

29 June 2026

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Attention: Marc Yeo
Time & Place
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Australia Square
264 George Street,
Sydney NSW 2000

SLR Project No.: 610.30495

Client Reference: 45-53 Macleay Street

**RE: 45-53 Macleay Street, Potts Point
Council and Urbis Comments Addressed**

1.0 Introduction

In January 2026, SLR Consulting completed a waste management plan on behalf of T&P Chimes Development Pty Ltd to accompany a state significant development application for a 16-storey mixed use development at 45-53 Macleay Street, Potts Point. The development comprises 44 apartments and ground floor retail.

This WMP was prepared in response to the requirements in the SEARs dated 16 May 2025 issued for SSD-83867719.

The City of Sydney reviewed the waste management plan and, in a letter dated 30 April 2026, provided some comments on the proposed waste management system. In addition, Urbis reviewed the waste management plan and provided comments. These changes have been accommodated in an updated waste management plan, SLR reference 610.30495-R01-v12.0-20260623.

This letter responds to each of Council's and Urbis' comments and indicates where in the waste management plan changes were made, if changes were necessary, or why changes are not proposed to be made.

2.0 Council Comments

Council's comments are shown below in italics with the response following in each case.

2.1 Bulky Waste

The bulky waste and problem waste storage area must be designed in accordance with Section B.2.2 of the Guidelines

Section B.2.2 requires a lockable cage, designated screened area or room in or attached to the storage area dedicated for bulky waste and problem waste.

New drawings have been prepared that show retail and residential bulky waste areas that comply with these requirements. These are shown in Figure 1 below.

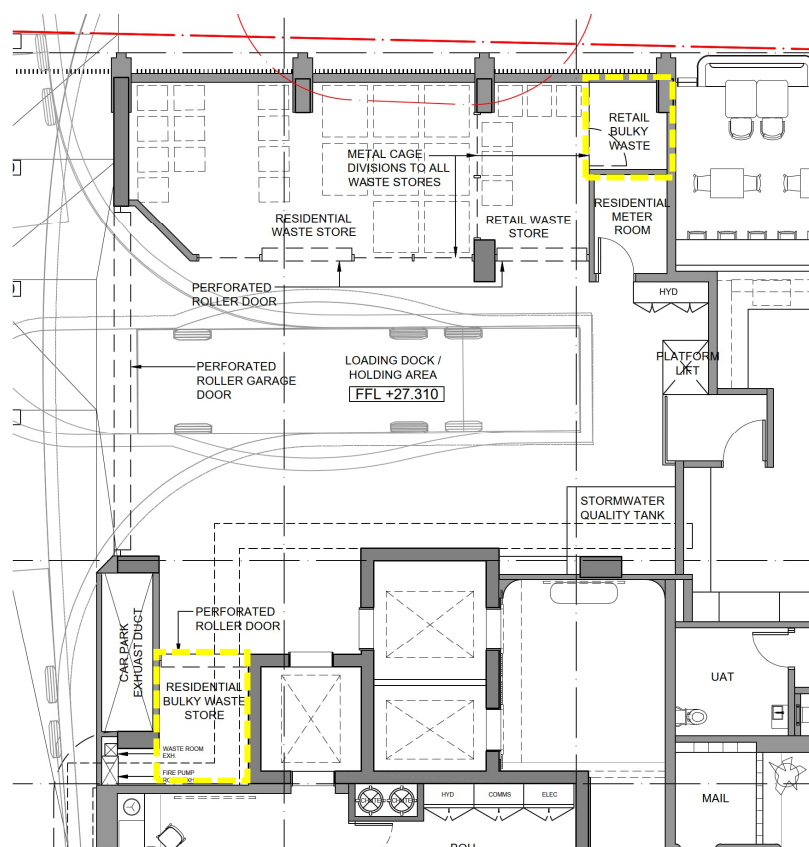


Figure 1 Bulky waste storage areas

2.2 Calculating waste quantities

The volume of waste must be calculated as per Reference A of the Guidelines, with bin allocation for each stream to be rounded up to the next whole number to ensure sufficient capacity.

Reference A sets out waste generation rates to be used for residential and retail premises.

2.2.1 Residential

The table on the first page of Reference A, page 32 of the Guidelines, states that for multi-residential developments, 120 L of garbage and 120 L of recyclables should be allowed per week. An allowance of 120 L for garden organics can be made but this *Only applies to multi-residential dwellings that generate garden organics (e.g. garden prunings and leaves)* which is not the case in this development.

Section 8.2.1 Residential in the waste management plan clearly states that *Council requires that each apartment has 120 L of garbage capacity and 120 L of recycling capacity each week*. Multiplying 44 units by 120 L gives 5,280 L for garbage and 5,280 L of recycling per week. In the absence of advice in the Guidelines on how much food waste to allow for, SLR has assumed that 50% of the garbage stream will be food waste and has therefore, divided the garbage quantities into two, 2,640 L for garbage and 2,640 L for food.

If collected once per week, this amounts to 2.4 1100 L bins for garbage, 4.8 for recycling and 11.0 240 L bins for food. These have been rounded up as specified by Council, to provide three bins for garbage, five for recycling and 11 for food waste. This is explained in the



waste plan in Section 8.2.1 Residential and shown in Table 11 Residential waste space allowance.

2.2.2 Retail

The table on the second page of Reference A, page 33 of the Guidelines, shows a list of non-residential development types and the proposed waste generation rates for each. A café is proposed on the ground floor of the development so SLR has used the figures for *Restaurant / eating* in the table on page 33 which says that 100 L of garbage, 500 L of recycling and 100 L of food waste per 100 m² per day of floor space should be assumed.

With a floor area of 121 m², the amount of garbage generated per day is 121 L, the amount of recycling is 605 L and the amount of food waste is 121 L. Multiplying these figures by seven, the number of days the café will be open each week, gives the figures shown in Table 12

Retail waste space allowance in the waste management plan. These amounts are 847 L of garbage, 4,235 L of recycling and 847 L of food waste.

If collected five days per week, this amounts to 0.71 240 L bins for garbage, 3.53 for recycling and 0.71 for food waste. These have been rounded up as specified by Council, to provide one bin for garbage, four for recycling and one for food waste. This is explained in the waste plan in Section 8.3.2 Retail and shown in Table 12 Retail waste space allowance.

For both residential and retail elements of the development, waste quantities have been calculated using the waste generation rates in Reference A.

2.3 Weekly collection frequency

The number of bins and associated storage area for the non-residential component must be recalculated and provided on the basis of no more than 3 times per week to align with the NSW Waste and Sustainable Materials Strategy

As the once per week collection frequencies proposed for residential collections already comply with this requirement, it is assumed that the retail collections, proposed to be five times per week, are the issue.

The purpose of the NSW Waste and Sustainable Materials Strategy 2041 is to guide how NSW manages waste over the long term and transition the state toward a circular economy. It is a whole-of-state policy and does not regulate individual projects such as this. New developments are regulated by planning laws and development control plans.

As expected therefore, the NSW Waste Strategy makes no mention of waste collection frequencies in new developments.

In addition, neither of the instruments that more directly affect new developments in the City of Sydney, the Sydney DCP and the Guidelines for Waste Management in New Developments, make any requirements for waste collection frequencies, let alone specifying three times per week.

No changes are required therefore, for the proposed retail collection frequencies.

2.4 Separate residential and non-residential waste storage

The proposed development must ensure that waste and recycling systems for the residential (residential) and non-residential (Commercial/Retail) components are entirely separate and self-contained in accordance with Section E.1.1 of the Guidelines



The design of the development has been amended to allow for separate and secured residential and retail waste storage areas. These are shown in Figure 2 below.

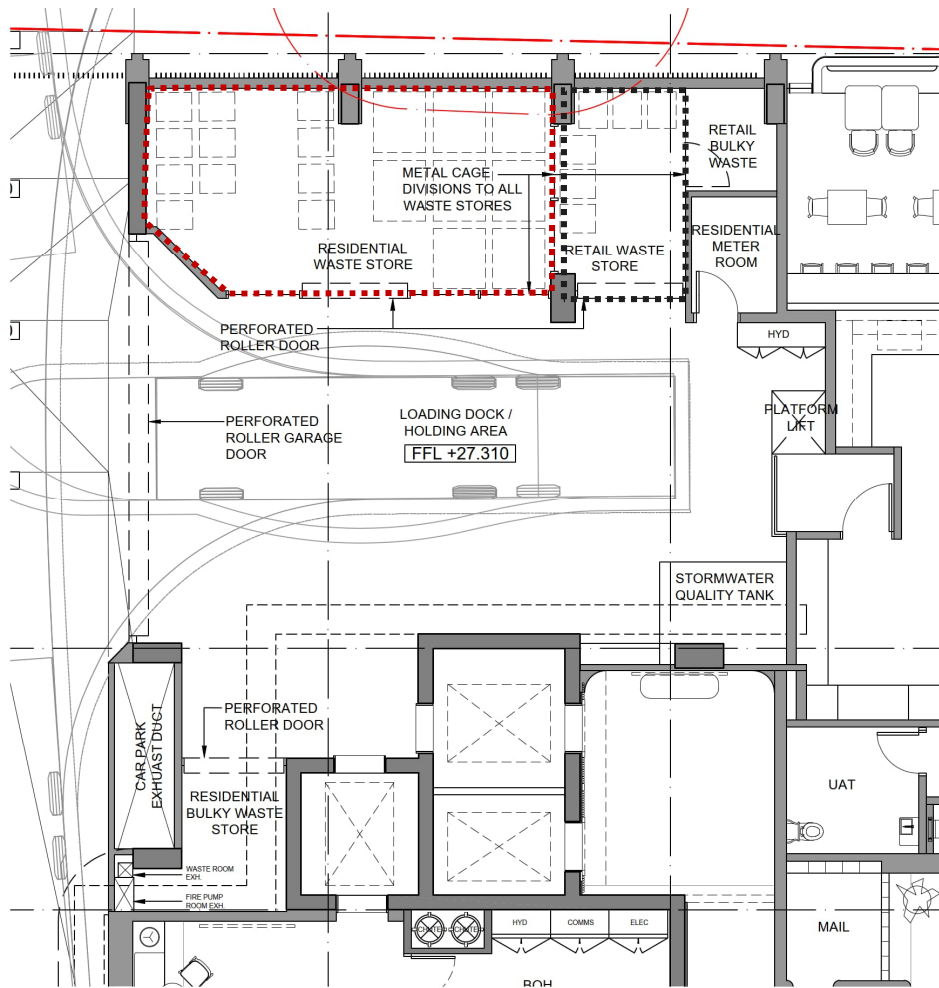


Figure 2 Retail and residential waste storage areas

2.5 Waste transfer within the development

All waste transfer must be completed wholly within the development, without relying on the public domain

The design of the development has been amended to allow access to the loading dock from within the retail tenancy. No waste transfer across public areas is proposed. This is shown in Figure 3 below.



