



PLANS AND DOCUMENTS  
referred to in the PDA  
DEVELOPMENT APPROVAL

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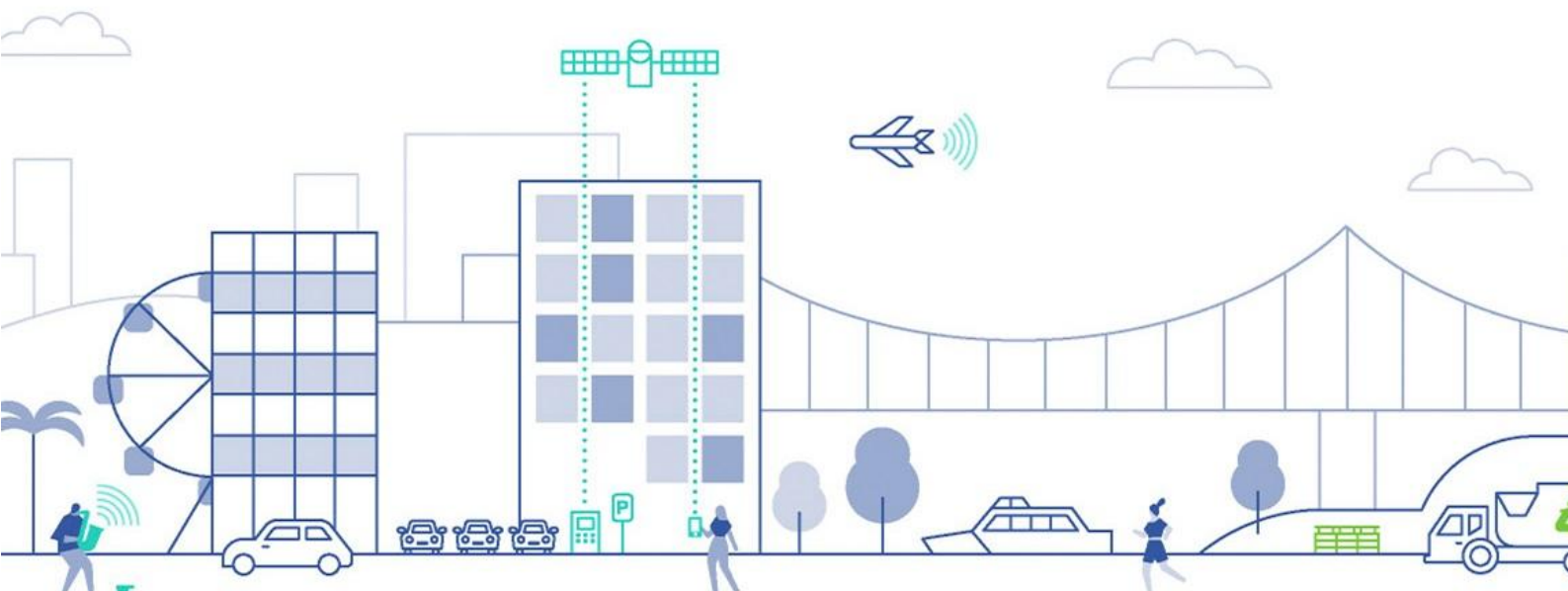


# Operational Waste Management Plan

Proposed Residential Development

At 893 – 899 Stanley St & 10 Hampton St, East Brisbane

On Behalf of Pedakil 3 Pty Ltd





## Disclaimer

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## Revision record

| Issue no. | Author       | Reviewed/approved | Development stage – Revision description | Date       |
|-----------|--------------|-------------------|------------------------------------------|------------|
| 1.        | R. Griffiths | N. Lee            | Schematic Design – Draft                 | 25/02/2026 |
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| 3.        |              |                   |                                          |            |
| 4.        |              |                   |                                          |            |

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# 1. Introduction

## 1.1 Background

Colliers International Engineering and Design (TTMC) Pty Ltd has been engaged by Pedakil 3 Pty Ltd to prepare an Operational Waste Management Plan (OWMP) to support the proposed residential development located at 893 – 899 Stanley Street and 10 Hampton Street, East Brisbane, Queensland. As the site is located within the Woolloongabba Priority Development Area (PDA), it is understood that a development application will be lodged with Economic Development Queensland (EDQ).

## 1.2 Scope

The content of this OWMP is intended to provide information on the typical movement of waste streams from generation to collection.

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 is located at 893 – 899 Stanley Street and 10 Hampton Street, East Brisbane, as depicted in Figure 1.1. The legal property description of each lot within the development site is Lot 61 on RP11567, Lot 62 on RP11567, Lot 63 on RP11567, Lot 1 on RP116092 and Lot 60 on RP11567.

The site is located within Precinct 1: Woolloongabba Core of the Woolloongabba Priority Development Area (PDA).

The site has frontages on Stanley and Hampton Street, recognised as an arterial and a neighbourhood road respectively on BCC's road hierarchy. All vehicular access into the site will occur via Hampton Street.

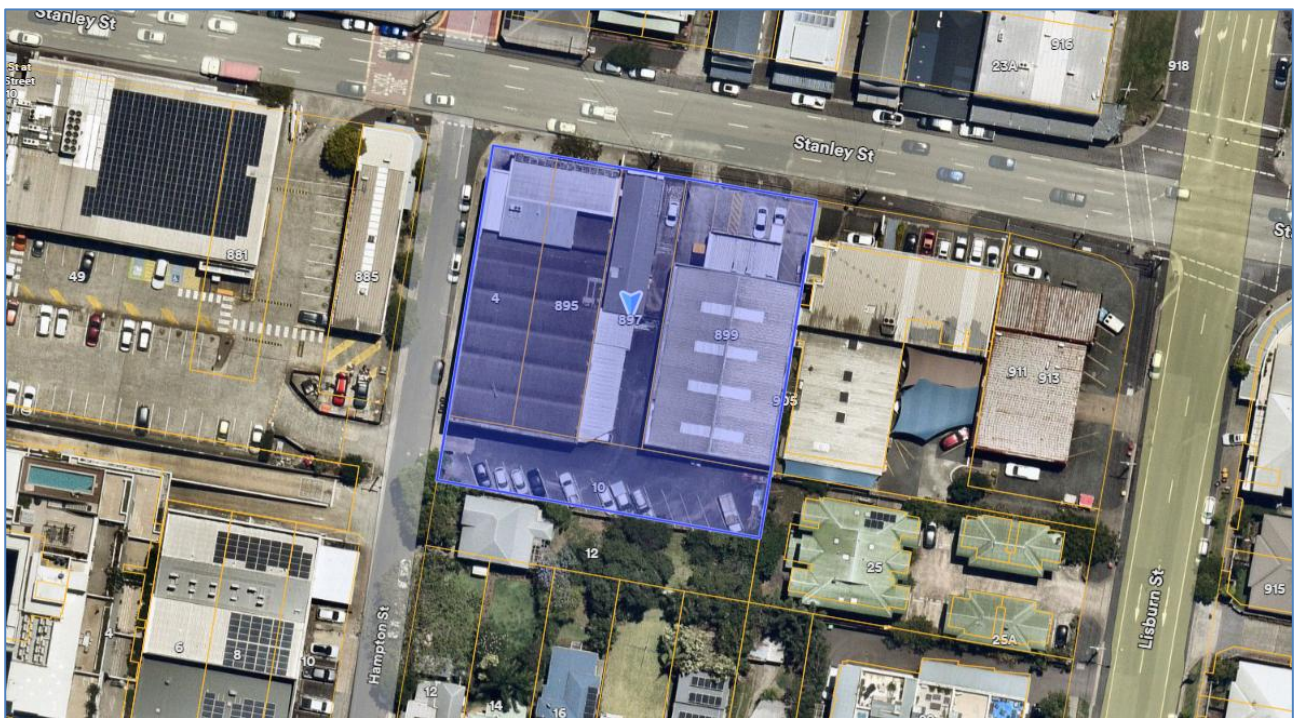


Figure 1.1: Site location

**Source:** Nearmap, Date: November 5<sup>th</sup>, 2025

## 1.4 Site statistics

The proposed development comprises of 19 level apartment building with 3 levels of podium parking. Levels 4 to 19 consist of a mix of 1 – 3 bed units.

