



Operational Waste Management Plan

Proposed Mixed-use Development

At 120 Montague Road, South Brisbane

On Behalf of Stockwell Development Group





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1 Introduction

1.1. Background

Colliers International Engineering & Design (TTMC) has been engaged by Stockwell Development Group to prepare an Operational Waste Management Plan (OWMP) to support the proposed mixed-use development located at 120 Montague Road, South Brisbane. It is understood this OWMP will accompany a Development Application submitted to Economic Development Queensland (EDQ).

1.2. Project brief and scope

The development site forms part of a larger site as detailed in Section 1.3, however, this OWMP has been prepared specifically to address the waste management requirements of the proposed new building that forms the subject of this development application only.

The content of this OWMP is intended to provide information on the typical movement of waste streams from generation to collection. Information of refuse management is provided for all uses within the proposed building. Information on the minimum standard of refuse management is provided as well as recommendations for better practice management to reduce the volume of waste to landfill.

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

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.

The items covered within the OWMP are described in Table 1.1.

Table 1.1: Scope items

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

1.3. Site analysis

The site, subject to this application, is referred to as 120 Montague Road and is located at 120-122, 128 Montague Road, 8-12 Oxford Street and 39A Boundary Street, South Brisbane as depicted in Figure 1.1 overleaf with the overall site outlined in red.

The legal property description of the lots within the subject site is detailed in Table 1.2.

The site falls within the Land Activation Program (SEQ Tranche 1) Provisional Priority Development Area (PPDA) declared on 29 May 2026. Additionally, the site is zoned by BCC as Principal centre (City centre) within the South Brisbane riverside neighbourhood plan area and part of the Kurilpa precinct.

The subject site has frontages to Montague Street and Oxford Street. All vehicular access to the proposed development will occur via Oxford Street recognised as a Neighbourhood road on BCC's road hierarchy.

Table 1.2: Property Description

Address	RPD
120 Montague Road	Lot 1 on RP95549
122 Montague Road	Lot 52 on RP10840
128 Montague Road	Lot 50 on RP885764
8 Oxford Street	Lot 37 on RP10840
10 Oxford Street	Lot 38 on RP10840
12 Oxford Street	Lot 39 on RP10840
39A Boundary Street	Lot 14 on RP95549

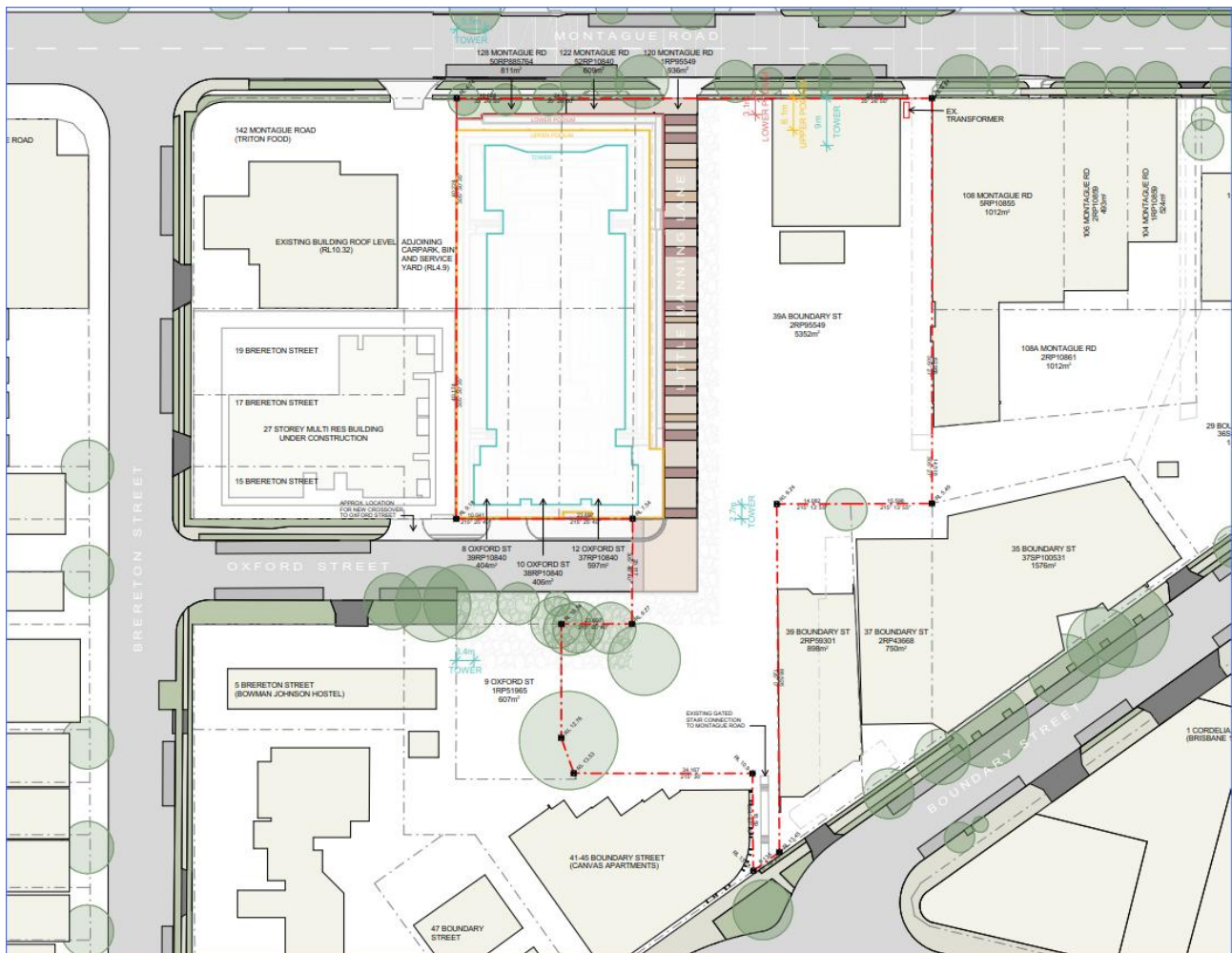


Figure 1.1: Site location

Source: Archipelago, Project: 25026, 108 Montague Road, Drawing: Site Context Plan – Proposed, Drawing Number: 101, Rev: A

1.4. Site statistics

The proposed development consists of a single 30 storey mixed-use building, comprised 6 levels of podium with car parking across all levels, centre uses on P1 to Level 1 and residential apartments from Level 4 to Level 26. Additionally, 1 level of plant and communal facilities and rooftop garden.

Figure 1.2 and Figure 1.3 provides a summary of the development as context for the volume information provided in Section 2.

DWELLING SUMMARY								
UNIT TYPE	FLOORS	1A	2A	2B	3A	3B	4A	TOTAL
PODIUM TOP	1	2	4	1	2	2	2	
PODIUM TOTAL		2	4	1	2	2	2	13
TYPICAL FLOORS	22	2	4	1	2	2	2	
TYPICAL FLOORS TOTAL		44	88	22	44	44	44	286
TOP FLOOR	0	0	0	0	0	0		
TOP SUBFLOOR TOTAL		0	0	0	0	0	0	0
NUMBER	23	46	92	23	46	46	46	299
UNITS/BED		46	115		92		46	299
TOTAL UNITS		15.4%	38.4%		30.8%		15.4%	100%

Figure 1.2: Residential development summary (apartment quantities)

Source: Archipelago, Project: 25026, 108 Montague Road, Drawing: Cover Sheet and Development Summary, Drawing Number: 001, Rev: A

PROPOSED AREA SCHEDULE (AS DESIGNED)			
	GFA CENTRE ACTIVITIES	GFA RESIDENTIAL USES	
PARKING P1	26m ²		—
PARKING P2	356m ²		—
PLAZA	420m ²		—
LEVEL 1	278m ²		—
LEVEL 2	—		—
LEVEL 3	—		—
LEVEL 4	—		1455m ²
TYPICAL TOWER	—	PER FLOOR	1455m ²
NO. TYPICAL FLOORS	22	SUBTOTAL	33465m ²
ROOF TCE LOWER	—		210m ²
ROOF TCE UPPER	—		90m ²
TOTAL PROVIDED	1080m ²		33765m ²

Figure 1.3: Development summary (development GFA)

Source: Archipelago, Project: 25026, 108 Montague Road, Drawing: Cover Sheet and Development Summary, Drawing Number: 001, Rev: A

2 Regulatory refuse management requirements

This section provides the detailed refuse calculations and describes the arrangements for the collection, storage, transfer and disposal of refuse within the development as deemed to satisfy council's current assessment benchmarks. This includes associated bin quantities, storage capacities, equipment details, collection frequencies and site access details.

2.1. Regulatory and governance considerations

2.1.1. PPDA Draft Provisional Land Use Plan

This plan has been prepared to align with EDQ's refuse related requirements outlined in the Draft Provisional Land Use Plan, specifically the PPDA-wide criteria related to access, parking and servicing under Section 4.1.3 replicated in Table 2.1.

Whilst the application has been submitted to EDQ as a development application, it is noted that the site is located within the Brisbane City Council (BCC) local government area and BCC will maintain responsibility for residential refuse collection. As such, where relevant this development has been designed to align with the respective provisions of the Brisbane City Council City Plan 2014 as outlined in Section 2.1.2.

Table 2.1: PPDA Draft Provisional Land Use Plan checklist

PPDA Draft Provisional Land Use Plan – May 2026		
Item	Requirement	Compliance/comment
Section 4.1.3 Access, parking and servicing		
1.	Development provides access, parking and servicing arrangements that are appropriate to the function and intensity of development within the PPDA and maintain the safety, capacity and efficient operation of the surrounding street network.	Refuse servicing arrangements commensurate with development scale and fit for purpose.
2.	Access, loading, servicing and parking arrangements are designed and located to: a. minimise conflict with pedestrians and cyclists, b. avoid dominance of streets and public spaces by access points, parking areas, loading facilities or service infrastructure, and c. integrate with quality built form outcomes, with visual and amenity impacts on streets, public spaces and adjoining land uses minimised.	Refuse servicing is provided on-site, is integrated into the built form by occurring within the aisle and wholly separate from pedestrian access and car or bike parking spaces.
3.	Servicing, waste management and loading activities are, where practicable, accommodated on site and managed to avoid adverse impacts on traffic operations, pedestrian safety and amenity.	As above, refuse servicing is provided on-site and minimises impacts to traffic, pedestrian safety and amenity.

2.1.2. Council's Refuse Planning Scheme

As this development is located within the Brisbane City Council (BCC) Local Government Area, and where specific design controls are not provided within the Draft Provisional Land Use Plan, this OWMP has been prepared to align with BCC's refuse requirements of SC6.26 Refuse Planning Scheme Policy (PSP) v35.00/2025 where relevant. Additionally, PO2, PO63 of the Centre or mixed use code, PO32 of the Multiple dwelling code and PO8 of the Infrastructure design code.

Colliers has referred to BCC's requirements as outlined in the Refuse PSP under section 2, 3, 4 and 5 as these sections are related to general requirements for all developments and specific planning controls for residential and non-residential uses.

A checklist detailing the specific design details addressed to achieve compliance with BCC's Refuse PSP requirements is located in *Appendix A*.

2.2. Prescribed refuse volumes

2.2.1. Residential refuse

The refuse volumes utilised for the calculation of residential refuse storage are based on Brisbane City Council's standard waste entitlement used for planning purposes. The entitlement is applied to all dwellings with an unchanged rate regardless of dwelling size. The waste entitlement applied to refuse calculations below is a requirement for development consent and not reflective of actual refuse generation.

A residential collection frequency of 3 times per week has been established for both general waste and commingled recycling in line with comparably sized developments previously approved by Brisbane City Council.

Table 2.2 details the residential rated entitlement applied to refuse calculations in Table 2.3.

