Operational Waste Management Plan

Proposed Mixed Use Development

At 7-15 Wren Street (Stage 2), Bowen Hills, QLD

On behalf of Wren Street Health Investments Pty Ltd

About TTM

For 30 years, we've been at the centre of the Australian development and infrastructure industry. Our unique combination of acoustics, data, traffic and waste services is fundamental to the success of any architectural or development project.

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T: (07) 3327 9500
F: (07) 3327 9501
E: ttmbris@ttmgroup.com.au

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No.	Author	Reviewed/Approved	Description	Date
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1 Introduction

1.1. Background

TTM Consulting has been engaged by Wren Street Health Investments Pty Ltd to prepare an OWMP to support the proposed mixed-use development located at 7-15 Wren Street, Bowen Hills, QLD. It is understood that a development application will be lodged with Brisbane City Council (BCC).

1.2. Scope

The content of this OWMP is intended to provide information in reverse order to the typical movement of waste streams from disposal to collection. The reverse order provides context for refuse collection, storage, and transfer. Information on refuse disposal and collection points is given for each use within the development. The recommendations in this report relate to the operational phase of the development only. Additional requirements for refuse management during or after demolition or construction phases are not included and require a dedicated plan. Items covered within the report are explained in Table 1.1. The key information for Council approval can be found in Section 2.

Table 1.1: Scope Items

Item	Explanation
Refuse streams	Identification of refuse streams & anticipated refuse volumes likely to be produced
Refuse separation	Recommendations for appropriate segregation methods for each refuse stream
Refuse collections	Assessment of refuse collection vehicle (RCV) access and manoeuvring
Refuse storage	Detailed analysis of refuse storage facilities and design
Refuse transfer	Assessment of refuse transfer between refuse storage and collections areas
Refuse disposal	Recommendations for refuse disposal within the development
Refuse management equipment	Identification of recommended and optional refuse management systems and equipment
Refuse management operations	Recommendations for operational efficiency and ongoing management, including refuse minimisation, tenant education and safety
Building design	Recommendations for design of refuse management facilities

Detailed information including site plans and drawings, specified and recommended refuse management equipment, common refuse signage as well as a list of terms and abbreviations are provided in the appendices.

The provisions outlined in this OWMP are considered appropriate for this type of development. It is noted that the refuse rooms are suitably sized to accommodate the refuse generated and number of bins proposed based on the storage and collection methods contained herein.

1.3. Regulatory Considerations

1.3.1. Council's Refuse Planning Scheme

The plan satisfies BCC's requirements by providing the following information:

- Type and quantity of refuse materials to be generated during the occupancy of the proposed site.
- Refuse collection, storage, transfer, and disposal arrangements during occupancy of the completed development.
- Recommended operational requirements for the operational phase of the development, and design requirements for the building and refuse management facilities.

As this development is a mixed-use site, TTM has referred to BCC requirements as outlined in the Refuse PSP under section 2, 3, 4 and 5 as these sections relate to Residential and Commercial Uses. Table 1.2 demonstrates the refuse management items addressed to align with the BCC's Refuse PSP requirements. This also meets the acceptable outcomes described with A061.1 and AO61.2 of the Centre or mixed use code.

Table 1.2: OWMP Compliance Checklist

BCC SC6.26 Refuse Planning Scheme Policy		
Item	**Requirement**	**Compliance / Comment**
Section 2 – General Requirements		
(1)	A written design proposal for waste collection is to be provided giving full details of the number of refuse bins and the storage and collection areas.	Details provided in this OWMP.
(2)	The collection of refuse is to be considered during the planning phase of development. This includes the physical manoeuvring area for the refuse collection vehicle and the bin storage areas and collection points. Access for other road users including pedestrians, cyclists, motorists and other service providers (e.g. postal) is to be maintained.	Considerations provided within this OWMP.
(3)	Uses with high trip-end densities provide a transport impact assessment report in accordance with the Transport, access, parking and servicing planning scheme policy with an assessment of refuse storage and collection included.	See Traffic Engineering documentation for details.
(4)	The waste collection system is to achieve the following outcomes: a. both the customer and service provider can access the bin storage area and collection point conveniently; b. the location, design and operation of the bin storage and collection system do not have unreasonable adverse acoustic, odour or visual impacts on the development, surrounding properties or the streetscape; c. the supply and servicing of either mobile garbage bins or bulk bins or refuse compactors complies with the requirements of this planning scheme policy.	Complies Complies – Collection service will be undertaken wholly on site. Complies
Section 3 - Access and Manoeuvrability		
(1)	If refuse collection is from an on-site bin storage area for multiple dwellings or from mobile garbage bins located throughout a development, the pavement/carriageway trafficked by the refuse collection vehicle is a minimum 6.5m wide.	Complies – 6.5m provided.
(2)	For detached dwellings on rear lots, pavements/carriageways trafficked by a refuse collection vehicle have a minimum width of 5.5m.	N/A

(3)	The pavement/carriageway has a minimum crossover width of 6.5m and is free from overhanging gardens or trees.	Complies
(4)	If the collection point is at the kerbside of the internal private road, it is preferred that mobile garbage bins are placed in front of each dwelling. If there are short dead-end streets off the main internal circulating road, sufficient level areas are to be provided beside the main internal circulating road (near the intersection) for a collection point for the mobile garbage bins required for those dwellings.	N/A
(5)	Turning and manoeuvring facilities for refuse collection vehicles are provided to meet design requirements for the vehicles identified in Table 3.	Complies – See Traffic Engineering documentation for details.
(6)	Subdivision layouts are to provide for the safe and efficient operation and manoeuvring of a side loading refuse collection vehicle. Layouts that require a refuse collection vehicle to reverse more than two truck lengths are to be avoided. If a temporary turnaround is provided, an easement in favour of BCC for this purpose will be required over any turning area located within private property. The temporary turnaround is to be constructed to a standard that is satisfactory to Council.	N/A
(7)	Adequate lift clearances are provided to overhanging trees and wires in accordance with Table 3.	Complies – Min 3.6m clearance is provided.
(8)	For MGB's, if it is necessary to wheel them to a collection point from a bin storage area: (a) the distance does not exceed 50m; (b) for a retirement facility, the distance does not to exceed 25m; (c) the mobile garbage bin transfer path is free of steps or other obstructions and does not exceed a 1:14 grade.	N/A
(9)	In instances where the gradient of the on-site manoeuvring area is greater than 5% (1:20), the pad that the collection vehicle will stand on while accessing refuse bins at the collection point, is to have a maximum gradient of 2% (1:50).	RCV will stand on a relatively flat 1:30 grade for servicing.
Section 4 - Residential Refuse Collection		
(1)	Residential development is to provide sufficient capacity for 240L of refuse and 240L of recycling per dwelling, allowing for one collection per week.	Complies
(2)	Residential development is to utilise kerbside collection where the locations for both the bin storage area and kerbside collection point can be appropriately accommodated in accordance with section 4.1.	N/A – Greater than 10 dwellings
(3)	a) On-site collection of bulk bins is provided for development comprising greater than 10 dwellings. b) the development comprises greater than 10 dwellings; or where the road verge is not properly shaped to the standard 1:50 gradient and a minimum of 2.5m wide or where the longitudinal road gradient is greater than 1:10.	Complies
(4)	Refuse and recycling collection for a mixed-use development ensures residential and commercial bins are stored separately with separate access to each.	Complies – Separate storage provided.
Section 4.1 - Kerbside Collection (MGB's) – Greater than 10 dwellings, Kerbside collection is not proposed		
Section 4.2 – On-site Collection (Bulk Bins) – This section applies to Residential services		
(1)	In accordance with section 4, development will avoid adverse impacts to residents, pedestrians and roads users by limiting the number of collections required per week while ensuring sufficient refuse and recycling capacity is provided to meet the needs of residents. Table 1 provides details of bulk bin volumes and the number of standard 240L kerbside bins their capacity is equivalent to. These are to be used when identifying the required refuse arrangements.	Complies – 3 services per week proposed as an accepted performance outcome.
(2)	The type of refuse service that is to be used (domestic or commercial) is identified, including whether the refuse collection vehicle is to be front loading, side loading or rear loading (sufficient height must be available).	Complies – Both domestic and commercial refuse serviced by rear loading RCV.

(3)	A written design proposal for waste collection is to be provided, giving full details of the proposed system, bin sizes, number of bins, storage and collection areas, frequency of collection and the refuse collection vehicle size. Table 2 provides the dimensions and types of bulk bins.	Complies
(4)	The manoeuvring of the refuse collection vehicle is undertaken in a safe and efficient manner, without detrimental impacts to pedestrian amenity or safety, Council or private infrastructure or the function of the road network.	Complies
(5)	For multiple dwelling developments fronting a local, neighbourhood, district or suburban road, the RCV may enter the site in a reverse gear in a single movement. An onsite dedicated pedestrian route is provided and is separate from the required vehicle manoeuvring area to ensure pedestrian safety is protected. The pedestrian route is to provide access from the site's frontage to the development and will have a minimum width of 1.2m. The refuse collection vehicle is to leave the site in a forward gear.	Complies – Site fronts a neighbourhood road. Reverse entry manouevre proposed.
(6)	For multiple dwellings developments fronting an arterial road, or where the refuse collection vehicle cannot reverse onto the site in a single movement, the refuse collection vehicle must enter and leave the site in a forward gear.	N/A
(7)	All entry and exit points are of a width and design that allows for sufficient ingress and egress for the refuse collection vehicle including a 6.5m crossover.	Complies – 6.5m provided.
(8)	To maximise safety, the distance required for refuse collection vehicles to reverse on-site is minimised. Where on-site turnaround of the refuse vehicle cannot be achieved, the bin storage area and collection point is located within 30m of the street frontage.	Complies – minimal reversing required.
(9)	Access for a refuse collection vehicle to the collection point is maintained at all times.	Complies
(10)	The required vertical and horizontal clearances are provided for the service to operate safely and efficiently. Operational clearance dimensions are shown in Table 3 for various types of collection arrangements.	Complies
(11)	Bulk bins of 1.1m³ or less are positioned so that collection personnel do not have to move them more than 5m. If a gradient is evident, speed bumps are provided to stop bulk bins from rolling away from the collection point.	Complies
(12)	Bulk bins of 1.5m³ or more are positioned so that front-lift refuse vehicles can drive directly to the container without relocating the bulk bin. If this cannot be achieved due to physical constraints, then the bulk bins are not moved more than 3m from the storage to the collection point.	N/A – 1.1m³ bins proposed.
(13)	The storage areas for bulk bins are: (a) contained in an enclosure or room of sufficient size for the bulk bin quantity required; (b) easily accessible for residents and for the required servicing of bins; (c) screened from neighbouring properties for odour, amenity and noise; (d) protected from the environment; (e) provided with natural or temperature-controlled ventilation if in an enclosed room; (f) kept clear of obstructions, such as fixed bay separators, that impede the ability to change from existing bin sizes or which otherwise limit future refuse collection options; (g) kept clear of other amenities such as air-conditioning units, hot water systems or electrical hubs where located in a bin room.	Complies
(14)	If a refuse or recycling chute is provided: (a) it is to be constructed to allow refuse to fall into the centre of the bin; (b) it is to have a door / lid to ensure clean changeover of bins; (c) separate chutes and bulk bins are to be used for each waste stream; (d) the room containing the chute and bin or compactor excludes all but authorised personnel.	Complies
(15)	Environmental best practices may also include the installation of a trapped waste connection to the sewer system and providing a roof canopy over the designated storage area.	Complies

