

## Waste Management Plan and Swept Path Diagrams

PLANS AND DOCUMENTS  
referred to in the PDA  
DEVELOPMENT APPROVAL

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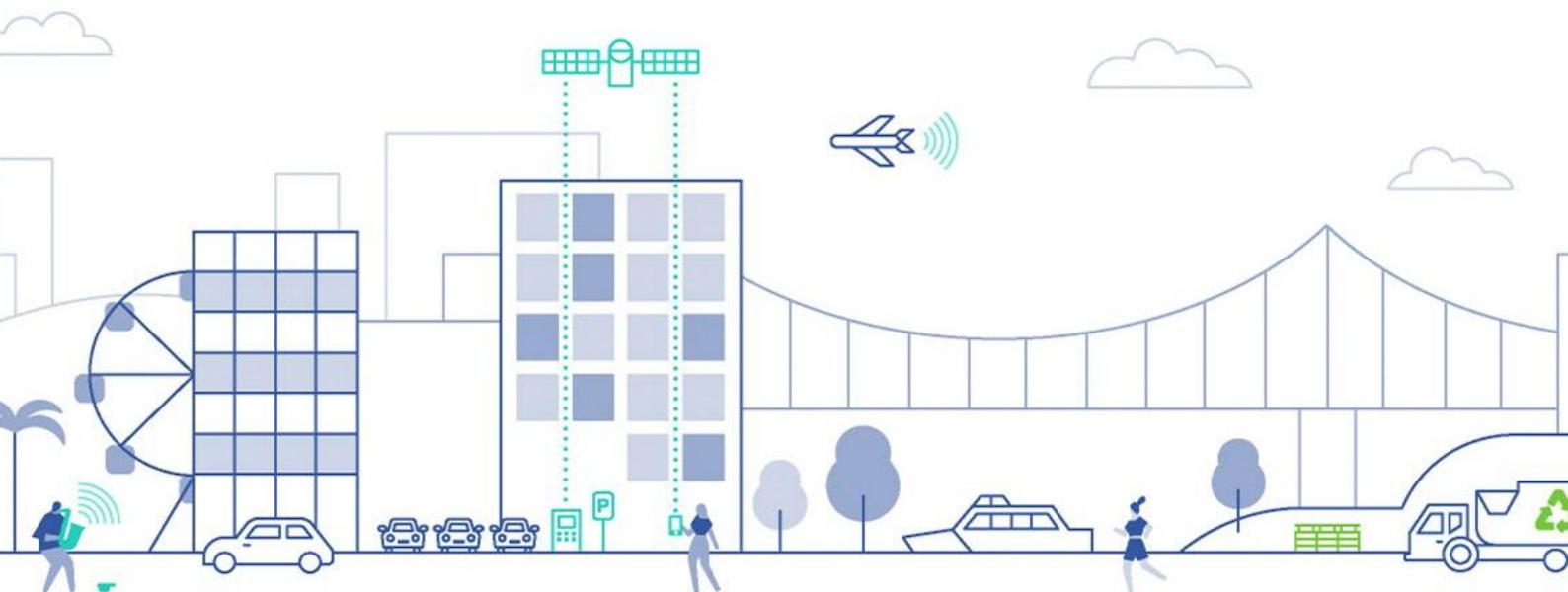


# Waste Management Plan

Proposed Commercial Development

At 63 O'Connell Terrace, Bowen Hills

On Behalf of Herron Coorey





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# 1 Introduction

## 1.1 Background

This Waste Management Plan (WMP) has been prepared by Colliers International Engineering and Design (TTMC) to support the construction of a new hotel development for short term accommodation purposes in alignment with Brisbane City Council’s PSP. The proposed site is located at 63 O’Connell Terrace, Bowen Hills. It is understood that a Material Change of Use application has been submitted as part of EDQ DA DEV2015/692 for the development.

## 1.2 Scope

Information on refuse management is given for each development phase. This WMP is structured to provide information on waste management for the demolition and construction phases, before providing information on the operational phase. The content of this WMP is intended to provide information on the typical movement of waste streams from generation to collection for each development phase.

The items covered within the WMP are described in Table 1-1.

Table 1-1: Scope Items

Item	Description
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 collections	Assessment of refuse collection vehicle (RCV) access and manoeuvring
Refuse storage	Detailed analysis of refuse storage facilities and design
Refuse transfer	Assessment of refuse transfer between refuse storage and collections areas
Refuse disposal	Recommendations for refuse disposal within the development
Refuse management equipment	Identification of recommended and optional refuse management systems and equipment
Refuse management operations	Recommendations for operational efficiency and ongoing management, including refuse minimisation, tenant education and safety
Building design	Recommendations for design of refuse management facilities

Detailed information including site plans and drawings, 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 provisions outlined in this WMP are considered appropriate for this type of development. It is noted that the refuse storage areas are suitably sized to accommodate the refuse generated and number of bins proposed based on the storage and collection methods outlined herein.

### 1.3 Site Analysis

The site is located at 63 O’Connell Street, Bowen Hills as shown in Figure 1-1. The site is formally described as Lot 1 RP9941. The site is zoned as Emerging Community (EC) and is located in the Bowen Hills Neighbourhood Plan and the Bowen Hills Priority Development Area.

The site consists of two frontages; O’Connell Terrace and Wren Street both classified as suburban roads on Brisbane City Council’s road hierarchy.

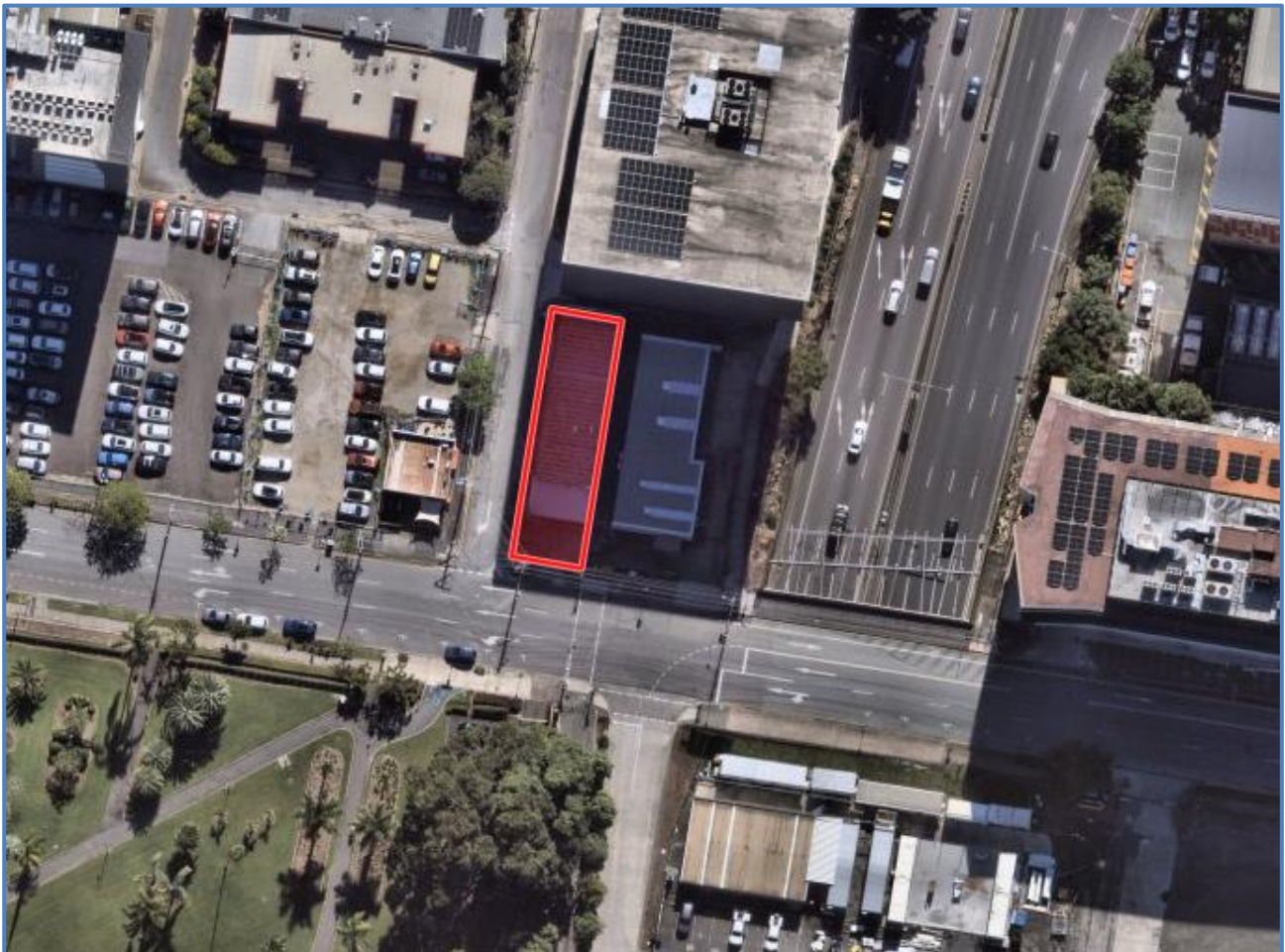


Figure 1-1: Site Aerial

Source: Nearthmap, 07/07/2025

## 1.4 Development Information

Table 1-2 provides a summary of the development in relation to the relevant refuse generating areas for use with the calculations provided in Section 3.1.

Table 1-2: Development Summary

Description	GFA/Quantity
Accommodation Units	100
Hotel Office	11m <sup>2</sup>
Hotel F&B	72m <sup>2</sup>

\* Areas ancillary to the above (i.e. communal areas, corridors, storerooms) are non-generating areas and have been excluded.

## 2 Site Waste Management Plan – Demolition & Construction Refuse Management

This section provides details on the collection, storage, transfer, and disposal of demolition and construction refuse within the development.

### 2.1 Compliance with EnviroDevelopment Criteria

The table below outlines the compliance with the EnviroDevelopment criteria for Commercial buildings relating to Waste. Note, no waste infrastructure will be installed in public spaces therefore Criteria 2.2 Post-Construction phase is not applicable to this development. To achieve certification in the Waste element, the project must meet all criteria outlined in Essential Action (2.1) as follows:

EnviroDevelopment Criteria	Supporting Documentation	Operational Waste Strategy Response
<p>2.1 Essential action</p> <p>2.1.1 The contractor implements a comprehensive, project-specific, waste management plan for the pre-construction, civil works and construction phases of the project. At a minimum, the waste management plan should meet all legislative requirements and align with relevant waste targets (where set and applicable) and include the following:</p> <ul style="list-style-type: none"> <li>• waste generation;</li> <li>• waste systems;</li> <li>• minimisation strategy;</li> <li>• performance/reduction targets;</li> <li>• bin quantity and size;</li> <li>• collection frequency;</li> <li>• waste contractors;</li> <li>• waste management facilities shown on plans;</li> <li>• signage; and</li> <li>• monitoring and reporting including frequency and method.</li> </ul>	<p>Site waste management plan endorsed by the developer, with further statements from the engineer as appropriate. The plan must address each of the requirements for the preconstruction and construction phases.</p>	<p>The requirements for criteria 2.1.1 have been addressed in Section 2 – Site Waste Management Plan - Demolition &amp; Construction Refuse Management.</p>

EnviroDevelopment Criteria	Supporting Documentation	Operational Waste Strategy Response
<p>2.1.2 Recycle or reuse a minimum of 90% (by weight or volume) of demolition, land clearing and civil works materials/products (including vegetative debris) on site. In the event that demolition, land clearing or civil works materials cannot be recycled on site, full details of the operators to be engaged (including all licences they hold to operate) and materials streams to be recovered as part of the off site activity must be provided. Note:</p> <ul style="list-style-type: none"> <li>i. Hazardous materials (e.g. asbestos, contaminated soil) are excluded.</li> <li>ii. If reuse on site is not feasible, the establishment of partnerships which embrace industrial ecology principles is strongly encouraged.</li> </ul>	<p>Details of existing materials on site and arrangements and estimates of waste streams and generation.</p>	<p>Prior to demolition works, the Contractor must detail the existing materials on site to be removed. A C&amp;D refuse template is provided in Appendix B.</p> <p>A 90% target for demolition waste to be recycled or reused is outlined in Section 2 – Site Waste Management Plan - Demolition &amp; Construction Refuse Management.</p>
<p>2.1.3 Recycle or reuse at least 90% of all built form construction waste (by weight or volume).</p>	<p>Evidence of a waste management plan. Quarterly reports, including waste records should be kept for compliance purposes.</p>	<p>During construction works, the Contractor must retain waste records as outlined in Section 2.2.2. A C&amp;D refuse template is provided in Appendix B.</p> <p>A 90% target for demolition waste to be recycled or reused is outlined in Section 2 – Site Waste Management Plan - Demolition &amp; Construction Refuse Management.</p>
<p>2.1.4 Manage and dispose/treat all hazardous substances, pollutants and contaminants in accordance with all legislative requirements. Where these materials are treated or used on site, that must occur in accordance with a sanctioned remediation process.</p>	<p>Details of any on site treatment processes for hazardous substances, pollutants, contaminants or acid sulphate soils must be provided and such processes must be supported by approved State Agency requirements and laws.</p>	<p>The management and disposal/treatment of all hazardous substance, pollutants and contaminants are outlined in Section 2.2.2.</p>

## 2.2 Planning For Construction

In order to achieve effective waste reduction during the excavation and construction phases, there are a number of measures that should be undertaken by the project manager, C&D contractors, and site staff. Any commitment to reducing waste sent to landfill will need to be agreed by all stakeholders and actions coordinated early in the operational works planning phases, in order to achieve best practice diversion rates. These measures are discussed in the following sections.