Table 2.2: Residential refuse generation rate

Generation rate	Applied to	Measure	General waste	(Commingled) recycling
Residential	All residential units	L/Unit/Week	240	240

Table 2.3: Refuse calculations

Area description	Measure	Quantity	General waste L/Week	Commingled recycling L/Week
Residential apartments	Unit	299	71,760	71,760
Total weekly volumes compacted (L/Week)			23,920*	N/A
Volumes per day (L/Day)			3,417*	10,251
Volumes per collection (L/Collection)			7,973*	23,920
Collection and equipment details	Collections per week		3	3
	Storage capacity		3 Days	3 Days
	Equipment size		1,100L	1,100L
	Equipment quantity required		7.25	21.75
	Equipment quantity provided		8	22

*Compaction ratio of 3:1 used for calculation purposes

2.2.2. Non-residential refuse

The generation rates and service frequency used for the calculation of non-residential refuse produced have been applied based on rates recommended by Brisbane City Council. It should be noted that these rates are standardised generation rates and not site specific however, provide an estimation on potential refuse volumes.

The tenancy use mix has been based on the tenancy types identified by the development operator with designated food and drink tenancies depicted on architectural drawings. Refer to town planning documentation for further information on the non-residential use types proposed for the development. Note, that the gallery tenancy is expected to generate negligible volumes of refuse and have been excluded from volume calculations

A 7-day trading week has been assumed for food and drink tenancies while a 5-day operational week has been assumed for commercial tenancies.

A non-residential collection frequency of 3 times per week has been established and complies with BCC's collection frequency restrictions for sites zoned as Principal centre, established in 'Table 2 – Non-residential service frequency requirement' of the refuse PSP.

Table 2.4 outlines the standard refuse generation rates applied to the volume calculations for the non-residential components of the site in Table 2.5 which form the basis for waste storage area design and sizing.

Table 2.4: Non-residential refuse generation rates

Generation rate	Applied to	Measure	General waste	Recycling
Food and drink outlet – Food and drink outlet (if less than 150m ²)	P1 Café nook & Plaza Café (including outdoor seating)	L/100m ² /Day	300	200
Office	P2, Plaza and L1 commercial tenancies	L/100m ² /Day	10	20

Table 2.5: Non-residential refuse calculations

Area description	Measure	Quantity	General waste L/Week	Recycling L/Week
Food and drink outlet <150m ²	GFA (m ²)	23	483	322
Food and drink outlet <150m ²	GFA (m ²)	149	3,129	2,086
Office	GFA (m ²)	868	434	868
Total volumes per week (L/Week)			4,046	3,276
Volumes per day (L Day)			578	468
Volumes per collection (L/Collection)			1,349	1,092
Collection and equipment details	Collections per week		3	3
	Storage capacity		3 Days	3 Days
	Equipment size		1,100L	1,100L
	Equipment quantity required		1.23	0.99
	Equipment quantity provided		2	1

2.3. Refuse bin, equipment requirements and specification

Table 2.6 and Table 2.7 outline the number of bins and additional equipment required for the development based on the generation calculations above.

As waste volumes may vary over time according to evolving waste streams or operation of the site and operator preference, bin numbers and sizes may need to be altered to suit the building operation. The tables show the maximum number of bins and equipment expected.

Table 2.6: Bin requirements

Component	Refuse stream	Bin/storage – Size or type	Number required
Residential	General waste	1,100L Bulk MGB	8 + 1 to remain beneath the chute discharge during servicing
	Recycling	1,100L Bulk MGB	22 + 1 to remain beneath the chute discharge during servicing
Non-residential	General waste	1,100L Bulk MGB	2
	Recycling	1,100L Bulk MGB	1

Table 2.7: Additional equipment

Component	Description	Quantity	Capability/specification – See <i>Appendix D</i> for details.
Residential	Individual unit bins - stream separated receptacles	598 Min.	A minimum of 1 receptacle for each stream is required in each unit. Further details in Section 2.4.1. Dimensions of receptacles used are not to exceed the dimensions of the chute hoppers; typically 30cm ³ .
	Dual refuse chute system	1	Co-located refuse chutes for the disposal for general waste and commingled recycling. Access points located on each habitable residential level. Colliers recommends a 600mm chute diameter for commingled recycling applications.
	Integrated chute discharge compactor	1	For use with general waste only. Will have a capacity to achieve an average compaction ratio of 3:1.
	2-bin 1,100L linear bin rotation system	2 (1 per refuse stream)	Automates bin rotation beneath the chute discharge for both general waste and commingled recycling. 1 bin rotation system is provided per stream. Reduces the overall level of building management intervention required.
Non-residential	Refuse/cleaners' trolleys	TBD	Used to assist in the manual transfer of bulk volumes or refuse to the communal bulk bins in the refuse room for final disposal.
	Tenancy bins - Stream separated receptacles	TBD	A minimum of 1 receptacle for each stream is required in each tenancy. Refer to Section 2.4.1.
	Used cooking oil storage	1 (if required)	Portable storage tank stored BOH. Required for food and beverage tenancies using fry vat equipment.

2.4. Refuse disposal

The tables in this section summarise general recommended disposal arrangements for frequently generated and infrequently generated refuse for each development component. Section 2.4.1 describes the frequently generated refuse streams that are generated in high volumes for any given period and require significant capacity for storage prior to collections. Section 2.4.2 describes the infrequently generated refuse streams that are generated in relatively low volumes, and where minimal provision for storage can be easily managed by collection frequency and ad hoc storage arrangements.

2.4.1. Frequently generated refuse

Table 2.8: Disposal of frequently generated waste

Refuse stream	Disposal details
General waste	Residential Space for bins to store one day's worth of generated refuse will be provided in each residential apartment – typically under the kitchen sink. Each day or as required, all refuse will be transferred by residents to the access hopper for the general waste side of the dual chute. The refuse chute will discharge directly into the general waste bulk bin stored in the chute discharge room. The chute hopper doors will have colour-coded features for easy identification and to support the separation of refuse streams. Instructions on the use of the dual chute system and accepted items in each stream will be required to be included in the resident apartment manual. Waste bins should always be lined with bags and the bags double tied before removal. Operationally, bins used for general waste should be limited in size to 30L or less and not exceed the dimensions of the chute hoppers in any direction. Waste bins should be accompanied by a commingled recycling bin in order to facilitate separation of general waste and recycling. Receptacles may be placed in all communal areas where refuse will be generated such as the rooftop terrace for collection and storage of at least one day of general waste. Bin quantities will be determined during the operational phase. A recycle bin will be positioned wherever a general waste bin is positioned to maximise recovery. Building management will assist with the disposal of all refuse generated in communal areas. Non-residential Tenancy operators will be required to provide receptacles for each separate refuse stream in a sufficient quantity to hold one days' or peak service periods' worth of refuse. 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. The number of and location of bins required will be determined during tenancy fit out and careful consideration should be given to the placement and types of bins to optimise source separation. Food & beverage tenancy waste will be captured by bins up to 90L in volume that will be placed within the kitchen or back-of-house area to meet the design or layout criteria of the cafe or restaurant operators. General waste from offices may include small quantities of food related waste from breaks or small volumes of other general wastes. Large quantities of waste are usually not produced. Bins should be located within a centralised bin station or limited number of stations on each level, under desk bins should be discouraged. One bin station is required for every 30 staff members in office areas or break-out space and will be located no more than 20m walking distance from any workstation or regularly occupied area for ease of disposal.

Table 2.9: Disposal of frequently generated recoverable materials

Refuse stream	Disposal details
Organic (food) waste	Separating organic or food waste from general waste is recommended to reduce the total amount of general waste produced. Separation may be considered and implemented at any stage during the operational phase of the development. While BCC does not currently offer a food organics collection service to multiple unit dwellings, commercial options are available at additional cost for both residential and non-residential uses. Alternatively, domestic composting equipment may be used for individual units or communally. Communal composting must be facilitated and managed by a building manager or caretaker to ensure correct usage. Where food waste is separated, caddy bins or bins less than 10L should be used in residential kitchens and bins up to 60L in commercial kitchens, for disposal of food waste. The bins are then transferred to the refuse room for collection. The content is then decanted in bulk bins or composting equipment provided. Transfer and collection should occur on a frequent basis to minimise odour amenity issues.
Commingled, including • glass • aluminium • steel cans • tins • cardboard • semi rigid plastics	Residential 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 dual chute hopper. The refuse chute will discharge directly into the appropriate bulk bin stored in the chute discharge. The chute hopper doors will have colour-coded features for easy identification and to support the separation of refuse streams. Instructions on the use of the dual chute system and accepted items in each stream will be required to be included in the resident manual. Residents of all levels will access the central refuse storage room directly for disposal of all oversized recyclable materials, lifts will be utilised for vertical transfer. Receptacles will be placed in all communal areas wherever a general waste bin is located for the storage of at least one day of commingled recycling. Bin quantities will be determined during the operational phase. Building management will assist with the disposal of all refuse generated in communal areas. Non-residential Items for recycling must not be bagged and disposed in loose form. Commingled recycling from food and beverage tenancies can be captured by bins up to 90L 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. Recycling from a office may include quantities of paper as well as plastic or glass drink bottles. These items can be collected separately from comingled recycling if larger quantities are produced. Recycling bins should be located next to waste bins. The bins can be for either comingled recycling or for the separate recycling streams (e.g. paper, plastic bottles). 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 building or refuse enclosure can be provided.
Used cooking oil	Non-residential Waste oils should be disposed separately from general waste if large quantities are produced (e.g. in food and beverage outlets where fry vat equipment is utilised). All waste liquids/oils should be separated and stored in clearly labelled containers. Typically, waste oils are removed during delivery of new oils by the supplying contractor. Self-bunded portable storage tanks are to be used for the storage of used cooking oil and housed within the back-of-house spaces of the relevant tenancy.

2.4.2. Infrequent waste

Table 2.10: Disposal of infrequently generated refuse

Refuse stream	Disposal details
Garden organics refuse/green waste	Garden organic refuse also referred to as green waste will be produced from common landscaped areas or around the development or from potted plants in residential apartments or on balconies. Minimal volumes of green waste generated from apartments will be captured in the general waste stream. Body corporate by-laws will include rules relating to the provision of green bins for residential units. Green waste from common areas is produced largely on a weather or seasonal dependent basis and based on plant selections. Common area green waste will be removed by the designated maintenance contractor. Interim storage is not provided. The engaged contractor will be required to send this material to a composting or resource recovery facility rather than to a landfill.
Difficult/complex recyclable items	A number of refuse items generated by both residential and non-residential uses are considered recyclable but not accepted in standard commingled recycling services. The types of items are extensive and recyclers typically specialise/accept single streams only, meaning it is usually not feasible or practical to opt-in to all possible services. Where a development elects to opt-in to specialist recycling services, items are usually stored in small, dedicated receptacles/tubs up to 60L, placed on shelving in an accessible area such as the refuse room. Each stream is either collected or transported to a specialist recycler once a sufficient quantity of material has accumulated.
Hard waste/bulky goods	Residential Hard waste collections will be coordinated in line with BCC's hard waste collection arrangements for residential uses, 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. Non-residential Non-residential tenancies will utilise the bulk bins provided for bulky waste disposal or make other coordinated collection arrangements where items are unsuitable for bulk bin disposal or where significant volumes are generated such as during tenancy refits.
Hazardous waste – Batteries	Batteries are highly volatile and must be disposed of separately and never in the general waste or commingled recycling bins. Colliers recommend a communal disposal point is provided by site management and located in a location that is convenient for access of both residents and tenancy staff.
Hazardous waste - Other	It is expected that the building management assist residents with disposal of 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.

2.5. Refuse storage, access and rotation requirements

All refuse will be stored within bins housed within dedicated refuse storage areas. Separate storage areas are provided for residential and non-residential uses. Refuse storage and servicing areas for both components are located on Plaza Level.

