



Assets | Engineering | Environment | Noise | Spatial | Waste

# Waste Management Plan

120 Marine Parade, Cottesloe

Prepared for Gary Dempsey Developments

April 2021

Project Number: TW19050



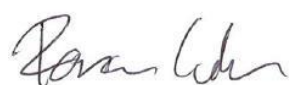
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## Approval for Release

Name	Position	File Reference
Ronan Cullen	Director and Waste Management Section Leader	TW19050 - Waste Management Plan.4b

Signature



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# Executive Summary

Gary Dempsey Developments is seeking development approval for the proposed mixed use development located at 120 Marine Parade, Cottesloe (the Proposal).

To accompany the development application the Town of Cottesloe (the Town) requires the submission of a Waste Management Plan (WMP) that will identify how waste is to be stored and collected from the Proposal. Gary Dempsey Developments has engaged Talis Consultants (Talis) to prepare this WMP to satisfy those conditions.

A summary of the bin size, numbers, collection frequency and collection method for the Proposal is provided in the below table.

## Proposed Waste Collection Summary

Waste Type	Generation (L/week)	Bin Size (L)	Number of Bins	Collection Frequency	Collection
Residential Bins					
Refuse	1,680	660	2	Twice each week	Town of Cottesloe / Private Contractor
Recycling	1,680	660	2	Twice each week	Town of Cottesloe / Private Contractor
Commercial Bins					
Refuse	1,050	660	1	Twice each week	Town of Cottesloe / Private Contractor
Recycling	1,050	660	1	Twice each week	Town of Cottesloe / Private Contractor

The Town's/Private contractor's rear loader waste collection vehicle will reverse into the Proposal from Marine Parade for servicing. Once servicing is complete the rear loader waste collection vehicle will exit the Proposal in forward gear onto Marine Parade.

A caretaker will oversee the relevant aspects of waste management at the Proposal.



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## 1 Introduction

Gary Dempsey Developments is seeking development approval for the proposed mixed use development located at 120 Marine Parade, Cottesloe (the Proposal).

To accompany the development application the Town of Cottesloe (the Town) requires the submission of a Waste Management Plan (WMP) that will identify how waste is to be stored and collected from the Proposal. Gary Dempsey Developments has engaged Talis Consultants (Talis) to prepare this WMP to satisfy those conditions.

The Proposal is bordered by apartments to the north and south, residential properties to the east, and Marine Parade to the west, as shown in Figure 1. Please note there are also existing apartments on the development site.

### 1.1 Objectives and Scope

The objective of this WMP is to outline the equipment and procedures that will be adopted to manage all waste (refuse and recyclables) at the Proposal. Specifically, the WMP demonstrates that the Proposal should be designed to:

- Adequately cater for the anticipated quantities of waste to be generated;
- Provide suitable Bin Storage Area including appropriate bins; and
- Allow for efficient collection of bins by appropriate waste collection vehicles.

To achieve the objective, the scope of the WMP comprises:

- Section 2: Waste Generation;
- Section 3: Waste Storage;
- Section 4: Waste Collection;
- Section 5: Waste Management; and
- Section 6: Conclusion.

## 2 Waste Generation

The following sections show the waste generation rates used and the estimated waste volumes to be generated at the Proposal.

### 2.1 Proposed Tenancies

The anticipated volume of refuse and recyclables were based on the number of apartments and the floor area (m<sup>2</sup>) of the commercial tenancy at the Proposal. The Proposal consists of the following:

- Residential Apartments:
  - Dual Key (1 Bedroom + 1 Bedroom) Apartment – 2; and
  - 3 Bedroom Apartments – 11; and
  - 4 Bedroom Apartments – 1.
- Commercial Tenancies:
  - Coffee Bar (low prep, no commercial kitchen) – 100m<sup>2</sup>.

### 2.2 Waste Generation Rates

In discussions with the Town it was agreed that the use of WALGA generation rates for multi-unit developments would overestimate the quantity of bins that the Town would provide. Therefore, it was agreed that as each residential apartment is entitled to one set of bins then the rates shown in Table 2-1 would apply.