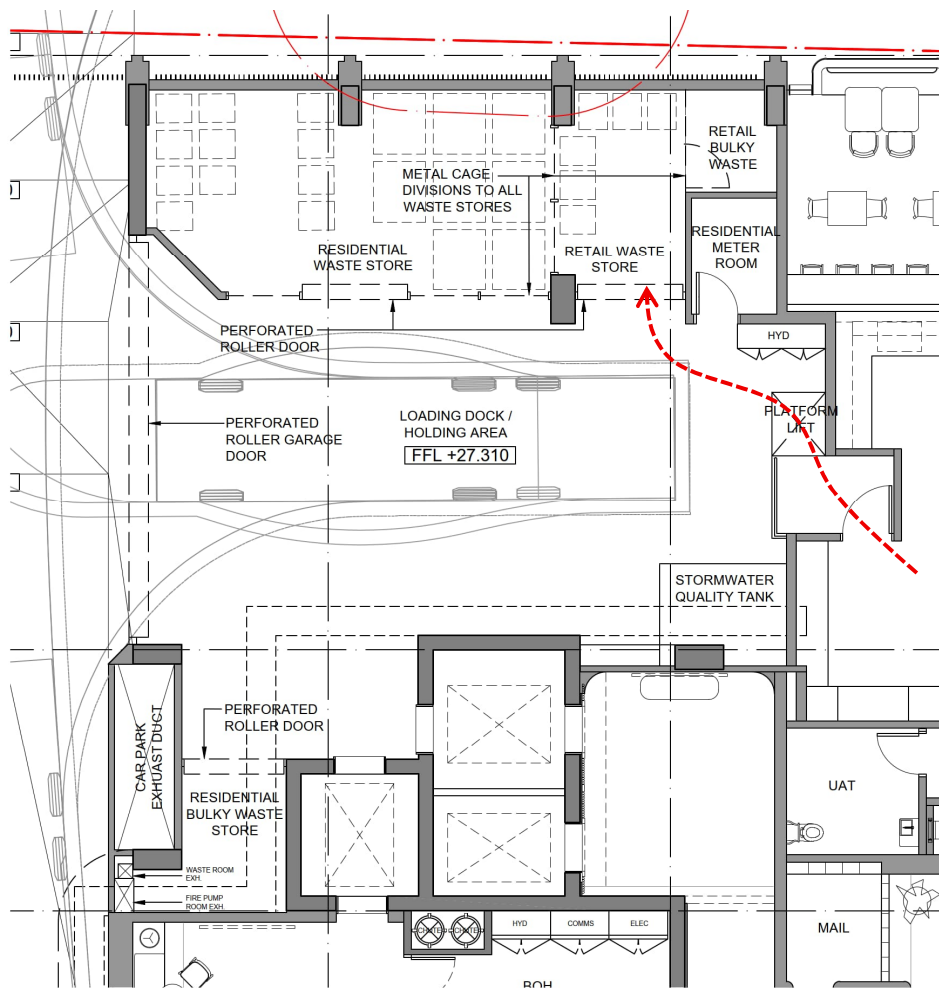


Figure 3 Retail access to loading dock

2.6 Chutes

The use of a single e-diverter chute system for the residential component is not supported as it has a high contamination rate. A dual-chute system must be provided to facilitate intuitive source separation.

The design of the development has been amended to allow for two chutes to be installed, one for garbage and one for recyclables. This is shown in Figure 4 below.



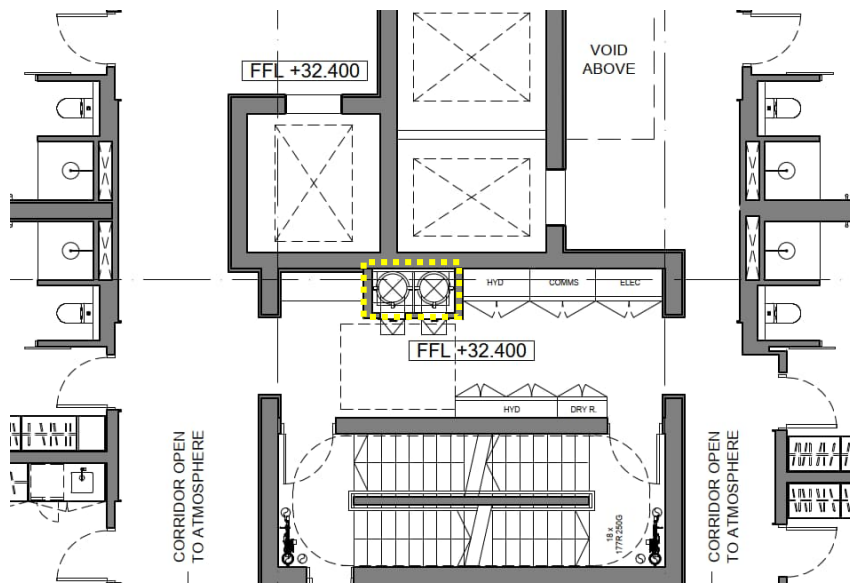


Figure 4 Dual chutes

2.7 FOGO disposal

FOGO disposal points should be provided on every residential level as per Section B.4.1 as the current proposal requires residents to carry food waste to a centralised location in the basement, which exceeds the maximum allowable travel distance of 30 m from the unit entrances.

Section B 4.1 says that *A chute room is required on each habitable floor of a development that has a chute system.* The development already complies with this requirement as shown in Figure 5 below

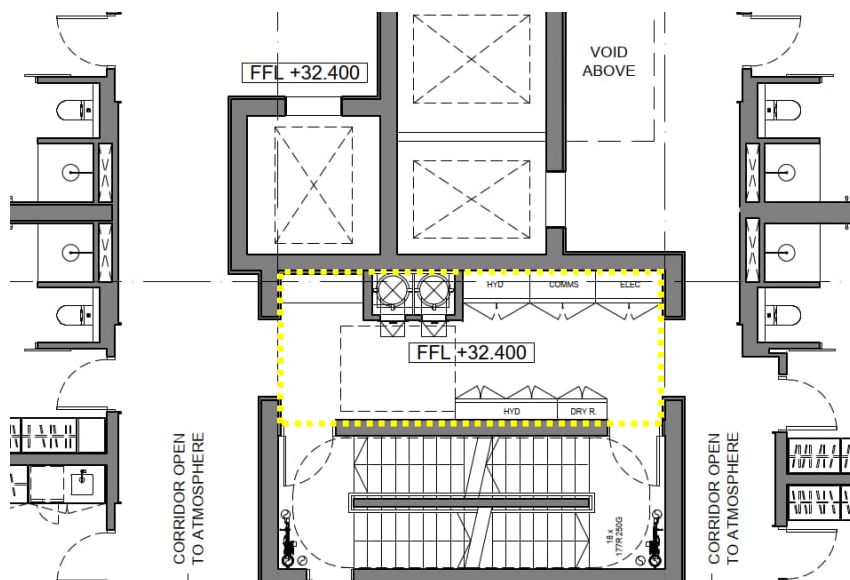


Figure 5 Chute room



In regard to the requirement to carry food waste, there is no requirement in the DCP or Waste Guidelines for food waste to be separated at all. The table in Reference A says that the waste allowance for food waste in MUDs is 'N/a'.

Despite that, and with regard to the NSW Government Food Waste Mandate, a FOGO room has been provided on a basement level, and a FOGO disposal point will be provided on Levels 1 and 2. These will be serviced and managed by the building manager or affordable housing provider. The distance from the furthest residential door to the FOGO disposal point is 19 m which is well within the 30 m requirement.

2.8 Waste room layout

The waste room layout must be amended in accordance with Reference D of the Guidelines, ensuring the layout allows the safe handling and restricted access.

Reference D of the Guidelines sets out construction requirements for waste storage.

The waste storage rooms comply on each point:

1.1 The floors, walls and ceilings of waste and recycling storage areas and chute room(s) are to be finished with a rigid, smooth-faced impermeable material capable of being easily cleaned.

The floors, walls and ceilings of waste and recycling storage areas and chute rooms will be finished with a rigid, smooth-faced impermeable material capable of being easily cleaned

1.2 The floors of waste and recycling storage areas are to be graded and drained to a Sydney Water approved drainage fitting. The floor is to be provided with a ramp to the doorway where necessary.

The waste storage areas will have an approved Sydney Water floor waste drain. This will be shown in the hydraulic plans in design development after DA approval. No ramp is required.

1.3 A close-fitting and self-closing door or gate operable from within the room is to be fitted to all waste and recycling storage areas.

Perforated roller doors are proposed.

1.4 Doors/gates to the waste and recycling storage rooms are to provide a minimum clearance width of 900 mm.

The minimum clearance for all waste storage doors is at least 900 mm.

1.5 At least one door or gate to the waste and recycling storage area is to have sufficient dimensions to allow the entry and exit of waste containers of a capacity nominated for the development.

The doors to the waste storage areas are wide enough to allow the entry of all proposed waste containers.

1.6 Lightweight roller shutter-type doors or grilles should be considered for access to waste and recycling storage areas, as these do not impact on the available storage space. If these types of doors or grilles are used, the requirement for a close-fitting and self-closing door remains, so that waste collectors can access the waste and recycling storage area other than through the roller door or grille.



Perforated roller doors are proposed.

1.7 The design shall restrict the entry of trespassers, vermin or other animals into the area.

The roller doors to the waste areas and the roller door to the loading dock will be locked and allow access only by residents, retailers, cleaners, Council collection staff and waste contractors.

1.8 The waste and recycling storage area is to be provided with an adequate supply of water for cleaning purposes with a hose cock. This does not include within chute rooms.

A water supply is provided to the waste storage areas.

1.9 The waste and recycling storage area is to be adequately ventilated by either:

1.9.1 Natural ventilation openings to external air. The dimension of the openings are not to be less than 5 per cent of the bin bay or bin room floor area.

1.9.2 A mechanical exhaust ventilation system in accordance with relevant Australian standards.

A mechanical exhaust ventilation system in accordance with relevant Australian standards will be provided

1.10 Waste and recycling areas are to be provided with artificial light controlled by switches located both outside and inside the storage area.

The waste storage areas have lights with switches inside and outside each area.

1.11 Any compactors or mechanical devices, if permitted for the mechanical handling and storage of waste and recycling, are to be fitted with safety operating and cut-off systems.

No compactors or mechanical devices are proposed.

1.12 Any facet of the waste and recycling management system that is visible from outside the building is to be in keeping with the dominant design of the remainder of the development.

No part of the waste system or waste storage is visible from outside the development.

A refrigerated waste room is not proposed.

3.0 Urbis Comments

3.1 DPHI key issues

Urbis suggested DPHI's key issues letter be referenced in the WMP. This has been done in Section 3 DPHI Key Issues.

3.2 Clarification of FOGO collection points

Urbis suggested that discrepancies in where FOGO disposal points are located should be clarified.



The location of the FOGO collection points is described in Section 9.4.1 Residential, which states *Residents on Levels 1 and 2 will take their food waste to a FOGO disposal point on each floor.* The location is shown in Figure 4.