2.5.1. Residential refuse storage

Residential refuse storage is provided over 3 co-located areas being a chute discharge room and 2 bin storage rooms; 1 for general waste bins and 1 for commingled recycling, each room is separated by an internal partition. The internal partition may be constructed of either solid wall, chain mesh or equivalent.

The chute discharge area is provided beneath the chute termination. The chute discharge area is designed to house the chute discharge equipment including bin rotation and compaction equipment specified in Table 2.7.

Access to the chute discharge area will be restricted to building management or approved personnel only via the restricted distribution of keys/fobs and signage.

The bin storage rooms on either side of the chute discharge area will provide storage for all residential bins required for the development between services as detailed in Table 2.6. and will serve as the servicing location. The bin storage compartments are provided adjacent to the RCV loading area.

The bin storage rooms have been sized and designed for one room to be utilised as the storage area for general waste bins and the second room will be used for the storage of recycling bins. Residents will have access to either bin storage room for the disposal of all refuse materials not suitable for chute disposal.

Building management will be responsible for the exchange of bins beneath the chute on bin rotation equipment as well as the presentation of all bins requiring collection to either bin storage room prior to each scheduled collection.

The collecting contractor will access either bin storage room for the retrieval of bins for collections servicing.

Figure 2.1 overleaf depicts the layout of each of the refuse storage areas provided.

2.5.2. Non-residential refuse storage

A consolidated refuse storage strategy is proposed for the where all non-residential tenancies within the development share the use of the communal bins provided within a single storage area. The non-residential refuse storage area is located near the residential refuse storage area, however, features entirely separate access.

The location of the non-residential refuse storage area is intended to balance convenient access to the enclosure by tenancy staff with maintaining serviceability and proximity to the RCV for servicing.

Access to the non-residential refuse room will be restricted to tenancy and building management staff as well as the collecting contractor.

The non-residential refuse room is also illustrated in Figure 2.1.

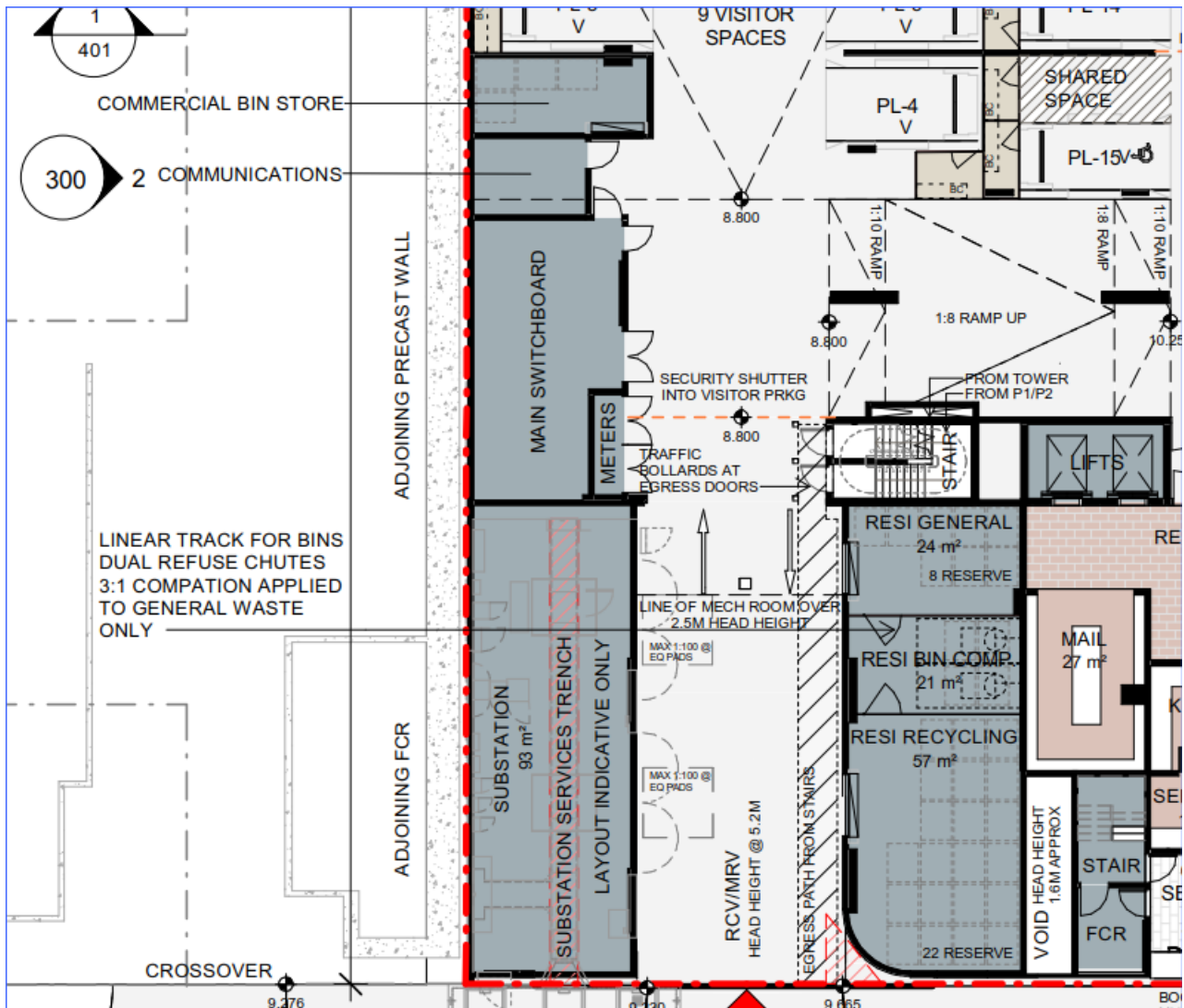


Figure 2.1: Refuse storage area layouts

Source: Archipelago, Project: 25026, 108 Montague Road, Drawing: General Arrangement Plan - Podium - Plaza, Drawing Number: 202, Rev: A

2.5.3. Refuse storage area design

Table 2.11 outlines the refuse storage area design criteria addressed in the design of each storage area in order to minimise odours, deter vermin, protect surrounding areas, and make it a user-friendly and safe area.

Table 2.11: Refuse storage area design requirements

Positioning considerations
Positioned with direct access to the designated loading point.
Is in a purpose-built storage room which is vermin proofed and used solely for the storage of refuse leaving the site only.
Where adjoining sensitive uses (habitable spaces, food preparation areas etc), is separated by means of solid construction (impermeable enclosure walls) to prevent amenity impacts.
Is positioned away from entrances to shops or residential premises.
Is over 5m from any door, window or fresh air intake within the development or any adjoining site or designed to prevent the escape of odours from the enclosure.
Visual amenity considerations
Is enclosed on all sides except for the access points to ensure bins are not visible from a public place, neighbouring properties, passing vehicles or pedestrian traffic external to the site.
Is designed to minimise their visual impact on the surrounding areas.
Functional design considerations
Is of sufficient size to accommodate the bins with sufficient clearance around the combined bin area.
Doors/shutters wide enough to allow for the easy removal of the largest container to be stored.
Permits unobstructed access for removal of the containers to the service point.
The height of the bin storage area allows for waste bins to be opened and closed.
Does not have any steps or lips where bins are required to be moved.
Adequate artificial lighting.
Be fire rated and ventilated in accordance with the National Construction Code – Building Code of Australia.
Bin washing and room cleaning considerations
A hose cock provided inside the room for cleaning bins and the enclosure surfaces.
The walls, ceilings, floors and equipment are to be designed and constructed of or sealed with an impervious material with a smooth finish to a height of 1m to allow for easy cleaning.
Coved at the intersection with the walls with coving integral to the floor.
The floors to be graded to fall to a drainage point.
Drainage points connected to sewer in accordance with trade waste requirements.
Roofed and designed to prevent entry by rainwater.

2.6. Refuse transfer

2.6.1. Residential refuse transfer

Residents of all apartments will transfer all refuse vertically for disposal via the diverter refuse chute for general waste and recyclable materials or via the lifts for items not suitable for chute disposal.

The collecting contractor will collect all residential bins directly from the respective residential bin storage room; either general waste or recycling, manoeuvre to the RCV lifting mechanism and return after service.

2.6.2. Non-residential refuse transfer

Either designated tenancy staff or cleaners will transfer all refuse generated from each of the non-residential tenancies to the non-residential refuse room directly via manual transfer methods. The lift or stairs at the Montague Street entry will be used for the vertical transfer of refuse between P1, P2 or L1 and Plaza Level and driveway ramps used for the lateral transfer across the site as illustrated in Figure 2.2 overleaf.

The collecting contractor will collect all bins directly from the non-residential bin storage room and manoeuvre to the RCV lifting mechanism and return after service.

While the bin transfer distance for the non-residential bins represents a performance solution against BCC's assessment benchmarks, the transfer path is direct and allows the contractor to remain within line of sight of the RCV and complies and is therefore considered appropriate.

2.6.3. Refuse transfer path design

Table 2.12 demonstrates the criteria addressed in the design of the refuse transfer path for both disposal and servicing for each development component.

Table 2.12: Refuse transfer path design

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

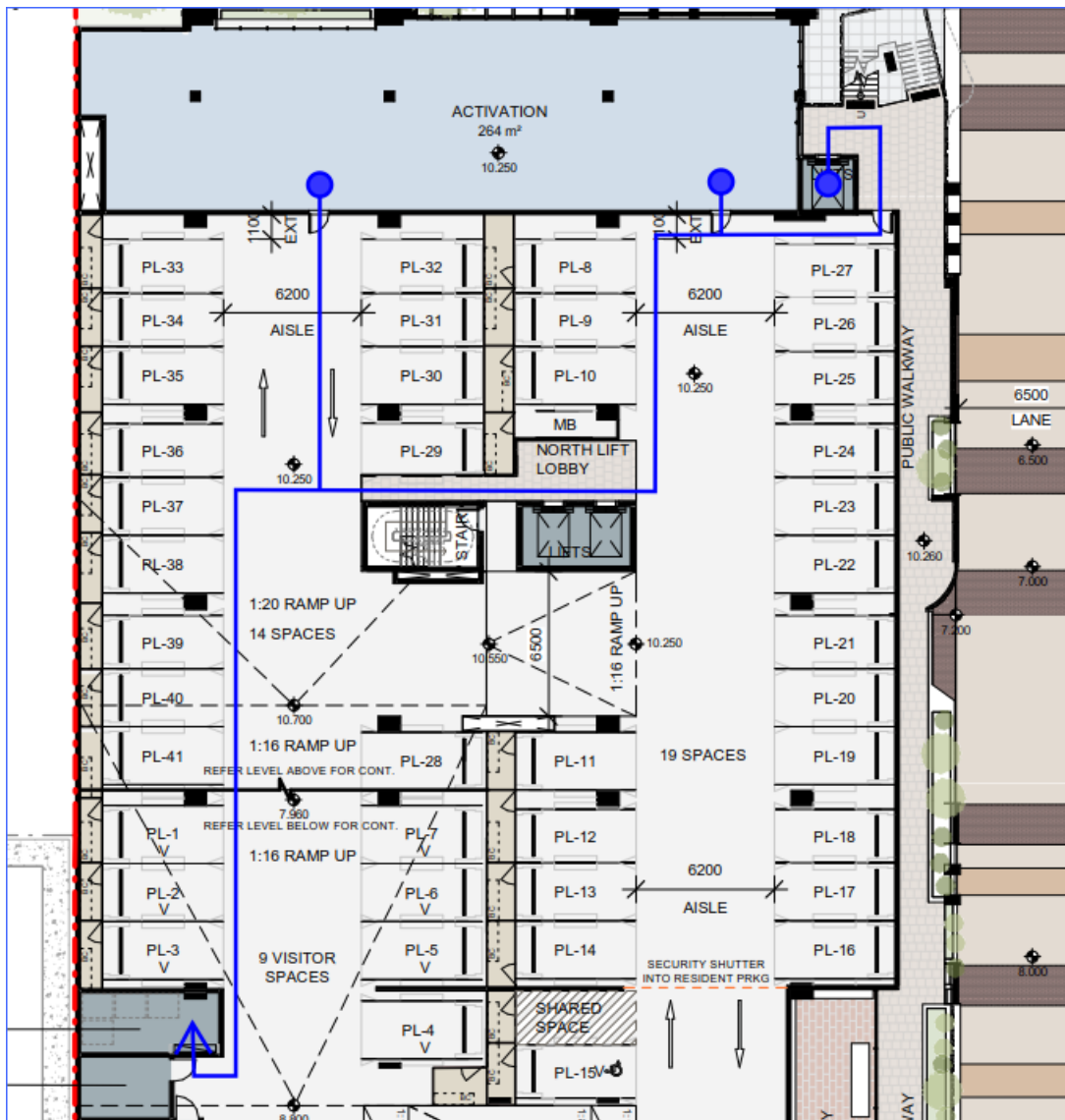


Figure 2.2: Non-residential refuse disposal transfer path

Source: Archipelago, Project: 25026, 108 Montague Road, Drawing: General Arrangement Plan - Podium - Plaza, Drawing Number: 202, Rev: A

2.7. RCV and bin servicing arrangements

The refuse collection methodology is consistent for both residential and non-residential uses; all refuse will be collected by rear loading RCV with reverse entry and forward exit manoeuvres proposed.