Section 5 – Non-Residential Refuse Collection		
(1)	The requirements for refuse bins or refuse compactors for non-residential development will be assessed case by case, based on the type and amount of waste generated by the development, which is dependent on the operational activities of the development.	OWMP – Provides the details for assessment.
(2)	Sufficient information is provided to demonstrate that refuse collection can occur in an efficient and safe manner on site without adverse impact on amenity (acoustic, odour or visual impacts) and pedestrian and vehicular traffic.	Complies – Services are performed in the designated loading area.
(3)	This information may include evidence from a refuse collection contractor to demonstrate that collection will occur outside normal service/delivery or business times, where seeking permission to allow a refuse collection vehicle to use service bays or parking spaces on the site for access.	N/A – Commercial contractor engagement hasn't been completed at this stage as this site is undergoing development assessment.
(4)	If proposing to use clearances less than the minimum vertical clearances in Table 3, a written confirmation from the proposed waste collection contractor giving full details of the proposed system, bin sizes, number of bins, frequency of collection and the refuse collection vehicle size is to be provided.	N/A – Full size BCC spec RCV used for design purposes.
(5)	If the gross floor area of a freestanding food and drink outlet, shop or office is less than 200sqm a dedicated service bay is not required for a refuse collection vehicle.	N/A
(6)	Provision is made for on-site refuse collection for Short-term accommodation if an accommodation hotel or motel.	N/A
(7)	Where disposal of industrial or commercial liquid waste by discharge to a road tanker, the road tanker is to be wholly on-site during collection.	N/A
(8)	The storage areas for industrial bins are to be either within a building or enclosure.	Complies – Bins are stored within the building and in an enclosure.

1.4. Site Location

The site is located at 7-15 Wren Street, Bowen Hills, QLD as shown in Figure 1.1.

The site has a dual road frontage on Wren Street and Campbell Street, identified as a District road and a suburban road respectively on BCC's Road Hierarchy.

The RCV will enter the property via a Wren Street.

Figure 1.1: Site Location

Source: Nearmaps, 2023

1.5. Development Summary

Table 1.3 provides a summary of the development, including the refuse infrastructure areas as context for the volume information provided in Section 2.

Table 1.3: Development Summary

Level	Description	Measure Building 1*
Lower Ground Level	Retail tenancy	79m^2 GFA
Ground Level	Retail tenancy	339m^2 GFA
	Concierge	13m^2 GFA
Mezzanine	Tenancy	241m^2 GFA
	Office	49 m^2 GFA
Level 1	Medical tenancy	1285m^2 GFA
Level 2	Medical tenancy	1285m^2 GFA
Level 3	Medical tenancy	1285m^2 GFA
Level 4	Medical tenancy	1285m^2 GFA
Level 5-7	Carpark	N/A
Level 8-29	Apartments + Carpark	240 Units
Level 30	Apartment Communal Bar	N/A – Accounted for in refuse provision for apartments
	Apartment Communal Kitchen	
Total		**240 Residential Units** **5,279 m^2 GFA of non-residential space**

* Areas and unit numbers relevant for refuse calculations only.

2 Refuse Management

This section provides the detailed refuse calculations and describes the arrangements for the collection, storage, transfer, and disposal of refuse within the development. This includes the associated bin quantities, storage capacities, equipment details, collection frequencies and site access details.

2.1. Refuse Calculations

The generation rates and service frequency used for the calculation of residential and non-residential refuse produced have been applied based on rates prescribed by Brisbane City Council to achieve compliance. It should be noted that these rates are standardised generation rates and not site specific however, give an estimation on the maximum potential waste generation. Site specific auditing is recommended once operational to establish actual refuse generation of this site and enable refinement of waste strategy and refuse equipment utilised.

A residential collection frequency of 3 times per week has been established for both general waste and commingled recycling in line with BCC's 'Residential (on-site bulk) service frequency and compaction requirement' guidelines.

A non-residential collection frequency of 3 days per week has been established to be compliant with BCCs un-documented maximum 'low-frequency servicing' requirement. TTM recommend a service frequency of 6 collections per fortnight (3 days between services) where food waste is generated to limit amenity impacts from odour and discourage vermin.

Table 2.1: BCC Provided Generation Rates

Type	Measure	Days of Operation	General Waste	Food Waste	Commingled Recycling
Residential	L / Unit / Week	N/A	240	-	240
Retail Food and Beverage > 150m^2	L / 100m^2 / Day	7	462	198	200
Retail Food and Beverage < 150m^2	L / 100m^2 / Day	7	210	90	200
Medical Centers	L / 100m^2 / Day	7	10	-	20
Bar	L / 100m^2 / Day	7	50	-	50
Office	L / 100m^2 / Day	7	50	-	50

Table 2.2: Residential Refuse Calculations

Building 1				
Description	Quantity	Measure	General Waste L/Week	Comingle Recycling L/Week
Residential Apartments	240	Unit	57,600	57,600
Volumes per Day (L / Day)			2,743 (Compacted at a ratio of 3:1)	8,229
Volumes per Collection (L / Collection)			6,400	19,200
Collection and Equipment Details	Collections per Week		3	3
	Storage Capacity		3 Days	3 Days
	Equipment Size		1100L	1100L
	Equipment Quantity Required		6	18

Table 2.3: Non-residential Refuse Calculations

Description	Area	Measure	General Waste L/Week	Food Waste L/Week	Comingle Recycling L/Week
Food and Beverage <150m²	79	GFA (m²)	1,161	498	1,106
Food and Beverage >150m²	580	GFA (m²)	18,757	8,093	8,120
Medical Tenancy	4,608	GFA (m²)	3,598	0	7,196
Office	49	GFA (m²)	34	0	69
Total Weekly Volumes (L / Week)			**7,850 (Compacted at a ratio of 3:1)**	**8,537**	**16,491**
Volumes per Collection (L / Collection)			**3,364**	**3,659**	**7,067**
Collection and Equipment Details	Collections per Week		3	3	3
	Storage Capacity		3 Days	3 Days	3 Days
	Equipment Size		1100L	660L	1100L
	Equipment Quantity Required		3	6	6

Table 2.4: Refuse collection Schedule

Residential Refuse Collections		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Collections per Week
General Waste	Collection Days		✓		✓		✓		3
	Vehicle Type		REL RCV		REL RCV		REL RCV		
Commingled Recycling	Collection Days		✓		✓		✓		3
	Vehicle Type		REL RCV		REL RCV		REL RCV		
Total Entries per Week			**2**		**2**		**2**		**6**

Non-Residential Refuse Collections		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Collections per Week
General Waste	Collection Days	✓		✓		✓			3
	Vehicle Type	REL RCV		REL RCV		REL RCV			
Commingled Recycling	Collection Days	✓		✓		✓			3
	Vehicle Type	REL RCV		REL RCV		REL RCV			
Organics	Collection Days	✓		✓		✓			3
	Vehicle Type	REL RCV		REL RCV		REL RCV			
Medical Waste	Collection Days	As required							-
	Vehicle Type								
Total Entries per Week		**3**		**3**		**3**			**6**

2.2. Refuse Bins and Equipment Requirements

Table 2.4 and Table 2.5 below outlines the number of bins and additional equipment required for the development. As waste volumes may vary according to the development occupants' attitudes to waste disposal and recycling, bin numbers and sizes may need to be altered to suit the building operation. The table shows the maximum number of bins and equipment expected.

Table 2.5: Bin Requirements

Component	Refuse Stream	Bin / Equipment - Type or Size	Bins Required
Residential (building 1)	General Waste	1100L	6 + 1 Spare
	Commingled Recycling	1100L	18 + 1 Spare
Non-residential	General Waste	1100L	3
	Commingled Recycling	1100L	6
	Food waste	660L	6
	Medical Waste	240L	8 (Space for 8 Bins for medical Tenancies)

Table 2.6: Additional Equipment

Component	Description	Quantity	Notes - See *Appendix B.1* for details
Residential	Refuse Chutes for General waste and recycling	2	Two chutes located through the entire building (ONLY FOR RESIDENTIAL USE) – Recycling Chute to be diverted on the mezzanine level to reach bins on conveyor
	Under Chute Bin compactor (General Waste)	1	A bin Compactor located under the waste bin chute (Above the General waste bin) to allow for a minimum compaction ratio of 3:1 of General waste
	Two-bin linear conveyor (recycling)	1	
Non-residential	Refuse / Cleaner Trolleys	TBD	
	Bin press (General waste)	1	Bin press to reduce volume of General waste bins

2.3. Refuse Storage

All refuse will be stored within stream separated bulk bins within the refuse rooms located on the ground level (Residential Refuse) and the Mezzanine Level (Commercial and Medical waste). Separate refuse storage rooms are provided for both residential and non-residential uses with access to be limited and controlled to each refuse room via the restricted distribution of door keys/fob or swipe cards and signage.