This Section also states that *The distance from the furthest residential door to the FOGO disposal point 19 m which is well within the 30 m requirement. Residents on other floors will take their food waste to the FOGO bin rooms on Basement 2 or Basement 3. (The basement location is shown in Figure 5.) The furthest any resident will have to walk to dispose of food waste is 2 m from the lift to the FOGO room.*

Regards,

SLR Consulting Australia Pty Ltd



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45-53 MACLEAY STREET, POTTS POINT

Waste Management Plan

Prepared for:

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SLR Ref: 610.30495-R01
Version No: -v12.0
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BASIS OF REPORT

This report has been prepared by SLR Consulting Australia Pty Ltd (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with T&P Chimes Development Pty Ltd (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

DOCUMENT CONTROL

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Executive Summary

This waste management plan has been prepared by SLR Consulting on behalf of T&P Chimes Development Pty Ltd to accompany a detailed state significant development application for a mixed-use development at 45-53 Macleay Street, Potts Point. The development is a 16-storey shop-top housing development comprising 44 apartments and ground floor retail.

This WMP has been prepared in response to the requirements in the SEARs dated 16 May 2025 and issued for SSDA (SSD-83867719). The following documents have been used as a guide:

- Sydney Development Control Plan 2012
- City of Sydney's *Guidelines for Waste Management in New Developments 2018* and
- NSW EPA (2014) *Waste Classification Guidelines*

The estimated quantities of demolition waste for the ground floor slab are 319.3m³ of concrete.

The estimated quantities of construction waste are 14.4 m³ of timber, 138 m³ of concrete, 65.9 m³ of bricks, 26.8 m³ of gyprock, 591.1 m³ of soil, 26.8 m³ of metal and 12.4 m³ of other material.

Each apartment will have 120 L of garbage capacity and 120 L of recycling capacity each week. Collection of separated food waste has also been allowed for.

The retailers are assumed to be food and beverage. Estimated quantities of retail waste are 847 L of garbage, 4235 L of recyclables and 847 L of food, per week.

The areas for waste storage are shown below.

Table 1 Total waste storage area allowance

Area	Area required (m ²)	Area provided
Residential waste	33.9	34.0
Retail waste	7.8	10.0
Total	41.7	44.0

The building will feature an e-diverter single chute system for residential levels. This will be for garbage and recyclables which will be collected in 1,100 L bins located in the chute room at the base of the chute.

Retailers will take their waste direct to the retail waste storage area on the ground level.

Collection from the Development will be from the loading dock. Entry and exit of the collection vehicles will be in a forward direction.

1 Introduction

1.1 Overview

This waste management plan has been prepared by SLR Consulting on behalf of T&P Chimes Development Pty Ltd (the Applicant) to accompany a detailed state significant development application (SSDA) for a mixed-use development at 45-53 Macleay Street, Potts Point (the site).

The proposal seeks approval for the construction and operation of a 16-storey shop-top housing development comprising:

- 44 apartments, including:
 - 23 affordable apartments on podium level 1 and 2 which will be managed by a community housing provider (CHP) for 15 years
 - 21 market apartments over 12 levels
- Ground floor retail
- Four levels of basement for parking, services and storage
- Vehicular and loading access from McDonald Street
- Landscaping and communal open space.

The site is in the City of Sydney Council area. It has an area of 1,289 m² and is legally described as SP 934. The site currently accommodates a 10-storey residential flat building comprising 80 apartments, and associated car parking.

The site is in Potts Point, which is well serviced by public amenities such as a supermarket, cafes, destination retail shops and a library. Further afield is the Sydney CBD and the Royal Botanic Garden Sydney to the west, and Elizabeth Bay and Rushcutters Bay to the east.

The site is within convenient walking distance (750 m) of Kings Cross Train Station which provides rail connections to Bondi Junction and South Sydney. It also benefits from access to local bus services along Macleay Street which run every 10 minutes on average throughout the day and connect the site with Potts Point, Central Station and Barangaroo.

The location of the site is shown in Figure 1 below.



Figure 1 Site location (source Nearmap)

Details of the development are shown in Table 2 below.

Table 2 Project Details

Descriptor	Project Details
Proposed Use	Shop Top Housing / Commercial Premises
Project Description	Construction and operation of a 16-storey shop-top housing development comprising: 44 apartments, including: 23 affordable apartments on podium level 1 and 2 which will be managed by a community housing provider (CHP) for 15 years 21 market apartments over 12 levels - Ground floor retail - Four levels of basement for parking, services and storage - Vehicular and loading access from McDonald Street - Landscaping and communal open space.
Gross Floor Area	Maximum 5,529.8 m ²
Building Height	Maximum 50.05 m including 30% affordable housing bonus and 10% design excellence bonus
Floor Space Ratio	Maximum 4.29:1 including 30% affordable housing bonus and 10% design excellence bonus
Vehicle access	Vehicle access to be provided off McDonald Street.

2 Response to SEARs

This WMP has been prepared in response to the requirements in the Secretary's Environmental Assessment Requirements (SEARs) dated 16 May 2025 and issued for SSDA (SSD-83867719). Specifically, this report has been prepared to respond to the SEARS requirements shown in Table 3 below.

Table 3 SEARs

Description of requirement	Section reference (this report)
17 Waste Management Provide the measures to be implemented to manage, reuse, recycle and safely dispose of waste, including in accordance with any council waste management requirements.	For demolition and construction phases please refer to Section 8 Demolition and Construction Waste and Recycling Management For the operational phase please refer to Section 9 Operational Waste Management How the development specifically complies with Council requirements is shown in Section 11 Compliance with Council Requirements
Identify appropriately sited waste storage areas, collection access paths/roads, and appropriate servicing arrangements for the site.	For site clearance and construction phases please refer to Section 7 Waste Storage and Servicing For the operational phase please refer to Section 9.4 Management

3 DPHI Key Issues

Department of Planning, Housing and Infrastructure issued a letter dated 21 May 2026, to T&P Chimes Development Pty Ltd, Subject: Request for Additional Information – Detailed design for mixed-use development with in-fill affordable housing at 45-53 Macleay Street, Potts Point (SSD-83867719).

The section of the letter relevant to this WMP states:

4. Waste

Provide updated plans and a Waste Management Plan which demonstrates waste management facilities in accordance with the Sydney Development Control Plan and Council's Guidelines for Waste Management in New Developments.

This document is the waste management plan required.

4 Objective

The WMP has been prepared to calculate waste quantities to ensure enough space is allowed for waste storage and that waste is properly handled during the site clearance, construction and operational phases of the project.

The following documents have been used as a guide:

- Sydney Development Control Plan 2012
 - Section 3.11.13 Design and location of waste collection points and loading areas and
 - Section 3.14 Waste

- City of Sydney's *Guidelines for Waste Management in New Developments 2018*¹ (Council Guideline) and
- NSW EPA (2014) *Waste Classification Guidelines*.²

This WMP applies to waste generated from the demolition, site preparation, construction and operational stages of the Development.

The principal objective of this WMP is to identify all potential waste type likely to be generated at the site during the demolition, construction and operational phases, including a description of how waste would be handled, processed and disposed of, or re-used or recycled, in accordance with Council's requirements.

5 Review of WMP

This WMP will be reviewed and updated:

- To remain consistent with waste and landfill regulations and guidelines
- If changes are made to site waste and recycling management, or
- To take advantage of new technologies, innovations and methodologies for waste or recycling management.

Copies of the original WMP and its future versions should be retained by the building manager. Changes made to the WMP, as well as the reasons for the changes made, should be documented by the building manager as part of the review process.

6 Waste Plan Author

This waste management plan was prepared by Andrew Quinn, an environmental consultant with more than 30 years' experience in waste management. He has worked for the NSW EPA, waste management contractors and consultants. He has a Bachelor of Applied Science from the University of Technology Sydney (2000), a Master of Environmental Studies from Macquarie University (2009) and has lectured in waste management at the University of NSW.

His experience includes preparing waste management plans for new developments, transfer station and resource recovery facility concept design and master planning, operational waste systems assessments, expert witness and due diligence for waste projects, waste chapters for EISs, waste contract and tender preparation, tender assessment and evaluation, resource recovery technology research, resource recovery management strategy and policy development, data analysis, managing and conducting waste audits of residential, commercial, industrial, landfill and MRF streams and in remote locations.

Andrew prepared the *Better Practice Guide for Resource Recovery in Residential Developments* the NSW EPA's official guides to waste management in residential developments. He has also prepared hundreds of waste management plans for new developments. Those most relevant to this project include:

- Surry Hills Shopping Village Waste Management Plan for TOGA
- Green Square Stage 3 Waste Management Plan for Mirvac,

¹ <https://www.cityofsydney.nsw.gov.au/development-guidelines-policies/guidelines-waste-management-new-developments>

² Available online from <https://www.epa.nsw.gov.au/your-environment/waste/classifying-waste/waste-classification-guidelines>

- Pitt Street South Over Station Development for Transport for NSW
- Fairwater Waste Plan for Frasers Property
- 306-308 Taren Point Road, Caringbah, NSW
- Midtown Stage 2 Development for Frasers Property.

7 Waste Legislation and Guidance

7.1 City of Sydney Requirements

7.1.1 Sydney Development Control Plan 2012

Waste and Recycling Management Plan process³

A Waste and Recycling Management Plan is to be submitted with all development applications for new and change-of-use developments that will generate construction, demolition and operational waste.

Waste and Recycling Management Plan forms are provided at the end of [Council's Guidelines and Appendix A of this waste plan].

Applicants need to complete these forms in accordance with the requirements included in these Guidelines and are to provide the following information in the Waste and Recycling Management Plan:

6 Details of the handling of construction, demolition and ongoing waste outputs of the development.

3.11.13 Design and location of waste collection points and loading areas

(1) Waste collection and loading is to be in accordance with the City of Sydney's Guidelines for Waste Management in New Developments (the Guidelines) (see Section 7.1.2 below) and accommodated wholly within new development in order of preference:

(a) in the building's basement; or

(b) at grade within the building in a dedicated collection or loading bay; or

(c) at grade and off street within a safe vehicular circulation system where in all cases vehicles will enter and exit the premises in a forward direction.

(2) The waste collection and loading point is to be designed to:

(a) allow waste collection and loading operations to occur on a level surface away from vehicle ramps; and

(b) provide sufficient side and vertical clearance to allow the lifting arc for automated bin lifters to remain clear of any walls or ceilings and all ducts, pipes and other services.

(3) Vehicle access for collection and loading will provide for:

³ Page 8

- (a) a 9.25m Council garbage truck and a small rigid delivery vehicle;*
- (b) minimum vertical clearance of 4.0 metres clear of all ducts, pipes and other services, depending on the gradient of the access and the type of collection vehicle;*
- (c) collection vehicles to be able to enter and exit the premises in a forward direction. Where a vehicle turntable is necessary to meet this requirement, it is to have a capacity of 30 tonnes;*
- (d) maximum grades of 1:20 for the first 6m from the street, then a maximum of 1:8 with a transition of 1:12 for 4m at the lower end;*
- (e) a minimum driveway width of 3.6m; and*
- (f) a minimum turning circle radius of 10.5m.*

(4) Where vehicle access is via a ramp, design requirements for the gradient, surface treatment and curved sections are critical and must be analysed at an early stage in the design process.