2.7.1. Residential and non-residential servicing arrangements

Council's appointed collecting contractor will be responsible for the collection of all residential refuse. A private collections contractor will be appointed for the collection of all non-residential refuse.

All RCV's will perform a single reverse manoeuvre to enter the site via the driveway crossover on Oxford Street. RCV's will stand in the designated RCV loading area on the driveway. Once the collections service is complete, RCV's will exit site onto Oxford Street in a forward gear.

Once the bins have been serviced, they will be returned to the residential refuse room by the collecting contractor where building management staff/cleaners will clean the bins as required for everyday use.

Further details on vehicle access and on-site manoeuvring can be found in the traffic report submitted with the development application submission.

Figure 2.3 illustrates the ingress and egress swept path analysis for a BCC specified rear loading RCV.

2.7.2. Servicing area design

Table 2.13 demonstrates the features of the bin servicing area.

Table 2.13: Service area design

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 steep ramps and allows bins to be manoeuvred easily.
Does not block the entry and exit to the property.
Is not adjacent to a kitchen or eating area for public use.
Is over 5m from any door, window or fresh air intake within the development or any adjoining site.
Is positioned as far as practicable away from entrances to shops or residential premises.
Best practice for non-residential development includes CCTV or other video monitoring designed to record RCV's collecting bins.

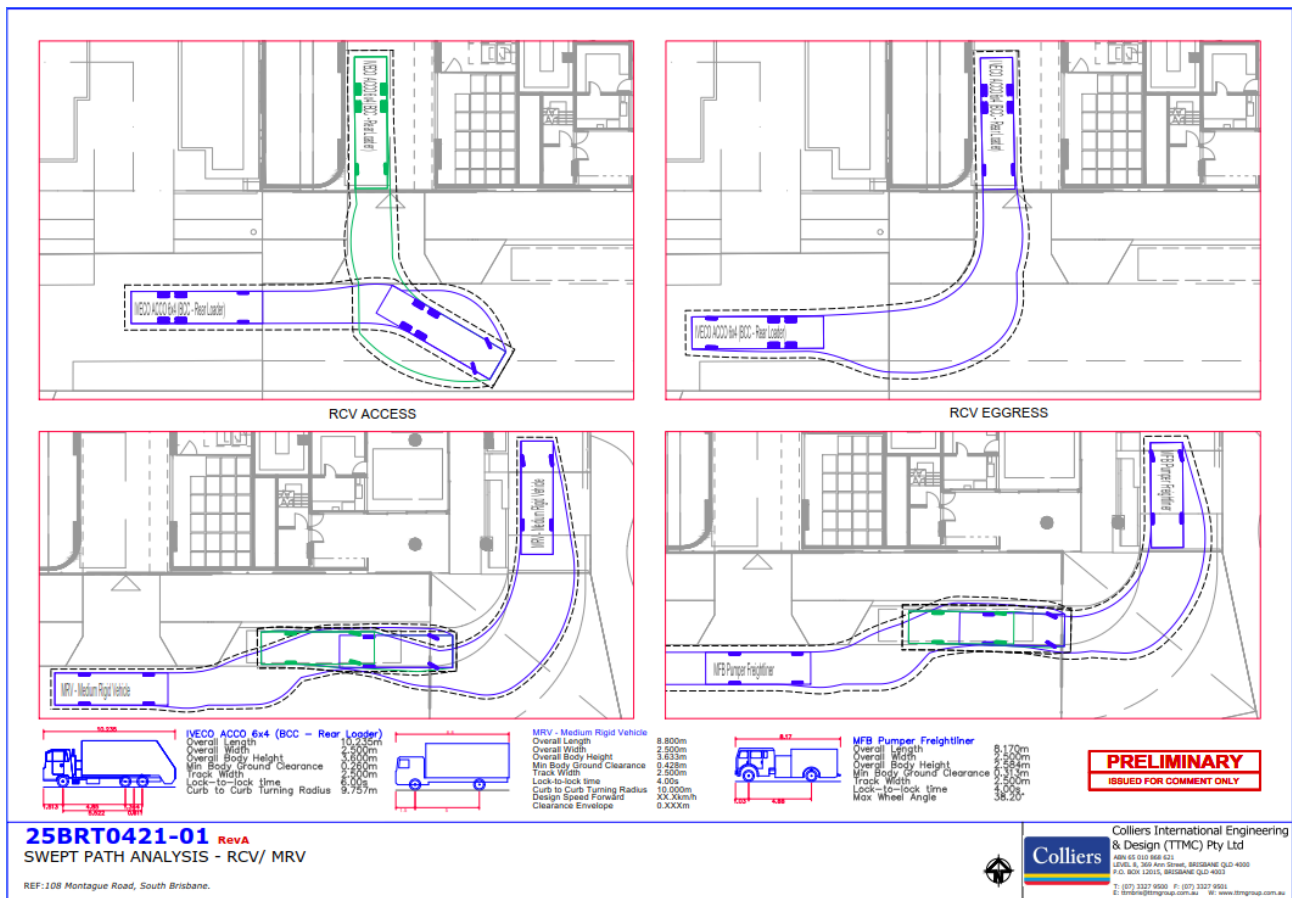


Figure 2.3: RCV swept paths

3 Recommended operational refuse management

This section does not contain information relevant for the assessment of building design.

This section relates to the outcomes and waste management practices of the development during the operational phase as recommended by Colliers. It is intended for use as a live document by the end user of the development to assist with the ongoing management of the development.

3.1. Anticipated residential refuse volumes

Colliers have worked extensively with operating residential and mixed-use developments within the Brisbane local government area. This includes establishing typical volumes of refuse generated through volumetric assessment. Colliers have established a flat generation rate applicable to developments containing mixed unit sizes. This rate is used to provide more accurate recommendations relating to anticipated bin numbers and the rotation of bins beneath refuse chutes as well as potential improved sustainability outcomes through landfill diversion.

It should be noted that the recommendations and comments in this section are based on the maximum aggregate audit results of operational sites completed by Colliers and do not factor in potential demographic or socio-economic factors and therefore not site specific however, give an estimation of likely waste generation. Site specific auditing is recommended to establish actual generation and composition of refuse for this site. Site specific auditing allows refinement of the overall refuse strategy.

3.1.1 Refuse profile and recommended stream separation

Refuse generated by residential uses including multiple dwelling apartments includes a substantial volume of food waste. Colliers recommend that food organic waste is separated from the general waste stream to reduce the level of waste sent to landfill. Onsite composting or organics processing equipment should be considered within the final design, and an area should be identified for the potential instigation of organics recovery during the operational phase of the development. Onsite composting or process may be combined with food waste generated by non-residential uses. Where onsite composting or processing occurs, this must be facilitated and managed through a building manager to ensure the correct use.

Alternatively, commercial food waste collections may be undertaken by the development at an additional cost. Council do not provide rating concessions for initiatives to reduce waste. Where commercial collections are undertaken this is an additional waste expense over Council's waste rating charge.

Colliers recommend that Container Deposit Scheme (CDS) receptacles are also available for resident use, this may provide additional revenue to the development (such as social club funds) or be donated to charity. Single item recyclable streams as captured by CDS offer a higher value recyclable product than achieved through commingled recycling. Incentivised recycling schemes help promote participant buy-in.

Consideration should be given to the separation of bulky cardboard. Oversized cardboard improperly disposed of is a leading cause of blockages in recycling chute applications.

3.1.2 Recommended residential refuse bins

Table 3.1 outlines the recommended number of bins and additional equipment that may be implemented where an additional level of sustainability through landfill diversion is sought. The recommended level of stream separation may be implemented at any stage during the occupational phase of the site.

These recommendations are provided to assist in the instigation of collection services and provided based on Colliers recommended stream separation.

Additional services may be provided utilising the residential bin storage room as proposed within the development application, with disposal facilitated through building management.

Table 3.1: Recommended total bin requirements

Refuse stream	Bin/equipment - Type or size	Bins required	Storage capacity between collections
General Waste	1,100L	6 +1 to remain beneath chute discharge during servicing	3 Days
Food Organics*	240L	8	2 Days Servicing every 2 days recommended
Commingled Recycling	1,100L	8 +1 to remain beneath chute discharge during servicing	3 Days
CDS*	660L	4	7 Days
Bulky Cardboard*	1,100L	1	7 Days
E-waste* (Excluding batteries)	1,100L	1	Ad Hoc
Mixed Batteries*	Countertop Receptacle	1	Ad Hoc
Complex recyclables*	Countertop Receptacle	TBD	Ad Hoc

* As noted in Section 3.1.1, these services represent additional commercial services not included in BCC's standard waste service or waste rates charge.

3.2. Anticipated non-residential refuse volumes

The exact volume of refuse generated by each tenancy will be influenced by each operator and their preferences.

The storage areas provided are considered to be oversized for the volumes anticipated and the storage areas provisioned for non-retail storage may be used to implement best practice stream separation or reduce the collection service frequency which will reduce carbon generation in turn.

Where additional refuse streams are separated (above general waste and recycling), these may be consolidated with residential refuse.

3.3. On-going management

The tables below relate to a cycle of ongoing implementation, operation, review and amendment of the refuse strategy. These tables are intended to serve as a live document to be completed and updated during the operational phase of the development and therefore intentionally left blank.

Responsibilities have to be assigned for all on-going refuse management related activities during the operation of the development to Stockwell Living. Colliers recommend the appointment of dedicated personnel to champion refuse management and sustainability. The following lists (Table 3.2 to Table 3.4) are designed to help manage and assign responsibilities and monitor the refuse operations. On-going management of the refuse strategy will maintain efficient services, a safe environment and improve on sustainability outcomes.

3.3.1. Implementation phase

Refuse management tasks during the implementation of the refuse strategy are required prior to and during the early stages of building occupancy. An opportunity to revisit these tasks is provided at routine intervals with the review of the refuse strategy.

Table 3.2: Implementation checklist

Task	Assigned	Remarks
Verify the as-built form of all refuse related areas. This task does not refer to building certification but is typically undertaken by a specialist waste consultant prior to building certification. This provides an opportunity to identify variances in building form versus design and recommend alternate or mitigating refuse management strategies. This task may also be required during building refits and change of use in tenancies.		
Appoint personnel to oversee or undertake refuse management tasks. A building or facilities manager is typically appointed and undertakes most operational tasks, engaging contractors for specialist tasks.		
Conduct internal safety review. An internal safety review is required to be undertaken to identify potential hazards in the implementation of the refuse strategy and risk mitigation opportunities. This includes the use of any refuse management equipment installed, as well as refuse transfer paths		
Development of policy and procedures Must be undertaken after safety review and abide by all relevant occupational health and safety legislation, regulations and guidelines to ensure site safety for visitors, building management staff and contractors. Also includes assessment of any manual handling risks and preparation of a manual handling control plan for waste and bin transfers.		