The residential refuse enclosure is located directly below the refuse chutes penetration with offsets on the mezzanine Level to allow for the chutes to reach the mobile bins on a linear conveyor and splitting the refuse into general waste and recycling. The refuse bin storage areas will be accessible only to building management and authorised persons. The cleaning staff will need to swap out the bins under the chutes as required. The chute, conveyor and compactor area will be fenced off from the rest of the room with only cleaners having access.

The refuse storage area may be accessed directly by cleaning staff and building management, but not to residents, via the lift lobby for the movement of bins using bin tugs to the collection area.

The non-residential refuse room is located in a serviceable, efficient and operationally convenient location on the mezzanine Level and close proximity to the elevators leading to the loading dock area on the ground level.

The combined refuse rooms are sufficiently sized to accommodate all of the bins and equipment required as outlined in Table 2.4 and Table 2.5.

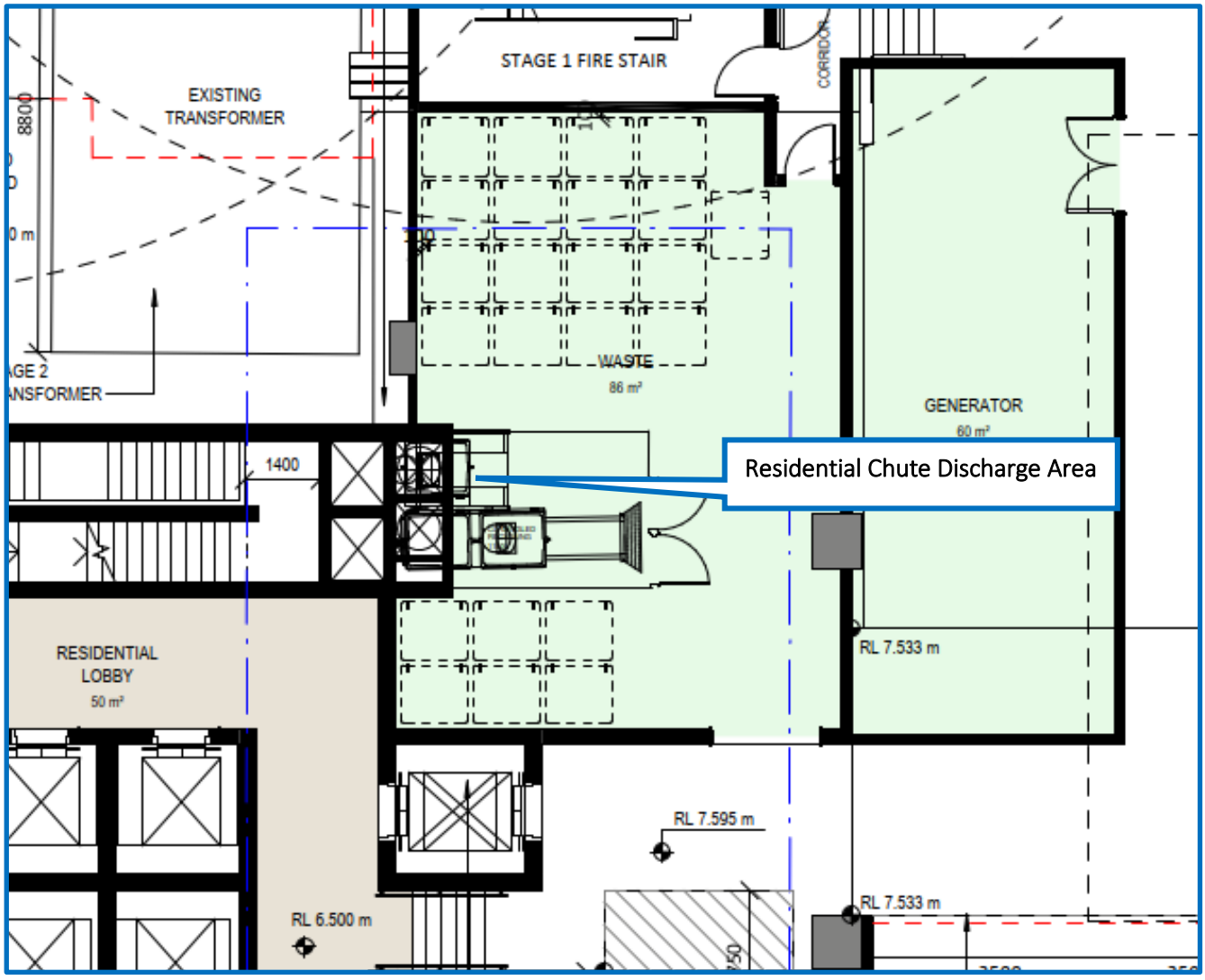
Figure 2.1 depicts a potential layout of each of the refuse storage areas.

The refuse storage areas also have the following features in order to minimise odours, deter vermin, protect surrounding areas, and make it a user-friendly and safer area:

- Doors wide enough to allow for the easy removal of the largest container to be stored.
- Adequate artificial lighting.
- Not located adjacent to or within any habitable portion of a building or place used in connection with food preparation (including food storage).
- Permits unobstructed access for removal of containers to the service point.
- Does not have any steps or lips.
- Is enclosed on all sides except for the entrance to ensure bins are not visible from a public place, neighbouring properties, passing vehicles or pedestrian traffic external to the site.
- Is of sufficient size to accommodate the bins with sufficient clearance around the combined bin area.
- Is positioned away from entrances to shops or residential premises.
- The height of the bin storage area allows for waste bins to be opened and closed.

Additional design features include:

- The floors to be graded to fall to a drainage point.
- Drainage points connected to sewer in accordance with trade waste requirements.
- A hose cock provided inside the room for cleaning bins and the rooms.
- The walls, ceilings, floors, and equipment are to be designed and constructed of impervious material with a smooth finish to allow for easy cleaning.
- Is designed to minimise their visual impact on the surrounding areas.
- Is naturally or mechanically ventilated.



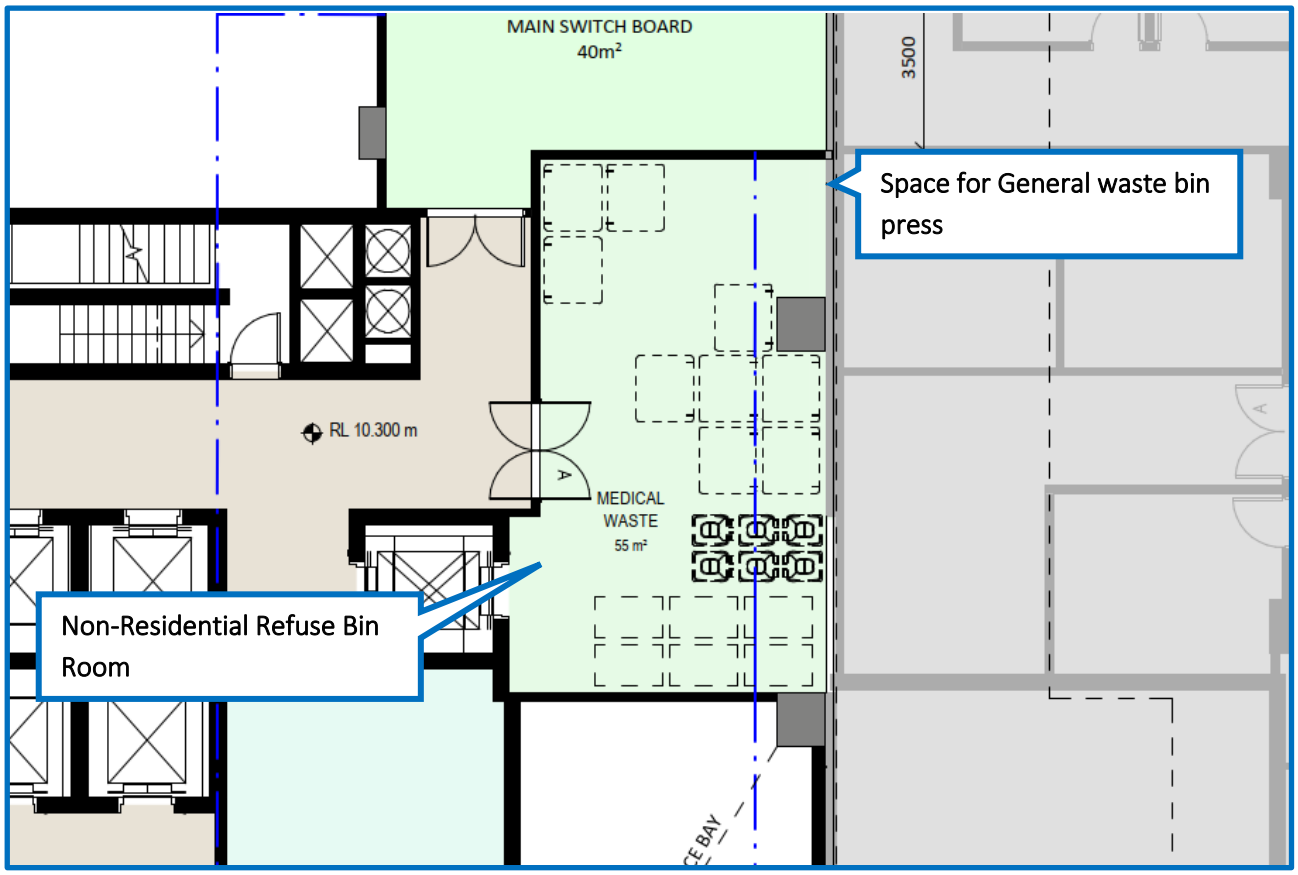


Figure 2.1: Residential and Non-residential Refuse Room Layouts

Source: Thomason Adsett, Project: Wren Street Stage 2, 7-15 Wren Street, Bowen Hills, QLD, Drawing: Site Plan – Ground level and Mezzanine Level, Rev 12, Dated: 27/11/23

2.4. Refuse Transfer

Building management or caretaker will be responsible for the rotation of bins under each refuse chute when deemed necessary. Additionally, they will also be responsible for movement/transfer of the refuse bins from the non-residential bin storage rooms to the temporary bin storage area at the loading dock (Seen in figure 2.2). They will need to transfer the bins to the ground level via the elevators, to the temporary bin enclosure prior to servicing. The residential refuse can be collected directly from the refuse room which is less than 5m from the back of the truck.