### 2.2.1 Contractor Selection

Contractor tendering should include a requirement for all contractors to identify their waste minimisation strategies and actions, and outline the materials that they are likely to reuse on site, recycle through the supply of bins, or recycle themselves through product stewardship arrangements for specialty wastes, and those items that they regularly dispose of to landfill. Contractors supply goods and equipment should also document within the tender submission the methods they undertake to reduce overordering, the anticipated/known wastage, and other waste minimisation actions. As a minimum, all contractors should follow the intent of this SWMP, and where not achievable, discussions with the Site Manager/Foreman must be undertaken and recycling contractors engaged to provide consultation on alternative solutions.

### 2.2.2 Material Identification and Recovery

It is recommended that construction contractors meet with the site manager to identify those materials or items that are to be salvaged or reused during the construction stages or may be suitable for reuse on other project sites. All other materials should then be categorised based on acceptance criteria for available recyclers. This presents a clear idea of those materials that are to be excluded from being sent offsite for recycling/reprocessing or for disposal to landfill. Details of the landfill disposal sites, transfer stations for recycling and construction waste transport contractors will be determined once a builder is appointed.

Note, as per EnviroDevelopment criteria the Contractor must recycle or reuse a minimum of 90% (by weight or volume) of demolition, land clearing and civil works materials/products (including vegetative debris) on site. In the event that demolition, land clearing or civil works materials cannot be recycled on site, full details of the operators to be engaged (including all licences they hold to operate) and materials streams to be recovered as part of the offsite activity must be provided. During construction, the Contractor must recycle or reuse at least 90% of all built form construction waste (by weight or volume). The waste volumes for construction waste can be documented in the form provided in Appendix B.

Key principles to be followed during demolition, in order of preference and generally in accordance with the waste hierarchy, include:

- Manual deconstruction of the following:
  - Materials that can be reused on site during further construction stages or used offsite.
  - Materials of high cost to dispose/treat. This material should not be mixed with other generic building materials, as the entire load will be deemed as contaminated, and may lead to a reduced recovery rate.

- High risk/dangerous materials (e.g. asbestos) by a licensed contractor or suitably qualified person.
- Items that will attract a high rebate (e.g. copper pipe).
- Segregation of like materials (e.g. timber) and separate storage on site in bins, depending on market availability of recycling agents.
- Materials that cannot be reused or recycled are to be disposed of to landfill.

Volumes will also be dependent upon the method of demolition, and greater recovery rates (90% required by EnviroDevelopment criteria) will be achieved with dismantling of building structures by hand rather than with heavy machinery however this can also:

- Have greater workplace health and safety risk, and
- Have significantly higher labour costs for little recompense for the level of segregation of materials (as it is more labour intensive).

Therefore, it is recommended that those items of high costs to dispose, high rebate value (e.g. copper pipe), or have special handling requirements (e.g. lead pipe, asbestos and plasterboard) should be deconstructed by hand in the appropriate stages where possible and segregated and disposed of accordingly. The remainder of materials may then be deconstructed either in phases to maximise segregation, or if a recycling disposal point accepts mixed materials and sorts at their processing plant, only then should materials be placed into mixed material bins.

This construction waste management analysis of the project has been undertaken to meet the requirements by DETSI. The goal of this document is in line with the planning controls as well as the waste hierarchy (avoid or reduce, reuse, recycle, recover energy, treat and dispose), shown in Figure 2.1, and aims to:

- Minimise the amount of waste generated,
- Maximise the reuse, recycling and reprocessing of construction waste materials, and
- Minimise the volume of material disposed to landfill.

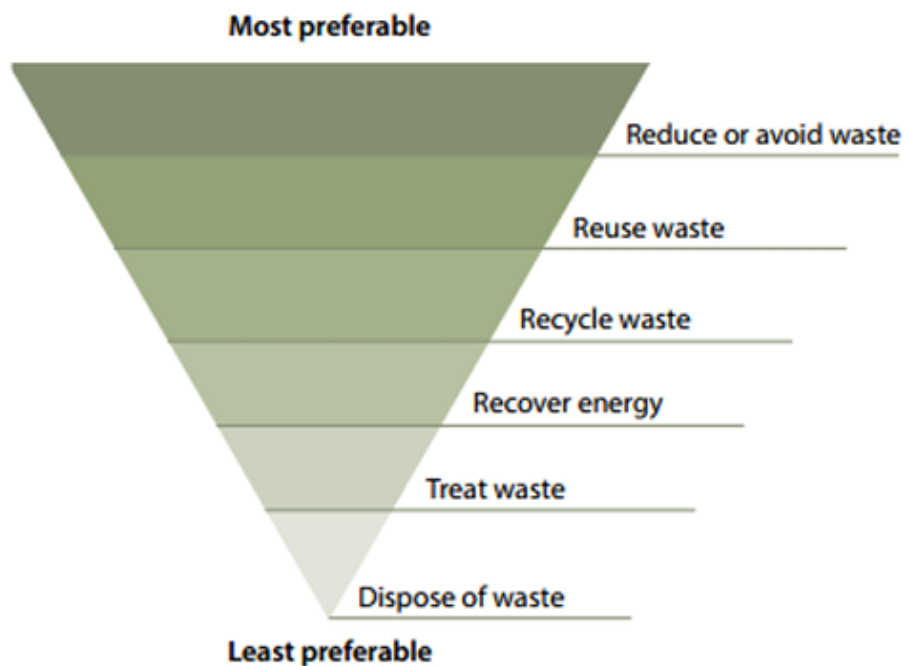


Figure 2.1 Waste Hierarchy

Information contained within the report is based on local government authority requirements related to Brisbane City Council and the associated waste services department. The recommendations provided are designed to comply with:

- Brisbane City Council’s SC6.26 Refuse Planning Scheme Policy
- Any asbestos removal must be removed and disposed of in accordance with the requirements of the *Work Health and Safety Act 2011 (WHS Act)* and the *Work Health and Safety Regulation*
- All lead contaminated materials must be handled and disposed of in accordance with the *Queensland Environmental Protection Act 1994 (EP Act)*, the *Queensland Waste Reduction and Recycling Act 2011* and the Department of Environment and Science (DESI) requirements.

## 2.3 Construction & Demolition Processes

As part of the EnviroDevelopment criteria, it will be a requirement to keep a copy of this Site Waste Management Plan (SWMP) and must be endorsed by the developer, along with proof of lawful disposal for all waste that is disposed of, or otherwise recycled from the site must be retained on site in a Waste Data File. Proof is to include a logbook with associated receipt/invoices, waste classification, and site validation certificate. All entries must include:

- Time and date,
- Description and size of waste,
- Waste facility used, and
- Vehicle registration and company name.

Both the logbook and associated receipts must be made available for inspection by the relevant authority at any time during site works and at the conclusion of works should be retained by the person responsible and made available for inspection by the relevant authority.

### 2.3.1 Asbestos

There are specific laws relating to working with or around asbestos in QLD which must be complied with including the *Work Health and Safety Act 2011* and *Work Health and Safety Regulation 2011*. If the structures that include demolition work were built prior to 1990, an asbestos specialist should be engaged to identify if asbestos containing materials (ACM) are present and an appropriate removal process be undertaken in accordance with Part 8.7 of the *QLD WHS Regulation (asbestos management and control)*. Requirements for managing asbestos include:

- Asbestos Register: A person with management or control of a workplace must ensure asbestos at the workplace is identified, the location of the asbestos is clearly indicated and recorded in a register. An asbestos register is not required if the building was constructed after 31 December 1989
- Asbestos Management Plan: A written plan must be prepared if asbestos has been identified at the workplace (or likely to be there at times). The person with management or control of the workplace must ensure the asbestos management plan is reviewed and, if necessary, revised at least once every five years
- Documentation of a licensed asbestos removalist.

The removal of asbestos must be in accordance with the QLD Asbestos Code of Practice 2021. All transport and disposal must comply with the *QLD Environmental Protection Act 1994* and *Waste Reduction and Recycling Act 2011* with evidence of disposal at a licensed facility.

Details of removal procedures and risk management will be detailed in the Hazardous Materials Survey. All works should be halted if unidentified materials are suspected. Additional sampling may be required to areas that were not accessible at the time the report was undertaken.

### 2.3.2 Contaminated Land

Any unexpected, contaminated soil identified after demolition and excavation has commenced is to be remediated and disposed of to an approved contaminated/remediated soil facility as per *Environmental Protection Act 1994* as required by the Queensland Parliamentary Counsel. If during the course of demolition or excavation and activities lead to the contamination of land, or once a person becomes aware that there is evidence of previous contamination, the Contractor must notify the Department of Environment, Tourism, Science and Innovation (DETSI) as per Section 320-320J of the *Environmental Protection Act 1994*.

If remediation works are to be undertaken, the Contractor must demonstrate compliance with DETSI requirements where applicable. Sites listed on the Environmental Management Register (EMR) or Contaminated Land Register (CLR) will require specific management and approval from DETSI. Documentation requirements for remediation works include:

- Preliminary Site Investigation Reports completed by a suitably qualified person
- Remediation Action Plans (RAP) in accordance with the Guidelines for the Assessment and Management of Contaminated Land in Queensland.
- Validation reports to confirm that remediation objectives outlined in the RAP have been met

### 2.3.3 Lead-Contaminated Materials

Many uses of lead have been phased out, however there are remaining traces used in paints, lead-acid car batteries, some forms of solder, waterproof flashing for roofs and gutters, and radiation protection. There are specific laws relating to working with or around lead-contaminated materials outlined within the *Work Health and Safety Regulation 2011*. Prior to the commencement of any works, the contractor must test for any lead-contaminated surfaces or materials. Lead test kits are commercially available. If any lead-contaminated materials are identified on site, the contractor must provide works with information about the risks and health effects when working with lead. Materials during demolition with lead contamination must be placed in a controlled area on site and storage must be restricted to that area. Any contaminated PPE as a result of the demolition process must be properly disposed of, laundered/ decontaminated or placed in a sealed container until re-use. Control measures must be reviewed on an on-going basis or when circumstances may affect the health and safety of workers. All lead-contaminated materials must be disposed of at designated sites which accept this waste type. The contractor can contact Brisbane City Council or DETSI to inquire further about local regulations for disposal and drop-off locations.

### 2.3.4 Hazardous Materials

If the structures that include demolition work were built prior to 1990, a Hazardous Materials Survey must be completed by a suitably qualified person. The report must include at least the following information:

- The location of hazardous materials throughout the site
- A description of the hazardous material
- The form in which the hazardous material is found e.g. AC sheeting, transformers, contaminated soil, roof dust
- An estimation (where possible) of the quantity of each particular hazardous material by volume, number, surface area or weight
- A brief description of the method for removal, handling, on-site storage and transportation of hazardous materials, and where appropriate, reference to relevant legislation, standards and guidelines and
- Identification of the disposal sites to which the hazardous materials will be taken.

If during the course of demolition or excavation and activities lead to the release of hazardous materials, or once a person becomes aware that there is evidence of previous spillage/release, the Contractor must notify DETSI as per Section 320-320J of the *Environmental Protection Act 1994*. Hazardous materials are regulated in accordance with the *QLD Workplace Health and Safety Regulation 2011*. The Contractor is responsible for notifying Workplace Health and Safety Queensland (WHSQ) should there be an incident involving hazardous materials or an event that exposes works to serious risk.

## 2.4 Construction Methodology

The key objectives for reducing total waste to landfill during the construction phase should be to:

- Minimise the amount of waste generated for the project – this should be the primary focus “waste avoidance”,
- Maximise the amount of materials reused or salvaged, sent for reuse or recycling, and
- Minimise the amount of waste sent to landfill.

These goals can be achieved with the right planning, commitment, infrastructure and site preparation. The site foreman, and contractor representatives should be engaged early and clear guidelines on the expectations to minimise waste to landfill communicated.

### 2.4.1 Waste Avoidance

- Plan to use building materials with low wastage rates such as prefabricated or modular materials,
- Design using standard material sizes, reducing off-cuts and time and labour saving,
- Store materials appropriately from weather, accidents, machinery and theft,
- Regularly undertake stocktake checks to ascertain available resources,
- Check all goods upon delivery for defects and return to supplier – do not accept oversupply as compensation,
- Purchase materials or request materials to have no packaging where appropriate, and
- Support the purchase of recycled content materials.

### 2.4.2 Reuse

- Reuse materials identified in the pre-planning consultation with the Site Foreman and construction contractor,
- Identify and source other salvaged materials from salvage yards or look for bespoke items on for sale websites/pages, and
- Stockpile materials that can be reused in future stages or projects.