Task	Assigned	Remarks
Engage refuse collection contractors. Council's contractors and a private collections contractor must conduct a site visit for the purposes of risk assessing the site prior to conducting services. Contractors must ensure that a full risk assessment of equipment, surfaces and related gradients is complete and procedural documentation is provided to the appropriate personnel. RCV manoeuvrability testing and the establishment of service frequency and timing is also undertaken at this time.		
Install signage in all refuse disposal and storage points. Signage is required to be installed to educate building occupants on location of disposal and refuse storage points. Additionally, to identify the accepted items disposed of in each refuse stream. The installed signage should be colour coded in accordance with <i>AS 4123.7 – 2006 Mobile waste containers</i> . Examples of signage are provided in the appendices.		
Leasing/body corporate agreements All body corporate and leasing contracts should contain clauses pertaining to waste management arrangements and use of any associated equipment.		
Education and training. Provision of equipment manuals, induction, training, health and safety procedures, risk assessments and personal protective equipment (PPE) to all staff/contractors associated with all waste management activities in order to control hazards. The step is repeated through the operational phase of the development as required due to changes to users or personnel.		
Consider fit out and move-in refuse. Higher volumes of waste are generated during the initial occupant move-in or final fit out. This typically includes large volumes of cardboard. Additional bins or collections may be required. This also applies to high turnover events and renovations.		
Baseline refuse auditing A baseline audit for non-residential uses once the development reaches 80% occupancy undertaken by a specialist waste consultant is recommended to identify refuse volumes and stream composition. This information is then used to establish potential recoverable material percentage based on initial waste practices and set recycling rate targets.		
Establish baseline targets The baseline audit results should be used to establish baseline landfill reduction and recycling rate targets. Baseline targets should be achievable with a view to continual improvement to enable the celebration of success and promote buy-in by building occupants.		

3.3.2. Occupation/operational phase

Refuse management tasks during the occupation or operational phase of the development relate to the day to day and business as usual operational tasks that must be undertaken to execute the refuse strategy.

Table 3.3: Occupation/operation checklist

Task	Assigned	Remarks
Facilitate disposal from communal areas and public realm. Appointed staff are required to transfer refuse generated in communal areas and the public realm to the refuse storage area for final disposal, this includes litter removal. Best practice operations include having dedicated cleaning staff assigned to handle all waste generated, rather than tenancy staff. This results in maximum recovery of available streams.		
Manage rotations of bins to ensure convenient access. Check bin fill levels and rotate/swap bins as required. Sufficient capacity must be provided for the disposal of all streams at all times including reduced personnel on site (such as weekends or public holidays). Where equal access to a refuse stream is not maintained, other streams may be contaminated leading lost resources.		
General cleaning. Regular cleaning and maintenance of all refuse management facilities is important to maintain a safe and hygienic environment for visitors, staff and contractors. General cleaning is required for all refuse holding and transfer areas including • Refuse bins, rooms and storage areas • Refuse transfer areas including lifts and staircases • Any other refuse management equipment		
Perform spot checks on bin contents and refuse streams. Appointed staff regularly check for compliance and stream contamination. Early intervention prevents the development of poor practice and lost resources. Feedback and education is provided to the relevant parties (see below).		
Ongoing education and communication. On-going education is important to ensure residents continue to use the facilities as originally intended and to avoid ongoing contamination of recoverable refuse streams. Appointed personnel should be actively involved in education of occupants and encouraging participation in recycling activities. Widespread communication of the achievements of the refuse strategy and areas for improvement encourage participant buy-in.		

3.3.3. Review and amendment phase

The review and amendment refuse management tasks relate to tasks undertaken on a routine (e.g. quarterly, bi-annually or annually) or ad hoc basis. At the completion of the review and amendment phase, the cycle restarts with the implementation of the amended refuse strategy.

Table 3.4: Review and amendment checklist

Task	Assigned	Remarks
Coordination of specialised cleaning contractors as required. Typical specialised cleaning services may include cleaning internal areas of compaction equipment (if selected); this reduces risk of blockage and risk of fire.		
Maintenance and servicing of refuse management equipment as per schedule. Frequency depends on equipment, building operation and manufacturer specification. Routine maintenance reduces downtime and detrimental impact of unscheduled equipment breakdown.		
Coordination of specialised equipment contractors as required. May extend to ad hoc services requiring specialist equipment such as bulky waste removal.		
Internal safety review. Routine safety reviews are required to identify changes to the site, work practices or legislation that may impact existing policies and procedures. Reviews should include visual inspection of equipment and user PPE. Any policy or procedure updates arising from a safety review must be immediately communicated.		
Review bin quantities and refuse management equipment. Reviewing bin quantities and equipment is required ensure operational sustainability of refuse volumes and equipment remains fit for purpose. Consideration should be given where alternate equipment may provide improved outcomes. This review may form part of an external audit and review process as recommendations made.		
Review service frequency and methodology on 6 monthly intervals with collecting contractor. The service frequency and service methodology should be reviewed to ensure the optimum cost efficiency in services provided and explore options for additional services. Any potential changes to the bin numbers or bin sizes should be made in liaison with the appointed contractor to confirm cost or contract implications.		
Update and amend OWMP based on review outcomes. On completion of the refuse strategy review the OWMP should be updated to reflect refuse strategy amendments and to enable implantation of refuse strategy.		

Appendix A 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 proposed solution, bin sizes, number of bins and the storage and collection areas, frequency of collection and the refuse collection vehicle size. Table 1 provides the dimensions and types of bins. Table 3 provides the specifications and types of collection vehicles.	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)	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).	All refuse collected by rear loading RCV. Min. 3.6m provided.
(4)	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.	Refer to Traffic engineering documentation for details.
(5)	Where a Refuse Collection Vehicle (RCV) is required to manoeuvre from an on-site position, allow an additional 500mm clearance for vehicle turning dimensions (swept paths) and servicing. Three clear swept path lines must be demonstrated for the RCV, namely wheel path, vehicle body path and 500mm clearance path.	Refer to Traffic engineering documentation for details.
(6)	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. <i>Note— Where alternative waste servicing solutions are proposed, advice may be sought directly from Council's waste service area prior to lodgement of the development application.</i>	Complies Complies – Details throughout this OWMP. Complies
Section 3 - Access and manoeuvrability		
(1)	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.	Refer to Traffic engineering documentation for details.
(2)	For multiple dwelling development accessed via a local, neighbourhood, district or suburban road, the refuse collection vehicle may enter the site in a reverse gear in a single movement.	Complies – Reverse entry proposed.
(3)	For multiple dwellings development accessed via 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
(4)	For development (other than a multiple dwelling) accessed via an arterial, suburban, district or minor road adjacent to an intersection with a major road, the refuse collection vehicle must enter and leave the site in a forward gear.	Complies – Reverse entry proposed from neighborhood road.

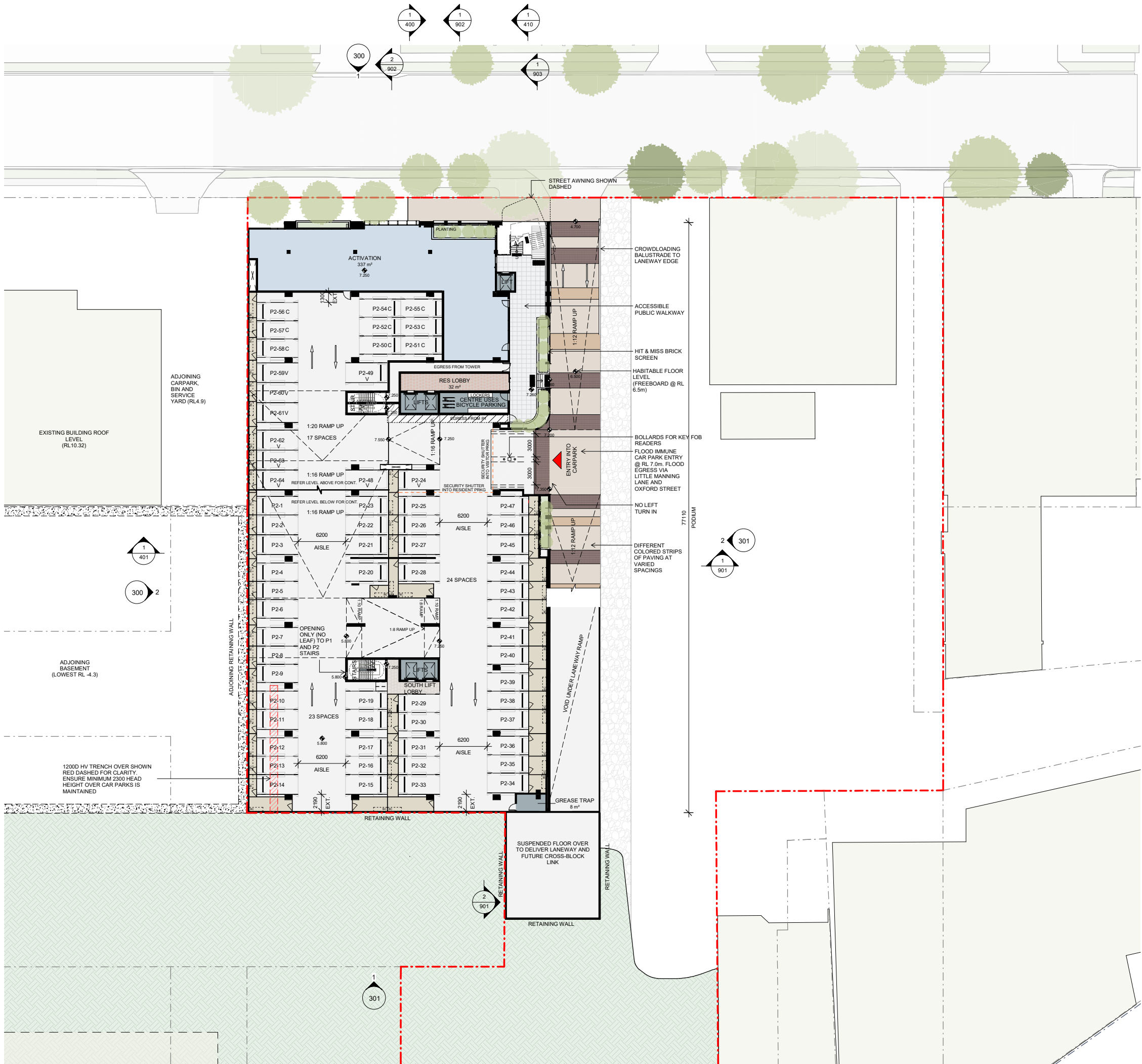
Item	Requirement	Compliance/comment
Section 3 - Access and manoeuvrability – continued		
(5)	Where refuse collection is from an on-site position, the area trafficked by the refuse collection vehicle must comply with requirements under the Transport, access, parking and servicing planning scheme policy including a minimum aisle/carriageway width of 6.5m wide. <i>Note—Service area design standards, including maximum gradients, minimum aisle widths, minimum vertical clearance and bay design are contained in the Transport, access, parking and servicing planning scheme policy.</i>	Complies
(6)	For detached dwellings on rear lots, pavements/carriageways trafficked by a refuse collection vehicle have a minimum width of 5.5m.	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 minimum 6.5m crossover which is free from overhead projections inclusive of gardens or trees.	Complies
(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 20m of the street frontage.	Complies – Minimal reversing required.
(9)	Turnaround facilities for a refuse collection vehicle exist or are provided for where involving staged subdivision developments or where development is located on a no through road. Turning and manoeuvring facilities for refuse collection vehicles are provided to meet design requirements for the vehicles identified in Table 3.	N/A
(10)	Subdivision layouts are to provide for the safe and efficient operation and manoeuvring of a side-lift loading refuse collection vehicle. Layouts that require a refuse collection vehicle to reverse more than 20m are to be avoided. Where the provided transport network results in a stub road for a proposed future road connection, interim turnaround facilities must be provided in compliance with the Transport, access, parking and servicing planning scheme policy and the Infrastructure design planning scheme policy.	N/A
(11)	Adequate lift clearances are provided to overhanging trees and wires in accordance with Table 3.	Complies
(12)	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
(13)	Access for a refuse collection vehicle to the collection point is maintained at all times.	Loading on the driveway aisle proposed.
(14)	Where non-residential development is proposing to use an alternative design vehicle other than those named in Table 3, written confirmation from the proposed licensed waste collection contractor giving full details of the bin size and the refuse collection vehicle size must be provided.	N/A
(15)	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). <i>Note—Access arrangements, including maximum gradients are contained in the Transport, access and parking planning scheme policy.</i>	Complies – Residential RCV will stand on a maximum 1:50 grade for servicing.