**Table 2-1: Residential Waste Generation Rates**

Waste Stream	Waste Generation Rate (L/Week)	Collection Frequency
Refuse	120	Weekly
Recyclables	240	Fortnightly

Waste generation rates used for the commercial tenancy were based upon the City of Melbourne's *Guidelines for Preparing a Waste Management Plan* (2017). Correspondence with the Town was undertaken to determine that the generation rates shown in Table 2-2 were acceptable for the commercial tenancy.

**Table 2-2: Commercial Waste Generation Rates**

Waste Stream	Waste Generation Rate (L/100m <sup>2</sup> /Week)	Collection Frequency
Refuse	150	Weekly
Recyclables	300	Fortnightly

### 2.3 Waste Generation Volumes

Waste generation is estimated by volume in litres (L) as this is generally the influencing factor when considering bin size, numbers and storage space required.

The following section describes the anticipated residential and commercial waste generation volumes for the Proposal.



### 2.3.1 Residential Waste

Residential waste generation volumes in litres per week (L/week) adopted for this waste assessment are shown Table 2-3. Based on Town's standard bin set/apartment it is estimated that the residential apartments at the Proposal could generate 1,800L of refuse and 1,800L of recyclables each week.

**Table 2-3: Estimated Waste Generation – Residential**

Number of Residential Apartments	Waste Generation Rate (L/week)	Waste Generation (L/Week)
<b>Refuse</b>		
14	120	1,680
<b>Recyclables</b>		
14	120	1,680

### 2.3.2 Commercial Waste

Commercial waste generation volumes in litres per week (L/week) adopted for this waste assessment are shown in Table 2-4. It is estimated that the commercial tenancy will generate 1,050L of refuse and 1,050L of recyclables each week.

**Table 2-4: Estimated Waste Generation – Commercial**

Commercial Tenancy	Area (m <sup>2</sup> )	Waste Generation Rate (L/100m <sup>2</sup> /week)	Waste Generation (L/Week)
<b>Refuse</b>			
Coffee Bar (low prep, no commercial kitchen)	100	150	1,050
<b>Recycling</b>			
Coffee Bar (low prep, no commercial kitchen)	100	150	1,050





## 3 Waste Storage

To ensure that waste is managed appropriately at the Proposal, it is important to allow for sufficient space to accommodate the required quantity of bins within the Bin Storage Area. The procedures and bins to be used at the Proposal is described in the following sections.

### 3.1 Internal Bins

To promote positive recycling behaviour and maximise diversion from landfill, the Proposal will have two bins within each residential apartment for the separate disposal of refuse and recyclables. Waste materials in these bins will be transferred by the resident, or their authorised representative, to the Proposal's Bin Storage Area for disposal in the appropriate bin.

In addition, the Coffee Bar will be required to have a minimum of two bins to facilitate the separate disposal of refuse and recyclables. The contents of these bins will be transferred by the tenant or staff/cleaners to the Bin Storage Area and be deposited into the appropriate bin.

### 3.2 Bin Storage Area

Waste materials generated within the Proposal will be collected in the bins located in the Bin Storage Area shown in Figure 2/Figure 3.

#### 3.2.1 Bin Sizes

Table 3-1 gives the typical dimensions of standard bins sizes. It should be noted that these bin dimensions are approximate and can vary slightly between suppliers.

**Table 3-1: Typical Bin Dimensions**

Dimensions	Bin Sizes		
	120L	240L	660L
Depth (mm)	545	730	780
Width (mm)	480	585	1,260
Height (mm)	930	1,060	1,200
Area (mm <sup>2</sup> )	262	427	983

*Reference: SULO Bin Specification Data Sheets*

#### 3.2.2 Residential Bin Requirements

To ensure sufficient area is available for storage of residential bins, the amount of bins required for the Bin Storage Area was modelled utilising the bin sizes in Table 3-1 and assuming collection of refuse and recyclables twice each week from the Proposal.

Based on the results shown in Table 3-2 the Bin Storage Area has been sized to accommodate:

- Two 660L refuse bins; and
- Two 660L recycling bins.

**Table 3-2: Residential Bin Requirements**

Waste Stream	Waste Generation (L/week)	Number of Bins Required		
		120L	240L	660L
Refuse	1,680	7	4	2
Recycling	1,680	7	4	2

The configuration of these bins within the Bin Storage Area is shown in Figure 2/Figure 3. It is worth noting that the number of bins and corresponding placement of bins shown in Figure 2/Figure 3 represents the maximum requirements assuming two collections each week of refuse and recyclables. Increased collection frequencies would reduce the required number of bins.