3.14 Waste

The City of Sydney's Guidelines for Waste Management in New Developments (the Guidelines) provide the minimum waste management requirements for all new and 'change of use' developments requiring consent and are to be used in the design, management and operation of a building's waste and recycling systems.

Waste and Recycling Management Plans are to be prepared in accordance with the Guidelines and the City's Waste Management Local Approvals Policy, which outlines how waste and recycling must be managed, stored and collected in public places.

3.14.1 Waste and Recycling Management Plans

(1) A Waste and Recycling Management Plan is to be submitted with the Development Application and will be used to assess and monitor the management of waste and recycling during construction and operational phases of the proposed development. The Waste and Recycling Management Plan is to be consistent with the City of Sydney Guidelines for Waste Management in New Developments.

3.14.2 Construction and demolition waste

- (1) The Waste and Recycling Management Plan is to address construction and demolition waste and include:*
- (a) details regarding how waste is to be minimised within a development;*
 - (b) estimations of quantities and types of materials to be re-used or left over for removal from the site;*
 - (c) details regarding the types of waste and likely quantities of waste to be produced;*
 - (d) a site plan showing storage areas away from public access for reusable materials and recyclables during demolition and construction and the vehicle access to these areas;*
 - (e) targets for recycling and reuse;*

(f) nomination of the role/person responsible for ensuring targets are met and the person responsible for retaining waste dockets from facilities appropriately licensed to receive the development's construction and demolition waste;

(g) confirmation that all waste going to landfill is not recyclable or hazardous; and

(h) measures to reuse or recycle at least 80% of construction and demolition waste, either on site or diverted for reuse and recycling with receipts sufficient to demonstrate the target will be achieved.

3.14.3 Collection and minimisation of waste during occupation

(1) The Waste and Recycling Management Plan is to address the generation of waste from the occupants of the development and include:

(a) plans and drawings of the proposed development that show:

(i) the location and space allocated to the waste and recycling management systems;

(ii) the nominated waste collection point/s for the site; and

(iii) identify the path of access for users and collection vehicles.

(d) details of the on-going management of the storage and collection of waste and recycling, including responsibility for cleaning, transfer of bins between storage areas and collection points, maintenance of signage, and security of storage areas; and

(c) where appropriate to the nature of the development, a summary document for tenants and residents to inform them of waste and recycling management arrangements.

(3) Development is to include sufficient space in kitchens to separate food waste collection or compostable material for composting or worm farming.

(4) Development is to include a separate space in a room or screened area for the storage and management of bulky waste (this can include furniture, mattresses and stripout waste) and problem waste (this can include light bulbs and electronic waste) for recycling collection.

4.2.6 Waste and recycling management

4.2.6.1 General

(1) Comply with the City of Sydney's Guidelines for Waste Management in New Developments.

4.2.6.2 Residential flat buildings and serviced apartments

(1) A space is to be provided inside each dwelling for separate storage of at least two day's volume of general waste, recyclables and compostable material.

(2) Provide a centralised waste and recycling storage area(s) near the collection point with capacity to store all waste and recycling likely to be generated in the building in the period between normal collection times.

-
- (3) Provide a separate space such as a room or screened area (in a designated area or room in or attached to the waste and recycling storage area) for the storage and recycling of bulky waste, textile waste and problem waste for collection.
- (4) The maximum walking distance from any entrance of a residential dwelling to the waste and recycling storage area is not to exceed 30 metres (lift travel distance not included) and should be located close to lifts and/or stairwells.
- (5) Space for composting and worm farming is to be available for all residents in a communal facility or in small private courtyards. Composting facilities are to be sited on an unpaved area with soil depth of at least 300mm.
- (6) If a chute system is used, a dual chute system (two separate chutes, one for waste and one for recycling) is to be provided for buildings with more than nine storeys.
- (8) A chute room is required on each habitable floor that has a chute system. The chute room is to be designed in accordance with Section B in the Guidelines for Waste Management in New Developments.
- (9) Minimise noise from the operation of the waste and recycling management system to residential units by:
- (a) locating chutes away from habitable rooms, and
 - (b) provide acoustic insulation to the waste service facilities or residential units adjacent to or above chutes, waste storage facilities, chute discharge, waste compaction equipment and waste collection vehicle access points.

4.2.6.3 Additional provisions for mixed use developments

- (1) The waste handling, storage and collection systems for residential and non-residential waste are to be separate and self-contained, this includes separate keys and locking systems.
- (2) Provide easy access from each central waste and recycling storage area to the nominated collection point.
- (3) The Waste Management and Recycling Plan is required to separately identify the collection points and management systems for both residential and non-residential waste streams.
- (4) Demonstrate that noise and odour from the non-residential waste and recycling management system does not impact on other occupants within the development.
- (5) The design and management of the waste management system is to physically and actively discourage non-residential tenants from using residential waste and recycling systems.

Section F Construction and demolition waste requirements

- 1.1 The management of waste from construction and demolition activities is to be minimised by avoidance and reduction practices, re-use on-site and the recycling of materials.
- 1.2 A Waste and Recycling Management Plan detailing these practices is to be completed and included with any new DA (this includes DAs for the change-of-use of a development). The plan should include a target for resource recovery that aims to achieve a minimum 80 per cent recovery rate.

1.3 Materials should be sorted on-site for separate recycling collection. If this is not possible, sorting and recycling after the collection of mixed materials from construction and demolition is required. If the ability to recycle a material is adversely affected by being mixed with other waste types, the material is to be stored and collected separately.

1.4 On-site or off-site re-use of materials is allowed for unscheduled waste materials not hazardous to human health or safety. Any use of waste materials off-site is subject to the provisions within the Protection of the Environment Operations Act 1997 and associated regulations.

1.5 The Waste and Recycling Management Plan is to address construction and demolition waste and include:

1.5.1 Full disclosure of any asbestos-contaminated material known to be at the site, details of quantities, the licence details of any asbestos removalist, and the designated disposal site licensed to accept asbestos-related waste.

1.5.2 Details regarding how all other waste is to be minimised within a development; and estimations of quantities and types of materials to be re-used or left over for removal from the site.

1.5.3 Details regarding the types of waste and likely quantities of waste to be produced.

1.5.4 Details to re-use or recycle at least 80 per cent of construction and demolition waste, either on-site or diverted for re-use and recycling, with receipts sufficient to demonstrate the target will be achieved.

1.5.5 Details of the off-site recycler's primary destination for materials for multi-unit residential developments over three storeys and all non-residential developments.

1.5.6 A site plan showing storage areas away from public access for re-usable materials and recyclables during demolition and construction, and the vehicle access to these areas.

1.5.7 Nomination of the role/person responsible for ensuring targets are met and the person responsible for retaining waste dockets from facilities.

1.5.8 Designation of appropriately licensed facilities to receive the development's construction and demolition waste.

1.5.9 Confirmation that all waste going to landfill is not hazardous.

7.1.2 Guidelines for Waste Management in New Developments 2018

The Guidelines require that a waste management plan be prepared for this development. The plan must show:

- *On drawings, the location and space allocated to the waste management systems and facilities and the nominated waste collection point for the site*
- *Details of the types and quantities of waste streams*
- *Access paths for users and collection vehicles*
- *Details of ongoing management, storage and collection of waste, including responsibility for cleaning, transfer of bins between storage areas and collection points, implementation and maintenance of signage, and security of storage areas*

- *Details of the handling of construction, demolition and ongoing waste outputs of the development*

Other specifications that are relevant to this development are detailed below.

Retail

- *For storing bulky waste and problem waste. For developments between 100 m² and 2,000 m², 4 m² must be provided with an additional 4 m² for each development over 2,000 m² and for every 20,000 m² of office space. This amounts to 4 m² for this development.*
- *For the storage of food waste for collection. The space should be dedicated in or attached to the waste storage area*
- *For separate collection of beverage containers that comply with the NSW Container Deposit Scheme.*
- *Where collection takes place inside a building, appropriate clearances need to be allowed for the collection vehicle.*
- *Collection points must be:*
 - *wholly within the boundary of the development*
 - *in an area that minimises any noise or odour*
- *Waste types that must be collected daily or stored in a refrigerated waste room until collection are:*
 - *50 L of seafood, poultry, and/or meat waste per day*
 - *Waste with 20% fish, poultry or meat by weight or volume*
- *Space or reduction systems for plastic wrap should be allocated where applicable.*

Residential

- *A lockable cage designated screened area or room in or attached to the storage area is to be dedicated for bulky waste and problem waste. The requirements for this space are:*
 - *There must be a caged section for gas bottle disposal within this dedicated space.*
 - *For 21 to 40 units a minimum size of 4 m² plus 1 m² for every 10 additional units above 20 units must be allocated*
 - *The area should be convenient for residents to access and located under each building for the corresponding number of units in the building.*
 - *Additional space is required for recycling textile waste such as a clothes bin. The minimum size required is 1 m² per 50 units up to a maximum of 2 m². This space should be in or attached to the storage area.*
- *The collection point is to be level, free of obstructions and with sufficient height clearance to enable the safe mechanical pick-up and set down of bins.*
- *Council vehicles must be able to collect waste, recycling and bulky items from residential developments on-site*
- *Waste collection and loading must be:*
 - *In the building's basement*
 - *At grade within the building in a collection bay*

- *At grade, off-street within a safe circulation system where vehicles enter and exit in a forward direction*
- *All collection of non-residential waste is to be conducted on-site*
- *The following are required for the nominated collection point:*
 - *A minimum vertical clearance of 4 m, including clearances of all ducts, pipes and other services*
 - *A minimum width of driveway of 3.6 m*
 - *A minimum turning circle radius of 10.5 m or provision for changing vehicle direction*
 - *Easily accessible from the waste and recycling storage area.*
 - *Access from the storage area must be level and free of steps or kerbs.*
 - *Must be no more than the following distances from the storage area:*
 - o *10 m for bins including 120 L, 240 L, 660 L and 1,100 L*
- *The path between the storage area and the collection point is not to exceed a grade of 1:14 at any point.*
- *Entry and exit of a collection vehicle from a site are to be in a forward direction. A vehicle turntable can be used if it has a 30 t capacity.*
- *Collection vehicles must be able to service the development with minimal reversing.*
- *Waste and recycling bins must be stored within the boundary of the development.*
- *The waste and recycling storage area must accommodate waste and recycling bins, bulky waste, problem waste and textile waste.*