The collecting Council waste contractor will collect the bins directly from the residential refuse room, while the Private contractor will collect the non-residential refuse bins from the temporary bin presentation area on ground level and return after servicing. A transfer distance of less than 5m from the bin storage area will be provided. The residential waste collection will take place with council collection, while non-residential waste will be collected by a private waste contractor.

All medical waste collection will be done on an ad-hoc basis and will be collected directly from the non-residential refuse storage room as a swap out service (Full bins for empties).

Building staff / Cleaners will be responsible for cleaning bins after service as required.

The refuse transfer path has been designed to allow for:

- The bins to be transferred via hard stand pathway.
- Allows bins to be easily manoeuvred.
- Does not impeded traffic flow.
- Does not extend through any habitable parts of a building or food premises.
- Does not have any lips, stairs, or steps for bins to be manoeuvred easily.

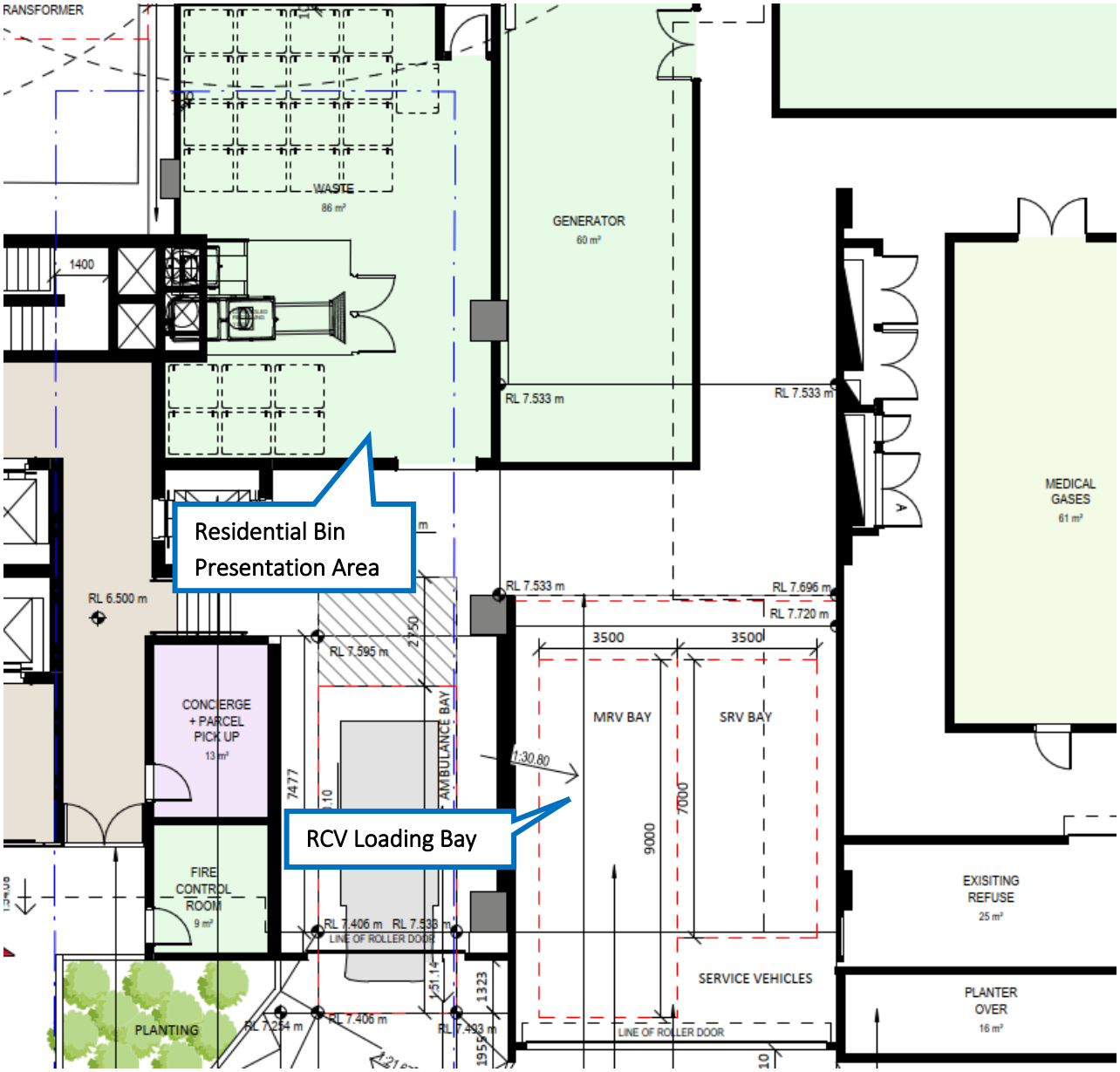


Figure 2.2: Bin servicing area - Residential

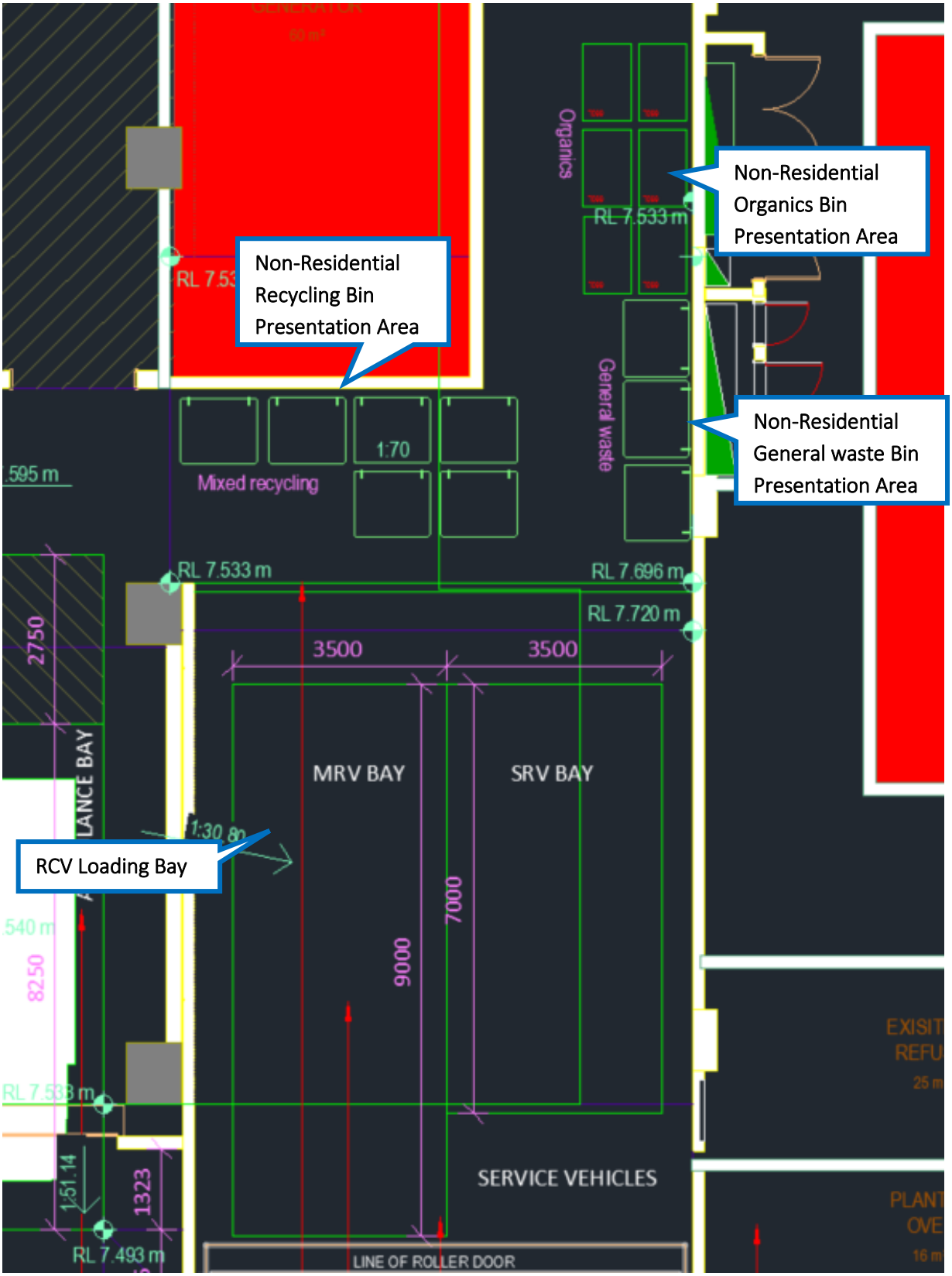


Figure 2.3: Bin servicing area – Non-Residential General Waste and Mixed Recycling

2.5. RCV Arrangements and Bin Servicing Areas

All refuse will be collected by Rear Loading RCV. Council's appointed collecting contractor will be responsible for the collection of all residential refuse. All non-residential refuse will be collected by private contractor. However, the non-residential tenancy operators may elect to use engage Council's appointed collecting contractor and align service days to reduce vehicle movements.

Residential waste and non-residential waste will be collected on separate days.

RCV's will perform a single reverse manoeuvre into the designated loading area via the driveway crossover on Nuttall Street, recognised as a neighbourhood road on BCC's Road Hierarchy. Once the collection service has been performed, the RCV will exit site in a forward gear onto Nuttall Street.

Further details on vehicle access and on-site manoeuvring can be found in the traffic report.