### 2.4.3 Recycling

- Provide bins for each material stream based on acceptance criteria from recycling contractors,
- Some contractors will provide mixed bins and they will undertake the sorting process within their facility – this may be particularly useful where available space or access is limited, and
- Remember to provide a comingled (mixed) recycling bin for staff to dispose of recyclables from lunches and packaging.

### 2.4.4 Contaminated Items

Contaminated items must go to an appropriately licensed facility with appropriately licensed transporter.

### 2.4.5 Landfill

Landfill should be a last resort option for those items that cannot be readily reused, recycled or reprocessed.

### 2.4.6 Recycled Materials

All demolition materials (listed above) suitable for recycling must be transported to an appropriately registered and accredited business to the satisfaction of the Principal Certifying Authority.

## 2.5 Waste Bin Guidelines

Site specific C&D refuse auditing must be conducted by the Contractor once construction has commenced to refine the equipment capacity (bin quantity, size and collection frequency) required and waste streams collected. All waste containers / skip bins are to be positioned within the property boundary. Bins outside of the property boundary such as the roadway or nature strip may require a permit application to Council. Storage of skip bins / containers should be placed in a suitable location as to not cause disturbance to normal stormwater flow and fitted with lids or protected from wind to prevent litter. Under no circumstances should hazardous, flammable or explosive materials be disposed of within skip bins.

All bins should be appropriately labelled, clearly visible to and from the property, easily accessible, stored in a well-lit area. Potential bins and stockpile locations are proposed to be located in close proximity to the area of work with unobstructed access to adjoining access roads.

## 3 Operational Refuse Management

This section provides the detailed refuse information and associated calculations in addition to outlining the arrangements for the operational phase of the development 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.

### 3.1 Regulatory and Governance Considerations

#### 3.1.1 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) v32. Additionally, PO32 of the Multiple dwelling code and PO8 of the Infrastructure design code.

As this development is a residential site, Colliers has referred to BCC’s requirements as outlined in the Refuse PSP under section 2, 3 and 5 as these sections detail the general requirements for all developments and specific controls for residential uses.

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

### 3.2 Refuse Calculations

The estimated refuse storage quantities and associated calculations are outlined in this section. Table 3-1 depicts the refuse generation rates sourced from Brisbane City Council’s SC6.26 Refuse planning scheme policy. Table 3-2 depicts the calculations conducted by Colliers to determine the total bin quantities for the residential aspects of the development.

#### 3.2.1 Refuse Generation Rates

Refer to Table 3-1 for the accepted refuse generation rates.

Table 3-1: Refuse Generation Rates

Description	Generation Rate	Measure	General Waste	Commingled Recycling
Accommodation Units	Motel/Hotel (accommodation room only)	L/Occupant/Day	5	5
Hotel Office	Office	L/100m <sup>2</sup> /Day	10	20
Hotel F&B	Food and drink outlet (<150m <sup>2</sup> )	L/100m <sup>2</sup> /Day	300	200

### 3.2.2 Refuse Volume Calculations

Refer to Table 3-2 for the accepted refuse volume calculations. A 7-day operation has been assumed for all uses.

Table 3-2: Refuse Calculations

Description	Measure	Quantity	General Waste L/Week	Commingled Recycling L/Week
Accommodation Units	Beds	100	3,500	3,500
Hotel Office	GFA	11m <sup>2</sup>	8	15
Hotel F&B	GFA	72m <sup>2</sup>	1,512	1,008
<b>Total Weekly Volumes (L / Week)</b>			<b>5,020</b>	<b>4,523</b>
<b>Volumes per Day (L / Day)</b>			<b>717</b>	<b>646</b>
<b>Volumes per Collection (L)</b>			<b>1,673</b>	<b>1,131</b>
Collection and Equipment Details	Collections per Week		3	2
	Storage Capacity (days)		3	4
	Equipment Size		1,100L	1,100L
	Equipment Quantity Required		1.52	2.06
	Equipment Quantity Provided		2	2

### 3.3 Equipment Requirements & Specifications

Table 3-3 outlines the number of bins and additional equipment required for the development based on the generation calculations above.

As refuse volumes may vary from assessment benchmarks, bin numbers and sizes may need to be altered to suit the building operation. The tables depict the maximum number of bins and equipment expected.

Table 3-3: Bin Requirements

Refuse Stream	Bin / Storage – Size or Type	Number Required
General Waste	1,100L	2
Commingled Recycling	1,100L	2

## 3.4 Refuse Disposal

The tables in this section summarise general recommended disposal arrangements for frequently generated and infrequently generated refuse for each development component. Section 3.4.1 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 3.4.2 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.

### 3.4.1 Frequently Generated Waste

Table 3-4: Disposal of Frequently Generated Refuse

Refuse Stream	Disposal Details
<b>WASTE</b>	
<b>General Waste</b>	<p>Space for bins to store one day's worth of generated general waste will be provided in each accommodation unit. Each day or as required, hotel/housekeeping staff will transfer waste from these bins via a cleaner's trolley to the respective bulk bins provided in the waste storeroom at ground level.</p> <p>Receptacles will be placed in all communal areas where refuse will be generated for collection and storage of at least on days' worth of waste. Bin quantities will be determined during the operational phase.</p> <p>The F&amp;B tenant will be responsible for holding atleast a day's worth of general waste within their service/BoH area. Staff will be responsible for transferring waste from these receptacles directly to the bulk bins on an as required basis.</p> <p>General waste must be disposed of bagged.</p>
<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 plastics</li> </ul>	<p>Space for bins to store one day's worth of generated commingled recycling will be provided in each accommodation unit. Each day or as required, hotel/housekeeping staff will transfer waste from these bins via a cleaner's trolley to the respective bulk bins provided in the waste storeroom at ground level.</p> <p>Receptacles will be placed in all communal areas where refuse will be generated for collection and storage of at least on days' worth of waste. Bin quantities will be determined during the operational phase.</p> <p>The F&amp;B tenant will be responsible for holding atleast a day's worth of commingled recycling within their service/BoH area. Staff will be responsible for transferring waste from these receptacles directly to the bulk bins on an as required basis.</p> <p>Commingled recycling must be disposed of bagged.</p> <p>Container deposit / refund schemes are currently in place in QLD. Occupants should be encouraged to separate containers that qualify for the schemes from the waste or recycling streams and send back to a return point.</p>

### 3.4.2 Infrequently Generated Waste

Table 3-5: 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 landscaped areas or potted plants around this development. Green waste is produced largely on a weather or seasonal dependent basis and based on plant selections. Green waste is usually 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 (if available) or resource recovery facility rather than to a landfill.</p>
<b>Bulky Goods Waste</b>	<p>Bulky goods waste will be stored temporarily within the storage room at each hotel level. Hotel management will be responsible for coordinating collection arrangements with a private waste contractor.</p>
<b>Hazardous Waste (batteries, and cartridges) Electronic Waste</b>	<p>Dedicated storage space will be provided within the storage room of each level to store e-waste. Building management will be responsible for coordinating collection arrangements with a private waste contractor and transferring all e-waste to the ground floor for collection.</p> <p>This includes the disposal of site-specific e-waste including:</p> <ul style="list-style-type: none"> <li>- toner cartridges</li> <li>- batteries</li> <li>- small appliances (TV's, alarm clocks, lamps, electric kettles etc.)</li> </ul> <p>It is expected that the hotel management assist with disposal of any hazardous, electronic, or liquid waste and paint or chemicals as required. Hazardous waste must be handled with due care, separated, and securely stored for collection by a specialist waste contractor.</p>

### 3.5 Refuse Storage & Transfer

A waste storeroom will be provided at ground level adjacent the loading area to store all bulk bins. A full width roller door is provided to allow for easy manoeuvring of bins during collection. The waste storeroom is suitably sized to accommodate all bins for the development based on the refuse calculations above.

Housekeeping staff/cleaners will decant waste from each receptacle via a cleaner's trolley and transfer all waste vertically via the lift and manually decant into the respective bulk bins provided within the waste storeroom located at ground level. Housekeeping staff/cleaner's will use the platform lift access the lower ground floor level. Cleaners' trolleys may be stored within the linen store located at each level.

Small bins will be provided within the office space and the back of house F&B area to store refuse. Staff will be responsible for transferring to the waste storeroom for disposal and manually decant the waste into the bulk bins.

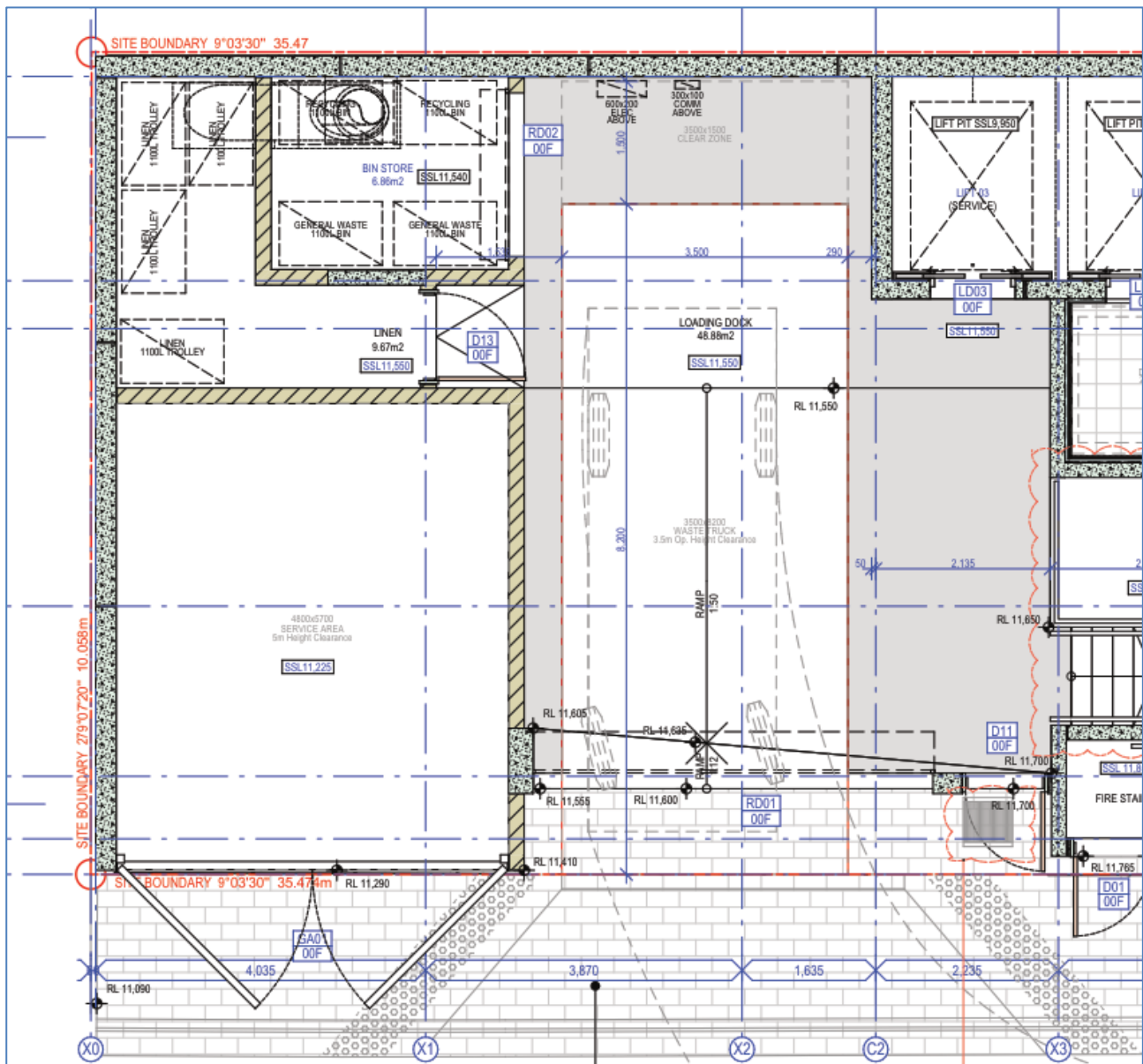


Figure 3-1: Waste Storeroom Layout (Ground floor)

Source: Cottee Parker, Project: 63 O'Connell Terrace, Bowen Hills, Drawing: Floor Plan – Ground, A-CD-2009.

### 3.5.1 Design Requirements

Table 3-6 outlines the refuse storage area design criteria addressed in order to minimise odours, deter vermin, protect surrounding areas, and make it a user-friendly and safe area. These design requirements are to be incorporated into the design and maintained during the detailed design phase.

Table 3-6: Refuse Storage Area Design Requirements

<b>Positioning Considerations</b>
Positioned in immediate proximity of the designated loading point
Is in a purpose-built storage area which is vermin proofed and used solely for the storage of refuse leaving the site or specifically designed for service vehicle use 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.
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 enclosures.
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.

### 3.6 RCV & Bin Servicing Arrangements

Refuse will be collected on-site by a private waste contractor up to three (3) times per week. The RCV will enter the site in a reverse manoeuvre via Wren Street and exit the site in a forwards direction via the same road. The RCV will stand adjacent to the waste storeroom within the dedicated loading bay and service the bins which will be placed along the northern boundary wall by building management.