A development schedule is presented in Figure 1.2.

| DEVELOPMENT SCHEDULE: RESIDENTIAL UNITS / NUMBERS: |       |       |       |       |      |                               |                      |                  |               |                                |                             |                    |  |
|----------------------------------------------------|-------|-------|-------|-------|------|-------------------------------|----------------------|------------------|---------------|--------------------------------|-----------------------------|--------------------|--|
| UNIT MIX SCHEDULE:                                 |       |       |       |       |      | BUILDING AREA SCHEDULE (GFA): |                      |                  |               |                                |                             |                    |  |
|                                                    | 1 BED | 2 BED | 3 BED | UNITS | CARS | Internal Unit Area            | Internal Circulation | External Balcony | L20 Pool Deck | Ground circulation entry, etc. | Ground car parking services | Podium car parking |  |
| LEVEL 20                                           |       |       |       |       |      |                               |                      |                  | 738           |                                |                             |                    |  |
| LEVEL 19                                           | 2     | 7     | 2     | 11    |      | 1,023                         | 83                   | 161              |               |                                |                             |                    |  |
| LEVEL 18                                           | 2     | 7     | 2     | 11    |      | 1,023                         | 83                   | 161              |               |                                |                             |                    |  |
| LEVEL 17                                           | 2     | 7     | 2     | 11    |      | 1,023                         | 83                   | 161              |               |                                |                             |                    |  |
| LEVEL 16                                           | 2     | 7     | 2     | 11    |      | 1,023                         | 83                   | 161              |               |                                |                             |                    |  |
| LEVEL 15                                           | 2     | 7     | 2     | 11    |      | 1,023                         | 83                   | 161              |               |                                |                             |                    |  |
| LEVEL 14                                           | 2     | 7     | 2     | 11    |      | 1,023                         | 83                   | 161              |               |                                |                             |                    |  |
| LEVEL 13                                           | 2     | 7     | 2     | 11    |      | 1,023                         | 83                   | 161              |               |                                |                             |                    |  |
| LEVEL 12                                           | 2     | 7     | 2     | 11    |      | 1,023                         | 83                   | 161              |               |                                |                             |                    |  |
| LEVEL 11                                           | 2     | 7     | 2     | 11    |      | 1,023                         | 83                   | 161              |               |                                |                             |                    |  |
| LEVEL 10                                           | 2     | 7     | 2     | 11    |      | 1,023                         | 83                   | 161              |               |                                |                             |                    |  |
| LEVEL 9                                            | 2     | 7     | 2     | 11    |      | 1,023                         | 83                   | 161              |               |                                |                             |                    |  |
| LEVEL 8                                            | 2     | 7     | 2     | 11    |      | 1,023                         | 83                   | 161              |               |                                |                             |                    |  |
| LEVEL 7                                            | 2     | 7     | 2     | 11    |      | 1,023                         | 83                   | 161              |               |                                |                             |                    |  |
| LEVEL 6                                            | 2     | 7     | 2     | 11    |      | 1,023                         | 83                   | 172              |               |                                |                             |                    |  |
| LEVEL 5                                            | 2     | 7     | 2     | 11    |      | 1,023                         | 83                   | 172              |               |                                |                             |                    |  |
| LEVEL 4                                            | 2     | 7     | 2     | 11    |      | 1,023                         | 83                   | 693              |               |                                |                             |                    |  |
| LEVEL 3                                            |       |       |       |       | 76   |                               |                      |                  |               |                                |                             | 2,022              |  |
| LEVEL 2                                            |       |       |       |       | 74   |                               |                      |                  |               |                                |                             | 2,022              |  |
| LEVEL 1                                            |       |       |       |       | 64   |                               |                      |                  |               |                                |                             | 1,931              |  |
| GRND                                               |       |       |       |       | 24   |                               |                      | 207              |               | 643                            | 1,073                       |                    |  |
| TOTAL                                              | 32    | 112   | 32    | 176   | 238  | 16,368                        | 1,328                | 3,130            | 738           | 643                            | 1,073                       | 5,975              |  |

Figure 1.2: Development schedule

**Source:** NMDS Architecture, Project: Proposed Unit Development 893-899 Stanely St East + 10 Hampton St East Brisbane, Drawings: DA-000, Dated: 17.03.2026

## 2. Regulatory refuse management requirements

This section provides the detailed refuse information and associated calculations in addition to outlining 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 & governance considerations

#### 2.1.1 State Government Development Scheme

This plan has been prepared to align with the refuse related sustainability goals and requirements outlined in The Woolloongabba Plan.

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 local government area. 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.

#### 2.1.2 Council's Refuse Planning Scheme

This plan has been prepared to align with BCC's refuse requirements of SC6.26 Refuse Planning Scheme Policy (PSP) v35. As this development is a residential site, Colliers has referred to BCC requirements as outlined in the Refuse PSP under section 2, 3, 4 and 5 as these sections outline the controls for all development and controls directly related to residential uses.

Please refer to *Appendix A* for the Planning Scheme Compliance Checklist.

## 2.2 Prescribed refuse volumes

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 recycling in line with comparably sized developments previously approved by Council.

Table 2.1 outlines the refuse generation rates utilised.

Table 2.1: Refuse generation rates

| Generation rate | Applied to            | Measure     | General waste | Recycling |
|-----------------|-----------------------|-------------|---------------|-----------|
| Residential     | All Residential Units | L/Unit/Week | 240           | 240       |

Table 2.2 outlines the estimated residential refuse generation volumes.

Table 2.2: Residential refuse calculations

| Area description                         | Measure                     | Quantity | General waste<br>L/Week | Recycling<br>L/Week |
|------------------------------------------|-----------------------------|----------|-------------------------|---------------------|
| Residential Units                        | Units                       | 176      | 42,240                  | 42,240              |
| Total weekly compacted Volumes (L/Week)* |                             |          | 14,080                  | N/A                 |
| Volumes per day (L/Day)                  |                             |          | 2,011                   | 6,034               |
| Volumes per collection (L/Collection)    |                             |          | 4,693                   | 14,080              |
| Collection and equipment details         | Collections per week        |          | 3                       | 3                   |
|                                          | Storage capacity            |          | 3 Days                  | 3 Days              |
|                                          | Equipment size              |          | 1,100L                  | 1,100L              |
|                                          | Equipment quantity required |          | 4.27                    | 12.80               |
|                                          | Equipment quantity provided |          | 5                       | 13                  |

\*Compaction ratio of 3:1 used for calculation purposes

## 2.3 Refuse bin, equipment requirements & specifications

Table 2.3 outlines the total number of bins required for the development based on the volume calculations above.

As actual refuse volumes may vary from assessment benchmarks or over time according to evolving waste streams and operation of the site, bin numbers and sizes may need to be altered to suit the building operation and occupant needs.

Table 2.3: Total bin requirements

| Refuse stream        | Bin/storage – Size or type | Number required                                                 |
|----------------------|----------------------------|-----------------------------------------------------------------|
| General waste        | 1,100L                     | 5<br>+1 to remain beneath the chute discharge during servicing  |
| Commingled recycling | 1,100L                     | 13<br>+1 to remain beneath the chute discharge during servicing |

Table 2.4 details the proposed additional waste equipment designed into the operational waste management of the development.