Item	Requirement	Compliance/comment
Section 4 - Residential refuse collection		
(1)	Residential development must be serviced by Council or their appointed collection contractor. <i>Note—For the purpose of this section residential development is defined as Dual occupancy, Dwelling house, Dwelling unit and Multiple dwelling.</i>	Will comply
(2)	Residential development is to provide sufficient capacity for 240L of refuse and 240 or 360L of recycling per dwelling, allowing for one collection per week. <i>Note—Council offers an optional user paid 240L green waste service. Where this service is to be utilised additional capacity must be designed for.</i>	3 services per week proposed in line with similarly sized approved developments.
(3)	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.
(4)	On-site collection must be provided for in the following cases: a. the development cannot accommodate external (fronting public road) kerbside collection; or b. the development comprises greater than 10 dwellings; or c. 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
(5)	Refuse and recycling collection for a mixed use development ensures residential and commercial bins are stored separately with separate access to each.	Complies
Section 4.1 - Kerbside collection (MGB's) – N/A greater than 10 dwellings		
Section 4.2 – On-site collection (bulk bins)		
(1)	In accordance with section 4, development will avoid adverse impacts to residents, pedestrians and roads users by providing sufficient capacity to achieve one collection per week while ensuring sufficient refuse and recycling capacity is provided to meet the needs of residents.	3 services per week proposed in line with similarly sized approved developments.
(2)	An on-site 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.	Complies
(3)	Bulk bins of 1.1m ³ 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. <i>Note—Standard design arrangements, including gradients are contained in the Transport, access and parking planning scheme policy.</i>	Refuse storage areas within 5m of RCV.
(4)	Bulk bins of 1.5m ³ 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 area to the collection point.	N/A – 1.1m ³ Bins proposed.

Item	Requirement	Compliance/comment
Section 4.2 – On-site collection (bulk bins) – continued		
(5)	The storage areas for bulk bins are: a. contained in a roofed and wholly screened 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 to mitigate odour, amenity and noise; d. of a design to mitigate the harbourage of vermin or attraction of scavenging animals; e. provided with natural or temperature-controlled ventilation if in an enclosed room; f. of a design which maintains a minimum internal vertical clearance of 2.1m; g. 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; h. are not to contain other amenities such as air-conditioning compressors, hot water systems or electrical hubs. <i>Note—Where screening is utilised to form part or all of a refuse storage area, the screening is to have a maximum of 25% openings, with a maximum opening dimension of 50mm, and are to be permanently fixed, durable and maintainable.</i> <i>Note—Allow for at least an additional 0.5m clearance surrounding each container, or for the storage of multiple bins, 1.5m clearance around the combined bin area (whichever is lesser).</i>	Complies
(6)	Best practice may include allowing additional space for the storage of extra containers to separately store either organic waste or other recyclables in the future.	Sufficient space provided for anticipated volume and composition.
(7)	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. the chute room must be of suitable size to allow for an additional bin/s to remain under the chute discharge/s at all times; d. separate chutes and bulk bins are to be used for each waste stream; e. the room containing the chute and bin or compactor excludes all but authorised personnel; f. design best practice may include developments greater than 15m (3 storeys) in height utilising twin chutes or single chute dual stream technology with openings on each residential floor to enable chute disposal of both refuse and recycling.	Complies
(8)	Environmental best practices may also include the installation of a trapped waste connection to the sewer system.	Sewer connected drainage point provided.

Section 5 – Non-residential refuse collection		
(1)	Non-residential development is to provide sufficient capacity to achieve low-frequency servicing in line with Table 2.	Complies
(2)	Refuse generation rates for specific uses are provided in Table 4 https://cityplan.brisbane.qld.gov.au/eplan/rules/0/269/0/27675/0/crossrefhref - Rules/0/269/1/49070/0. These figures are to be used to calculate the refuse and recycling capacity required. <i>Note—Where a refuse generation rate is not defined in Table 4, the applicant is responsible for providing evidence in support of the refuse generation proposed.</i>	Complies
(3)	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
(4)	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.	Details on servicing provided within this OWMP.
(5)	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. <i>Note—Standard design arrangements, including gradients, are contained in the Transport, access, parking and servicing planning scheme policy.</i>	Performance solution proposed for transfer distance; transfer route is direct and maintains line of sight with RCV.
(6)	Bulk bins of 1.5m ³ or more are positioned so that front-lift refuse collection 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 area to the collection point.	N/A 1.1m ³ bins proposed.
(7)	The storage area for refuse bins are: a. contained either within a building or a roofed and wholly screened enclosure of sufficient size for the bin quantity required. Table 1 provides the bin types and dimensions; <i>Note—Where screening is utilised to form part or all of a refuse storage area, the screening is to have a maximum of 25% openings, with a maximum opening dimension of 50mm, and are to be permanently fixed, durable and maintainable.</i> b. easily accessible for occupants and for the required servicing of bins; <i>Note—Allow for at least an additional 0.5m clearance surrounding each container, or for the storage of multiple bins, 1.5m clearance around the combined bin area (whichever is lesser).</i> c. screened from neighbouring properties to mitigate impacts from odour, amenity and noise; d. of a design to mitigate the harbourage of vermin or attraction of scavenging animals; e. provided with natural or temperature-controlled ventilation if in an enclosed room; f. of a design which maintains a minimum internal vertical clearance of 2.1m; g. 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; h. are not to contain other amenities such as air-conditioning compressors, hot water systems or electrical hubs.	Complies
(8)	Best practice may include allowing additional space for the storage of extra containers to separately store either organic waste or other recyclables in the future.	Refuse area sufficiently sized.
(9)	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.	Complies

Appendix B Relevant site plans



LEGEND

BC BICYCLE PARK

CAR PARK

- 46 RESIDENT STANDARD CAR BAYS
- 18 VISITOR (V) AND COMMERCIAL (C) CAR BAYS
- 52 RESIDENT STORAGE CAGES
- 52 RESIDENT BICYCLE SPACES (BC)
- 8 CENTRE USE BICYCLE SPACES

A JD FOR DA LODGEMENT 05.06.26
Rev Initial Description Date

PLANNING APPROVAL

Client



Archipelago

Turrbal and Yuggera/Jagera Country
Level 3, 199 George Street Brisbane QLD 4000
www.archipelago.com.au

Project

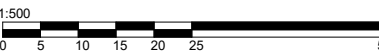
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108 MONTAGUE ROAD

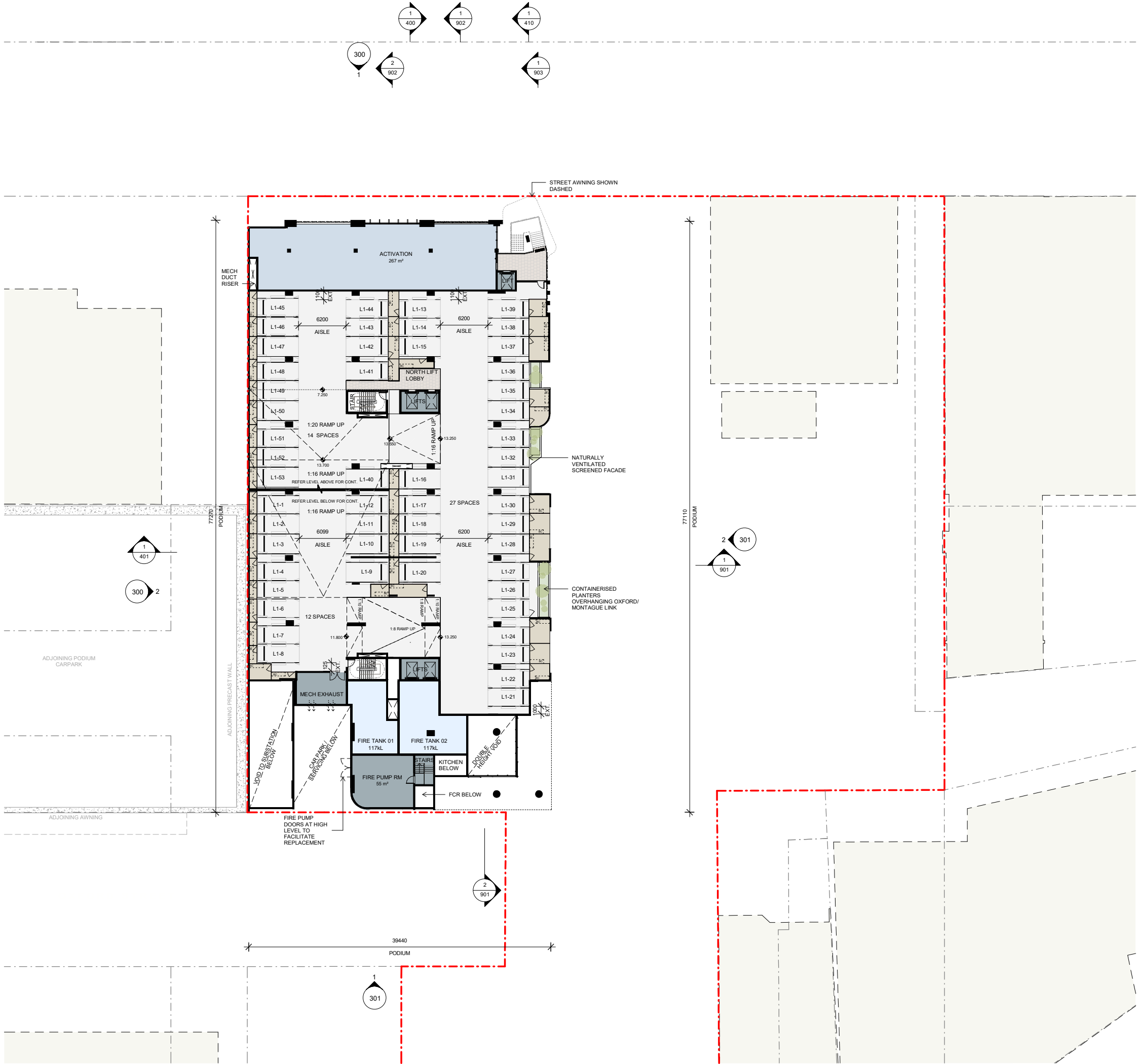
DRAWING TITLE
GENERAL ARRANGEMENT PLAN -
PODIUM - LEVEL P2

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Do not scale from drawings. Contractor to verify all dimensions on site prior to construction, and are to advise Archipelago of any discrepancy. © Copyright 2023 All rights reserved