The bin servicing area / loading bay has been designed with the following features:

- Has sufficient access and clearance for the waste and recycling collection vehicles to service the bins, including no overhead obstructions.
- Allows bins to be serviced safely while minimising the impediment to vehicle movements during servicing.
- Is clearly separated from car parking bays, footpaths, and pedestrian access.
- Is devoid of stairs, lips or ramps and allows bins to be manoeuvred easily.
- Does not block the entry and exit to the property.
- Is over 5m from any door, window or fresh air intake within the development or any adjoining site.
- Is positioned away from entrances to shops or residential premises.

Residential refuse and non-residential refuse will be collected on alternate days to ensure available space within the refuse bin collection area.

For RCV swept paths, please refer to TTM Traffic report for 7-15 Wren Street.

3 Recommended Operational Requirements

3.1. Operational Equipment Summary

The tables in this section summarise general recommended disposal arrangements for frequently generated and infrequently generated refuse for each use within the development. Section 3.1.1 and 3.1.2 describes the frequently generated refuse streams that are generated in high volumes for any given period require significant capacity for storage prior to collections. Section 3.1.3 describes infrequently generated refuse streams that are generated in relatively low volumes, and where minimal provisions for storage can be easily managed by collection frequency.

3.1.1 Residential Refuse

Bins will be provided for each residence to store at least one days' worth of generated refuse. Each day or as required, all refuse will be transferred by residents to the refuse chute access hoppers accessible on each residential level, in both buildings, see Figure 3.1 below for typical access hopper layout. The refuse chute will discharge directly into general waste bulk bin or recycling bulk bin stored in the refuse room. The chutes have appropriate offsets to allow bins to fit underneath chutes as well as diverters to allow for residents to be able to segregate their waste between general waste and recycling.

Bins should also be placed in communal or resident amenity areas with building management to assist with the disposal of waste from communal areas. Further details are provided in Table 3.1.

Figure 3.1 Typical Dual Chute Access Hopper – Resident Accessible Only

Source: DKO Architecture (QLD) Pty Ltd, Project Locale: 14 Lytton Rd, Bulimba, Drawing: Level 03 Plan

Table 3.1: Disposal of Residential Waste

Refuse Stream	Disposal Details
WASTE	
General Waste	Waste bins should always be lined with bags and the bags tied before removal. Operationally, general waste should weigh approximately 3 kg or less and does not exceed the dimensions of the Waste Chutes. **Residential Tenancies** Residents will have receptacles within their individual units for collection and storage of at least one day of general waste. Bins are typically placed under the kitchen sink and accompanied by a commingled recycling bin in order to facilitate separation of general waste and recycling. **Communal Spaces** General waste from the communal spaces (e.g. recreational areas) may include small quantities of food waste, food packaging etc. General waste bins of an appropriate size to accommodate at least one day of waste should be located within the respective areas. A recycling bin should always accompany a general waste bin to facilitate stream separation. Additional bins may be provided for special events.
Organic (Food) Waste	While BCC does not currently offer a food organics collection service to multiple unit dwellings, commercial options are available at additional cost. Separating organic or food waste from general waste is recommended to reduce the total amount of general waste produced. Additionally, apartment style equipment such as organic household composter or worm farms are available for use where practical and space allows. Composting should be arranged with the building management.
RECYCLING	
Commercial Comingled, including • glass • aluminum • steel cans • tins • cardboard • semi rigid plastics	Items for recycling must not be bagged and disposed in loose form. This can be done by decanting the materials from the individual receptacles into the refuse chute access hopper. Residents will directly access the refuse room for the disposal of oversized recyclables not suitable chute disposal. **Residential Tenancies** Residents will have receptacles within their individual units for collection and storage of at least one day of recycling. Recycling bins are typically placed under the kitchen sink next to the general waste bin. Recycling bins will usually be used for all recycling materials (commingled recycling). However, residents are encouraged to make use of the container refund scheme and separate eligible containers from the commingled recycling material (see below). **Communal Spaces** Recycling from the communal spaces (e.g. residential recreation areas) may consist of recyclable drink containers, food packaging, (clean) paper, cardboard etc. Recycling bins should be located next to waste bins within this area. Extra bins may be provided for special events.
	Container deposit / refund schemes are currently in place in Queensland. Various models exist including bottle return facilities and (automated) reverse vending machines. Occupants should be encouraged to separate containers that qualify for the schemes from the waste or recycling streams and send back to a return point. Storage space or dedicated bins within the units or refuse rooms can be provided.

3.1.2. Non-Residential Refuse

Bins will be provided for each tenancy. After each day of operation or as required, refuse will be transferred by staff / cleaners to the non-residential refuse room and decanted into the appropriate bulk bins. Further details are provided in Table 3.2.

Table 3.2: Disposal of Non-Residential Waste

Refuse Stream	Disposal Details
WASTE	
General Waste	Waste bins should always be lined with bags and the bags tied before removal. General waste from food and beverage outlets such as restaurants, takeaways, cafés will be captured by bins typically ranging in size from 30L to 80L that will be placed within the kitchen or back-of-house area to meet the design or layout criteria of the café or restaurant operators. Tenancies will have a sufficient quantity of receptacles within the tenancy for collection and storage of at least one day of general waste.
Organic (Food) Waste	Separating organic or food waste from general waste is recommended to reduce the total amount of general waste produced. Caddy bins or bins no larger than 60L should be used in retail and food and beverage outlets, for disposal of food waste if required. The bins are then transferred to the refuse room for collection. The content is then decanted in bulk bins no larger than 660L bins provided within the refuse room. A purpose-built trolley should be used to transfer caddy bins.
Cooking Oil Waste	Waste oils should be disposed separately from general waste if large quantities are produced (e.g. in food and beverage outlets). All waste liquids / oils (e.g. from commercial kitchens) should be separated and stored in clearly labelled containers. Typically, waste oils are removed during delivery of new oils by the supplying contractor. Bunded areas or bunded plastic pallets should be supplied for the storage of liquid waste / oils and stored in a levelled area (e.g. refuse room). Bunded pallets can be stored indoors or purpose built for outdoors.
RECYCLING	
Commercial Comingled, including • glass • aluminum • steel cans • tins • cardboard • semi rigid plastics	Items for recycling must not be bagged and disposed in loose form. This can be done by decanting the materials from the individual receptacles into the provided bulk bins. Commingled recycling from food and beverage outlets such as restaurants, takeaways, cafés can be captured by bins up to 120L that will be placed within the kitchen or back-of-house area to meet the design or layout criteria of the café or restaurant operators. Tenancies will have a sufficient quantity of receptacles within each tenancy for collection and storage of at least one day of recycling.
	Container deposit / refund schemes are currently in place in Queensland. Various models exist including bottle return facilities and (automated) reverse vending machines. Occupants should be encouraged to separate containers that qualify for the schemes from the waste or recycling streams and send back to a return point. Storage space or dedicated bins within the relevant tenancies can be provided.

Table 3.3 Disposal of Hospital waste

Frequently Generated Waste Streams – Hospital	
Refuse Stream	**Disposal Details**
WASTE	
All Clinical Waste and Waste related to Hospital Operations	**Disposal and Transfer** Medical / clinical / hygiene waste should be disposed of within clinical waste containers or bins stored on each floor or within the staff areas / nurse stations / examination rooms etc. Small transferable clinical and sharps containers may be placed in examination rooms or staff only areas. Larger clinical waste bins can be stored within the refuse room or within storerooms internal to the tenancy. Specific receptacles need to be provided for specific uses and types of clinical waste. Transfer Clinical waste bins will be transferred by staff / cleaners to the refuse room for storage prior to collection. Alternatively, clinical waste bins will be collected directly by a specialist waste contractor who will provide a "wheel-out wheel-back" service whereby the bins are collected from where they are stored. **Clinical waste will need to be divided into general medical waste, cytotoxic waste and Anatomy waste**
General Waste	**Disposal and Transfer** There will be receptacles within the health care facility for collection and storage of at least one day of general waste. Bins should be placed according to the operational requirements of the facility. There should be bins in back-of-house / staff areas, in patient rooms, examination / treatment rooms as well as in the public access areas. Waste bins should be accompanied by a recycling bin (commingled recycling or bins for cardboard, paper, plastics, glass etc.) in order to facilitate separation of general waste and recycling. Waste bins should always be lined with bags and the bags tied before removal. Transfer Bins are typically collected by staff / cleaners in the course of their normal duties and the bagged and tied waste decanted into larger bins or bags connected to cleaners' trolleys. The waste material is then transferred at the end of the shift with other items. Depending on the individual operations of the facility, waste transfer may be two staged to included disposal of material into 120 L or 240 L bins within a cleaner's room and subsequently transferred to the (bulk) bins in the refuse rooms That are then disposed of in the shared compactor, or the 120L to 240L bins could also be used to dispose of waste directly into the compactor. Direct disposal of waste can also occur where waste chutes and associated access is provided to the individual floor levels. Waste chutes are not typically available to the patients of the public, but housed within a cleaner's room, back of house area or locked compartment.
Organic (Food) Waste	Smaller food waste bins up to 80L can be used within the kitchen for food preparation and uneaten / returned food wastes. The bins may then be decanted into the 660L bin located in the waste room.
Cooking Oil Waste (If reqd.)	Old Cooking Oil can be placed into supplier drums and collected as an exchange for delivered oils. The waste oil can be kept within the Kitchen or placed on a bunded pallet within the waste room
RECYCLING	
Comingled Recycling including	**Disposal and Transfer** There will be receptacles within health care facility for collection and storage of at least one day of recycling. Recycling bins are typically placed next to the general waste bins.