Table 2.4: Additional equipment

| Description                                         | Quantity | Capability/specification - see <i>Appendix D</i> for further details                                                                                                                                                                                      |
|-----------------------------------------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Individual unit bins - Stream separated receptacles | 352      | A minimum of 1 receptacle for each stream is required in each unit.                                                                                                                                                                                       |
| Single chute fitted with diverter system            | 1        | Single refuse chute for disposal of general waste and commingled on each floor with a diverter system to separate refuse streams at disposal point into general waste and commingled recycling.<br>Chute hoppers will be provided on each habitable level |
| 2-bin linear rotation system                        | 2        | Automates bin rotation beneath the chute discharge for general waste and commingled recycling. Reduces the overall level of building management intervention required.                                                                                    |

## 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 2.5: Disposal of frequently generated waste

| Refuse stream        | Disposal details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>WASTE</b>         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>General waste</b> | <p>Residents will have receptacles within their individual dwellings for collection and storage of at least one day of general waste. Bins are typically placed under the kitchen sink. Additional bins can be placed in other areas as required.</p> <p>Waste bins should be accompanied by a recycling bin (commingled recycling bins for cardboard, paper, plastics, glass etc.) in order to facilitate separation of general waste and recycling. General waste bins should always be lined with bags and the bags tied before removal.</p> <p>Waste bins should always be lined with bags and the bags tied before removal. Operationally, bins used for general waste should be limited to 30L or less and must not exceed the dimensions of the chute hoppers.</p> <p>The refuse chute will discharge directly into the bulk bins stored in the chute discharge room, via the diverter system. The chute hopper doors will include colour-coded features for easy identification and to support the separation of refuse streams. Instructions on the use of the diverter chute system and accepted items in each stream will be required to be included in the resident apartment manual.</p> |

Table 2.6: Disposal of frequently generated recoverable materials

| Refuse stream                                                                                                                                                                                                           | Disposal details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Organic (Food) waste</b>                                                                                                                                                                                             | While BCC do not currently offer food waste or FOGO collections to multiple residential developments, separating organic food waste from general waste should be considered to reduce the total amount of general waste produced.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>RECYCLING</b>                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Commingled, including</b> <ul style="list-style-type: none"> <li>• Glass,</li> <li>• Aluminium,</li> <li>• Steel cans,</li> <li>• Tins,</li> <li>• Cardboard,</li> <li>• Semi rigid &amp; rigid plastics.</li> </ul> | <p>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 chute hopper.</p> <p>Residents will have receptacles within their individual dwellings 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. Additional recycling bins can be placed in other areas as required.</p> <p>Recycling bins will usually be used for all recycling materials (comingled recycling). However, cardboard, paper, plastics, glass etc. can be collection separately if required.</p> <p>Once full, residents will transfer/carry their recycling to the refuse chute hopper on each level, The refuse chute will discharge directly into the comingled recycling bulk bins stored in the chute discharge room, via the diverter system. The chute hopper doors will include colour-coded features for easy identification and to support the separation of refuse streams. Instructions on the use of the diverter chute system and accepted items in each stream will be required to be included in the resident apartment manual.</p> <p>Residents will liaise with building management for the disposal of all oversized recyclable materials, lifts will be utilised for vertical transfer of oversized material.</p> |

## 2.4.2 Infrequently generated refuse

Table 2.7: Disposal of infrequently generated refuse

| Refuse stream                                          | Disposal details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Garden organics refuse/green waste</b>              | <p>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 will be captured in the general waste stream.</p> <p>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.</p> <p>The engaged contractor will be required to send this material to a composting or resource recovery facility rather than to a landfill.</p> |
| <b>Hard waste/bulky goods</b>                          | <p>Hard waste collections will be coordinated in line with Council'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.</p>                                                                                                                                                                                                                                                                                      |
| <b>Hazardous waste - Batteries</b>                     | <p>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 the main lobby of the building or alternate easily accessible location for all residents.</p>                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Hazardous waste - Other (paints, chemicals etc)</b> | <p>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 BCC and QLD government websites for further information.</p>                                                                                                                                                                                                                                                                                                                    |

## 2.5 Refuse storage, access & rotation requirements

All refuse generated will be stored in bins located within a dedicated refuse storage area on the ground floor. The bin room is sufficiently sized to accommodate all of the bins required for the development as outlined in Table 2.3. Residents will have access to the bin storage room, via liaison with building management for the disposal of items not suitable for chute disposal.

The waste chutes and linear conveyor system will be fully partitioned from the remainder of the room, with access restricted to building management personnel only. The chute partition is indicatively illustrated as a dashed line on architectural drawings. Building management will be responsible for rotating bins between the conveyor system within the refuse storage room, with sufficient space provided to facilitate the rotation of all bins. Management will also undertake routine cleaning of the bins and refuse storage area as required.

All bins will be collected directly from the refuse store by council's appointed waste collection contractor.

Figure 2.1 depicts the refuse room layout.

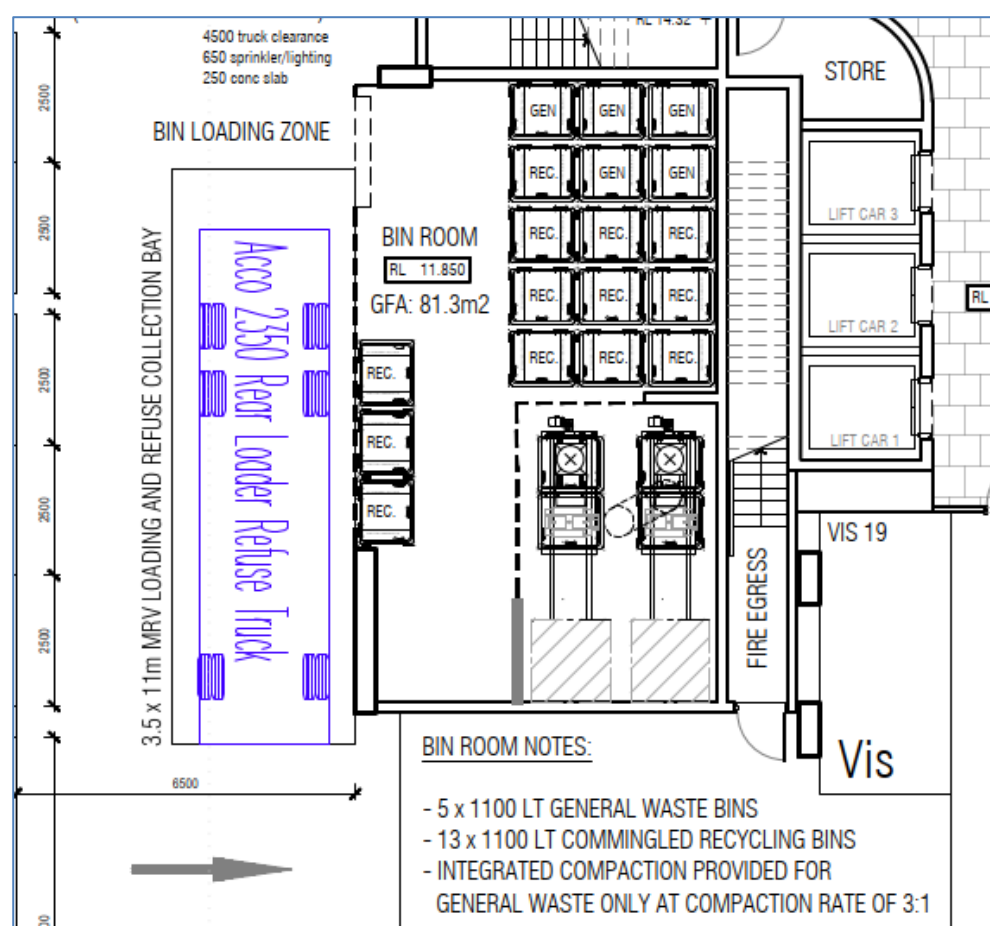


Figure 2.1: Refuse storage area layout

**Source:** NMDS Architecture, Project: Proposed Unit Development 893-899 Stanley St East + 10 Hampton St East Brisbane, Drawings: DA-200, Dated: 17.03.2026

Table 2.8 outlines the refuse storage area design criteria addressed for each storage area in order to minimise odours, deter vermin, protect surrounding areas, and make it a user-friendly and safe area.