Note the previously approved DA DEV2015/692 supported the use of an alternative design vehicle via a private waste contractor service the site.

The collection days and frequency form a part of the contract between building management and waste contractor and is agreed to, based on both the building and contractors' business requirements.

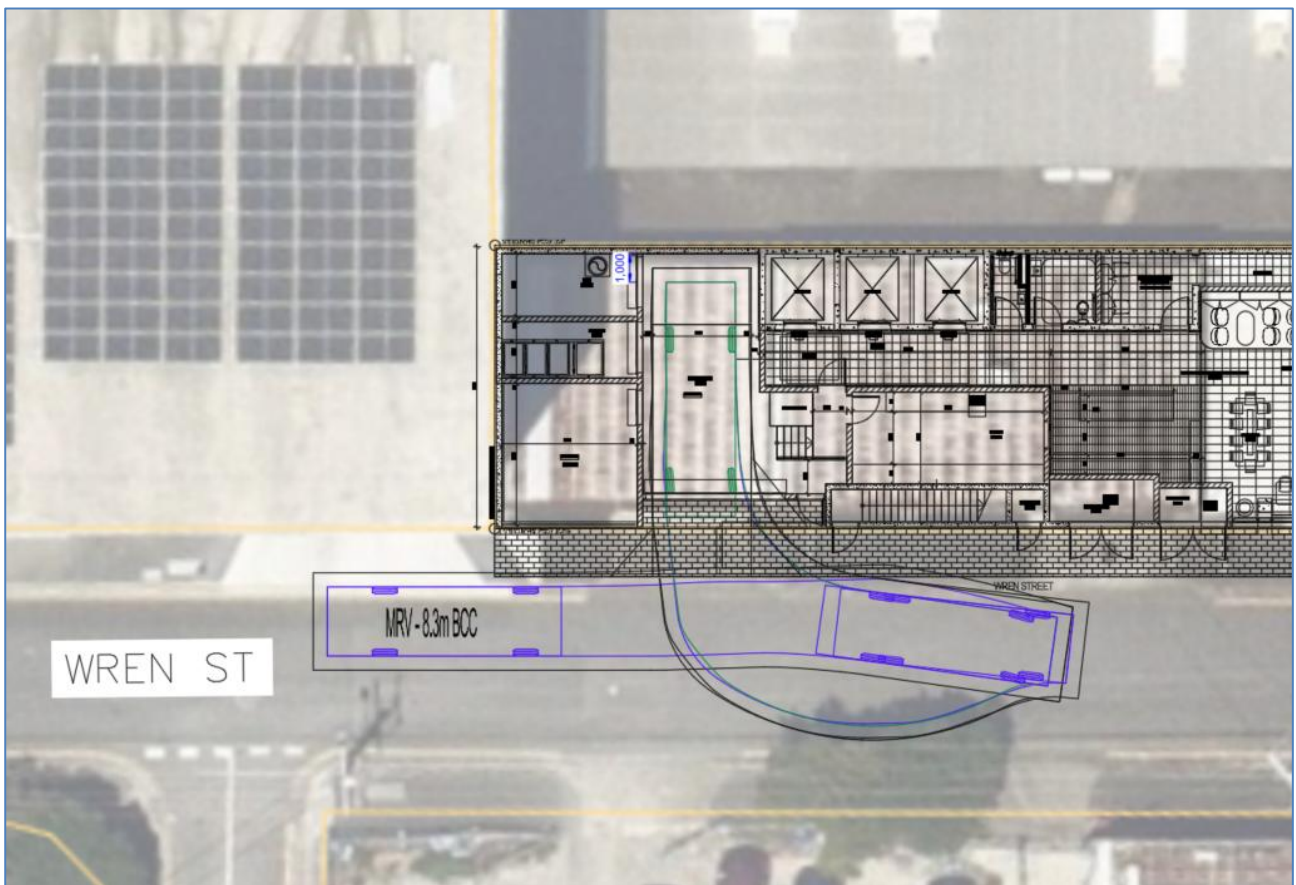


Figure 3-2: RCV Swept Path Diagram of an 8.3m RCV

**Source:** Colliers, **Drawing:** Vehicle Swept Path – SRV, RevA.

## 4 Operational Waste Recommendations

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.

### 4.1 On-going Management

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

Responsibilities have to be assigned for all on-going refuse management related activities during the operation of the development. Colliers recommend the appointment of dedicated personnel to champion refuse management and sustainability. The following lists (Table 4-1 to Table 4-3) 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.

#### 4.1.1 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 4-1: Implementation Checklist

Task	Assigned	Remarks
<p><b>Certify the as-built form of all refuse related areas.</b></p> <p>This task does not refer to building certification but is typically undertaken by a specialist waste consultant prior to building certification. This offers an opportunity to identify variances in building form versus design and recommend alternate or mitigating refuse management strategies.</p> <p>This task may also be needed during building refits and change of use in tenancies.</p>		
<p><b>Appoint personnel to oversee or undertake refuse management tasks.</b></p> <p>A facilities or dock manager is typically appointed undertakes most operational tasks, engaging contractors for specialist tasks.</p>		
<p><b>Conduct internal safety review.</b></p> <p>An internal safety review is required to be undertaken to identify potential hazards in the implementation of the refuse strategy and risk mitigation opportunities.</p> <p>This includes the use of any refuse management equipment installed, as well as refuse transfer paths</p>		

<p><b>Development of policy and procedures</b></p> <p>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, staff, and contractors.</p> <p>Also includes assessment of any manual handling risks and preparation of a manual handling control plan for waste and bin transfers.</p>		
<p><b>Engage refuse collection contractors.</b></p> <p>Either Council's appointed collections contractor or a private contractor (for non-residential developments) must conduct a site visit for the purposes of risk assessing the site prior to conducting services. Contractors must ensure that a full risk assessment of equipment, surfaces and related gradients is complete and procedural documentation is provided to the appropriate personnel.</p> <p>RCV manoeuvrability testing and the establishment of service frequency and timing is also undertaken at this time.</p>		
<p><b>Install signage in all refuse disposal and storage points.</b></p> <p>Signage is required to be installed to educate building occupants on location of disposal and refuse storage points. Additionally, to identify the accepted items disposed of in each refuse. The installed signage should be colour coded in accordance with AS 4123.7 – 2006 Mobile waste containers. Examples of signage are provided in the appendices.</p>		
<p><b>Leasing / Body Corporate Agreements</b></p> <p>All body corporate and leasing contracts should contain clauses pertaining to waste management arrangements and use of any associated equipment.</p> <p>This should also extend to on charging of costs and concessions for waste reduction and recycling performance.</p>		
<p><b>Education and Training.</b></p> <p>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.</p> <p>The step is repeated through the operational phase of the development as required due to changes in users or personnel.</p>		
<p><b>Consider fit out and move-in refuse.</b></p> <p>Higher volumes of waste are generated during the initial occupant move-in or final fit out. This typically includes large volumes of cardboard. Additional bins or collections may be required.</p> <p>This also applies to high turnover events and refits.</p>		
<p><b>Baseline Refuse Auditing</b></p> <p>A baseline audit once the development reaches 80% occupancy undertaken by a specialist waste consultant is recommended to identify refuse volumes and stream composition. This information is then used to establish potential recoverable material percentage based on initial waste practices and set recycling rate targets.</p>		

## 4.1.2 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 4-2: Occupation/Operation Checklist

Task	Assigned	Remarks
<p><b>Facilitate disposal from communal areas, public realm, and tenancies.</b></p> <p>Appointed staff are required to transfer refuse generated in communal areas and the public realm to the refuse storage area for final disposal, this includes litter removal. Best practice operations in non-residential development include having dedicated cleaning staff to handle all waste generated within tenancies, rather than tenancy staff. This results in maximum recovery of available streams.</p>		
<p><b>Manage rotations of bins to ensure convenient access.</b></p> <p>Check bin fill levels and rotate / swap bins as required. Sufficient capacity must be provided for the disposal of all streams at all times including reduced personnel on site (such as weekends or public holidays). Where equal access to a refuse stream is not maintained, other streams may be contaminated leading lost resources.</p>		
<p><b>Manage bin transfers to temporary holding or agreed servicing point.</b></p> <p>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.</p>		
<p><b>General cleaning.</b></p> <p>Regular cleaning and maintenance of all refuse management facilities is important to maintain a safe and hygienic environment for visitors, staff, and contractors. General cleaning is required for all refuse holding and transfer areas including:</p> <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>		
<p><b>Perform spot checks on bin contents and refuse streams.</b></p> <p>Appointed staff regularly check for compliance and stream contamination. Early intervention prevents the development of poor practice and lost resources. Feedback and education are provided to the relevant parties (see below).</p>		
<p><b>Ongoing education and communication.</b></p> <p>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.</p> <p>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.</p>		

### 4.1.3 Review/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 4-3: Review and Amendment Phase

Task	Assigned	Remarks
<p><b>Coordination of specialised cleaning contractors as required.</b></p> <p>Typical specialised cleaning services may include cleaning internal areas of compaction equipment (if selected); this reduces risk of blockage, odour, and risk of fire.</p>		
<p><b>Maintenance and servicing of refuse management equipment as per schedule.</b></p> <p>Frequency depends on equipment, building operation and manufacturer specification. Routine maintenance reduces downtime and detrimental impact of unscheduled equipment breakdown.</p>		
<p><b>Coordination of specialised equipment contractors as required.</b></p> <p>May extend to ad hoc services requiring specialist equipment such as bulky / hard waste removal.</p>		
<p><b>Internal safety review.</b></p> <p>Routine safety reviews are required to identify changes to the site, work practices or legislation that may impact existing policies and procedures.</p> <p>Reviews should include visual inspection of equipment and user PPE.</p> <p>Any policy or procedure updates arising from a safety review must be immediately communicated.</p>		
<p><b>Audit operational refuse volumes and composition.</b></p> <p>As similarly undertaken at the beginning of occupancy a review by a specialist waste consultant is recommended to identify refuse volumes and stream composition. This information is then used to establish potential recoverable material percentage and identify opportunities for improvement in refuse strategy.</p> <p>Alternatively, an internal audit may be undertaken by visual inspection during on-site waste management handling activities. For example, cleaners may observe contents of waste receptacles when decanting caddies in larger bins and recording results, this method is less accurate than a comprehensive audit, however, give immediate indicative results and may be undertaken on an ongoing basis.</p>		
<p><b>Review bin quantities and refuse management equipment.</b></p> <p>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.</p> <p>This review may form part of the external audit process (above) as recommendations made.</p>		

# Appendix A OWMP 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 in this WMP.
(2)	The collection of refuse is to be considered during the planning phase of development. This includes the physical manoeuvring area for the refuse collection vehicle and the bin storage areas and collection points. Access for other road users including pedestrians, cyclists, motorists and other service providers (e.g. postal) is to be maintained.	Considerations provided within this WMP.
(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).	Commercial refuse collected by rear loading RCV (MRV)
(4)	Uses with high trip-end densities provide a transport impact assessment report in accordance with the Transport, access, parking and servicing planning scheme policy with an assessment of refuse storage and collection included.	Refer to Traffic engineering documentation for details.
(5)	Where a Refuse Collection Vehicle (RCV) is required to manoeuvre from an on-site position, allow an additional 500mm clearance for vehicle turning dimensions (swept paths) and servicing. Three clear swept path lines must be demonstrated for the RCV, namely wheel path, vehicle body path and 500mm clearance path.	Refer to Traffic engineering documentation for details.
(6)	<p>The waste collection system is to achieve the following outcomes:</p> <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> <p><i>Note— Where alternative waste servicing solutions are proposed, advice may be sought directly from Council's waste service area prior to lodgement of the development application.</i></p>	<p>Complies</p> <p>Complies – Details throughout this OWMP.</p> <p>Complies</p>
<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.	Refer to Traffic engineering documentation for details.
(2)	For multiple dwelling development accessed via a local, neighbourhood, district or suburban road, the refuse collection vehicle may enter the site in a reverse gear in a single movement.	Complies – Reverse entry proposed.
(3)	For multiple dwellings development accessed via an arterial road, or where the refuse collection vehicle cannot reverse onto the site in a single movement, the refuse collection vehicle must enter and leave the site in a forward gear.	N/A
(4)	For development (other than a multiple dwelling) accessed via an arterial, suburban, district or minor road adjacent to an intersection with a major road, the refuse collection vehicle must enter and leave the site in a forward gear.	N/A

Item	Requirement	Compliance / Comment
<b>Section 3 - Access and Manoeuvrability – Continued</b>		
(5)	<p>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.</p> <p><i>Note—Service area design standards, including maximum gradients, minimum aisle widths, minimum vertical clearance and bay design are contained in the Transport, access, parking and servicing planning scheme policy.</i></p>	Refer to Traffic engineering documentation for details.
(6)	For detached dwellings on rear lots, pavements/carriageways trafficked by a refuse collection vehicle have a minimum width of 5.5m.	N/A
(7)	All entry and exit points are of a width and design that allows for sufficient ingress and egress for the refuse collection vehicle, including a minimum 6.5m crossover which is free from overhead projections inclusive of gardens or trees.	Refer to Traffic engineering documentation for details.
(8)	To maximise safety, the distance required for refuse collection vehicles to reverse on-site is minimised. Where on-site turnaround of the refuse vehicle cannot be achieved, the bin storage area and collection point is located within 20m of the street frontage.	Complies – Minimal distance required for reverse manoeuvre.
(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.	Written confirmation from JJ Richards provided during EDQ DA submission.
(15)	<p>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).</p> <p><i>Note—Access arrangements, including maximum gradients are contained in the Transport, access and parking planning scheme policy.</i></p>	N/A