### 3.2.3 Commercial Bin Requirements

To ensure sufficient area is available for storage of the commercial bins, the amount of bins required for the Bin Storage Area was modelled utilising the bin sizes in Table 3-1 and assuming collection of refuse and recyclables twice each week from the Proposal.

Based on the results shown in Table 3-3 the Bin Storage Area has been sized to accommodate:

- One 660L refuse bin; and
- One 660L recycling bin.

**Table 3-3: Commercial Bin Requirements**

Waste Stream	Waste Generation (L/week)	Number of Bins Required		
		120L	240L	660L
Refuse	1,050	5	3	1
Recycling	1,050	5	3	1

The configuration of these bins within the Bin Storage Area is shown in Figure 2/Figure 3. It is worth noting that the number of bins and corresponding placement of bins shown in Figure 2/Figure 3 represents the maximum requirements assuming two collections each week of refuse and recyclables. Increased collection frequencies would reduce the required number of bins.

### 3.2.4 Bin Storage Area Design

The design of the Bin Storage Area will take into consideration:

- Impervious floors draining to the sewer;
- A tap for washing of bins and Bin Storage Area as required;
- Adequate aisle width for easy manoeuvring of bins;
- Bin Storage Area doors self-closing, wide enough to fit bins through and proposed to be vermin proof;
- Ventilated to a suitable standard;
- Appropriate signage and stickers to help educate residents and tenants, which can be provided from the Town upon request;
- Undercover where possible and be designed to not permit stormwater to enter into the drain;
- The Bin Storage Area shall be located behind the building setback line;
- Bins are not visible from the property boundary or areas trafficable by the public; and
- Bins are reasonably secured from theft and vandalism.



Bin numbers and storage space within the Bin Storage Area will be monitored by the caretaker during the operation of the Proposal to ensure that the number of bins and collection frequency is sufficient.



## 4 Waste Collection

The following sections describe the options for waste collections at the development based on discussions with the Town and the Town's waste collection contractor.

### 4.1 Option 1 – Collection by the Town of Cottesloe

It is proposed that the Town's rear loader waste collection vehicle will service the development and provide two 660L refuse bins and two 660L recycling bins for the residential apartments and one 660L refuse bin and one 660L recycling bin for the commercial tenancy. The Town will service the residential and commercial bins twice each week.

The Town's rear loader waste collection vehicle will service the bins onsite from the Bin Presentation Area, shown in Figure 2, utilising the Marine Parade entry. As agreed with the Town's Manager of Compliance and Regulatory Services, the Town's rear loader waste collection vehicle will travel with left hand lane traffic flow and reverse into the driveway from Marine Parade. The Town's waste collection vehicle may require a "spotter" to accompany the driver and to assist the driver to reverse in a safe manner. A minimum 2.5m area will be available at the rear of the vehicle to facilitate servicing. Once servicing is complete the Town's rear loader waste collection vehicle will exit in a forward motion, turning left onto Marine Parade moving with traffic flow.

It is proposed that servicing would be conducted outside of operating hours of the commercial tenancy to mitigate the impact on local traffic movements during peak traffic periods. Should this servicing arrangement be supported by the Town, the strata manager will apply for a noise exemption from the Town prior to the development becoming operational.

The Town will be provided with key/PIN code to access any security access gates/roller doors to facilitate servicing, if required.

The caretaker will ferry the bins to and from the Bin Presentation Area on collection days. It should be noted that only full bins will be presented to the Bin Presentation Area for servicing on collection days. Bins will be placed out for servicing where they will not obstruct pedestrians or vehicles. The bin travel path between the Bin Presentation Area and rear of the waste collection vehicle will be of flat surface and be kept free of obstacles. Following servicing, the caretaker will return the bins to the Bin Storage Area as soon as possible on the same day of service.

The above servicing method will preserve the amenity of the area by removing the requirement for bins to be placed out to the verge and the requirement of collection vehicles to be standing on Marine Parade holding up traffic on collection days.

The ability for the Town's rear loader waste collection vehicle to access the Proposal has been assessed by CARDNO and will be included within their traffic impact statement.