Table 2.8: Refuse storage area design requirements

|                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Positioning considerations</b>                                                                                                                                                               |
| Positioned in immediate proximity or directly accessible to the designated loading point.                                                                                                       |
| Storage provided is conveniently accessible to residents for disposal or accessed via chutes.                                                                                                   |
| Is in a purpose-built storage room which is designed to be unattractive to vermin and used solely for the storage of refuse leaving the site only.                                              |
| Not located adjacent to or within any habitable portion of a building or place used in connection with food preparation (including food storage).                                               |
| 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.                                                                                              |
| <b>Visual amenity considerations</b>                                                                                                                                                            |
| 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.                                                                                                                           |
| <b>Functional design considerations</b>                                                                                                                                                         |
| 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.                                                                                    |
| <b>Bin washing and room cleaning considerations</b>                                                                                                                                             |
| A hose cock provided inside the room for cleaning bins and the enclosure.                                                                                                                       |
| The walls, ceilings, floors and equipment are to be designed and constructed of impervious material with a smooth finish to allow for easy cleaning.                                            |
| 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

Residents will dispose of all refuse vertically via the chute hoppers located on each floor. For items unsuitable for chute disposal such as bulky or electronic waste, residents will liaise with building management to arrange disposal of waste items into the bulk bins. The lifts will be utilised for the transfer of items not suitable for chute disposal.

The collecting contractor will park within RCV loading bay and retrieve the bin directly from the refuse room for servicing. After servicing the collecting contractor will return the bins to the refuse room.

Table 2.9 demonstrates the criteria addressed in the design of the refuse transfer path for all uses.

Table 2.9: Refuse transfer path design

| Positioning considerations                                                 |
|----------------------------------------------------------------------------|
| The bins to be transferred via hard stand pathway.                         |
| Allows bins to be easily manoeuvred.                                       |
| 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.  |

## 2.7 RCV & bin servicing arrangements

All refuse for the site will be collected by council's collecting contractor utilising a rear loading RCV.

The RCV will enter the via over the driveway crossover located on Hampton Street in a forward gear. The RCV will perform a single reserve manoeuvre into the RCV loading bay located adjacent to the refuse store. Once servicing is completed the RCV will exit the site back onto Hampton Street in a forward gear.



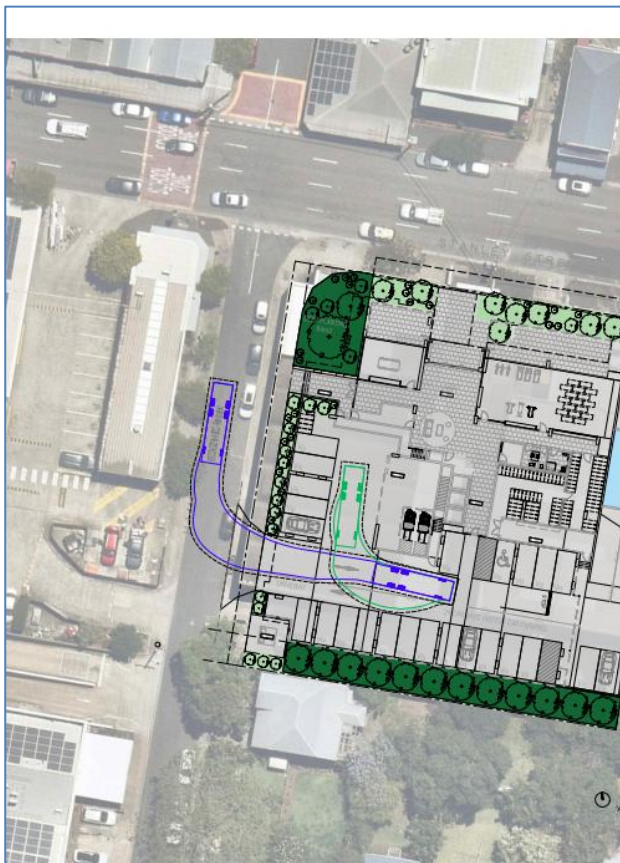
Figure 2.2 illustrates the swept paths for the rear loading RCV. Further details on vehicle access and on-site manoeuvring can be found in the transport report submitted with the submission.

Table 2.10 demonstrates the features of each bin servicing area.

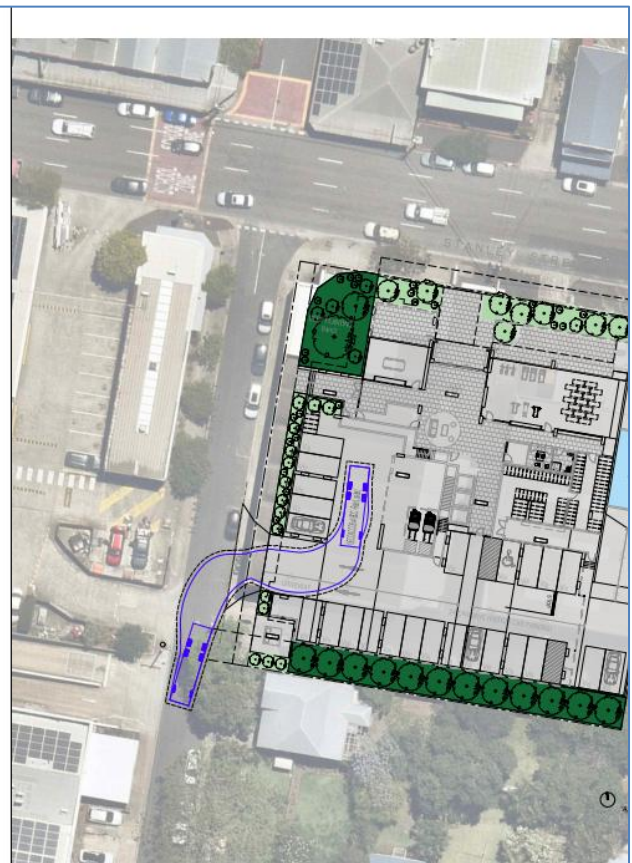
Table 2.10: Service Area Design

| Service area design requirements                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------|
| 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 devoid of stairs, lips or 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 screened sufficiently to minimise the view of bins from neighbouring properties or passing vehicles and pedestrian traffic external to the site. |
| Is positioned away from entrances to residential premises.                                                                                          |



REAR LIFT BCC RCV ENTERING SITE



REAR LIFT BCC RCV EXITING SITE

Figure 2.2: Swept Path

Source: Colliers

## 3. Recommended operational refuse management

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

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 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 building management intervention through bin rotations beneath the refuse chute.

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 stream separation

Refuse generated by residential uses including multiple dwelling residential apartments includes a substantial volume of food waste. Colliers recommend that food organic waste is separated from the general waste stream.

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.

## 3.2 Recommended refuse bins and equipment

Table 3.1 outlines the 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 bin room as proposed within the development application.