Waste chute systems

- *Chutes are to be provided with an opening on each floor, designed to be used by all residents and enclosed within a chute room. Chutes are not to open onto any habitable space and chute openings are to have an effective self-sealing system*
- *Chutes are to terminate in a waste and recycling storage area and discharge directly into a waste or recycling container in a manner designed to avoid spillage and overflow. Protective skirting between chute and containers is permitted to prevent spillage and minimise dust or spray.*
- *For safety reasons, residents are not to be able to access the area where the chute discharges.*
- *The total maximum travel distance from any residential dwelling entry to a chute system on any given storey is not to exceed 30 m. Additional chutes may be required for buildings in order not to exceed the maximum travel distance.*

Chute rooms

- *A chute room is required on each habitable floor of a development that has a chute system.*
- *The chute room will include, in addition to space for recycling mobile bin as required:*
 - *The chute inlet hopper*
 - *Space for spare mobile bin in case of chute failure, allowing for at least one 240 L mobile bin for each six residences serviced by that chute*
 - *Space for large cardboard and/or bulky items to reduce the likelihood of blockages in chutes*

- *Each chute room is to provide access for all persons in accordance with Council's Access Policy. Chute rooms are to allow sufficient space to permit easy opening of the chute and chute room door and the storage and manoeuvring of mobile bins.*
- *A chute room is not to be located adjacent to a habitable room.*
- *Chute rooms are to display instructions on the use of the waste and/or recycling chute including instructions not to dispose hazardous and bulky material into the chute, and what materials can be recycled using the container(s) provided.*

Mixed use

- *Residential and non-residential waste and recycling systems for residential are to be separate and self-contained.*
- *Commercial and retail tenants must not be able to access residential waste and recycling storage areas or chutes.*
- *Collection points for residential and non-residential waste and recycling may be shared.*
- *The Waste Management Plan must identify residential and non-residential storage areas, collection points and management systems.*
- *Residential waste chutes must not carry non-residential waste.*

7.2 Food and Garden Organics

The NSW Government has mandated that from 1 July 2030 all local government areas in NSW must provide all relevant residential accommodation with enough organics collection bins for food waste and garden waste (FOGO) generated by residents in that accommodation.⁴

The EPA will enforce compliance and there will be court-imposed penalties and fines for councils to deter non-compliance.

Councils are exempt from collecting and transporting FOGO waste from certain exempt multi-unit dwellings. An exempt multi-unit dwelling is a building that has all these conditions:⁵

- *was legally occupied before 1 July 2030 and*
- *uses a waste chute not designed for separating FOGO waste and*
- *lacks a shared waste collection room/area for residents.*

Based on these conditions, this development is an exempt multi-unit dwelling. The timeframe for these exemptions is from 1 July 2030 until 1 July 2035.

⁴ <https://www.epa.nsw.gov.au/Your-environment/Recycling-and-reuse/business-government-recycling/Food-organics-and-garden-organics/fogo-mandates-and-rollout>

⁵ <https://www.epa.nsw.gov.au/Your-environment/Recycling-and-reuse/business-government-recycling/Food-organics-and-garden/FOGO-mandates-and-rollout/exemptions>

7.3 Other legislation and guidelines

Other specifications that are relevant to this development are detailed in Table 4 below.

Table 4 Legislation and guidance

Legislation and Guidance	Objectives
State and National legislation and guidelines	
Building Code of Australia (BCA) and relevant Australian Standards	The BCA has the aim of achieving nationally consistent, minimum necessary standards of relevant health and safety, amenity and sustainability objectives efficiently.
Council of Australian Governments National Construction Code	The National Construction Code sets the minimum requirements for the design, construction and performance of buildings throughout Australia.
NSW EPA's Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities 2012	These better practice guidelines present information on waste minimisation and resource recovery as well as information on commonly used waste management provisions. The guidelines also provide benchmarks for assessing waste production rates in Australia.
NSW Waste and Sustainable Materials Strategy 2041: Stage 1 – 2021-2027	Replacing the <i>NSW Waste Avoidance and Resource Recovery Strategy (2014-21)</i> , the NSW Waste and Sustainable Materials Strategy 2041 focuses on the transition of NSW to a circular economy. The strategy focuses on minimising what is thrown away, and to use and reuse resources more efficiently, making them as productive as possible. The strategy identifies the need to identify infrastructure needs, the mandating of separation of some organic waste streams, and incentivising biogas generation from waste materials.
NSW EPA Resource Recovery Orders and Resource Recovery Exemptions	The NSW EPA has issued a number of resource recovery orders and resource recovery exemptions under the POEO (Waste) Regulation 2014 for a range of waste that may be recovered for beneficial re-use. These waste typically include those from demolition works. - Resource recovery orders present conditions which generators and processors of waste must meet to supply the waste material for beneficial re-use. - Resource recovery exemptions contain the conditions which consumers must meet to use waste for beneficial re-use.
NSW EPA's Waste Classification Guidelines 2014	The NSW EPA <i>Waste Classification Guidelines</i> assists waste generators to effectively manage, treat and dispose of waste to ensure the environmental and human health risks associated with waste are managed appropriately and in accordance with the <i>POEO Act 1997</i> and is associated regulations.
<i>Protection of the Environment Operations Act (POEO) 1997 and Amendment Act 2011</i>	The POEO Act 1997 and POEO Amendment Act 2011 are administered by the NSW Environment Protection Authority to enable the NSW Government to establish instruments for setting environmental standards, goals, protocols and guidelines. They outline the regulatory requirements for lawful disposal of waste generated during the demolition, and operational phases of a development, as well as the system for licencing waste transport and disposal.
The Work Health and Safety Regulation 2017	The Work Health and Safety Regulation 2017 provide detailed actions and guidance associated with the topics discussed in <i>The Work Health and Safety Act 2011</i> . The primary aim of the regulation is to protect the health and safety of workers and ensure that risks are minimised in work environments. Workplaces are to ensure that they are compliant with the requirements specified in the regulations. The regulations discuss items such as actions that are prohibited or obligated in work environments, the requirements for obtaining licences and registrations, and the roles and responsibilities of staff in workplaces.

Legislation and Guidance	Objectives
<i>Waste Avoidance and Resource Recovery Act 2001</i>	The <i>Waste Avoidance and Resource Recovery Act 2001</i> aims to promote waste avoidance and resource recovery and repeals the <i>Waste Minimisation and Management Act 1995</i>. Specific objectives of the <i>Waste Avoidance and Resource Recovery Act 2001</i> include: • encouraging efficient use of resources • minimising the consumption of natural resources and the final disposal of waste by encouraging the avoidance of waste and the reuse and recycling of waste • ensuring industry and the community share responsibility in reducing/dealing with waste, and • efficiently funding of waste/resource management planning, programs and service delivery. As of 2016, the addition to the Act of Part 5 defines the legislative framework for the 'Return and Earn Container Deposit Scheme' whereby selected beverage containers can be returned to State Government authorities for a monetary refund.

8 Demolition and Construction Waste and Recycling Management

8.1 Targets for Resource Recovery

Targets for new development are expected to contribute to state-specific targets. The NSW Waste and Sustainable Materials Strategy 2041 (DPIE, 2021) sets a target of 80% average recovery rate from all waste streams by 2030. Analysis by the NSW EPA (2022-2023) indicates that construction and demolition waste recovery rates in 2022-2023 were 73%.⁶

It is anticipated that the waste minimisation measures in the following sections will assist the Development to meet these targets. Waste reporting and audits can be used to determine the actual percentage of waste that have been recycled during the demolition stage of the Development.

8.2 Waste Streams and Classifications

Demolition is likely to generate the following broad waste streams:

- Demolition waste for the ground floor slab only,
- Packaging waste, and
- Work compound waste from on-site employees.

A summary of likely waste types generated from demolition activities, along with their waste classifications and proposed management methods, is provided in Table 5 below.

Table 5 Potential waste types and their management methods

Waste Types	NSW EPA Waste Classification	Proposed Management Method
Demolition and Construction		
Sediment fencing, geotextile materials	General solid waste (non-putrescible)	Reuse at other sites where possible or disposal to landfill

⁶ <https://www.epa.nsw.gov.au/your-environment/waste/waste-overview/waste-performance-data>

Waste Types	NSW EPA Waste Classification	Proposed Management Method
Concrete	General solid waste (non-putrescible)	Off-site recycling for filling, levelling or road base
Bricks and pavers	General solid waste (non-putrescible)	Cleaned for reuse as footings, broken bricks for internal walls, crushed for landscaping or driveway use, off-site recycling
Gyprock or plasterboard	General solid waste (non-putrescible)	Off-site recycling or returned to supplier
Sand or soil	General solid waste (non-putrescible)	Off-site recycling
Metals such as fittings, appliances and bulk electrical cabling, including copper and aluminium	General solid waste (non-putrescible)	Off-site recycling at metal recycling compounds and remainder to landfill
Conduits and pipes	General solid waste (non-putrescible)	Off-site recycling
Timber – treated	General solid waste (non-putrescible)	Reused for formwork, bridging, blocking, propping or second-hand supplier
Timber - untreated		Off-site recycling, chip for landscaping, sell for firewood, reused for floorboards, fencing, furniture, mulched secondhand supplier and remainder to landscape supplies.
Doors, windows, fittings	General solid waste (non-putrescible)	Off-site recycling at secondhand supplier
Insulation material	General solid waste (non-putrescible)	Off-site disposal
Glass	General solid waste (non-putrescible)	Off-site recycling, glazing or aggregate for concrete production
Asbestos	Special waste	Off-site disposal to a licensed landfill facility.
Fluorescent light fittings and bulbs	General solid waste (non-putrescible)	Off-site recycling or disposal, contact <i>FluoroCycle</i> for more information ⁷
Paint	Liquid waste	Off-site recycling, Paintback collection ⁸ or disposal
Synthetic rubber or carpet underlay	General solid waste (non-putrescible)	Off-site recycling, reprocessed for other uses
Ceramics including tiles	General solid waste (non-putrescible)	Off-site recycling
Carpet	General solid waste (non-putrescible)	Off-site recycling, disposal or reuse
Packaging		
Packaging materials, including wood, plastic, including stretch wrap or LDPE, cardboard and metals	General solid waste (non-putrescible)	Off-site recycling
Wooden or plastic crates and pallets	General solid waste (non-putrescible)	Reused for similar projects, returned to suppliers, or off-site recycling. Contact <i>Business Recycling</i> for more information ⁹
Work Compound and Associated Offices		
Food Waste	General solid (putrescible) waste	Dispose to landfill with general garbage

⁷ Available online from <http://www.fluorocycle.org.au/> or <http://www.environment.gov.au/settlements/waste/lamp-mercury.html>

⁸ Available online from <https://www.paintback.com.au/>

⁹ Available online from <https://businessrecycling.com.au/>

Waste Types	NSW EPA Waste Classification	Proposed Management Method
Recyclable beverage containers, such as glass and plastic bottles, aluminium cans and steel cans	General solid waste (non-putrescible)	Recycling at off-site licensed facility or at NSW container deposit scheme 'Return and Earn' facility ¹⁰
Clean paper and cardboard	General solid waste (non-putrescible)	Paper and cardboard recycling at off-site licensed facility
General domestic waste generated by workers such as soiled paper and cardboard, food and polystyrene	General solid waste (non-putrescible) mixed with putrescible waste	Disposal at landfill
Plant Maintenance		
Empty oil and other drums or containers, such as fuel, chemicals, paints, spill clean ups. Containers were previously used to store Dangerous Goods (Class 1, 3, 4, 5 or 8) and residues have not been removed by washing or vacuuming.	Hazardous waste	Transport to comply with the transport of Dangerous Goods Code applies in preparation for off-site recycling or disposal at licensed facility
Empty oil and other drums or containers, such as fuel, chemicals, paints, spill clean ups. Containers have been cleaned by washing or vacuuming.	General solid waste (non-putrescible)	
Air filters and rags	General solid waste (non-putrescible)	Off-site disposal
Oil filters, drained	General solid waste (non-putrescible)	Off-site recycling
Lead-acid or nickel-cadmium batteries	Hazardous waste	Off-site recycling, Contact the Australian Battery Recycling Initiative ¹¹ for more information
Other batteries	General solid waste (non-putrescible)	

For further information on how to classify a waste type refer to the NSW EPA (2014) *Waste Classification Guidelines*¹². Further information on managing demolition waste is available from the NSW EPA.¹³

8.3 Demolition Waste

The building for demolition has been included in concept SSDA WMP. This detailed SSDA considers the ground floor slab only.