### 4.2 Option 2 – Collection by a Private Contractor

The option for a private contractor to service the development has been assessed in the event that the Town's waste collection vehicle cannot safely and conveniently access the Bin Presentation Area. Following discussions with the Town and the Town's waste contractor, it was revealed that servicing could only be completed by their rear loader vehicle with the approximate dimensions of 10m. The utilisation of a private



contractor would allow additional space within the Bin Presentation Area as private contractors have smaller lower profile vehicles within their fleet which could service the development safely and efficiently.

The private contractor's rear loader waste collection vehicle would service the development and provide two 660L refuse bins and two 660L recycling bins for the residential apartments and one 660L refuse bin and one 660L recycling bin for the commercial tenancy. The private contractor would service the residential and commercial bins twice each week.

The private contractor's rear loader waste collection vehicle would service the bins onsite from the Bin Presentation Area, shown in Figure 3, utilising the Marine Parade entry. As agreed with the Town's Manager of Compliance and Regulatory Services, the rear loader waste collection vehicle would travel with left hand lane traffic flow and reverse into the driveway from Marine Parade. The waste collection vehicle may require a "spotter" to accompany the driver and to assist the driver to reverse in a safe manner. A minimum 2.5m area will be available at the rear of the vehicle to facilitate servicing. Once servicing is complete the private contractor's rear loader waste collection vehicle will exit in a forward motion, turning left onto Marine Parade moving with traffic flow.

It is proposed that servicing would be conducted outside of operating hours of the commercial tenancy to mitigate the impact on local traffic movements during peak traffic periods. Should this servicing arrangement be supported by the Town, the strata manager will apply for a noise exemption from the Town prior to the development becoming operational.

The private contractor will be provided with key/PIN code to access any security access gates/roller doors to facilitate servicing, if required.

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The above servicing method will preserve the amenity of the area by removing the requirement for bins to be placed out to the verge and the requirement of collection vehicles to be standing on Marine Parade holding up traffic on collection days.

The ability for a private contractors rear loader waste collection vehicle to access the Proposal has been assessed by CARDNO and will be included within their traffic impact statement.

### **4.3 Bulk Waste and Greenwaste Collection**

Bulk waste materials will be removed from the Proposal as they are generated. Each apartment has an allocated storage room at the Proposal which can be utilised to store bulky wastes temporarily. The caretaker will liaise with residents and tenants on procedures for bulky waste disposal within the Proposal. The Town may provide residents with complimentary tip passes to dispose of bulky wastes, on presentation of valid identification. Details of dedicated waste services and drop off facilities provided by the Town can be found on the Town's website.

Greenwaste collection services will be provided by external contractors, as required. The caretaker will liaise with service providers to ensure an efficient and effective service is maintained.



## 5 Waste Management

A caretaker will be engaged to complete the following tasks:

- Monitoring and maintenance of bins and the Bin Storage Area;
- Cleaning of bins and Bin Storage Area when required;
- Ferrying of bins to and from the Bin Storage Area and Bin Presentation Area on collection days;
- Monitor Bulk Waste Management and assist residents/tenants with its removal, as required;
- Ensure all residents/tenants at the Proposal are made aware of this WMP and their responsibilities thereunder;
- Monitor resident/tenant behaviour and identify requirements for further education and/or signage;
- Engage with the Town for regular inspections to help mitigate potential contamination with commercial tenancy waste;
- Regularly engage with residents/tenants to develop opportunities to reduce waste volumes and increase resource recovery; and
- Regularly engage with the Town's/private contractor's waste services to ensure efficient and effective waste service is maintained.



## 6 Conclusion

As demonstrated within this WMP, the Proposal provides a sufficiently sized Bin Storage Area for storage of refuse and recyclables, based on the estimated waste generation and a suitable configuration of bins. This indicates that an adequately designed Bin Storage Area has been provided, and collection of refuse and recycling can be completed from the Proposal.

The above is achieved using:

- Residential Apartments:
  - Two 660L refuse bins, collected twice each week; and
  - Two 660L recycling bins, collected twice each week.
- Commercial Tenancy:
  - One 660L refuse bin, collected twice each week; and
  - One 660L recycling bin, collected twice each week.

The Town's/private contractor's rear loader waste collection vehicle will reverse into the Proposal from Marine Parade for servicing. Once servicing is complete the rear loader waste collection vehicle will exit the Proposal in forward gear onto Marine Parade.