Table 3.1: Recommended bin requirements (total)

| Refuse stream                    | Bin/equipment - Type or size | Bins required                                                   | Storage capacity between collections         |
|----------------------------------|------------------------------|-----------------------------------------------------------------|----------------------------------------------|
| General waste                    | 1,100L                       | 3<br>+1 to remain beneath each chute discharge during servicing | 3 Days                                       |
| Food organics                    | 240L                         | 1                                                               | 2 Days<br>Servicing every 2 days recommended |
| Commingled recycling             | 1,100L                       | 6<br>+1 to remain beneath each chute discharge during servicing | 3 Days                                       |
| CDS                              | 660L                         | 1                                                               | 7 Days                                       |
| Bulky cardboard                  | 1,100L                       | 1                                                               | Ad Hoc                                       |
| E-waste<br>(Excluding batteries) | 1100L                        | 1                                                               | Ad Hoc                                       |
| Mixed batteries                  | Countertop receptacle        | 1                                                               | Ad Hoc                                       |

### 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 will be assigned for all on-going refuse management related activities during the operation of the development. 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 set intervals with the review of the refuse strategy.

Table 3.2: Implementation checklist

| Task                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Assigned | Remarks |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------|
| <b>Verify the as-built form of all refuse related areas.</b><br>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.<br>This task may also be required during significant building refits or renovation. |          |         |
| <b>Appoint personnel to oversee or undertake refuse management tasks.</b><br>A building manager or caretaker is typically appointed to undertake most operational tasks, engaging contractors for specialist tasks.                                                                                                                                                                                                                                        |          |         |
| <b>Conduct internal safety review.</b><br>An internal safety review is required to be undertaken to identify potential hazards in the implementation of the refuse strategy and risk mitigation opportunities.<br>This includes the use of any refuse management equipment installed, as well as refuse transfer paths.                                                                                                                                    |          |         |
| <b>Development of policy and procedures</b><br>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, and contractors.<br>Also includes assessment of any manual handling risks and preparation of a manual handling control plan for waste and bin transfers.                                                                        |          |         |

| Task                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Assigned | Remarks |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------|
| <b>Engage refuse collection contractors.</b><br>Council's collections contractor must conduct a site visit for the purpose 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.<br>RCV manoeuvrability testing and the establishment of service frequency and timing is also undertaken at this time. |          |         |
| <b>Install signage in all refuse disposal and storage points.</b><br>Signage is required to be installed to educate building occupants on location of disposal and refuse storage points. Additionally, 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.                                                   |          |         |
| <b>Leasing and body corporate agreements.</b><br>All leasing contracts and body corporate agreements should contain clauses pertaining to waste management arrangements and use of any associated equipment.                                                                                                                                                                                                                                                                                   |          |         |
| <b>Education and training.</b><br>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.<br>The step is repeated through the operational phase of the development as required due to changes in users or personnel.                                                                                 |          |         |
| <b>Consider fit out and move-in refuse.</b><br>Higher volumes of waste are generated during the initial resident move-in or final fit out. This typically includes large volumes of cardboard. Additional bins or collections may be required.<br>This also applies to high turnover events and refits or renovation.                                                                                                                                                                          |          |         |

### 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 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------|
| <b>Facilitate disposal from communal areas, and public realm.</b><br>Appointed building manager/caretaker is required to transfer refuse generated in communal areas and the public realm to the refuse storage area for final disposal, this includes litter removal.                                                                                                                                                                                                                  |          |         |
| <b>Manage rotations of bins to ensure convenient access.</b><br>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).<br>Where equal access to a refuse stream is not maintained, other streams may be contaminated leading lost resources.                                                                              |          |         |
| <b>Manage bin transfers to agreed servicing point (if required).</b><br>Bins are required to be presented to the temporary holding or agreed servicing point prior to the scheduled service time and ensure the area is free from obstruction. Late bin placement or servicing obstruction may lead to missed bin services.                                                                                                                                                             |          |         |
| <b>General cleaning.</b><br>Regular cleaning and maintenance of all refuse management facilities is important to maintain a safe and hygienic environment for staff and contractors.<br>General cleaning is required for all refuse holding and transfer areas including: <ul style="list-style-type: none"> <li>• Refuse bins, rooms and storage areas</li> <li>• Refuse transfer areas including lifts and staircases</li> <li>• Any other refuse management equipment</li> </ul>     |          |         |
| <b>Perform spot checks on bin contents and refuse streams.</b><br>Building management regularly check for correct bin use 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).                                                                                                                                                                            |          |         |
| <b>Ongoing education and communication.</b><br>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.<br>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. |          |         |

### 3.3.1. 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 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------|
| <b>Coordination of specialised cleaning contractors as required.</b><br>Typical specialised cleaning services may include cleaning internal areas of compaction equipment (if selected); this reduces risk of blockage, odour and risk of fire.                                                                                                                                                   |          |         |
| <b>Maintenance and servicing of refuse management equipment as per schedule.</b><br>Frequency depends on equipment, building operation and manufacturer specification. Routine maintenance reduces downtime and detrimental impact of unscheduled equipment breakdown.                                                                                                                            |          |         |
| <b>Coordination of specialised equipment contractors as required.</b><br>May extend to ad hoc services requiring specialist equipment such as bulky/hard waste removal.                                                                                                                                                                                                                           |          |         |
| <b>Internal safety review.</b><br>Routine safety reviews are required to identify changes to the site, work practices or legislation that may impact existing policies and procedures.<br>Reviews should include visual inspection of equipment and user PPE.<br>Any policy or procedure updates arising from a safety review must be immediately communicated.                                   |          |         |
| <b>Review bin quantities and refuse management equipment.</b><br>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.<br>This review may form part of the external audit process (above) as recommendations made. |          |         |

| Task                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Assigned | Remarks |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------|
| <p><b>Review service frequency and methodology on 6 monthly intervals with collecting contractor.</b></p> <p>The service frequency and service methodology should be reviewed once development is fully occupied and on rolling 6 monthly basis to ensure the optimum cost efficiency in services provided and explore options for additional services.</p> <p>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.</p> |          |         |
| <p><b>Review of recycling rate target to target continual improvement.</b></p> <p>Once benchmarked performance has been assessed against the existing targeted recycling rate a new target can be established that strives for continual improvement.</p> <p>Any changes in targeted recycling rates and the achievements of the refuse strategy should be widely communicated to all uses.</p>                                                                                                                            |          |         |
| <p><b>Update and amend OWMP based on review outcomes.</b></p> <p>On completion of the refuse strategy review the OWMP should be updated to reflect refuse strategy amendments and to enable implementation of refuse strategy.</p>                                                                                                                                                                                                                                                                                         |          |         |