The ground floor slab is estimated to be 250mm thick.

The total area of existing building and carpark is 1277.2 m².

The total quantity of concrete is estimated to be 319.3 m³.

8.4 Construction Waste Types and Quantities

The Construction Site Manager will need to specify the types and quantities of wastes produced during construction and on this basis the numbers and capacity of bins can be determined.

¹⁰Available online from <http://returnandearn.org.au/>

¹¹<http://www.batteryrecycling.org.au/home>

¹² Available online from <https://www.epa.nsw.gov.au/your-environment/waste/classifying-waste/waste-classification-guidelines>

¹³<http://www.epa.nsw.gov.au/your-environment/waste/industrial-waste/construction-demolition>

In the absence of construction waste generation rates from Council, SLR has adopted the waste generation rates from Appendix A of The Hills DCP for estimating the type and quantities of waste generated from construction of the Development. SLR has adopted the 'Block of Flats' rates to measure waste expected from the Development. These are shown in Table 6 below.

Table 6 Waste generation rates for the construction of the Development

Rate Type	Per Area (m ²)	Waste types and quantities (m ³)						
		Timber	Concrete	Bricks	Gyprock	Sand or Soil	Metal	Other
Block of Flats	1,000	0.7	6.7	3.2	1.3	28.7	1.3	0.6

The construction wastes quantities anticipated from the construction of the Development are provided in Table 7. Actual waste quantities and composition will vary; however, this estimate is provided so that the Construction Site Manager can make provision for on-site or off-site re-use and recycling opportunities.

Table 7 Estimated types and quantities of construction waste

Area (m ²)	Waste types and quantities (m ³)						
	Timber	Concrete	Bricks	Gyprock	Sand and Soil	Metal	Other
13,624.8	14.4	138.0	65.9	26.8	591.1	26.8	12.4

8.5 Waste Avoidance

In accordance with Council's Guidelines, and better practice waste management, the Building Contractor, Building Designer and/or equivalent roles should:

- Develop a purchasing policy based on the approximate volumes of materials to be used so that the correct quantities are purchased.
- Arrange for delivery of materials on an 'as needed' basis to avoid material degradation through weathering and moisture damage.
- Communicate strategies to handle and store waste to minimise environmental, health and amenity impacts.
- Select materials with a low environmental impact over the lifecycle of the building.
- Choose timber from certified plantations and avoid unsustainable timber imports including western red cedar, oregon, meranti, luan or merbau.
- Use leased equipment rather than purchase and disposal.
- Minimise site disturbance and unnecessary excavation.
- Incorporate existing trees and shrubs into the landscape plan.
- Grouping wet areas together to minimise the amount of pipe work required.
- Design the Project to require standard material sizes or make arrangements with manufacturing groups for the supply of non-standard material sizes.
- Design works for de-construction.
- Reduce packaging waste by:
 - Returning packaging to suppliers where practicable to reduce waste further along the supply chain

- Purchasing in bulk
- Requesting cardboard or metal drums rather than plastics
- Requesting metal straps rather than shrink wrap, and
- Using returnable packaging such as pallets and reels.
- Use prefabricated materials.
- Select materials for Project works with low embodied energy properties or materials that have been salvaged or recycled for the construction of the Project including concrete that utilises slag and fly ash content, structural and reinforced steel that uses recycled steel content or bulk insulation products that contain recycled content, such as recycled glass in glass-wool.
- Preferentially use paints, floor coverings and adhesives with low VOC (volatile organic compound) content.
- Reduce the use of polyvinyl chloride products.
- Implement measures to prevent the occurrence of windblown litter, dust and stormwater pollution.
- Ensure subcontractors are informed of and implement site waste minimisation and management procedures.

8.6 Reuse, Recycling and Disposal

Effective management of construction materials and construction and demolition waste, including options for reuse and recycling where applicable and practicable, will be conducted. Only wastes that cannot be cost effectively reused or recycled are to be sent to landfill or appropriate disposal facilities.

Refer to Table 5 for an outline of the proposed reuse, recycling and disposal methods for potential construction waste streams generated by the Development.

In accordance with Council's Guidelines and best practice waste management, the following specific procedures should be implemented:

- Ensure the site's project management of the site includes minimising waste generation, requiring the appropriate storage and timely collection of waste materials, and maximising re-use or recycling of materials.
- Store wastes on site appropriately to prevent cross-contamination and guarantee the highest possible re-use value.
- Consider the potential of any new materials to be re-used and recycled at the end of the Project's life.
- Determine opportunities for the use of prefabricated components and recycled materials.
- Strip topsoil from areas designated for excavation and store it on site for reuse.
- Reuse excavation material will be on-site where possible.
- Re-use formwork where appropriate.
- Retain roofing material cut-offs for re-use or recycling.
- Retain used crates for storage purposes unless damaged.
- Recycle cardboard, glass and metal wastes.

- Recycle or dispose of solid waste timber, brick, concrete, asphalt and rock, where such waste cannot be re-used on site, to an appropriately licenced construction and demolition waste recycling facility or an appropriately licenced landfill.
- Dispose of all asbestos and/or hazardous wastes in accordance with SafeWork NSW and NSW EPA requirements.
- Deliver batteries and fluorescent lights to drop off-site recycling facility.
- Return excess materials and packaging to the supplier or manufacturer.

8.7 Waste Storage and Servicing

8.7.1 Waste Segregation and Storage

Waste materials produced from site preparation and construction activities are to be separated at the source and stored separately on-site. It is anticipated that the Development will provide enough space on-site for separate storage, for example, separate skip bins or appropriately managed stockpiles, of the following waste types:

- Bricks, concrete and scrap metal
- Metal and steel, in a condition suitable for recycling at metal recycling facilities
- Timber
- Glass
- Hardstand rubble
- Uncontaminated excavation spoil, if present
- Contaminated excavation spoil, if present
- Hazardous waste, if present
- Paper and cardboard
- General co-mingled recycling waste, and
- Non-recyclable general waste.

If there is insufficient space on-site for full segregation of waste types, the Site Manager, or equivalent role, should consult with the waste and recycling collection contractor to confirm which waste types may be co-mingled prior to removal from the site.

8.7.2 Waste Storage Areas

Waste storage areas will be accessible and allow enough space for storage and servicing requirements. The storage areas will also be flexible in order to cater for change of use throughout the Development. Where space is restricted, dedicated stockpile areas are to be delineated on the site, with regular transfers to dedicated skip bins for sorting.

All waste placed in skips or bins for disposal or recycling will be adequately contained to ensure that the waste does not fall, blow, wash or otherwise escape from the site. Waste containers and storage areas are to be kept clean and in a good state of repair.

Areas designated for waste storage should:

- Allow unimpeded access by site personnel and waste disposal contractors
- Consider environmental factors which could potentially cause an impact to the waste storage, such as slope, drainage and the location of watercourses and native vegetation
- Allow enough space for the storage of garden waste and other waste materials on-site
- Employ adequate environmental management controls to prevent off-site migration of waste materials and contamination from the waste. For example, consideration of slope, drainage, proximity relative to waterways, stormwater outlets and vegetation
- Consider visual amenity, safety, accessibility and convenience in their selection, and
- Not present hazards to human health or the environment.

8.7.3 Waste Servicing and Record Keeping

The Site Manager or equivalent role is to:

- Arrange for suitable waste collection contractors to remove any construction waste from site
- Ensure waste bins are not filled beyond recommended filling levels
- Ensure that all bins and loads of waste materials leaving site are covered
- Maintain waste disposal documentation detailing, at a minimum:
 - Descriptions and estimated amounts of all waste materials removed from site
 - Details of the waste and recycling collection contractors and facilities receiving the waste and recyclables
 - Records of waste and recycling collection vehicle movements, for example, date and time of loads removed, licence plate of collection vehicles, tip dockets from receiving facility, and
 - Waste classification documentation for materials disposed to off-site recycling or landfill facilities.
- Ensure lawful waste disposal records are readily accessible for inspection by regulatory authorities such as Council, SafeWork NSW or NSW EPA, and
- Remove waste during hours approved by Council.

If skips and bins are reaching capacity, removal and replacement should be organised as soon as possible. All site generated building waste collected in the skips and bins will leave the site and be deposited in the approved site lawfully able to accept them.

8.7.4 Contaminated or Hazardous Waste Management

For details on the presence of asbestos and other hazardous materials and how they are to be handled, please refer to:

- Preliminary (Stage 1) Site Contamination Investigation dated 12 February 2025 prepared by JK Environments Pty Ltd
- Remediation Action Plan dated 12 February 2025 prepared by JK Environments Pty Ltd
- Detailed Site Investigation dated 13 February 2025 prepared by JK Environments Pty Ltd.

8.8 Site Inductions

All staff, including sub-contractors and labourers, employed during the site preparation and construction phases of the Development must undergo induction training regarding waste management for the Site.

Induction training is to cover, as a minimum, an outline of the WMP including:

- Legal obligations and targets
- Emergency response procedures on-site
- Waste priorities and opportunities for reduction, reuse and recycling
- Waste storage locations and separation of waste
- Procedures for suspected contaminated and hazardous wastes
- Waste related signage
- The implications of poor waste management practices, and
- Responsibilities and reporting, including identification of personnel responsible for waste management and individual responsibilities.

It is the responsibility of the Site Manager or Building Contractor to notify Council of the appointment of waste removal, transport or disposal contractors.

8.9 Signage

Standard signage is to be posted in all waste storage and collection areas. All waste containers should be labelled correctly and clearly to identify stored materials.

Signs approved by the NSW EPA for labelling of waste materials are available online¹⁴ and should be used where applicable. A selection of signs prepared by NSW EPA is provided in Figure 2.