A caretaker will oversee the relevant aspects of waste management at the Proposal.



# Figures

**Figure 1: Locality Plan**

**Figure 2: Bin Storage Area and Presentation Area – Collection Option 1**

**Figure 3: Bin Storage Area and Presentation Area – Collection Option 2**





LEGEND

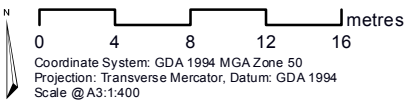
- Site Boundary
- Cadastrate

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Gary Dempsey  
Developments



Prepared: F Walker	Date: 28/05/2019
Checked: J Wroe	Project No: TW19050
Reviewed: R Hayton	Revision: A

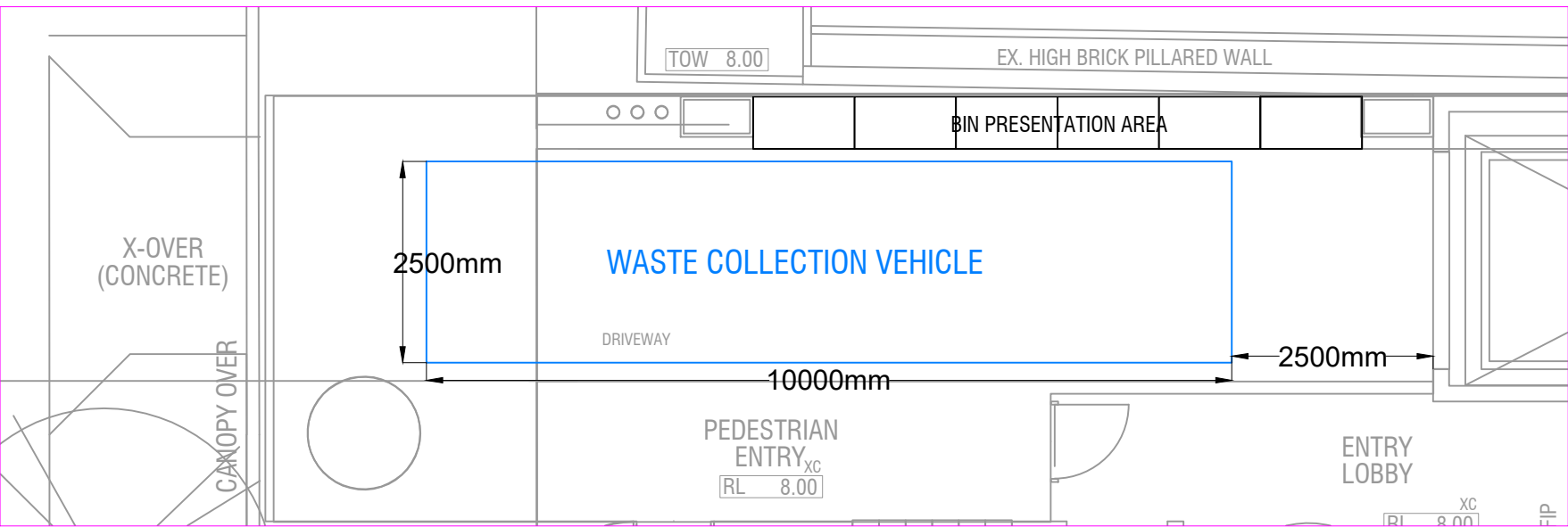
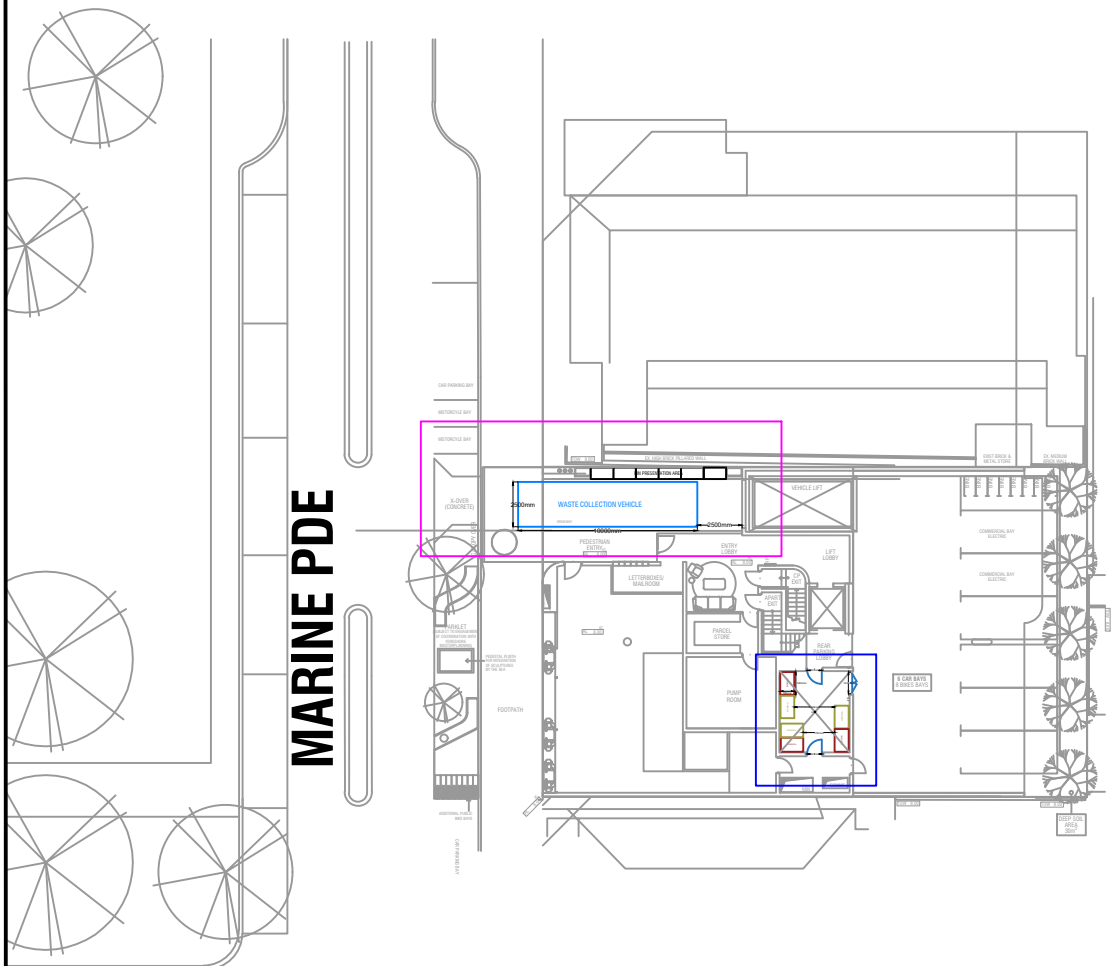