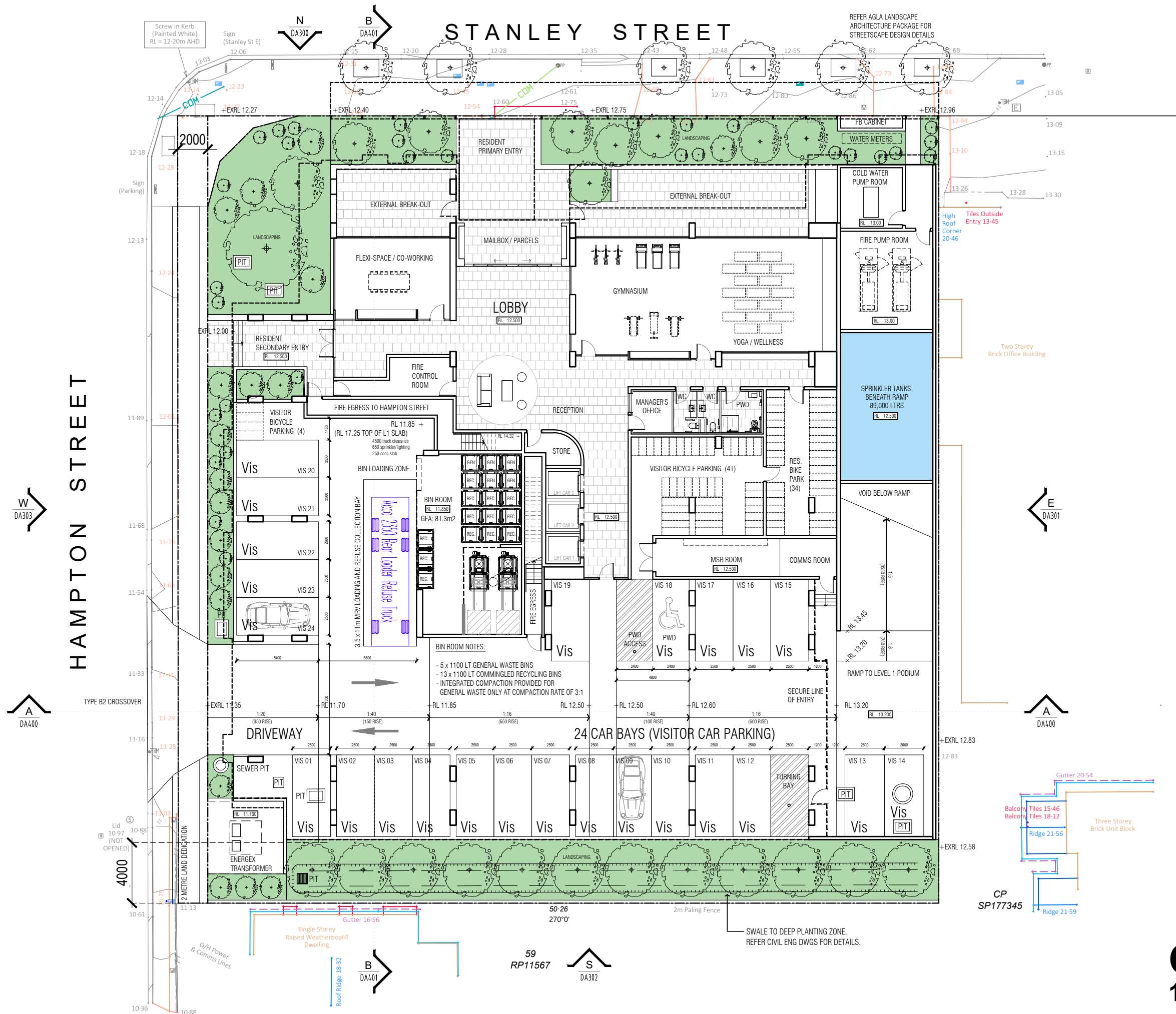
## Appendix A Council PSP compliance checklist

| BCC SC6.26 Refuse Planning Scheme Policy      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                   |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| Item                                          | Requirement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Compliance/comment                |
| <b>Section 2 – General requirements</b>       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                   |
| (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 within 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.                                                                                                                                                                                                                                                                    | Details 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).                                                                                                                                                                                                                                                                                                                                                                                              | Details provided within this OWMP |
| (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.                                                                                                                                                                                                                                                                                                                                                                                            | See traffic report submitted      |
| (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.                                                                                                                                                                                                                                                                                                       | Complies                          |
| (6)                                           | The waste collection system is to achieve the following outcomes: <ul style="list-style-type: none"> <li>a. both the customer and service provider can access the bin storage area and collection point conveniently;</li> <li>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;</li> <li>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.</li> </ul> | Complies                          |
| <b>Section 3 - Access and manoeuvrability</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                   |
| (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.                                                                                                                                                                                                                                                                                                                                                                                             | Complies                          |
| (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.                                                                                                                                                                                                                                                                                                                                                                                                                                     | Forward in, forward out 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.                                                                                                                                                                                                                                                                                                                                                                                     | Forward in, forward out proposed  |
| (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.                                                                                                                                                                                                                                                                                                                                                                                      | N/A                               |
| (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.                                                                                                                                                                                                                                                                                                                                                    | Complies see traffic report       |
| (6)                                           | For detached dwellings on rear lots, pavements/carriageways trafficked by a refuse collection vehicle have a minimum width of 5.5m.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | N/A                               |

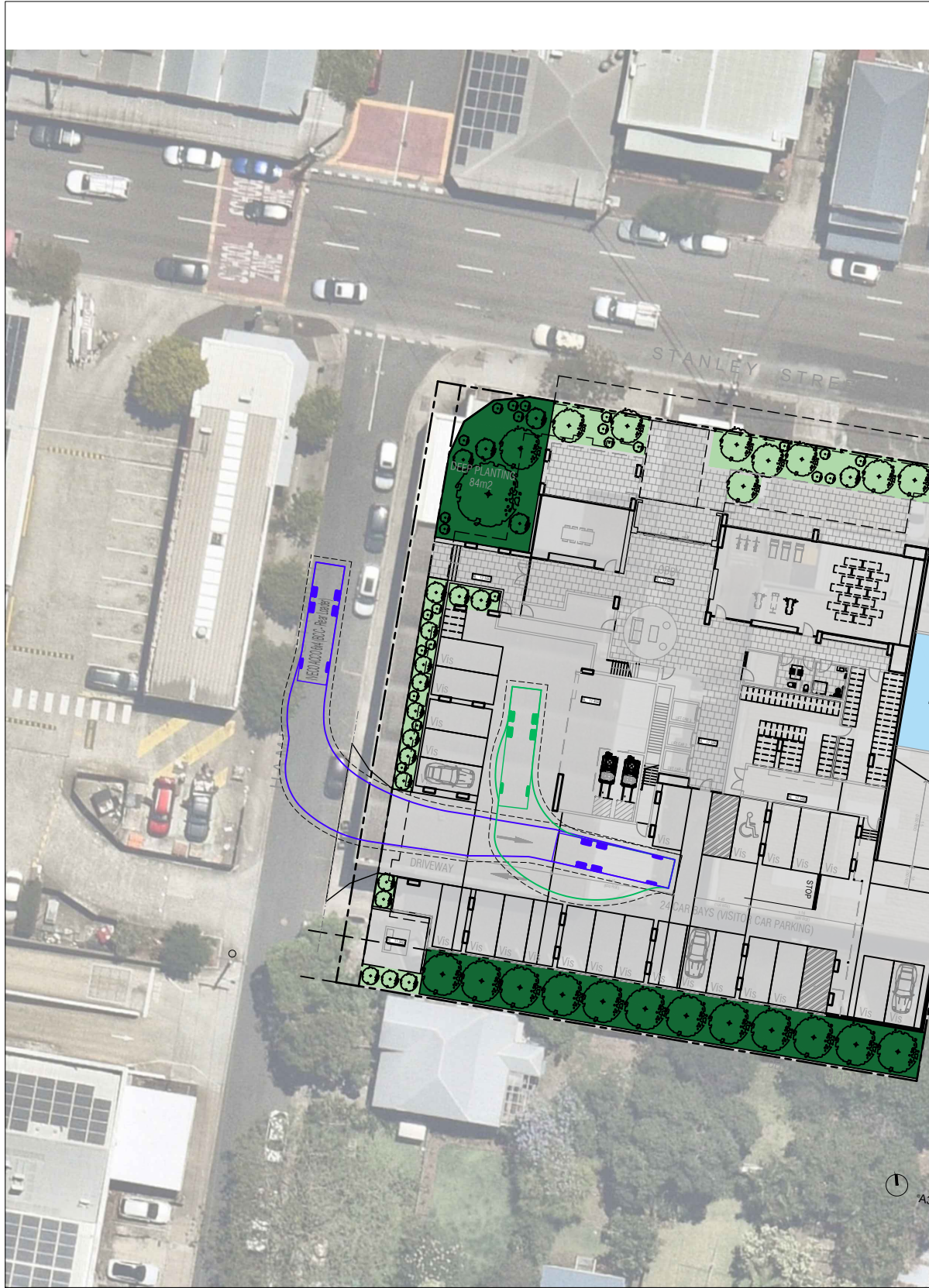
| Section 3 - Access and manoeuvrability - continued                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                      |
|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| (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.                                                                                                                                                                                                                                                                  | N/A                  |
| (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.                                                                                                                                                                                                                                                                                                                                                                                                                                            | Complies             |
| (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).                                                                                                                                                                                                                                                                                         | Complies             |
| Section 4 - Residential refuse collection                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                      |
| (1)                                                                                                         | Residential development must be serviced by Council or their appointed collection contractor.                                                                                                                                                                                                                                                                                                                                                                                                                                         | Complies             |
| (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.                                                                                                                                                                                                                                                                                                                                                                         | Details with OWMP    |
| (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 on site proposed |
| (4)                                                                                                         | On-site collection must be provided for in the following cases: <ul style="list-style-type: none"> <li>a. the development cannot accommodate external (fronting public road) kerbside collection; or</li> <li>b. the development comprises greater than 10 dwellings; or</li> <li>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.</li> </ul>                                                                    | Complies             |
| (5)                                                                                                         | Refuse and recycling collection for a mixed use development ensures residential and commercial bins are stored separately with separate access to each.                                                                                                                                                                                                                                                                                                                                                                               | N/A residential only |
| Section 4.1 - Kerbside collection (MGB's) – N/A Greater than 10 dwellings, kerbside collection 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 providing sufficient capacity to achieve one collection per week while ensuring sufficient refuse and recycling capacity is provided to meet the needs of residents.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Complies |
| (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 <sup>3</sup> 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 |
| (4)                                                                                         | Bulk bins of 1.5m <sup>3</sup> 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      |
| (5)                                                                                         | <p>The storage areas for bulk bins are:</p> <ul style="list-style-type: none"> <li>a. contained in a roofed and wholly screened enclosure or room of sufficient size for the bulk bin quantity required;</li> <li>b. easily accessible for residents and for the required servicing of bins;</li> <li>c. screened from neighbouring properties to mitigate odour, amenity and noise;</li> <li>d. of a design to mitigate the harbourage of vermin or attraction of scavenging animals;</li> <li>e. provided with natural or temperature-controlled ventilation if in an enclosed room;</li> <li>f. of a design which maintains a minimum internal vertical clearance of 2.1m;</li> <li>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;</li> <li>h. are not to contain other amenities such as air-conditioning compressors, hot water systems or electrical hubs.</li> </ul> | 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | N/A      |
| (7)                                                                                         | <p>If a refuse or recycling chute is provided:</p> <ul style="list-style-type: none"> <li>a. it is to be constructed to allow refuse to fall into the centre of the bin;</li> <li>b. it is to have a door/lid to ensure clean changeover of bins;</li> <li>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;</li> <li>d. separate chutes and bulk bins are to be used for each waste stream;</li> <li>e. the room containing the chute and bin or compactor excludes all but authorised personnel;</li> <li>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.</li> </ul>                                                                                                                                                       | Complies |
| (8)                                                                                         | Environmental best practices may also include the installation of a trapped waste connection to the sewer system.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Complies |