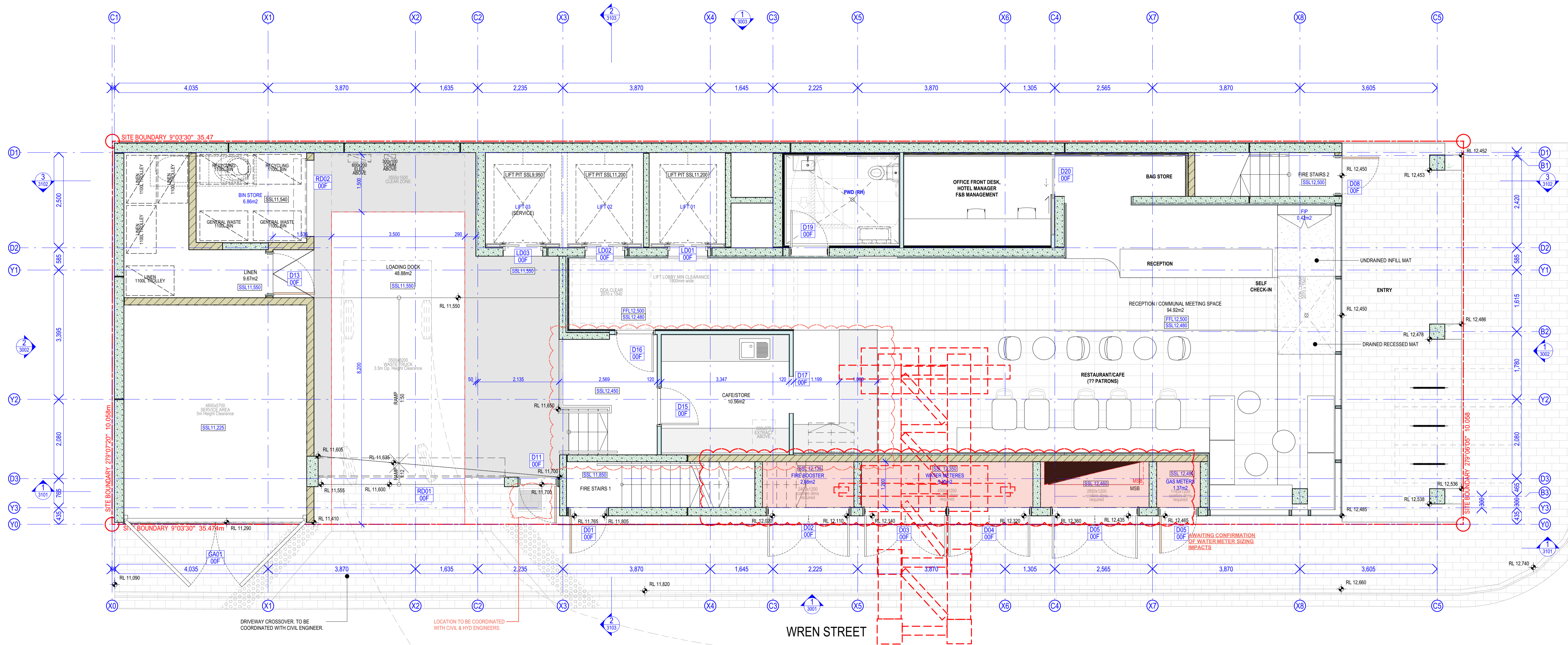
Item	Requirement	Compliance / Comment
<b>Section 5 – Non-residential refuse collection</b>		
(1)	Non-residential development is to provide sufficient capacity to achieve low-frequency servicing in line with Table 2.	Complies
(2)	Refuse generation rates for specific uses are provided in Table 4. These figures are to be used to calculate the refuse and recycling capacity required.	Complies
(3)	Sufficient information is provided to demonstrate that refuse collection can occur in an efficient and safe manner on site without adverse impact on amenity (acoustic, odour or visual impacts) and pedestrian and vehicular traffic.	Complies
(4)	This information may include evidence from a refuse collection contractor to demonstrate that collection will occur outside normal service/delivery or business times, where seeking permission to allow a refuse collection vehicle to use service bays or parking spaces on the site for access.	Noted
(5)	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
(6)	Bulk bins of 1.5m <sup>3</sup> or more are positioned so that front-lift refuse collection vehicles can drive directly to the container without relocating the bulk bin. If this cannot be achieved due to physical constraints, then the bulk bins are not moved more than 3m from the storage area to the collection point.	N/A
(7)	<p>The storage area for refuse bins are:</p> <ul style="list-style-type: none"> <li>a. contained either within a building or a roofed and wholly screened enclosure of sufficient size for the bin quantity required. Table 1 provides the bin types and dimensions;</li> <li>b. easily accessible for occupants and for the required servicing of bins;</li> <li>c. screened from neighbouring properties to mitigate impacts from 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
(8)	Best practice may include allowing additional space for the storage of extra containers to separately store either organic waste or other recyclables in the future.	Noted.
(9)	Where disposal of industrial or commercial liquid waste by discharge to a road tanker, the road tanker is to be wholly on-site during collection.	Noted.

# Appendix B C&D Refuse Template and Checklist

Waste and/or Recyclable Materials			Destination		
			Reuse and Recycling		Disposal
Possible Materials Generated	Estimated volume (m <sup>3</sup> ) or Area (m <sup>2</sup> ) or weight (t) (Contractor to confirm)		On-site (How will materials be reused and/or recycled on-site?)	Off-site (Specify the contractor and recycling facility)	Specify the contractor and/or landfill site/transfer station
	Demolition	Construction			
Excavation Material					
Timber (specify)					
Concrete					
Bricks					
Tiles					
Metal (specify)					
Glass					
Plasterboard					
Fixtures and Fittings					
Floor Coverings					
Packaging					
Garden Organics					
Recoverable containers (CDS)					
Paper/Cardboard					
Residual Waste					
Hazardous Waste (specify)					
Other(s) specify					
<p><b>How and where will materials be stored on-site for reuse and recycling?</b> e.g. in skip bins located near entry.</p>					
<p><b>How will site operations be managed to ensure minimal waste creation and maximum reuse and recycling?</b> e.g. staff training, feedback from waste management service provider, on-going checks by site managers, separate area set aside for sorted wastes, clear signage for waste areas etc.</p>					
<p><b>How will this plan be evaluated, and who is responsible for the evaluation?</b> e.g. feedback from staff collected by the site manager.</p>					



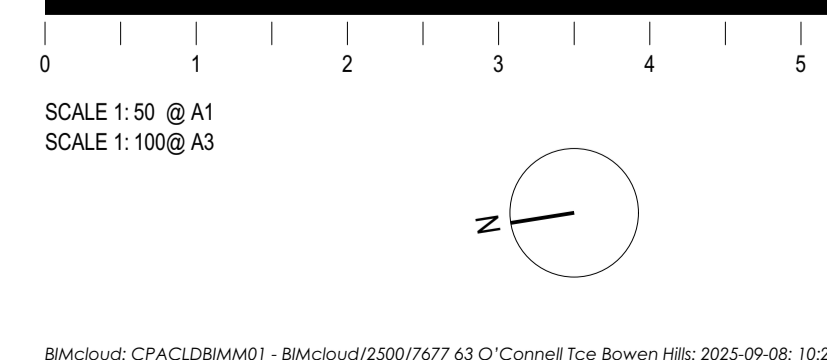
## Appendix C Site Plans



**1 FLOOR PLAN - LEVEL 00 (FOYER)**  
SCALE @ A1 1:50

**COTTEEPARKER**

BRISBANE  
T 61 7 3846 7422  
COTTEE PARKER ARCHITECTS PTY LTD  
ABN 77 010 924 106  
COTTEEPARKER.COM.AU



- GENERAL NOTES**  
All queries - please seek a response from Cottee Parker before proceeding.
- All construction to comply with the applicable National Construction Code and Australian Standards, and with the conditions of any Approvals. Notify Cottee Parker of conflicts or omissions.
  - The Lead Contractor and Subcontractors are to review all levels, setbacks, clearances and interfaces prior to placing orders and during the works. This includes existing/new buildings and external works, and the fixed services, fixtures and fittings. This includes coordination with other documents. Notify Cottee Parker of conflicts or omissions.
  - Do not scale from this drawing - use figured dimensions.
  - Refer to 9000-series drawings for notation, abbreviations and symbols.
  - The Client is to review this drawing. Cottee Parker will proceed on the basis that the design and documentation satisfy the brief and Principal's Project Requirements unless we receive written advice to the contrary within 20 working days from the date of issue.
  - Cladding, and the description of 'changes' in the title block, is for guidance only and may not cover all edits to the drawing since last issue.
  - The original drawing / digital file is signed and is retained by Cottee Parker for verification.
  - Cottee Parker Architects Pty Ltd asserts copyright of this drawing. It may not be copied, adapted or redistributed without permission.
  - Builder and/or Subcontractors to supply one sample each of the proprietary items, finishes, samples materials and shop drawings for sign off prior to placement of order, fabrication or construction. Once approved one signed item is to be held by the Builder and one duplicate item to be forwarded to Client's Representative.

ISSUE PURPOSE	DATE	I	C	A
COORDINATION UPDATE WITH CORE	2025-08-19	KM	EL	MT
SETOUT ADJUSTMENT AND ROOFTOP PLANT RESOLUTION				
CONFIRMATION SKETCH				
CORE SETOUT ADJUSTMENT	2025-08-12	KM	EL	MT
COORDINATION UPDATE	2025-08-04	KM	EL	MT
PRELIMINARY ISSUE	2025-07-30	SH	DW	MT
PRELIMINARY ISSUE	2025-07-07	SH	DW	MT
PRELIMINARY ISSUE	2025-06-10	SH	DW	MT
PRELIMINARY ISSUE	2025-06-08	VAR	DW	MT
PRELIMINARY ISSUE	2025-05-02	SH	DW	MT

REFER TO 0900 SERIES FOR GENERAL NOTATION, ABBREVIATIONS, SYMBOLS AND NUMBERING SYSTEMS

**63 O'Connell Tce Bowen Hills**  
63 O'Connell Tce, Bowen Hills  
CLIENT - CLIENT COMPANY

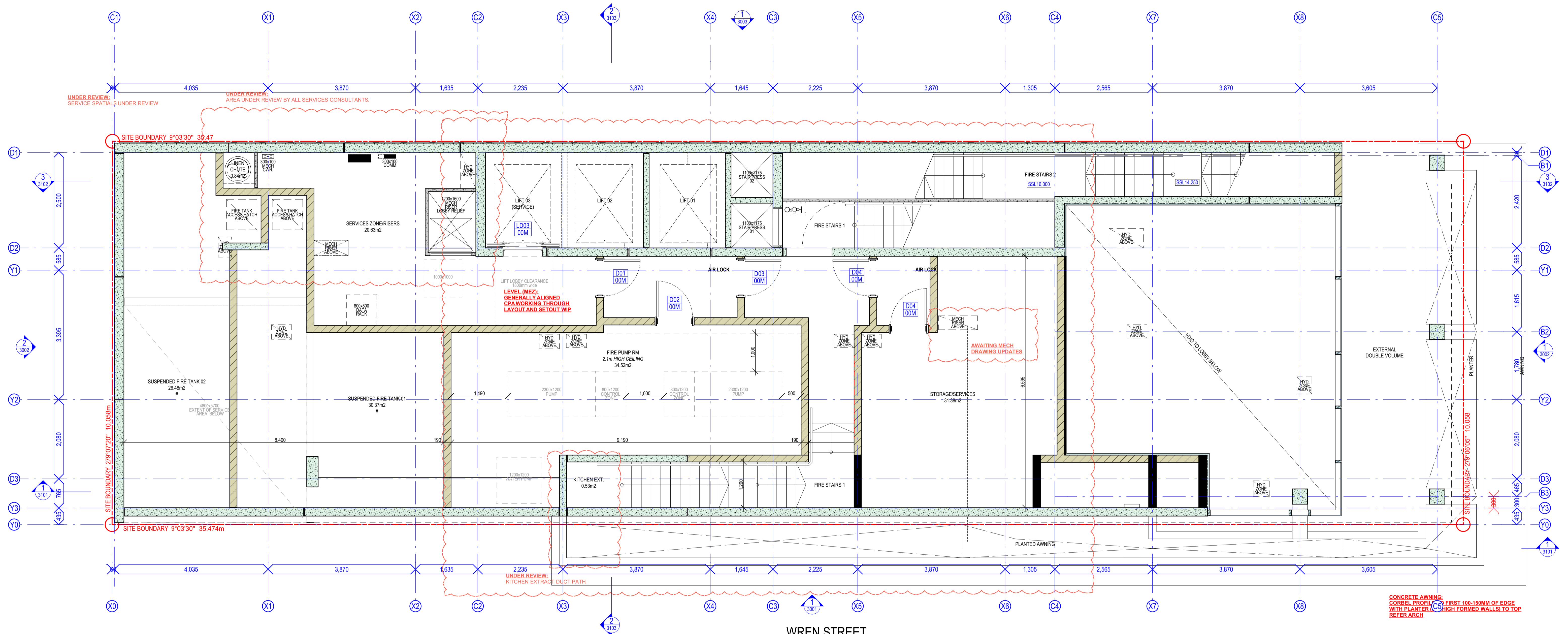
**FLOOR PLAN - GROUND**  
DRAWING TITLE

JOB No 7677  
DRAWING No A-CD-2009  
ISSUE P09

**PRELIMINARY NOT FOR CONSTRUCTION**

DRAWING NUMBERING TRANSITIONED TO CONTRACT  
COORDINATION UPDATE REFLECTING INSTRUCTED CHANGES SINCE LAST ISSUE  
CHANGE REGISTER