Frequently Generated Waste Streams – Hospital	
Refuse Stream	**Disposal Details**
Glass, aluminium, steel cans, tins, paper, small cardboard, semi rigid plastics	Recycling bins will usually be used for all recycling materials (comingled recycling). However, cardboard, paper, plastics, glass etc. can be collection separately if large quantities are produced. Transfer Bins are typically collected by staff / cleaners in the course of their normal duties and decanted in loose form into larger bins or bags connected to cleaners' trolleys. The comingled recycling material is then transferred at the end of the shift with other items. Items for recycling must not be bagged and disposed in loose form. Depending on the individual operations of the facility, transfer may be two staged to included disposal of material into 120 L or 240 L bins within a cleaner's room and subsequently transferred to the (bulk) bins in the refuse rooms. Direct disposal of comingled recycling can occur where recycling chutes and associated access is provided to the individual floor levels. Waste chutes are not typically available to the patients of the public, but housed within a cleaner's room, back of house area or locked compartment.
Cardboard	Goods or supplies should be decanted from bulk packaging as it is delivered, and the bulky material placed directly into bins within the refuse room that are then disposed of in the shared cardboard compactor.
Secure Destruction Paper	**Disposal and Transfer** All secure destruction paper from within the medical departments and wards and their offices will be captured in 240L wheelie bins. The bins will be collected, emptied and returned by private contractors.
PVC	PVC is a significant waste stream within hospitals. Plastics can account for up to a third of a hospital's general waste. It is estimated that of all the plastic generated by a hospital, approximately one quarter is PVC medical products such as intravenous bags, face masks and oxygen tubes. **Disposal and Transfer** Separate caddies (Wall mounted or standalone) must be provided throughout the hospital for the disposal of PVC material, which can then be transferred by the cleaning staff to the PVC bulk bins provided in the bin store room.

3.1.2 Infrequent Waste

Table 3.3: Disposal of Infrequently Generated Waste

Refuse Stream	Disposal Details
Green Waste	Green waste is typically produced on an ad hoc and largely weather dependent basis from deep and containerised plantings. Green waste is usually removed by the designated maintenance contractor. The engaged contractor will be required to send this material to a composting or resource recovery facility rather than to a landfill. Interim storage is not provided.
Hard Waste / Bulky Goods	Hard waste may be stored in limited volumes within the refuse room. Alternatively, collections can be coordinated, and hard waste / bulky goods moved to the loading or a designated area for removal prior to collection. When storing bulky goods in a loading area, it is recommended that items are placed on a pallet for efficient loading via a pallet jack or forklift onto the RCV.
Hazardous Waste (paints, batteries and cartridges) **Electronic Waste**	Where applicable, occupants usually make their own arrangements for the disposal of specialised or hazardous waste and electronic waste such as recycling of toner cartridges and electronic waste. Please refer to local and QLD government websites for disposal options. Batteries must be disposed of separately and never in the general waste or commingled recycling bins. A communal disposal point will be provided by site management and located in the residential lobby. It is an expectation that the building management assist with disposal of all other hazardous or liquid waste and any paint or chemicals as required and requested. Hazardous waste must be handled with due care, separated and securely stored for collection by a specialist waste contractor. Please refer to local and QLD government websites for further information.

3.2. On-going Management

The tables below are not assessable as part of the development application instead for the demonstration of required tasks during the operational phase of the development and therefore intentionally left blank.

Responsibilities have to be assigned for all on-going refuse management operations. This is generally done by a building manager, staff and / or cleaners. The following lists (Table 3.4 to Table 3.10) are designed to help managing responsibilities and monitor the refuse operations in order to maintain efficient services and a safe environment.

Table 3.4: General Refuse Management Checklist

Objectives	Checked	Remarks
Organise temporary additional bins or collections to cater for additional waste generated during initial resident move in.		
Organising of weekly pick-ups for all refuse streams.		Liaise with private contractors and Council as required.
Managing daily bin transfers between refuse storage / collection areas if required.		
Check bin fill levels and rotate / swap bins as required, e.g. under chutes.		

3.1.1 Safety

Transferring refuse bins and using management equipment are considered hazardous tasks. Therefore, contractors must ensure that a full risk assessment of equipment, surfaces, and related gradients is complete. The contractor must provide procedural documentation to appropriate personnel prior to delivery of equipment occupancy of the development.

Table 3.5: Safety Checklist

Objectives	Checked	Remarks
Abiding by all relevant occupational health and safety legislation, regulations and guidelines to ensure site safety for residents, visitors, staff and contractors.		
Assessment of any manual handling risks and preparation of a manual handling control plan for waste and bin transfers.		
Provision of equipment manuals, training, health and safety procedures, risk assessments and personal protective equipment to staff / contractors in order to control hazards associated with all waste management activities.		To be completed for bin tugs – all staff that will handle transfer of bins must be trained in SOP and safety procedures surrounding the use of the bin tug.

3.2.2. Signage

All receptacles, bins and other refuse management equipment will have adequate signage. Standard signage will be provided in and around waste collection and storage areas and should be colour coded in accordance with AS 4123.7 – 2006 Mobile waste containers (see *Appendix C*).

Table 3.6: Signage Checklist

Objectives	Checked	Remarks
Ensuring compliance of signage with government local council regulations.		Use signage provided by Council if available
Ensuring that labelling on bins, refuse room etc. is appropriate and clear and easy to read and updated if required.		

3.2.3. Cleaning and Maintenance

Regular cleaning and maintenance of all refuse management facilities is important to maintain a safe and hygienic environment for residents, visitors, staff, and contractors.

Table 3.7: Cleaning and Maintenance Checklist

Objectives	Checked	Remarks
General cleaning of all refuse holding and transfer areas including • Refuse rooms and storage areas • Refuse bins • Refuse transfer areas including lifts and staircases • Refuse chutes and hopper doors • Any other refuse management equipment		Frequency depends on refuse generation and building operation.
Coordination of specialised cleaning contractors as required.		
Maintenance and servicing of refuse management equipment as per schedule.		Frequency as per manufacturers recommendation and warranty requirements.
Coordination of specialised equipment contractors as required.		

3.2.4. Refuse Minimisation

Refuse minimisation is an important part of any site operation, it is strongly recommended that building management are actively involved in encouraging and assisting residents to follow the refuse hierarchy. At a minimum, the following should be implemented. Guidance on additional refuse minimisation options can be provided during the operational phase of the development by external review.

Refuse minimisation required regular reviewing to ensure operational sustainability of refuse volumes, equipment, and economic feasibility. It is recommended that refuse weights and movements are noted and reviewed. An external review is usually conducted 12 to 18 months after the implementation of the plan.

Table 3.8: Refuse Minimisation Checklist

Objectives	Checked	Remarks
Regular review of material quantities to avoid over-ordering.		
Encourage residents to regularly review grocery quantities to avoid over-ordering and food waste.		
Consideration of secondary and recycled materials where possible.		
Encouraging refuse minimisation through education and signage (see below).		
Reduce refuse through continuous monitoring and review (see below).		

3.2.5. Education and Communication

On-going education is important to ensure people continue to use the facilities as originally intended and to avoid ongoing contamination of recoverable refuse streams. Building management should be involved in education of residents and encouraging participation in recycling activities. All body corporate and leasing contracts should contain clauses pertaining to waste management arrangements and use of any associated equipment.

Table 3.9: Education and Communication Checklist

Objectives	Checked	Remarks
Communication of refuse management arrangements to residents, staff and contractors as required.		
Consideration of promotional opportunities for any successes e.g. local shopping partnerships / discounts.		

3.2.6. Monitoring and Review

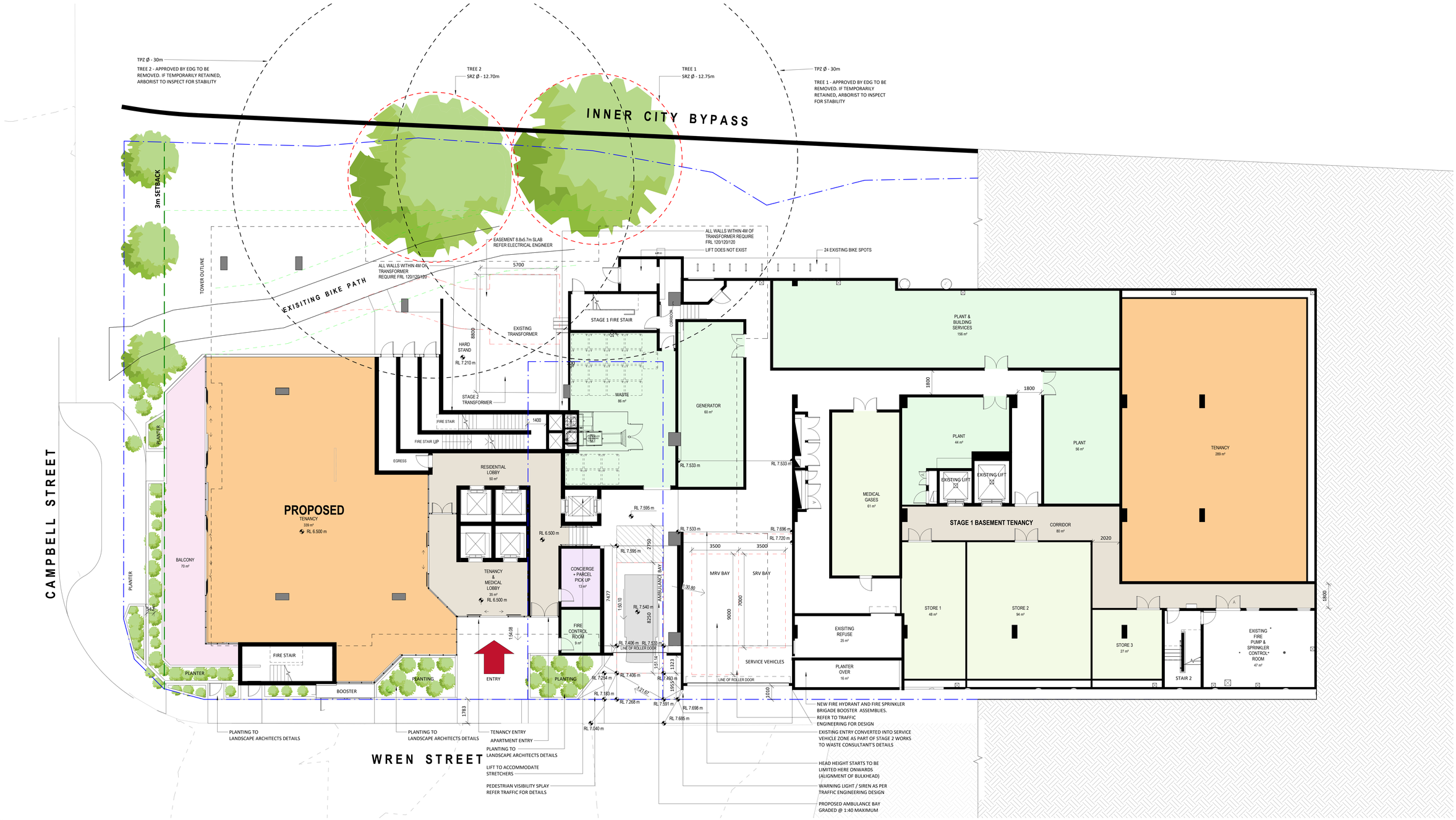
Regular monitoring and inspections of waste and related equipment and facilities from the development should be conducted by building management or designated staff or maintenance and sustainability.