¹⁴ NSW EPA approved waste materials signage <https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/business-government-recycling/standard-recycling-signs>

Figure 2 Examples of NSW EPA labels for waste skips and bins

8.10 Monitoring and Reporting

The following monitoring practices are to be undertaken to improve demolition and construction waste management and to obtain accurate waste generation figures:

- Conduct waste audits of current projects where feasible.
- Note waste generated and disposal methods.
- Look at past waste disposal receipts.
- Record this information to track waste avoidance, reuse and recycling performance and to help in waste estimations for future waste management plans.

As specified in the Sydney DCP, records of waste volumes recycled, reused or contractor removed are to be maintained. This can include dockets or receipts verifying recycling and disposal in accordance with this WMP. This evidence should also be presented to regulatory bodies when required.

Waste audits can be carried out by the Building Contractor to gauge the effectiveness and efficiency of waste segregation procedures and recycling and reuse initiatives. Where audits show that the above procedures are not carried out effectively, additional staff training will be undertaken and signage re-examined.

8.11 Roles and Responsibilities

All personnel have a responsibility for their own environmental performance and compliance with all legislation. It will be the responsibility of the Building Contractor to implement the WMP, and an employee and subcontractor responsibility to ensure that they always comply with the WMP.

Where possible, an Environmental Management Representative should be appointed for the Development. Suggested roles and responsibilities are provided in Table 8.

Table 8 Suggested roles and responsibilities for site preparation and construction waste management

Responsible Person	General Tasks
Construction Site Manager	Ensuring plant and equipment are well maintained.
	Ordering only the required amounts of materials.
	Keeping materials segregated to maximise reuse and recycling.
	Ultimately responsible for routinely checking waste sorting and storage areas for cleanliness, hygiene and safety issues, contaminated waste materials, and also ensuring that all monitoring and audit results are well documented and carried out as specified in the WMP.
Construction Environmental Manager or equivalent	Approaching and establishing the local commercial reuse of materials where reuse on-site is not practical.
	Establishing separate skips and recycling bins for effective waste segregation and recycling purposes.
	Ensuring staff and contractors are aware of site requirements.
	Provision of training of the requirements of the WMP and specific waste management strategies adopted for the Project.
	Contaminated waste management and approval of off-site waste transport, disposal locations and checking licensing requirements.

Responsible Person	General Tasks
	Approval of off-site waste disposal locations and checking licensing requirements.
	Assessment of suspicious potentially contaminated materials, hazardous materials and liquid wastes.
	Monitoring, inspection and reporting requirements.

Daily visual inspections of waste storage areas may be delegated to other on-site staff. All subcontractors will be responsible for ensuring that their work complies with the WMP through the project induction and contract engagement process.

9 Operational Waste Management

9.1 Targets for Resource Recovery

Targets for new development are expected to contribute to state-specific targets. The NSW *Waste and Sustainable Materials Strategy 2041* (DPIE, 2021) sets a target of 80% average recovery rate from all waste streams by 2030. Analysis by the NSW EPA (2022-2023) indicates that the commercial and industrial waste recovery rate in 2022-2023 was 51%.¹⁵

It is anticipated that the waste minimisation measures in the following sections will assist the Development to achieve this recycling rate. Waste reporting and audits can be used to determine the actual percentage of wastes that are being or have been recycled during operation.

9.2 Waste Quantities

9.2.1 Residential

The proposal is seeking approval for 44 apartments. Council requires that each apartment has 120 L of garbage capacity and 120 L of recycling capacity each week. Council also requires apartment buildings that produce garden organics to have 120 L of capacity for that material. In this case bins for garden organics are not required.

Collection of separated food waste has also been allowed for on the assumption that 50% of the garbage stream is food.

9.2.2 Retail

The SSDA seeks approval for one consolidated retail tenancy with an area of 121 m² on the ground floor. These are assumed to be a food and beverage retailers.

Council's waste generation rates for a food and beverage retailer are shown in Table 9 below.

Table 9 City of Sydney retail waste generation rates

Type	City of Sydney Classification	Garbage	Recycling	Food
		Litres per 100 m ² per day		
Food and beverage	Restaurant/eating	100	500	100

¹⁵ <https://www.epa.nsw.gov.au/your-environment/waste/waste-overview/waste-performance-data>

Total estimated retail waste generation is shown in Table 10 below.

Table 10 Retail waste quantity estimates

Type	GFA (m ²)	Garbage	Recycling	Food
Litres per week				
Ground Floor Retail	121	847	4,235	847

9.3 Waste Storage Areas

9.3.1 Residential

Table 11 shows the residential garbage and recycling capacity allowances and the waste storage area required.

Table 11 Residential waste space allowance

Per Week (L)	Garbage	2,640
	Recycling	5,280
	Food ¹⁶	2,640
Bin Capacity (L)	Garbage	1100
	Recycling	1100
	Food	240
Collection Frequency per Week	Garbage	1
	Recycling	1
	Food	1
Number of Bins	Garbage	3
	Recycling	5
	Food	11
Area required for bins (m ²)	Garbage	5.1
	Recycling	8.5
	Food	4.7
	Total bin space	18.3
	Total including manoeuvring	27.5
Bulky waste space required (m ²)		6.4
Total including bulky waste (m ²)		33.9

9.3.2 Retail

The calculations for the waste room size are based on the following:

- 240 L bins for garbage, food waste and recyclables
- Seven days operation per week.

¹⁶ Assumed to be 50% of the garbage stream

The calculations for the waste room area are shown in Table 12 below.

Table 12 Retail waste space allowance

Per Week (L)	Garbage	847
	Recycling	4,235
	FOGO	847
Bin Capacity (L)	Garbage	240
	Recycling	240
	FOGO	240
Collection Frequency per Week	Garbage	5
	Recycling	5
	FOGO	5
Number of Bins	Garbage	1
	Recycling	4
	FOGO	1
Area required for bins (m ²)	Garbage	0.4
	Recycling	1.7
	FOGO	0.4
	Total bin space	2.6
	Total including manoeuvring	3.8
Bulky waste space required (m ²)		4
Total including bulky waste (m ²)		7.8

9.3.3 Total waste storage areas

Residential and non-residential waste and recycling systems will be separate. Retail tenants will not be able to access residential waste and recycling storage areas or chutes. The collection point for residential and non-residential waste and recycling are shown in Figure 4.

The areas for waste storage is shown in Table 13 below.

Table 13 Total waste storage area allowance

Area	Area required (m ²)	Area provided
Residential waste	33.9	34.0
Retail waste	7.8	10.0
Total	41.7	44.0

The drawings in Figure 3 below show that two waste storage room with the areas shown in Table 13 have been allowed for and so are adequate for the proposed bin size options.

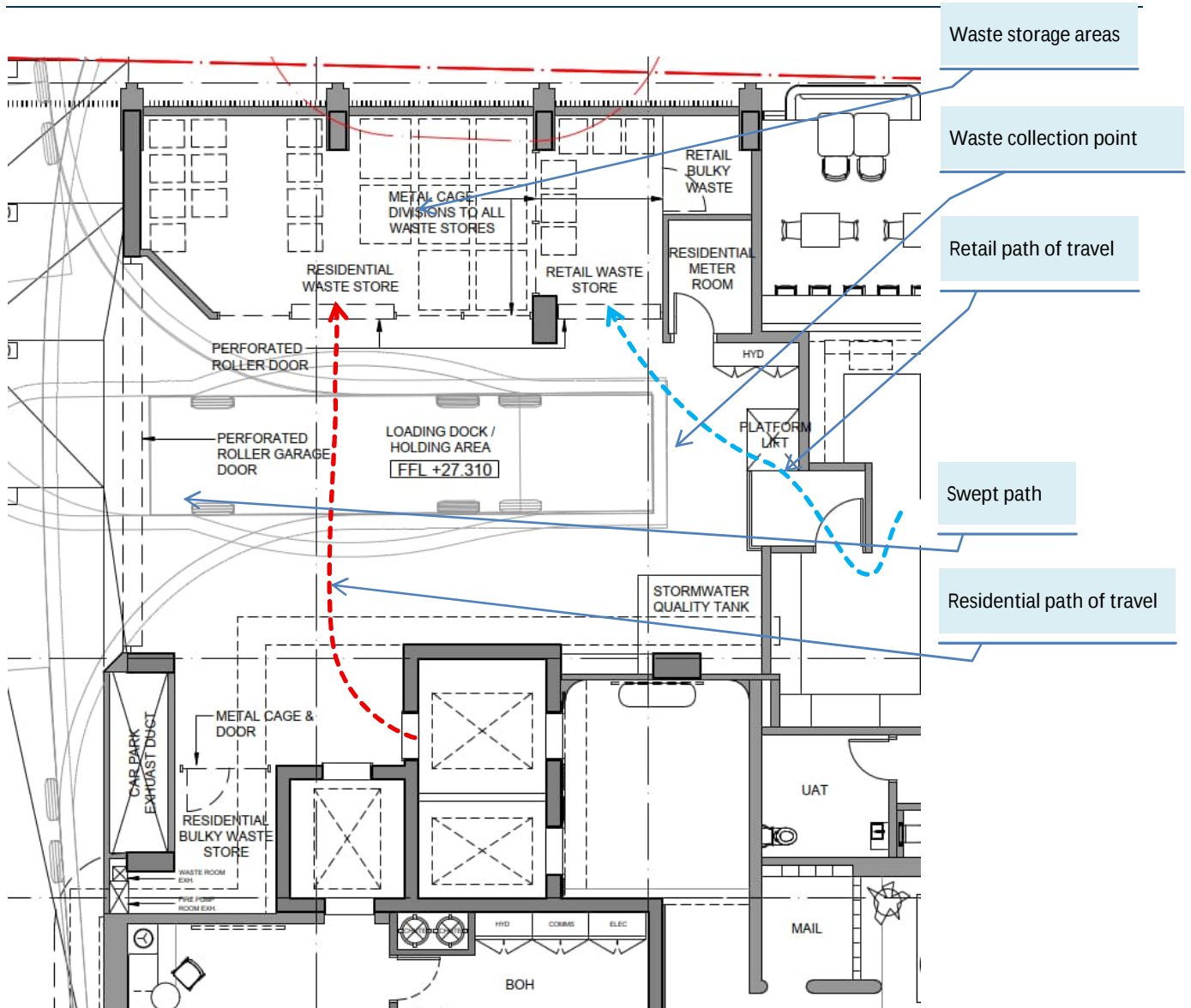


Figure 3 Waste bin storage areas

9.3.4 Garbage chutes and waste handling

The building will feature two chutes one for garbage and one for recyclables. Chute doors will be located in the common areas on each floor. Chutes will run through all floors to a room on the ground floor. Garbage and recyclables will be collected in 1,100 L bins located in the chute room at the base of the chute.

Collection vehicles will enter the development in a forward direction, then reverse into position to empty bins and then exit the development in a forward direction.