BIMcloud: CFACLDBIM01 - BIMcloud/2500/7677 63 O'Connell Tce Bowen Hills: 2025-09-08: 10:28 AM



**1 FLOOR PLAN - LEVEL 00M**  
SCALE @ A1 1:50

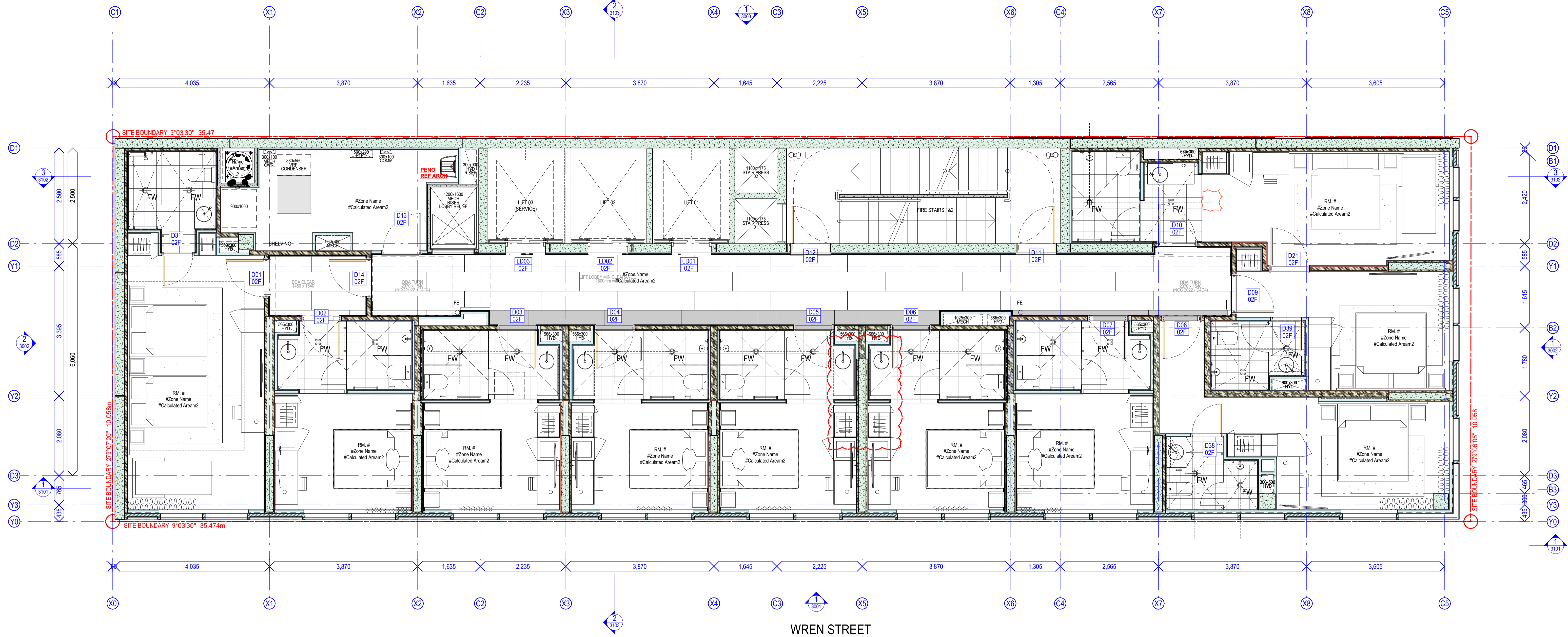
COORDINATION UPDATE WITH CORE	DATE	BY	APP'D
P07 SETOUT ADJUSTMENT AND ROOFTOP PLANT RESOLUTION	2025-08-19	KM	EL MT
P06 COORDINATION UPDATE	2025-08-04	KM	EL MT
P05 PRELIMINARY ISSUE	2025-07-30	SH	DW MT
P04 PRELIMINARY ISSUE	2025-07-07	SH	DW MT
P03 PRELIMINARY ISSUE	2025-06-10	SH	DW MT
P02 PRELIMINARY ISSUE	2025-06-08	VAR	DW MT
P01 PRELIMINARY ISSUE	2025-05-02	SH	DW MT

ISSUE PURPOSE	DATE	BY	APP'D
COORDINATION UPDATE REFLECTING INSTRUCTED CHANGES SINCE LAST ISSUE			
DRAWING NUMBERING TRANSITIONED TO CONTRACT DOCUMENTATION DS			

**PRELIMINARY**  
NOT FOR CONSTRUCTION

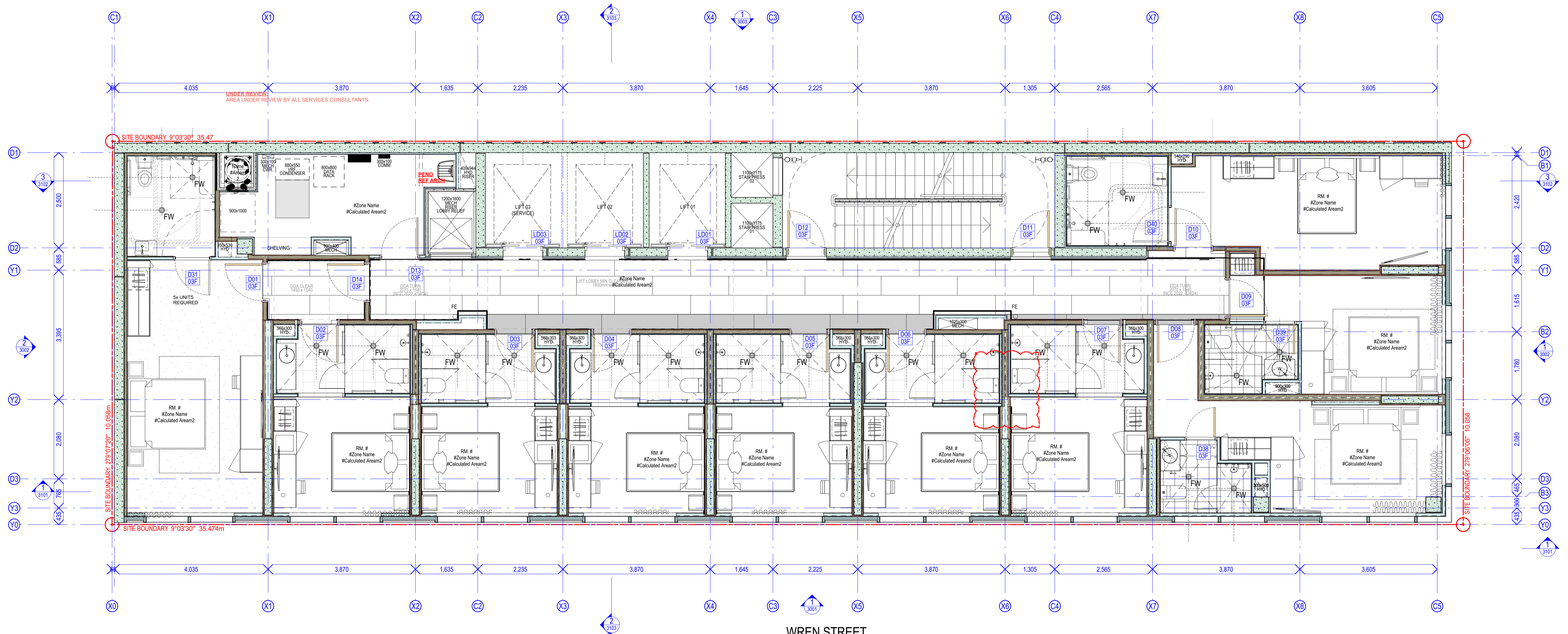
REFER TO 0900 SERIES FOR GENERAL NOTATION, ABBREVIATIONS, SYMBOLS AND NUMBERING SYSTEMS

START HERE



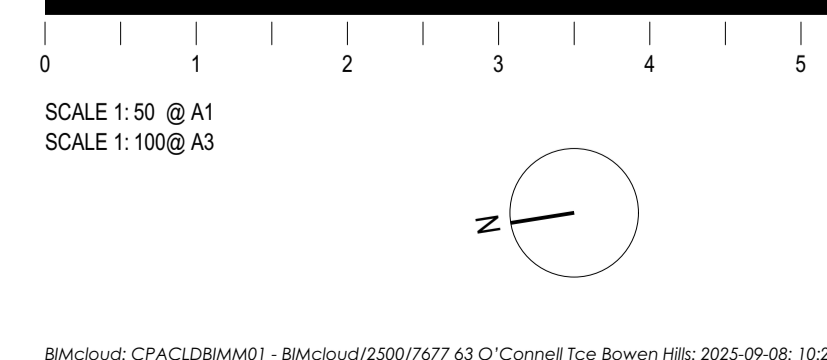
1 FLOOR PLAN - LEVEL 02 (TYP)  
SCALE @ A1 1:50

COORDINATION UPDATE WITH CORE	DATE	BY	APP'D
P07 SETOUT ADJUSTMENT AND ROOFTOP PLANT RESOLUTION	2025-08-19	KM	EL MT
P06 COORDINATION UPDATE	2025-08-04	KM	EL MT
P05 PRELIMINARY ISSUE	2025-07-30	SH	DW MT
P04 PRELIMINARY ISSUE	2025-07-07	SH	DW MT
P03 PRELIMINARY ISSUE	2025-06-10	SH	DW MT
P02 PRELIMINARY ISSUE	2025-06-08	VAR	DW MT
P01 PRELIMINARY ISSUE	2025-05-02	SH	DW MT



1 FLOOR PLAN - LEVEL 03 (ACCESS)  
SCALE @ A1 1:50

**COTTEEPARKER**  
BRISBANE  
T 61 7 3846 7422  
COTTEE PARKER ARCHITECTS PTY LTD  
ABN 77 010 924 106  
COTTEEPARKER.COM.AU



- GENERAL NOTES**  
All queries - please seek a response from Cottee Parker before proceeding.
1. All construction to comply with the applicable National Construction Code and Australian Standards, and with the conditions of any Approvals. Notify Cottee Parker of conflicts or omissions.
  2. The Lead Contractor and Subcontractors are to review all levels, setbacks, clearances and interfaces prior to placing orders and during the works. This includes existing/new buildings and external works, and the fixed services, fixtures and fittings. This includes coordination with other documents. Notify Cottee Parker of conflicts or omissions.
  3. Do not scale from this drawing - use figured dimensions.
  4. Refer to 9000-series drawings for notation, abbreviations and symbols.
  5. The Client is to review this drawing. Cottee Parker will proceed on the basis that the design and documentation satisfy the brief and Principal's Project Requirements unless we receive written advice to the contrary within 20 working days from the date of issue.
  6. Cladding and the description of 'changes' in the title block, is for guidance only and may not cover all edits to the drawing since last issue.
  7. The original drawing / digital file is signed and is retained by Cottee Parker for verification.
  8. Cottee Parker Architects Pty Ltd asserts copyright of this drawing. It may not be copied, adapted or redistributed without permission.
  9. Builder and/or Subcontractors to supply one sample each of the proprietary items, finishes, samples materials and shop drawings for sign off prior to placement of order, fabrication or construction. Once approved one signed item is to be held by the Builder and one duplicate item to be forwarded to Client's Representative.