Waste composition audits are recommended for non-residential refuse on routine (12 monthly basis to identify potential improvements in the recycling process taking place. Audits may be undertaken by an external contractor or initially by visual inspection during on-site waste management handling activities. For example, cleaners may observe contents of waste receptacles when decanting caddies in larger bins and recording results, this method is less accurate than a comprehensive audit, however, give immediate indicative results and may be undertaken on an ongoing basis.

Table 3.10: Monitoring and Review Checklist

Objectives	Checked	Remarks
Continual monitoring of equipment uses and scheduling to ensure best operational outcomes.		
Regular review of refuse management equipment and facilities such as bin volumes, refuse storage capacities and stormwater management arrangements.		
Review service frequency and methodology on 6 monthly intervals with collecting contractor.		
Update and amend OWMP based on review outcomes.		

Appendix A Site Plans and Drawings



GROUND LEVEL

- MEDICAL / OFFICE
- LOBBY
- EXISTING INDICATIVE STRUCTURAL ROOT ZONE (INNER RED DASH) AND TREE PROTECTION ZONE (OUTER BLACK DASH). REFER LANDSCAPE DRAWINGS

0 1 2 3 5 10m

GROSS FLOOR AREA

PROPOSED (STAGE 2) - TENANCY	339
PROPOSED (STAGE 1) - TENANCY	459
CONCIERGE PARCEL PICK UP	13
TOTAL	810m²

DEVELOPMENT APPLICATION

Wren Street Stage 2
7-15 Wren Street, Bowen Hills, QLD

AustralAsian Property Group Pte Ltd

ABN 76 105 314 654
Dimensions take precedence over scaling. Do not measure off drawings as print sizes may vary

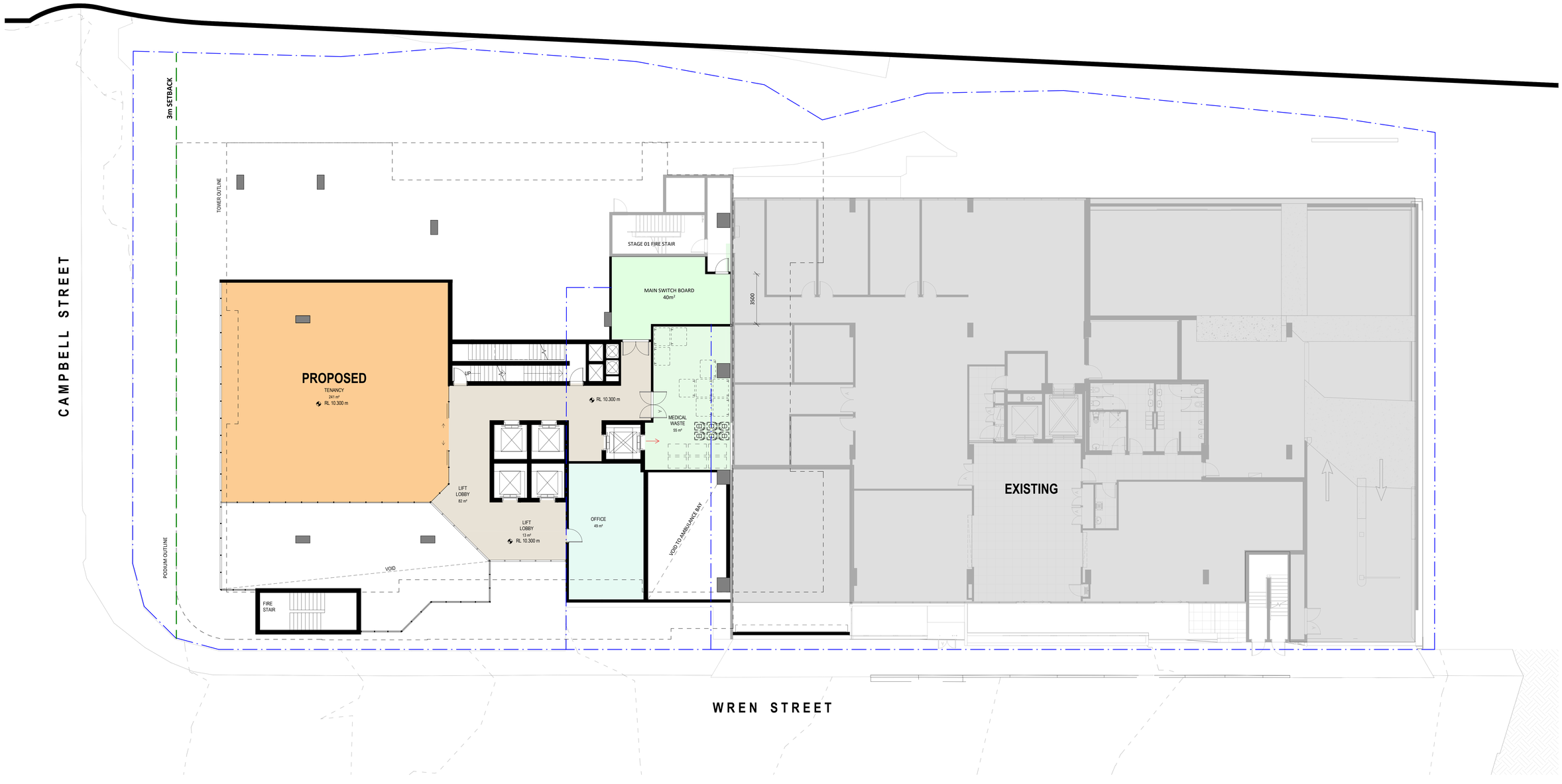
Telephone +61 7 3840 9999
bne@thomsonadsett.com
Level 9, 470 St Pauls Terrace
Fortitude Valley
Qld 4006 Australia
thomsonadsett.com

thomson adsett

GROUND FLOOR PLAN - LOBBY

As indicated @ A0 | 27-11-2023

TA # 22.0169.17 | **DA02.02** | **rev. 13**



MEZZANINE LEVEL

		GROSS FLOOR AREA	
	RETAIL/OFFICE	TENANCY	241
	OFFICE	OFFICE	49
	LOBBY	LIFT LOBBY	86
		TOTAL	376m²

0 1 2 3 5 10m

DEVELOPMENT APPLICATION

Wren Street Stage 2
7-15 Wren Street, Bowen Hills, QLD

AustralAsian Property Group Pte Ltd

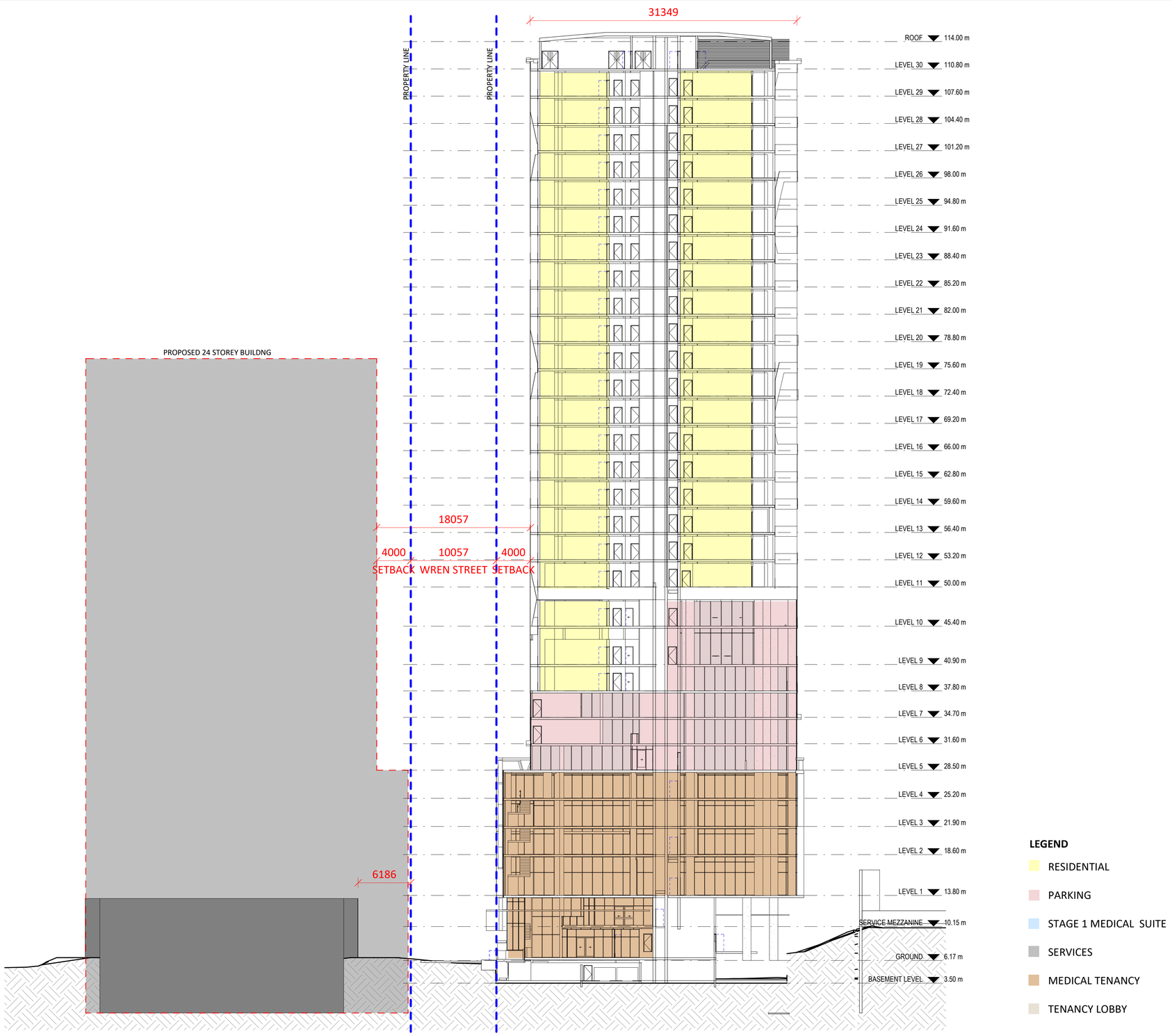
Telephone +61 7 3840 9999
bne@thomsonadsett.com
Level 9, 470 St Pauls Terrace
Fortitude Valley
Qld 4006 Australia
thomsonadsett.com