- LEGEND**
- BC** BICYCLE PARK
- CAR PARK**
- 54 RESIDENT STANDARD CAR BAYS
 - 42 RESIDENT STORAGE CAGES
 - 42 RESIDENT BICYCLE SPACES (BC)

A JD FOR DA LODGEMENT 05.06.26
Rev Initial Description Date

PLANNING APPROVAL

Client
STOCKWELL

Archipelago
Turrbal and Yuggera/Jagera Country
Level 3, 199 George Street Brisbane QLD 4000
www.archipelago.com.au

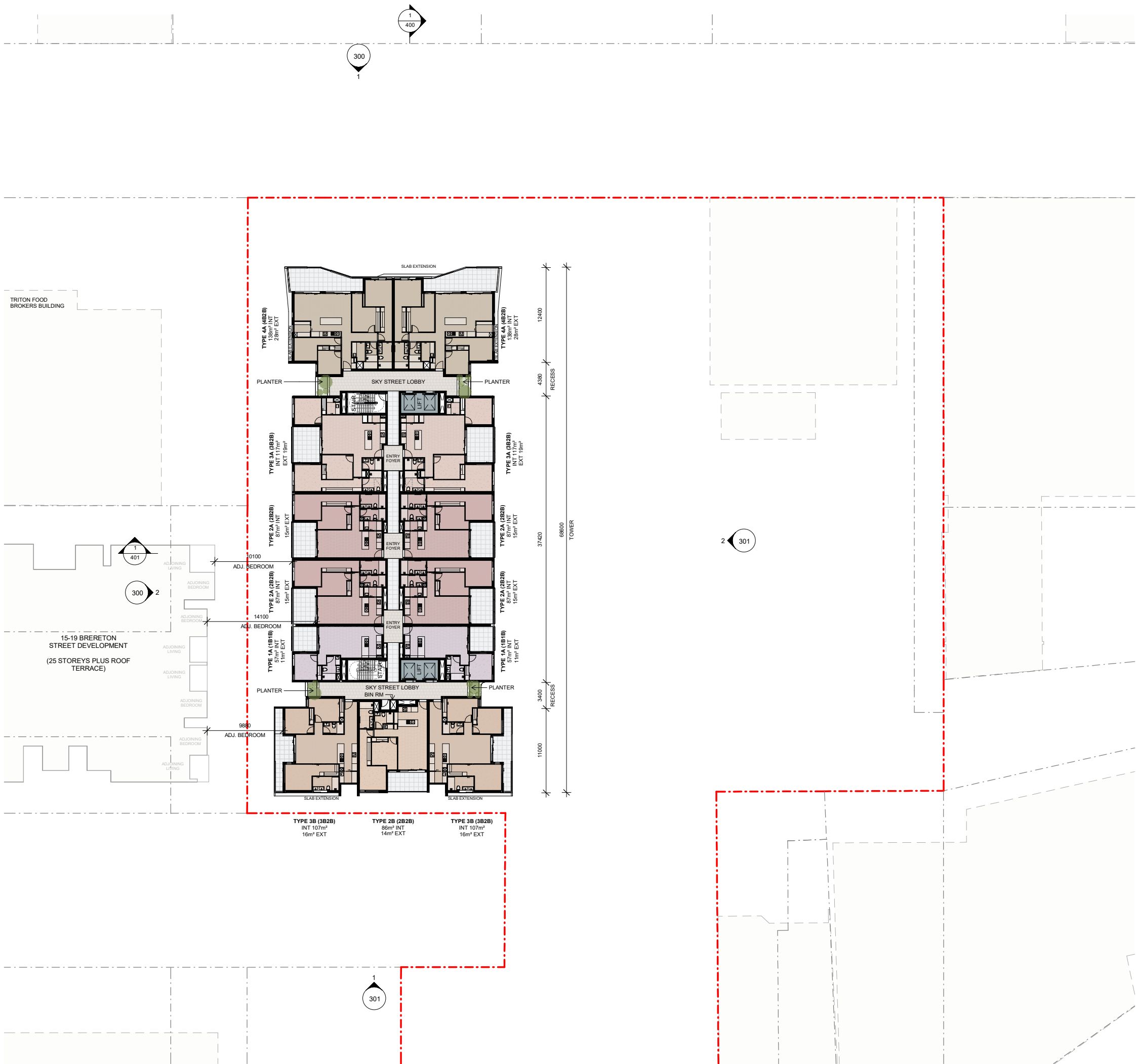
Project
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108 MONTAGUE ROAD

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AR	DA	203	A

Do not scale from drawings. Contractor to verify all dimensions on site prior to construction, and are to advise Archipelago of any discrepancy. © Copyright 2023 All rights reserved.
1:500
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Rev	Initial	Description	Date

PLANNING APPROVAL

Client



Archipelago

Turrbal and Yuggera/Jagera Country
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Project

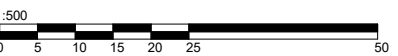
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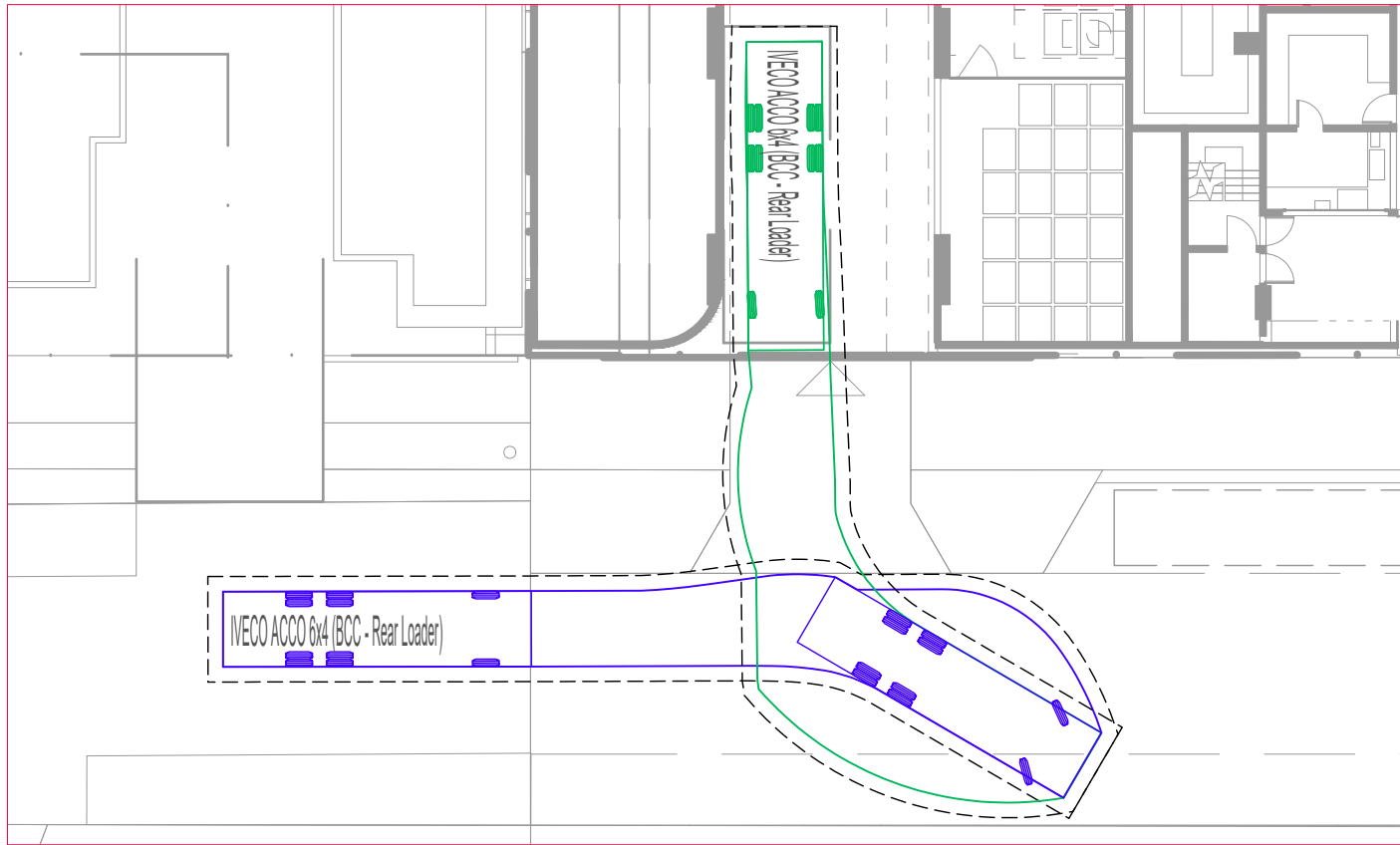
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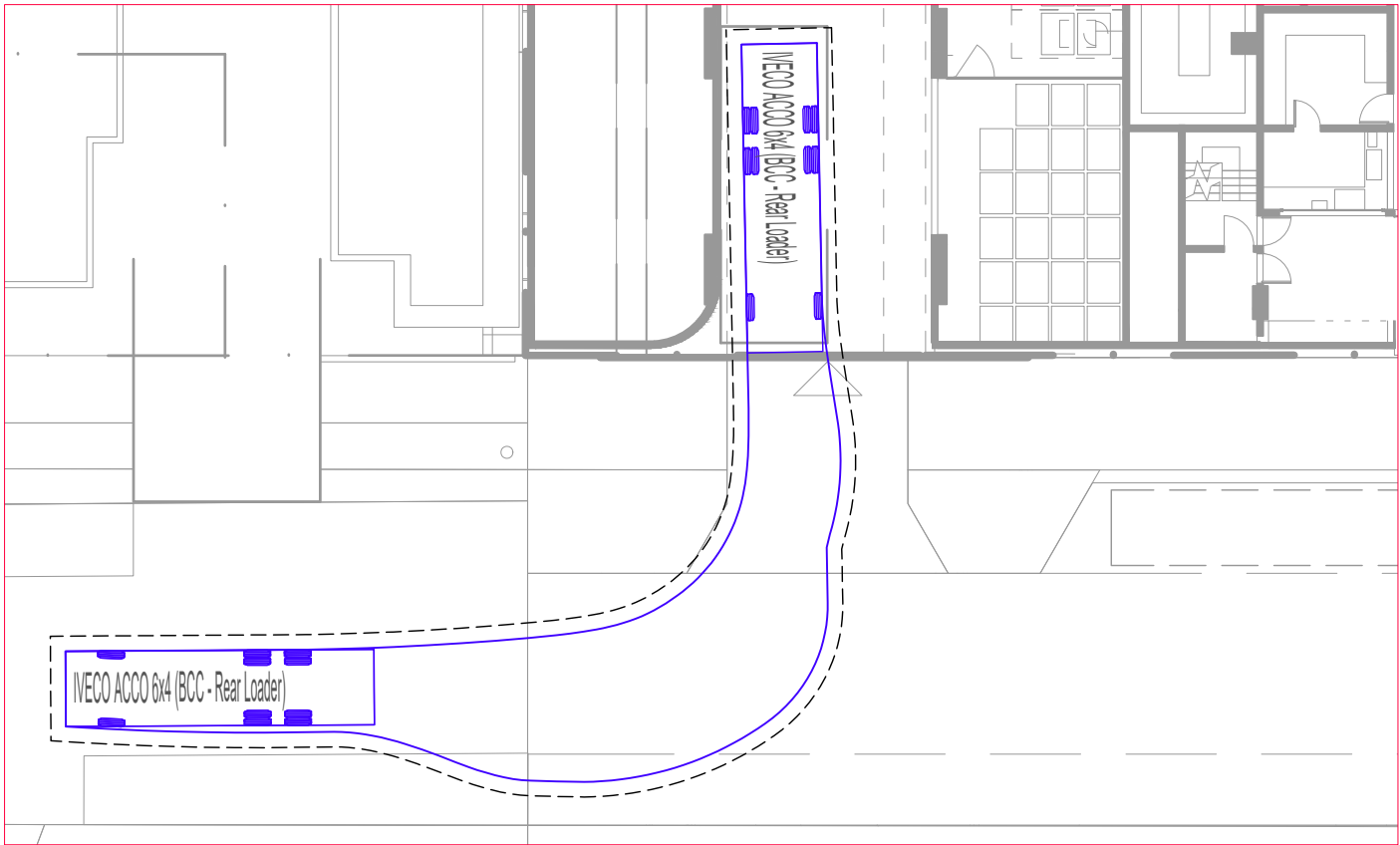
Do not scale from drawings. Contractor to verify all dimensions on site prior to construction, and are to advise Archipelago of any discrepancy. © Copyright 2023 All rights reserved.