9.4 Management

9.4.1 Residential

Residents will take their recyclables and bulky to the waste storage room. Residents will have access to the recycling bins and bulky waste storage area but access to the chutes and garbage and food bins will be prevented.

Regular transfer of bins from the chute room to the storage rooms will be undertaken by cleaners or facilities managers. Cleaners or facilities management staff will change full 1,100 L bins in the chute rooms for empty ones. All bins will be stored in the residential waste storage area until collection from the loading dock.

Residents on Levels 1 and 2 will take their food waste to a FOGO disposal point on each floor. This is shown in Figure 4 below.

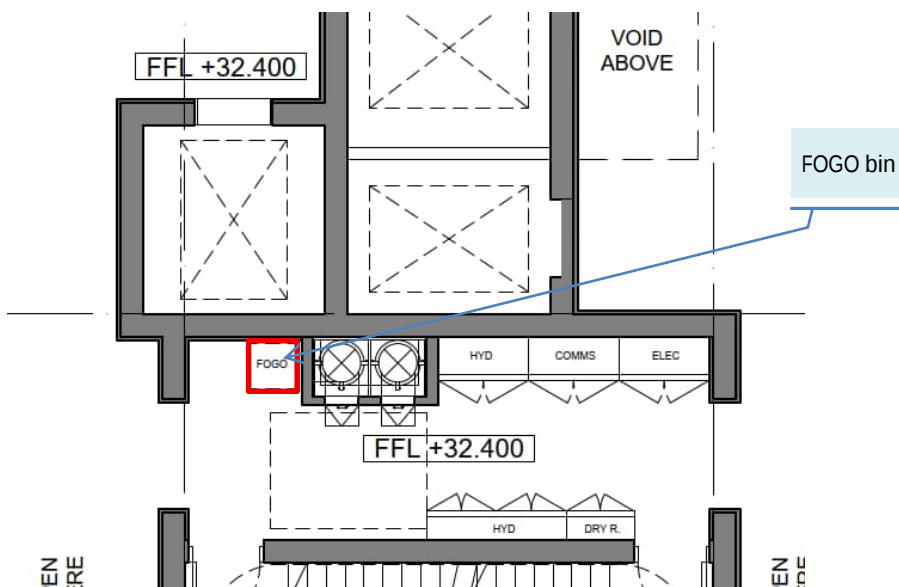


Figure 4 FOGO bin on Levels 1 and 2

The distance from the furthest residential door to the FOGO disposal point 19 m which is well within the 30 m requirement. Residents on other floors will take their food waste to the FOGO bin rooms on Basement 2 or Basement 3. The basement location is shown in Figure 5 below.

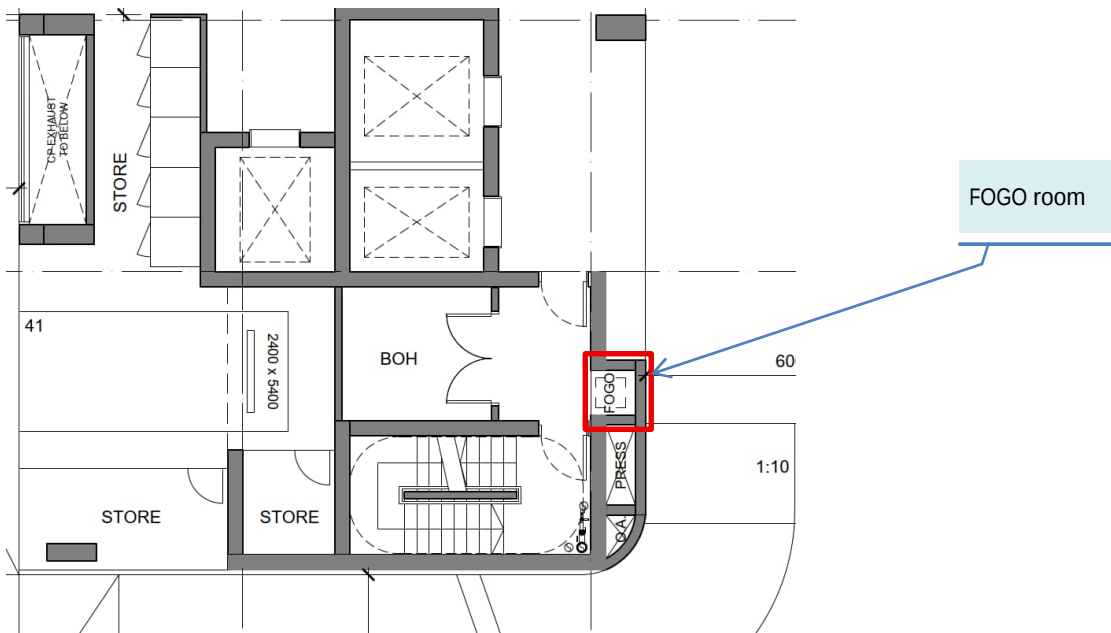


Figure 5 FOGO room on Basement 2 and Basement 3

The furthest any resident will have to walk to dispose of food waste is 2 m from the lift to the FOGO room. The building manager, affordable housing provider or their cleaners will manage the transfer of bins between these rooms and take the bins to the residential waste room for collection.

9.4.2 Retail

Using wheeled bins, trolleys, bags or other means, retail waste will be brought by the retailers directly to the retail waste storage area on the ground level through a passage at the rear of the retail area to the loading dock.

9.4.3 Cleaning, Maintenance and Security

Regular cleaning of waste and recycling storage areas will be undertaken by cleaners or facilities management staff. Facilities management staff will erect and maintain suitable signage in the waste storage areas. All waste storage areas will be secured and access only available to tenants, facilities managers and collection contractors.

9.4.4 Collection

Collection from the Development will be from the collection point shown in Figure 3. As specified by Council, entry and exit of a collection vehicle from a site will be in a forward direction.

Collection operators will enter the building and access the waste storage area. They will identify bins for collection and empty them into the collection vehicle after which they will be returned to the waste storage area.

10 Assessment and findings

The WMP establishes that during ongoing operation of the development, weekly collections for waste, recyclables and food from the residential dwellings will be provided once per week. This amounts to three vehicle movements per week.

The WMP also establishes that during ongoing retail operation of the development, a five-times-per-week collection of waste, recyclables and food, will be provided. This amounts to 15 vehicle movements per week.

The WMP also establishes that the amount of space allowed for residential and retail waste and recycling on-site is adequate to store the amounts projected to be generated.

11 Compliance with Council Requirements

The development and waste management plan complies with Council's requirements in the following ways:

- Waste collection and loading is in accordance with Council's Guidelines and the Sydney DCP 2012.
- The waste rooms and loading area are at grade within the building in a dedicated loading bay
- The waste collection and loading point is designed to allow waste collection and loading operations to occur on a level surface away from vehicle ramps; and provides sufficient side and vertical clearance to allow the lifting arc for automated bin lifters to remain clear of any walls or ceilings and all ducts, pipes and other services.
- Vehicle access for collection and loading provides for a 9.25 m Council garbage truck with a minimum vertical clearance of 4.0 metres clear of all ducts, pipes and other services.
- Collection vehicles can enter and exit the premises in a forward direction
- The waste management plan covers management of waste and recycling during construction and operational phases of the proposed development.
- Details are provided for how waste will be minimised at the development, estimations of quantities and types of waste and likely quantities of waste to be produced.
- The waste plan mentions state targets for recycling and reuse, nominates the roles responsible for waste management and their responsibilities during the construction and demolition phases.
- The waste management plan addresses the generation of waste from the occupants of the development and includes plans and drawings that show the location and space allocated to the waste and recycling management systems, the nominated waste collection point and identifies the path of access for users.
- It also provides details of the on-going management of the storage and collection of waste and recycling, including responsibility for cleaning, transfer of bins between storage areas and collection points, maintenance of signage, and security of storage areas.
- The development includes sufficient space in kitchens to separate food waste collection or compostable material for composting or worm farming.
- The development includes a rooms for the storage and management of retail and residential bulky waste and problem waste.

- A space is provided inside each dwelling for separate storage of at least two day's general waste, recyclables and compostable material.
- A centralised waste and recycling storage area is provided near the collection point with capacity to store all waste and recycling likely to be generated in the building in the period between normal collection times.
- The collection points and management systems for both residential and non-residential waste streams are described.
- The waste handling, storage and collection systems for residential and non-residential waste are separate and self-contained and have separate keys and locking systems.
- There is easy access from each waste and recycling storage area to the nominated collection point.
- Waste and recycling quantities have been calculated using the waste generation rates in Council's Guidelines.
- The proposed bins are those recommended by Council in its Guidelines and use the footprint dimensions show in the Guidelines.
- The collection point is wholly within the boundary of the development in an area that minimises any noise or odour.
- The area proposed for bulky waste has been calculated using the formula in Council's Guidelines.
- The collection point is level, free of obstructions and has sufficient height clearance to enable the safe mechanical pick-up and set down of bins.
- Council vehicles can collect waste, recycling and bulky items from residential developments on-site.
- All collection of non-residential waste will be conducted on-site.
- The path between the storage area and the collection point does not exceed a grade of 1:14 at any point.
- The waste and recycling storage area accommodate waste and recycling bins, bulky waste, problem waste and textile waste.
- The waste storage areas will have an approved Sydney Water floor waste drain. This will be shown in the hydraulic plans in design development after DA approval.
- A mechanical exhaust ventilation system in accordance with relevant Australian standards will be provided.
- Chutes are provided with an opening on each floor and designed to be used by all residents.
- Chutes terminate in a chute room and discharge directly into a waste or recycling container in a manner designed to avoid spillage and overflow.
- Residents will not be able to access the area where the chute discharges.
- Retail tenants cannot access residential waste and recycling storage areas or chutes.

12 Cumulative impacts

The projected quantities of waste and recyclables, 10.6 m³ from the residential dwellings and 5.9 m³ from the retail operations each per week, are insignificant compared to the quantities of waste and recyclables generated in Sydney every day.

As much as possible, allowance has been made for the separation of recyclables and food in the residential dwellings and retail operations, guided by the waste generation rates in Council's Guidelines. Allowance has also been made for the separation of bulky waste and textiles in the residential areas and it is possible that further separation and recovery of waste materials will be made during the operational phase of the development.

The total of 18 waste and recycling vehicle movements are anticipated to be required each week. These are insignificant compared to the number of vehicle movements every day in this dense residential area. Council's residential waste collection vehicles would be passing this property once per week whether collection was undertaken or not, so there is no increase in normal residential waste vehicle movements as a result of this development.

There are already many other retail and commercial premises in this part of Macleay Street and surrounding areas, from which waste is collected every day. There are dozens of hotels, restaurants, galleries, laundries, commercial offices, banks, florists and supermarkets visited by large and small vehicles delivering supplies as well as collecting waste every day. As a result, the number of waste collection vehicles travelling to and from the proposed development will have negligible impact.

13 Mitigation measures

As the waste-related impact of the development is zero or negligible, no mitigating measures are proposed beyond those for the separation of recyclables and food already detailed.

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