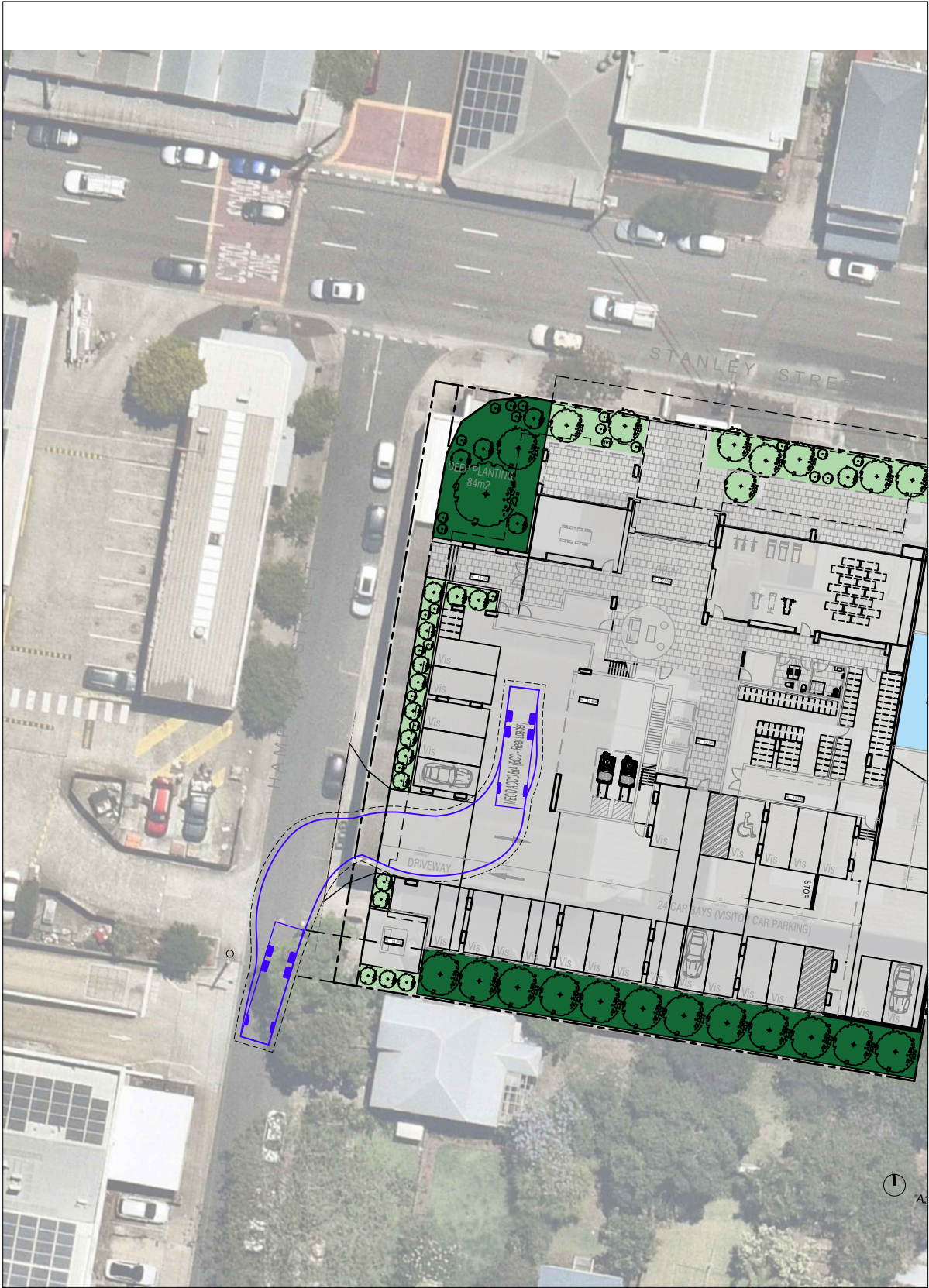
## Appendix B     Relevant development plans



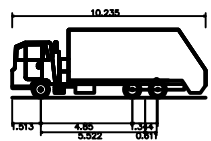
## Appendix C    RCV swept paths



REAR LIFT BCC RCV ENTERING SITE



REAR LIFT BCC RCV EXITING SITE

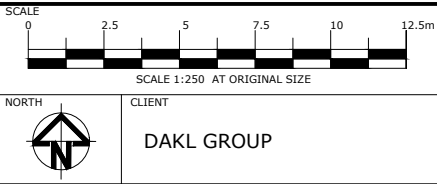


IVECO ACCO 6x4 (BCC - Rear Loader)  
Overall Length 10.235m  
Overall Width 2.500m  
Overall Body Height 3.600m  
Min Body Ground Clearance 0.280m  
Track Width 2.500m  
Lock-to-lock time 6.00s  
Curb to Curb Turning Radius 9.757m