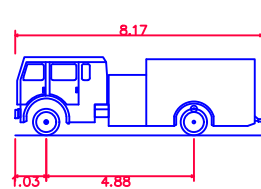
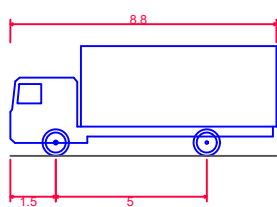
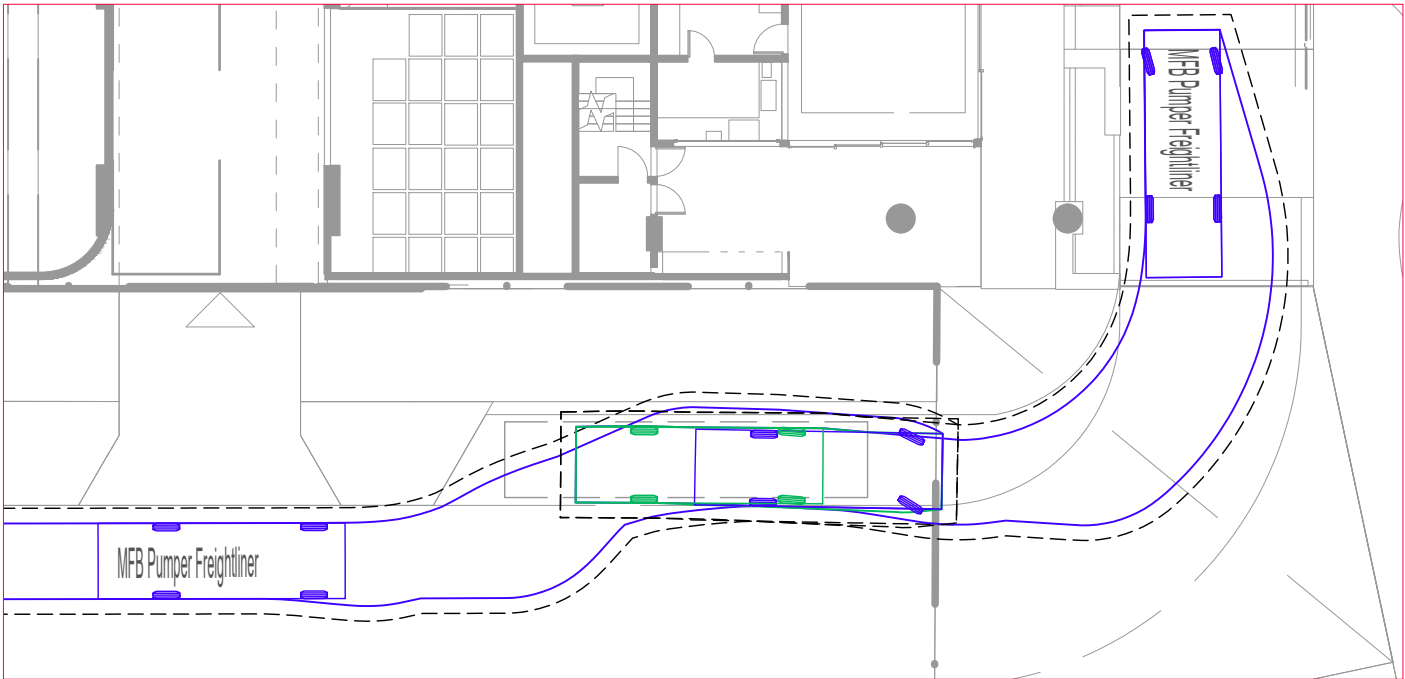
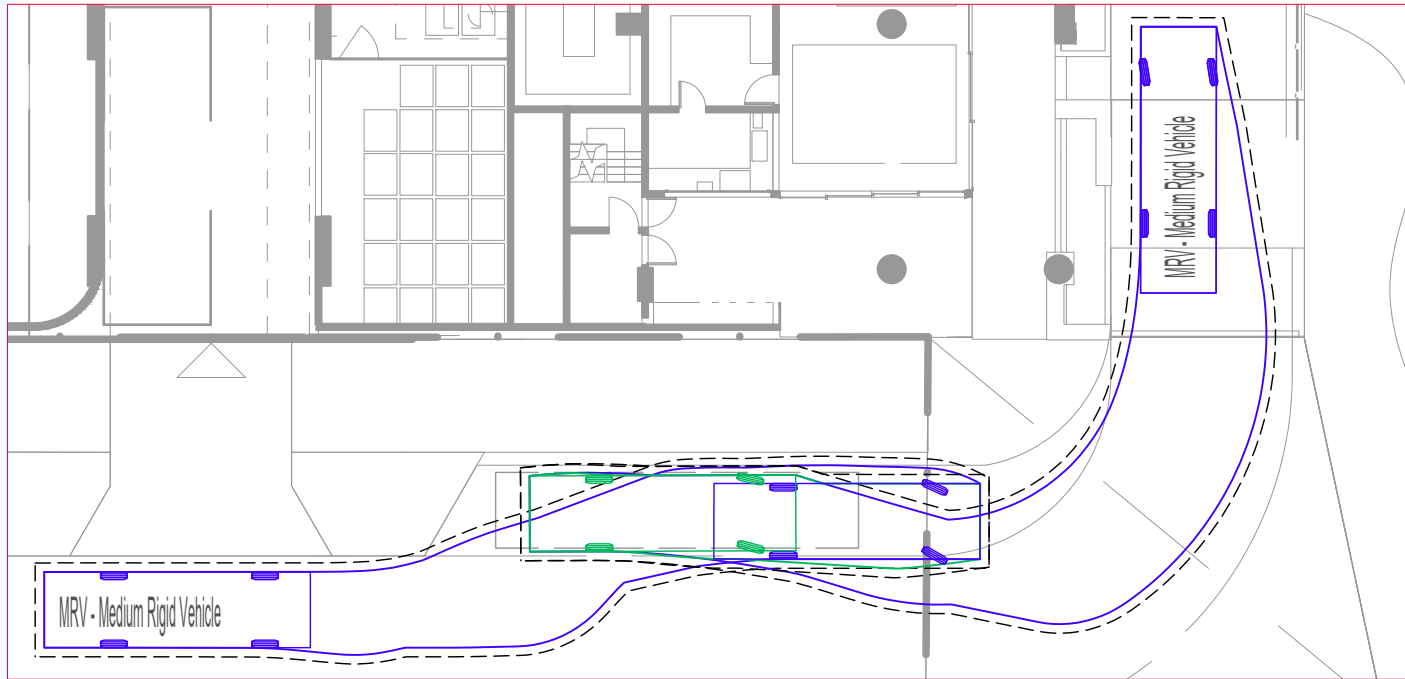
Appendix C RCV swept paths



RCV ACCESS



RCV EGRESS



Simon Crank DIRECTOR
SIMON CRANK RPEQ 18360
APPROVED 2 Jun 2026

25BRT0421-01 RevA SWEPT PATH ANALYSIS - RCV/ MRV

REF:108 Montague Road, South Brisbane.

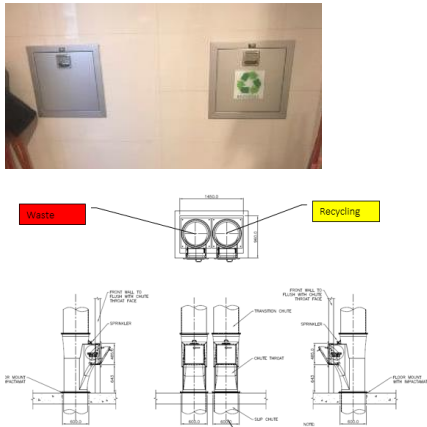


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Appendix D Systems and specifications

D.1 Specified refuse management equipment

The table below provides contextual examples of the specific equipment types specified in this OWMP 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
Tenancy and communal area bins	General waste, recycling, food waste, paper/ cardboard		Various options and sizes available. To be supplied depending on preference and space available. Examples: https://www.sourceseparation-systems.com.au-product/multisort https://methodrecycling.com/au/
1,100L 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
Dual Refuse Chute System	General waste, recycling, food waste		Refuse disposal in multi-storey buildings through refuse chutes options include: single chute for waste only, or 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
Linear conveyor	General waste, recycling, food waste		Automated bin rotation (e.g. linear or carousel) to manage bin fill level and prevent overflow under chutes Example: https://www.elephantsfoot.com.au/products/compactors/carousel-linear https://wastech.com.au

Bin types	Waste streams	Examples	Information
Chute discharge compaction	General waste	 	Compactors designed for integration with the refuse chute to minimise the volume of general waste. Examples: https://www.elephantsfoot.com.au/products/compactors/carousel-linear https://wastech.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
Portable Cooking Oil Storage	Used Cooking Oil	 	Cooking oil recycling Example: https://www.cookers.com.au Cooking oil delivery, used oil collection and provision of required equipment
240L bins (Optional)	General waste, paper, recycling, green waste	  	Dimensions approx. 740 x 580 x 1080mm (L x W x H) (dimensions may depend on contractor) Examples: http://www.justwheeliebins.com.au , http://wheeliebinonline.com.au
660L bins (Optional)	General waste, recycling, paper/ cardboard, food, organic waste	 	Dimensions approx. 780 x 1260 x 1330mm (L x W x H) (dimensions depend on contractor) Examples: http://www.justwheeliebins.com.au , https://www.australianwastemanagement.com.au
Counter-top E-Waste recycling (Optional)	Electronic Waste	 	Prepaid battery collection Example: https://envirostream.com.au/product/prepaid-countertop-battery-recycling-box/ https://www.ecoactiv.com.au/product/4l-battery-recycling-prepaid-service/ Toner cartridge collection https://zerowasteboxes.terracycle.com.au/products/ink-and-toner-catridges-zero-waste-boxes

Appendix E Refuse signage

E.1 Refuse signage

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



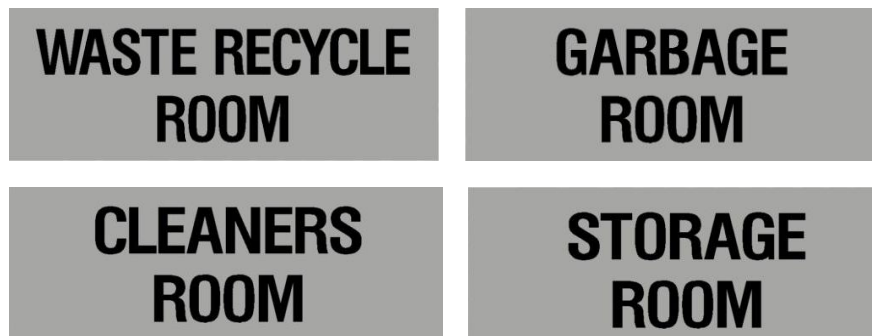
Colour coding as per AS 4123.7-2006

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

E.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 F 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 1.00m ³ to 4.50m ³ 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.
Refuse Trolley		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.

TERM	ABBREVIATION	DEFINITION
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.
Heavy Rigid Vehicle	HRV	A vehicle specifically designed for collecting and emptying refuse bin.
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.