thomson adsett

MEZZANINE LEVEL

As indicated @ A0 | 27-11-2023

TA # 22.0169.17 | **DA02.03** | **rev. 12**



B SITE SECTION - WREN STREET
1 : 250

DEVELOPMENT APPLICATION

Wren Street Stage 2
7-15 Wren Street, Bowen Hills, QLD

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Telephone +61 7 3840 9999
bne@thomsonadsett.com
Level 9, 470 St Pauls Terrace
Fortitude Valley
Qld 4006 Australia
thomsonadsett.com

thomson adsett

SITE SECTIONS - WREN STREET

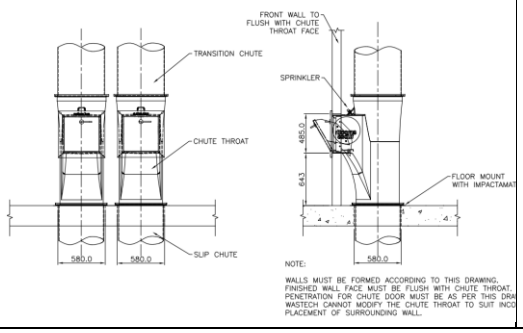
As indicated @ A1 01-09-2023

TA # 22.0169.17 **DA03.03** **rev. 3**

Appendix B Systems and Specifications

B.1 Specified Refuse Equipment

The table below provides contextual examples of the OWMP specified equipment and is not intended to provide an exhaustive list of all potential options of the required equipment.

Bin Types	Waste Streams	Examples	Information
Residential unit bins	General waste and recycling	 	Various options and sizes. Built and standalone bin available. Examples: https://www.bunnings.com.au
Commercial Back-of-house bins	General waste, recycling, food waste, paper / cardboard		Various options and sizes available. Tenant to supply depending on preference and space available. Example: 60L multisort bins https://www.sourceseparationsystems.com.au-/product/multisort
1100L bins	General waste, recycling, paper / cardboard	 	Dimensions approx. 1070 x 1240 x 1330mm (L x W x H) (dimensions depend on contractor) Examples: http://www.justwheeliebins.com.au, https://www.australianwastemanagement.com.au
Refuse / Cleaners Trolleys	All Streams	 	Assisted manual transfer of refuse Examples: https://rubbermaidcommercial.com.au/products/waste-management/mega-brute https://www.materialshandling.com.au/products/deluxe-compact-cleaning-carts
Dual Chute with Under Chute compactor	General waste,		Refuse disposal in multi-storey buildings through refuse chutes: options include single chute for waste only, single chute with diverter system or dual chute for disposal of waste and recycling Examples: https://www.wastech.com.au/products/chutes https://www.elephantsfoot.com.au/products/chutes

Bin Types	Waste Streams	Examples	Information
Clinical / sanitary bins	Clinical, medical, pharmaceutical hygiene and sanitary waste		Various options and sizes available, depending on type of clinical / sanitary waste and contractor. Examples: 500mL to 25L, 60L, 120L or 240L Examples: https://www.suez.com.au http://www.danielshealth.com.au/solutions

Appendix C Refuse Signage

C.1 Refuse Signage

All waste stream signage used should be colour coded to be compliant with *AS 4123.7–2006 Mobile waste containers – Part 7: Colours, markings and designation requirements.*

Waste signage guideline are provided by the Queensland government: https://www.qld.gov.au/environment/pollution/management/waste/recovery/recycling/signage.

General Refuse Signage

Other Refuse Signage

Colour coding as per AS 4123.7-2006

Mixed (Commingled) Recycling	*PMS 108*
General waste (landfill)	*PMS 032C*
Organics	*PMS 15-0343*
Paper and cardboard recycling	*PMS Process Blue C*
Soft Plastics	*PMS 1655*
Used Cooking Oil	*Grey*

C.2 Other Refuse, Facility and Safety Signage

Various signage including refuse area, safety and facility signage should be arranged through certified signage providers. Example signs can be found at http://www.signblitz.com.au, https://www.wayout.com.au or https://www.smartsign.com.

Example Refuse Room Signage

Example Facility Signage

Example Safety Signage

Appendix D Terms and Abbreviations

In this OWMP, a term or abbreviation has the following meaning unless indicated otherwise:

TERM	ABBREVIATION	DEFINITION
Equipment		
Bin (Refuse Bin)		A plastic or steel container for disposal and temporary storage of waste or recycling items. Various types and sizes exist for different items and purposes. Examples include residential unit bins, bulk bins, MGB, steely bins and specialised for medical waste or cigarette butts.
Bin Storage Area		An enclosed area designated for storing on-site refuse bins or a refuse compactor within the property.
Bulk Bin		A galvanized or steel bin receptacle that is greater than 360L in capacity generally ranging from 1.00m³ to 4.50m³ used for the storage of refuse that is used for on-site refuse collection.
Bulk Mobile Garbage Bin	Bulk MGB	A plastic (polypropylene) receptacle that is greater than 360L in capacity generally ranging from 660L to 1100L used for the storage of refuse.
Collection Point		An identified position where refuse bins are stored for collection and emptying. The collection point can also be the bin storage area.
Compactor		A receptacle that provides for the mechanical compaction and temporary storage of refuse. It allows to reduce bin numbers and collection frequency.
Composter		A container or machine used for composting specific food scraps and/or organic materials.
Food Waste Recycling System		Defined as a vacuum or pump-based system for shredding, macerating or pulping of food waste. The food waste is transferred through pressure (service) pipes to sealed liquid storage tanks.
Green Waste		All vegetated organic material such as small branches, leaves and grass clippings, tree and shrub pruning, plants and flowers.
Liquid Waste		Non-hazardous liquid waste generated by commercial premises should be connected to sewer or collected for treatment and disposal by a liquid waste contractor (including grease trap waste).
Mobile Garbage Bin	MGB	A plastic (polypropylene) bin or bins used for the temporary storage of refuse that is up to 360L in capacity and may be used in kerbside refuse collection or on-site collection.
Putrescible Waste		Putrescible waste is the component of the waste stream liable to become putrid and usually breaks down in a landfill to create landfill gases and leachate. Typically applies to food, animal and organic products.
Recycling		Recycling contains all material suitable for re-manufacture or re-use, e.g. glass bottles and jars; plastics such as PET, HDPE and PVC; aluminium aerosol and steel cans and lids; milk and juice cartons; soft drink, milk and shampoo containers; paper, cardboard, junk mail, newspapers and magazines.
Refuse		Refuse is material generated and discarded from residential and commercial buildings including general waste, recyclables, green waste and bulky items.
Refuse Storage Room		An area identified for storing on-site MGBs or Bulk Bins within the property.

TERM	ABBREVIATION	DEFINITION
Refuse Tolley		A cart on wheels that can be used to collect smaller quantities of refuse from different areas or rooms of a building or site, and wheel the collected refuse to a (bulk) bin storage area where it is disposed. Refuse trolleys are commonly used in hotels or offices.
Regulated Waste		Regulated waste is waste prescribed under legislation as regulated waste.
Transfer (Manual Transfer)		Manual transfer means physical transfer of refuse material and associated bulk bins or trolleys without assistance.
Waste		Waste is referred to as refuse material with the exclusion of recycling, green waste, hazardous waste, special waste, liquid waste and restricted solid waste.
Waste (General Waste)		General waste is generally referred to as material free of any actual or apparent contamination such as pathological / infectious, radioactive materials and / or hazardous chemical. Reporting use is for material considered to be free of food waste.
Wheelie Bin		A MGB of up to 360L, usually with 2 wheels for easy transfer. A common type is a 240L wheelie bin used for kerbside collection in many residential areas.
Measures		
Cubic Metre	m^3	Volume in cubic metre(s) related to refuse management equipment.
Ground Floor Area	GFA	The GFA of all storeys of a building is measured from the outside of the external walls or the centre of a common wall. It is commonly measured in square metres.
Kilogram	kg	Kilogram(s) related to refuse weight.
Litre	L	Litre(s) related to refuse volumes.
Square Metre	m^2	Square metre(s) related to refuse areas.
Ton	T	Ton(s) related to refuse weight.
Collection Vehicles		
Body Truck		A conventional heavy vehicle with a covered loading area. It is generally not specifically designed for emptying the content of bins into the truck during refuse collections, but can be used to carry entire (full) bins for servicing by bin swap-over.
Refuse Collection Vehicle	RCV	A vehicle specifically designed for collecting and emptying refuse bins and refuse compactors.
Rear-End-Loading Refuse Collection Vehicle	REL RCV	A truck specially designed to collect municipal solid waste and recycling, typically 240L wheelie bins to 1100L bulk bins, from rear loading mechanism and haul the collected waste to a solid waste treatment facility.
Tank Truck		An RCV that is specifically designed to collect liquid wastes such as waste cooking oil and food waste pulp. The waste is typically pumped from a waste storage tank into the truck via a hose. Liquid waste management equipment is often provided by the contractor who collects the waste and operates the truck.