**PRELIMINARY  
ADVICE ONLY**

20 March 2026

| REV. | DATE     | AMENDMENT DESCRIPTION | DRAWN | CHECKED | APPROVED |
|------|----------|-----------------------|-------|---------|----------|
| A    | 20-03-26 | ORIGINAL ISSUE        | RL    | WKS     | WKS      |



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PROJECT  
**893-899 STANLEY ST EAST, EAST BRISBANE**

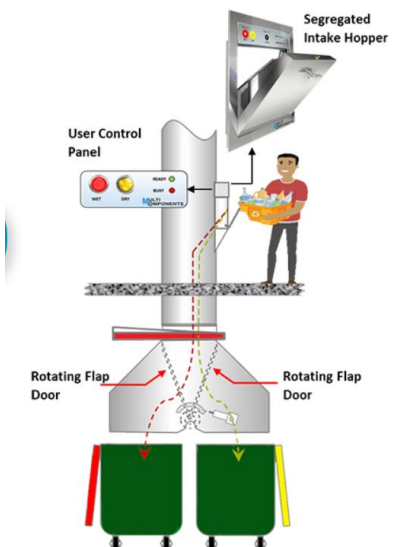
DRAWING TITLE  
**SWEPT PATH ANALYSIS**  
DESIGN VEHICLE - 10.235M REAR LIFT RCV

|                                |                     |
|--------------------------------|---------------------|
| PROJECT NUMBER<br>26BRT0011    | ORIGINAL SIZE<br>A3 |
| DRAWING NUMBER<br>26BRT0011-01 | REVISION<br>A       |
| DATE<br>20 Mar 2026            | SHEET<br>1 OF 1     |

## Appendix D    Systems & specifications

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/<br>equipment<br>types                         | Waste<br>streams                                        | Examples                                                                            | Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------------|---------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Residential<br>unit bins                           | General<br>waste and<br>recycling                       |    | Various options and sizes.<br>Built and standalone bin available.<br>Examples:<br><a href="https://www.bunnings.com.au">https://www.bunnings.com.au</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 1100L bins                                         | General<br>waste,<br>recycling,<br>paper /<br>cardboard |    | Dimensions approx.<br>1070 x 1240 x 1330mm (L x W x H)<br>(dimensions depend on contractor)<br>Examples:<br><a href="http://www.justwheeliebins.com.au">http://www.justwheeliebins.com.au</a> ,<br><a href="https://www.australianwaste-management.com.au">https://www.australianwaste-management.com.au</a>                                                                                                                                                                                                                                                                                                                              |
| Counter-<br>top E-waste<br>recycling<br>(optional) | Electronic<br>waste                                     |  | Prepaid battery collection<br><br>Example:<br><a href="https://envirostream.com.au/product/prepaid-countertop-battery-recycling-box/">https://envirostream.com.au/product/prepaid-countertop-battery-recycling-box/</a><br><br><a href="https://www.ecoactiv.com.au/product/4l-battery-recycling-prepaid-service/">https://www.ecoactiv.com.au/product/4l-battery-recycling-prepaid-service/</a><br><br>Toner cartridge collection<br><a href="https://zerowasteboxes.terracycle.com.au/products/ink-and-toner-catridges-zero-waste-boxes">https://zerowasteboxes.terracycle.com.au/products/ink-and-toner-catridges-zero-waste-boxes</a> |
| Linear<br>Conveyor                                 | General<br>waste,<br>recycling,<br>food<br>waste        |  | Automated bin rotation (e.g. linear or carousel) to manage bin fill level and prevent overflow under chutes<br><br>Example:<br><a href="https://www.elephantsfoot.com.au/products/compactors/carousel-linear">https://www.elephantsfoot.com.au/products/compactors/carousel-linear</a><br><a href="https://wastech.com.au">https://wastech.com.au</a>                                                                                                                                                                                                                                                                                     |
| Chute<br>systems                                   | General<br>waste,<br>recycling,<br>food<br>waste        |  | Refuse disposal in multi-storey buildings through refuse chutes: single chute for waste only, or single chute with diverter system or dual chute for disposal of waste and recycling<br>Examples:<br><a href="https://www.wastech.com.au/products/chutes">https://www.wastech.com.au/products/chutes</a><br><a href="https://www.elephantsfoot.com.au/products/chutes">https://www.elephantsfoot.com.au/products/chutes</a>                                                                                                                                                                                                               |

| Bin/<br>equipment<br>types       | Waste<br>streams                     | Examples                                                                           | Information                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------|--------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chute<br>Discharge<br>Compaction | General<br>waste                     |   | <p>Compactors designed for integration with the refuse chute to minimise the volume of general waste.</p> <p>Examples:<br/> <a href="https://www.elephantsfoot.com.au/products/compactors/carousel-linear">https://www.elephantsfoot.com.au/products/compactors/carousel-linear</a><br/> <a href="https://wastech.com.au">https://wastech.com.au</a> </p> |
| E-diverter<br>system             | General<br>Waste<br>and<br>recycling |  | <p>Used to separate refuse streams.</p> <p><a href="https://www.elephantsfoot.com.au/ediverter/">https://www.elephantsfoot.com.au/ediverter/</a></p>                                                                                                                                                                                                      |

## 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



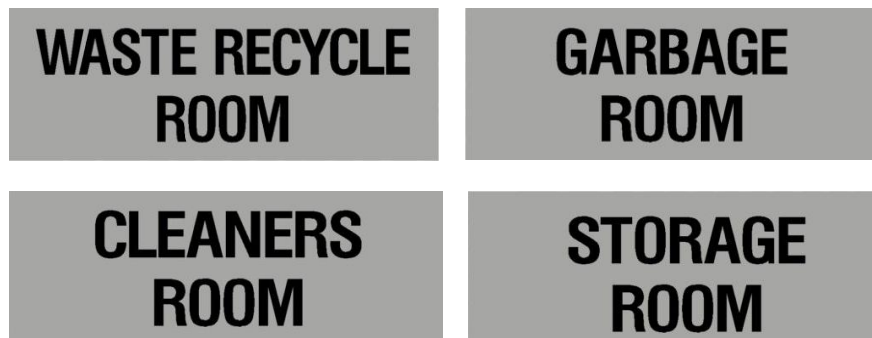
### Colour coding as per AS 4123.7-2006

|                               |                    |
|-------------------------------|--------------------|
| 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 & abbreviations

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

| TERM                        | ABBREVIATION | DEFINITION                                                                                                                                                                                                                                                                                                 |
|-----------------------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Equipment</b>            |              |                                                                                                                                                                                                                                                                                                            |
| 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 <sup>3</sup> to 4.50m <sup>3</sup> 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.                                                                                                                                                                                                                                  |
| 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.                                                                                                                                             |

| TERM                                   | ABBREVIATION   | DEFINITION                                                                                                                                                                                                                                                                                                           |
|----------------------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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.                                                                                                                                                            |
| <b>Measures</b>                        |                |                                                                                                                                                                                                                                                                                                                      |
| Cubic metre                            | m <sup>3</sup> | 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 <sup>2</sup> | Square metre(s) related to refuse areas.                                                                                                                                                                                                                                                                             |
| Ton                                    | T              | Ton(s) related to refuse weight.                                                                                                                                                                                                                                                                                     |
| <b>Collection vehicles</b>             |                |                                                                                                                                                                                                                                                                                                                      |
| 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 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. |