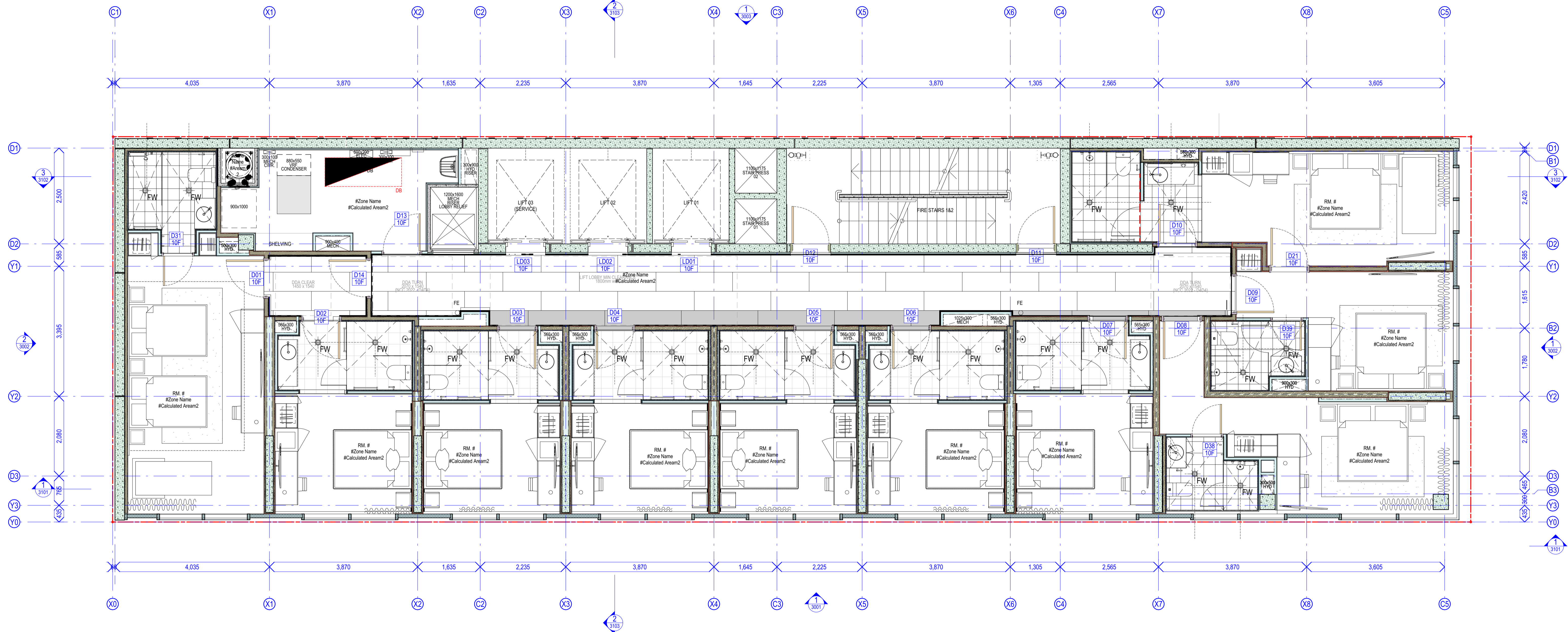
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P06 COORDINATION UPDATE	2025-08-04	KM	EL	MT
P05 PRELIMINARY ISSUE	2025-07-30	SH	DW	MT
P04 PRELIMINARY ISSUE	2025-07-07	SH	DW	MT
P03 PRELIMINARY ISSUE	2025-06-10	SH	DW	MT
P02 PRELIMINARY ISSUE	2025-06-08	VAR	DW	MT
P01 PRELIMINARY ISSUE	2025-05-02	SH	DW	MT

DRAWING NUMBERING TRANSITIONED TO CONTRACT DOCUMENTATION DS  
COORDINATION UPDATE REFLECTING INSTRUCTED CHANGES SINCE LAST ISSUE  
CHANGE REGISTER

REFER TO 0900 SERIES FOR GENERAL NOTATION, ABBREVIATIONS, SYMBOLS AND NUMBERING SYSTEMS

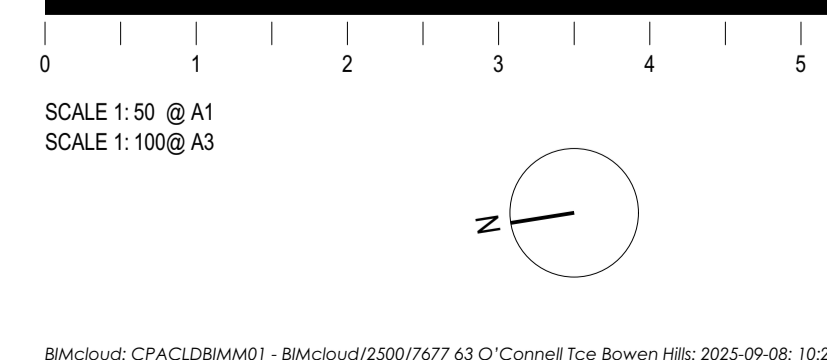
**63 O'Connell Tce Bowen Hills**  
63 O'Connell Tce, Bowen Hills  
CLIENT - CLIENT COMPANY  
DRAWING TITLE  
**FLOOR PLAN - LEVEL 03**  
JOB No 7677  
DRAWING No A-CD-2013  
ISSUE P08

**PRELIMINARY**  
NOT FOR CONSTRUCTION



**1 FLOOR PLAN - LEVEL 10**  
SCALE @ A1 1:50

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**GENERAL NOTES**  
All queries - please seek a response from Cottee Parker before proceeding.

- All construction to comply with the applicable National Construction Code and Australian Standards, and with the conditions of any Approvals. Notify Cottee Parker of conflicts or omissions.
- The Lead Contractor and Subcontractors are to review all levels, setbacks, clearances and interfaces prior to placing orders and during the works. This includes existing/new buildings and external works, and the fixed services, fixtures and fittings. This includes coordination with other documents. Notify Cottee Parker of conflicts or omissions.

- Do not scale from this drawing - use figured dimensions.
- Refer to 9000-series drawings for notation, abbreviations and symbols.
- The Client is to review this drawing. Cottee Parker will proceed on the basis that the design and documentation satisfy the brief and Principal's Project Requirements unless we receive written advice to the contrary within 20 working days from the date of issue.
- Cladding, and the description of 'changes' in the title block, is for guidance only and may not cover all edits to the drawing since last issue.

- The original drawing / digital file is signed and is retained by Cottee Parker for verification.
- Cottee Parker Architects Pty Ltd asserts copyright of this drawing. It may not be copied, adapted or redistributed without permission.
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COORDINATION UPDATE WITH CORE	DATE	I	C	A
P05 SETOUT ADJUSTMENT AND ROOFTOP	2025-06-19	KM	EL	MT
PLANT RESOLUTION				
P04 PRELIMINARY ISSUE	2025/07/03	SH	DW	MT
P03 PRELIMINARY ISSUE	2025/07/07	SH	DW	MT
P02 PRELIMINARY ISSUE	2025/06/10	SH	DW	MT
P01 PRELIMINARY ISSUE	2025/05/02	SH	DW	MT

**DRAWING NUMBERING TRANSITIONED TO CONTRACT**  
DOCUMENTATION DS  
COORDINATION UPDATE REFLECTING INSTRUCTED CHANGES SINCE LAST ISSUE  
CHANGE REGISTER

REFER TO 0900 SERIES FOR GENERAL NOTATION, ABBREVIATIONS, SYMBOLS AND NUMBERING SYSTEMS

**PRELIMINARY**  
NOT FOR CONSTRUCTION

**63 O'Connell Tce Bowen Hills**



63 O'Connell Tce, Bowen Hills  
CLIENT - CLIENT COMPANY

DRAWING TITLE  
**FLOOR PLAN - LEVEL 10**


JOB No 7677  
DRAWING No A-CD-2020  
ISSUE P06

## Appendix D Systems & Specifications

## Typical Refuse Bins




Bin Types	Waste Streams	Examples	Information
1100L bin	General waste, commingled recycling		Dimensions approx.. 1360 x 1280 x 1465 mm (L x W x H) (dimensions depend on contractor) Examples: <a href="http://www.justwheeliebins.com.au">http://www.justwheeliebins.com.au</a> , <a href="https://www.australianwastemanagement.com.au">https://www.australianwastemanagement.com.au</a>
Trolleys	General waste, recycling, food waste, paper / cardboard		Assisted manual transfer of refuse Examples: <a href="https://rubbermaidcommercial.com.au/products/waste-management/mega-brute">https://rubbermaidcommercial.com.au/products/waste-management/mega-brute</a> <a href="https://www.materialshandling.com.au/products/deluxe-compact-cleaning-carts">https://www.materialshandling.com.au/products/deluxe-compact-cleaning-carts</a>

## Refuse Transfer and Disposal Methods

Method	Examples	Description
Manual transfer / disposal		<p><b>Manual transfer</b> is simply the process of physically carrying waste bags, food waste receptacles or recycling boxes and crates without assistance.</p> <p>From a safety perspective, this is acceptable for small quantities and initial disposal into refuse chutes, refuse compartments or, in the case of ground level activities, directly into the refuse storage room.</p> <ul style="list-style-type: none"> <li>• <b>Waste</b> material should be bagged prior to any transfer from apartments, suites, offices, back-of-house areas etc. to waste storage compartments or rooms.</li> </ul>

Method	Examples	Description
	 	<ul style="list-style-type: none"> <li>• <b>Recycling</b> material should be placed in boxes or crates prior to transfer.</li> <li>• <b>Cardboard and paper</b> items can be placed within another cardboard box for transfer.</li> </ul> <p>Examples: <a href="https://www.alamy.com">https://www.alamy.com</a></p>

## Refuse Minimisation Options

<p><b>Container deposit schemes</b></p>	<p>Container deposit / refund schemes are currently in place in several states in Australia.</p> <p>Residents, tenants, staff and cleaners should be encouraged to separate containers that qualify for the schemes from the waste or recycling streams and return them to one of the return points. Storage space or dedicated bins within tenancies, apartments or communal areas should be provided.</p> <p>For larger developments or precincts where large amounts of empty containers are expected, consideration may be given to an on-site return point. The return points should be located near recycling bins so that cardboard boxes or plastic bags that have been used to transfer the empty containers to the return point can be disposed appropriately. This can prevent cluttering of the area around the return point.</p> <p>The images below show a typical return point and containers that commonly qualify for a deposit refund.</p> <div style="display: flex; justify-content: space-around;">   </div> <div style="text-align: center; margin-top: 20px;">  </div> <p>Sources: <a href="https://returnandearn.org.au">https://returnandearn.org.au</a>, <a href="https://envirobank.com.au/bottle-and-can-recycling-queensland">https://envirobank.com.au/bottle-and-can-recycling-queensland</a>, <a href="https://www.containersforchange.com.au/how-it-works">https://www.containersforchange.com.au/how-it-works</a></p>
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## Appendix E Refuse Signage

## 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



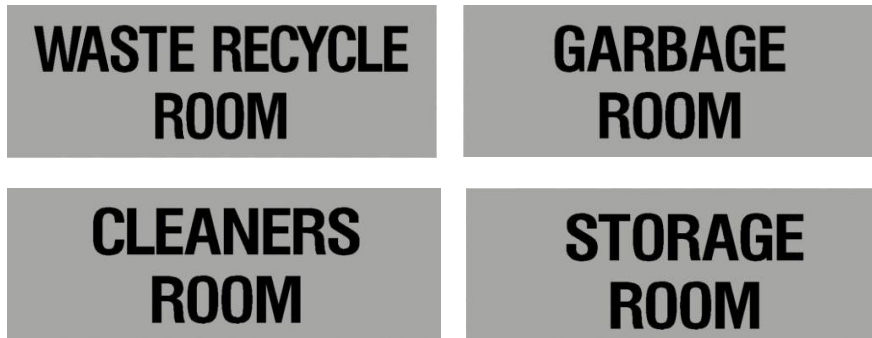
### Colour coding as per AS 4123.7-2006

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

### 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.

TERM	ABBREVIATION	DEFINITION
Transfer (Manual Transfer)		Manual transfer means physical transfer of refuse material and associated bulk bins or trolleys without assistance.
Waste		Waste is referred to as refuse material with the exclusion of recycling, green waste, hazardous waste, special waste, liquid waste, and restricted solid waste.
Waste (General Waste)		General waste is generally referred to as material free of any actual or apparent contamination such as pathological / infectious, radioactive materials and / or hazardous chemical. Reporting use is for material considered to be free of food waste.
Wheelie Bin		A MGB of up to 360L, usually with 2 wheels for easy transfer. A common type is a 240L wheelie bin used for kerbside collection in many residential areas.
<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-End-Loading Refuse Collection Vehicle	REL RCV	A truck specially designed to collect municipal solid waste and recycling, typically 240L wheelie bins to 1100L bulk bins, from rear loading mechanism and haul the collected waste to a solid waste treatment facility.
Tank Truck		An RCV that is specifically designed to collect liquid wastes such as waste cooking oil and food waste pulp. The waste is typically pumped from a waste storage tank into the truck via a hose. Liquid waste management equipment is often provided by the contractor who collects the waste and operates the truck.



19 September 2025  
Our Ref: 25BRT0176 LT01\_1  
BCC Ref: A006490812

**Attention: Paul Chapple**

Herron Coorey Pty Ltd  
11 Greg Chappell Street  
Albion QLD 4010

Dear Paul,

**RE: 63 O'Connell Terrace, Bowen Hills – Hotel Development  
Traffic Engineering Statement for a Minor Change Application**

Colliers International Engineering & Design (TTMC) Pty Ltd (Colliers) has been engaged by Herron Coorey to prepare a traffic engineering statement for a change application relating to an approved hotel development, located at 63 O'Connell Terrace, Bowen Hills.

The current approval for the site, which is the subject of the change application, was issued by Economic Development Queensland (EDQ) in October 2024 (EDQ Ref: DEV2015/629/5, Version 1, dated 24th October 2024).

Under the approved development configuration, the loading dock was provided as follows:

- A minimum internal width of 3.5m, measured wall-to-wall, and a minimum internal length of 9.85m, measured wall-to-boundary (no roller shutter provided).
- A minimum internal height clearance of 4m, measured from floor-to-services/ceiling.
- 2.0m x 2.5m sight splays on both sides of access.
- A 3m wide Type A crossover to Wren Street.

The development plans have been revised to incorporate feedback from various consultants regarding services provisions/locations, with the bin store, laundry room and transformer area being relocated towards the northern property boundary. This has resulted in the loading dock being shifted approximately 2.5m south of the approved location (adjacent to the northern property boundary), towards O'Connell Terrace.

Under the revised development scheme, the loading dock configuration is provided as follows:

- A minimum internal width of 4.5m, measured wall-to-wall, and a minimum internal length of 8.5m, measured wall-to-roller shutter (minimum length of 9.75m from wall-to-boundary with the roller shutter up).

- A minimum internal height clearance of 4m, measured from floor-to-services/ceiling.
- 2.0m x 2.5m sight splays on the exit side of the access only.
- A 3.5m wide Type A crossover to Wren Street.

Based on this, the proposed loading dock arrangements are generally consistent with (or represent and improvement on) the approved arrangements, with the exception of the internal length for vehicle standing and the access pedestrian splay provisions.

Regarding the internal length provision, the revised development has provided a roller shutter for security. It is noted that the internal length between the wall and the roller is 8.5m, which is suitable to accommodate a 6.4m Small Rigid Vehicle (SRV), while the length between the wall and the boundary (while the shutter is up) is consistent with the approved provision, being suitable for access by vehicles up to the size of an 8.3m Medium Rigid Vehicle (MRV), as shown in the swept path drawing included as **Attachment 1**.

With regards to the access provisions, whilst it is acknowledged that AS2890.2 requires pedestrian sight splays on both sides of the driveway, due to the location of the transformer, a pedestrian splay is unable to be provided on the entry side of the access. However, it is noted that the loading dock has been widened when compared to the approved arrangement by 1m, allowing for a 0.5m effective sight splay on each side. Regardless, in order to manage the potential for pedestrian conflicts on the entry side of the access, Colliers recommends that a combination a convex mirror, flashing lights/warning tones and signage be provided in order to alert pedestrians when vehicles are exiting the loading dock.

Overall, Colliers considers the revised loading dock arrangements to be generally in accordance with the approved arrangements, with the changes between the approved and proposed arrangements considered to be either an improvement on the approved provision or manageable through additional mitigation measures. As such, the proposed arrangements are considered suitable.

If you have any queries relating to the information provided herein, please contact Richard Watson or myself on (07) 3327 9500.

Yours sincerely,

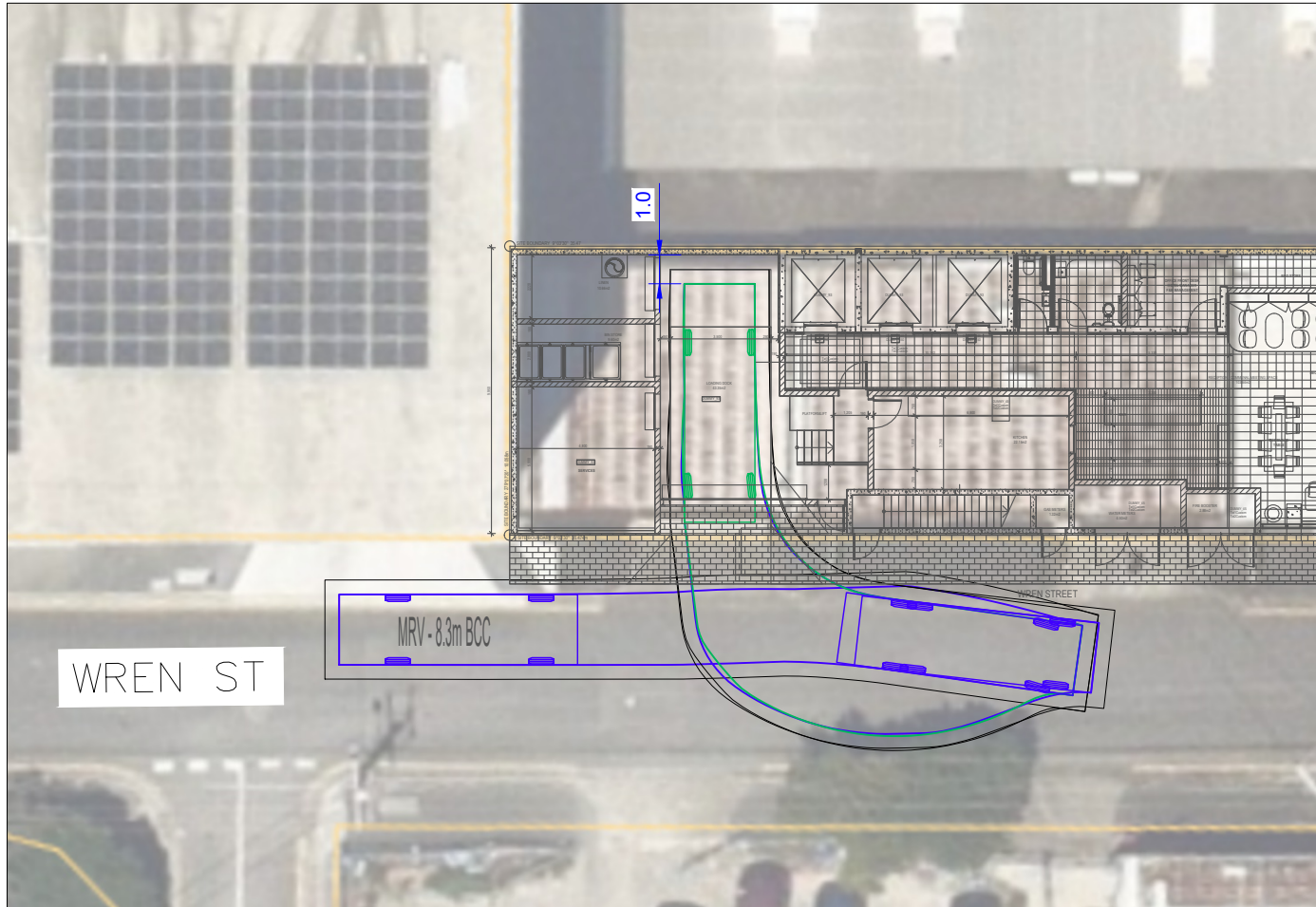
Handwritten signature of Thomas Crust in black ink.

Thomas Crust  
Senior Consultant – Transport  
Colliers International Engineering &  
Design (TTMC) Pty Ltd

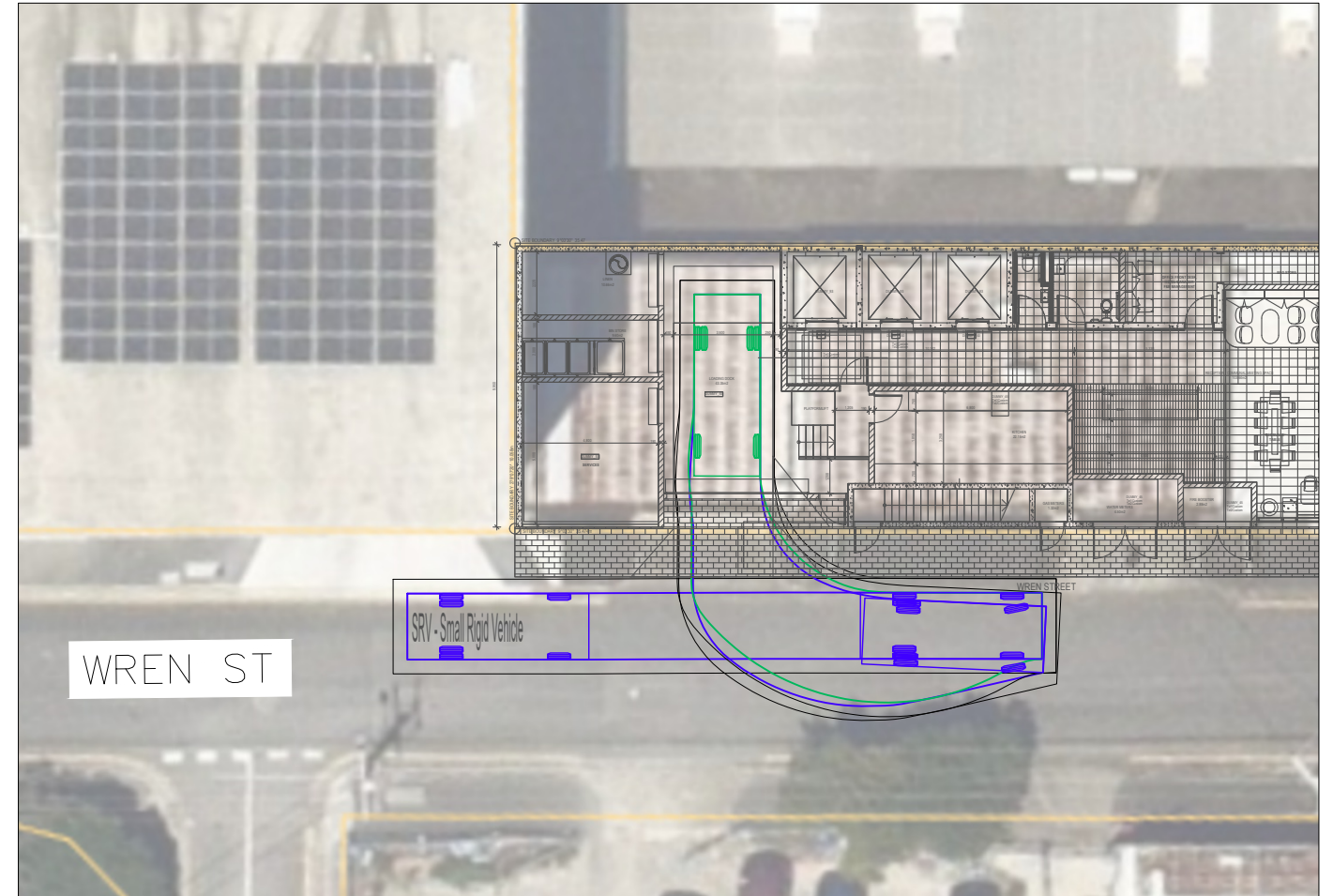
Reviewed,

Handwritten signature of Richard Watson in black ink.

Richard Watson (RPEQ – 27182)  
Director  
Colliers International Engineering &  
Design (TTMC) Pty Ltd



GROUND LEVEL LOADING DOCK MRV ENTRY + EXIT MANOEUVRE

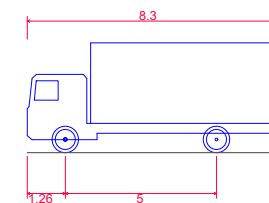


GROUND LEVEL LOADING DOCK SRV ENTRY + EXIT MANOEUVRE

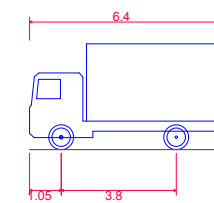
**NOTES:**

1. MAPPING UNDERLAY PROVIDED BY NEARMAP. MAY BE SUBJECT TO DETAILED DESIGN & SITE SURVEY.
2. ALL UNITS SHOWN ARE IN METERS (m) UNLESS OTHERWISE NOTED

**VEHICLE PROFILES**



<b>MRV - 8.3m BCC</b>	
Overall Length	8.300m
Overall Width	2.450m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.450m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	8.500m
Design Speed Forward	5.00km/h
Clearance Envelope	0.500m



<b>SRV - Small Rigid Vehicle</b>	
Overall Length	6.400m
Overall Width	2.330m
Overall Body Height	3.500m
Min Body Ground Clearance	0.398m
Track Width	2.330m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	7.100m
Design Speed Forward	5.00km/h
Clearance Envelope	0.500m

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
A	17-09-25	ORIGINAL ISSUE	TC	RW	RW

SCALE 1:250 AT ORIGINAL SIZE

NORTH

CLIENT  
**HERRON COOREY**

**Colliers** International Engineering & Design (TTMC) Pty Ltd

ABN 65 010 868 621  
LEVEL 8, 369 Ann Street, BRISBANE QLD 4000  
P.O. BOX 12015, BRISBANE QLD 4003

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

PROJECT  
**63 O'CONNELL TCE, BOWEN HILLS - HOTEL DEVELOPMENT**

DRAWING TITLE  
**SERVICE VEHICLE LOADING DOCK SWEEP PATH ASSESSMENT**  
DESIGN VEHICLE - 6.4m SRV & 8.3m MRV

PROJECT NUMBER <b>25BRT0176</b>	ORIGINAL SIZE <b>A3</b>
DRAWING NUMBER <b>25BRT0176-01</b>	REVISION <b>A</b>
DATE <b>17 Sep 2025</b>	SHEET <b>1 OF 1</b>