Figure 01



# BIN STORAGE AREA AND PRESENTATION AREA - COLLECTION

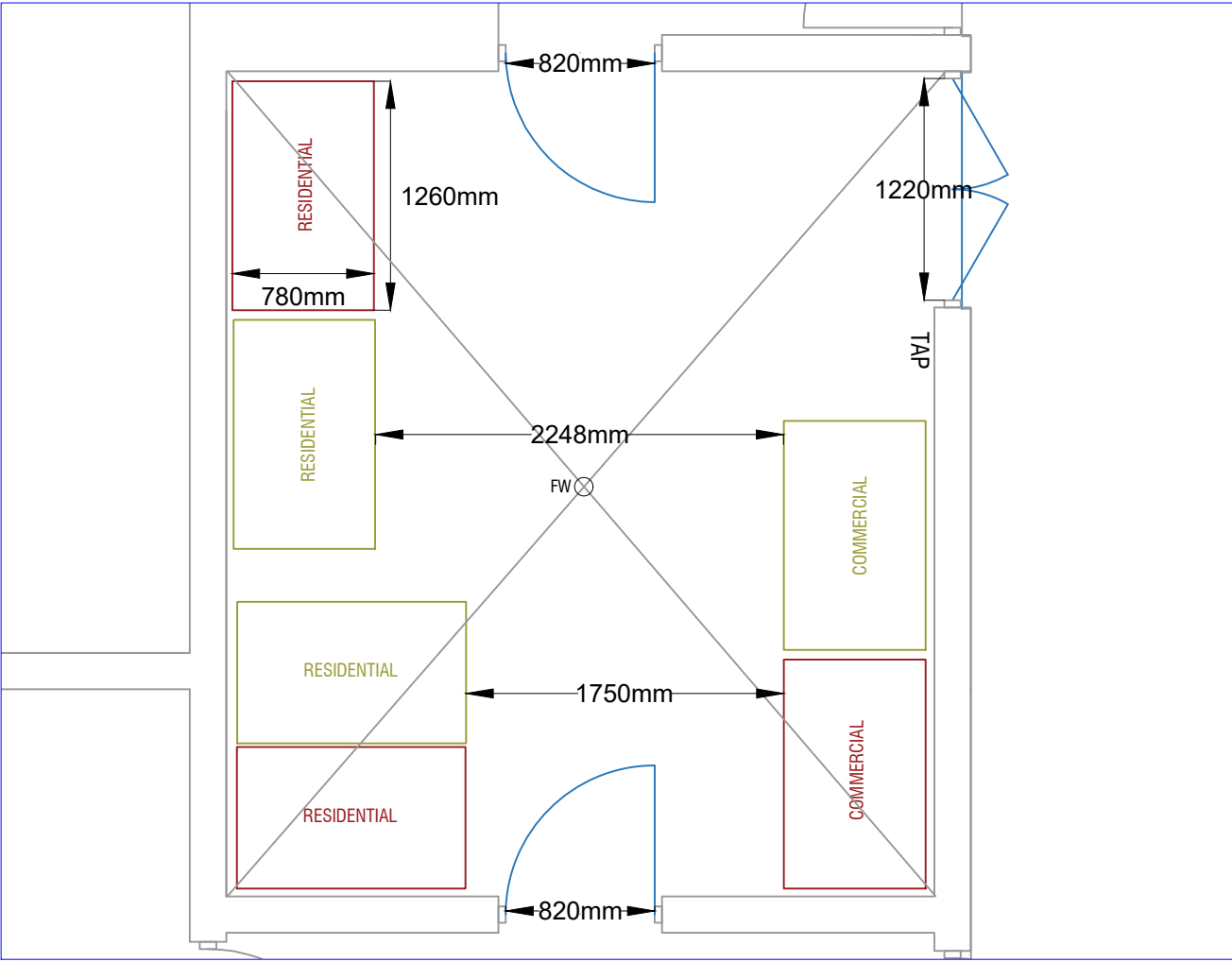
## OPTION 1



### Legend:

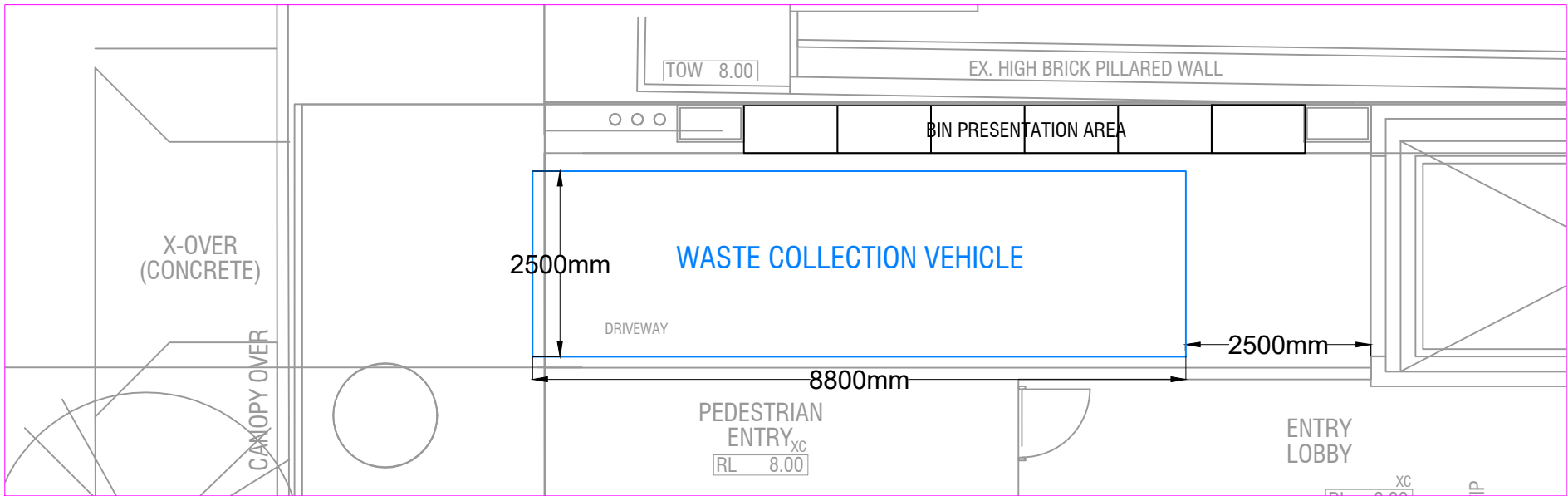
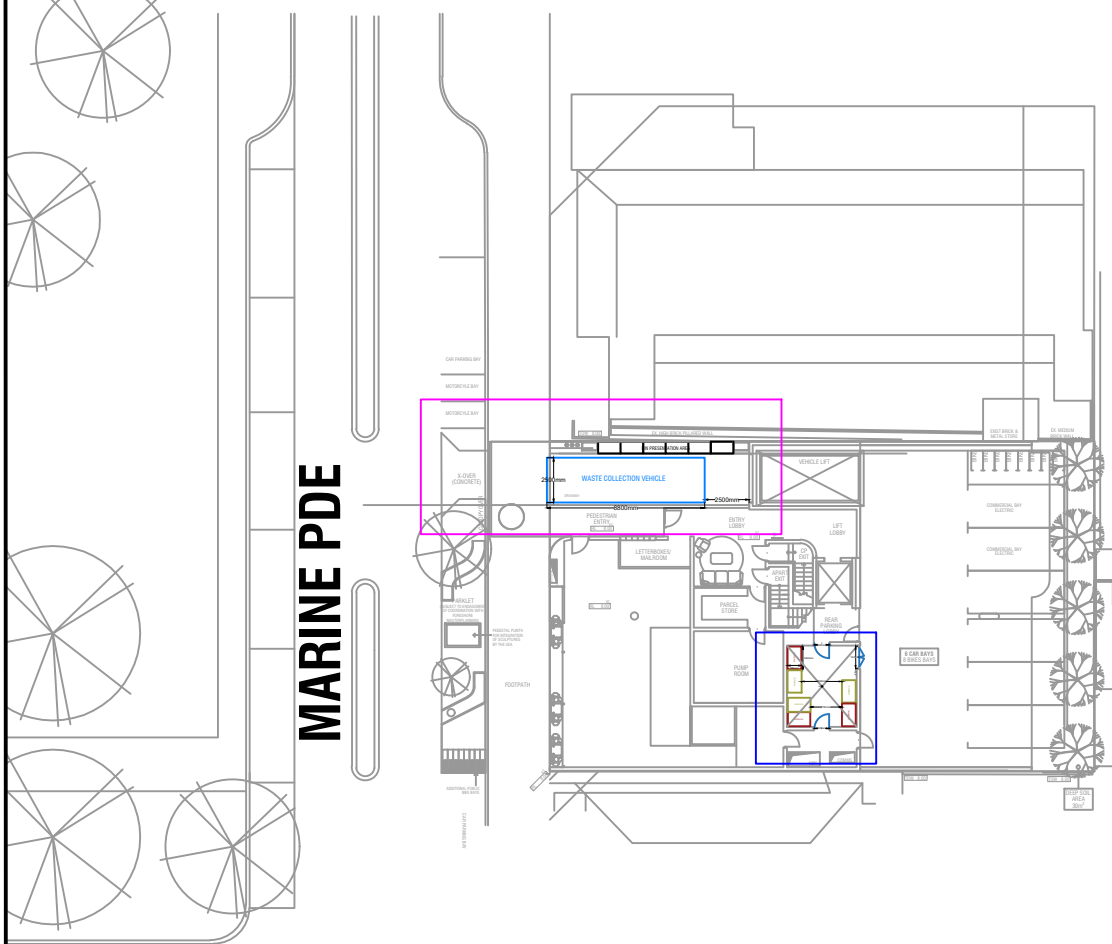
#### Bin Storage Area

- RESIDENTIAL** 2 x 660L residential refuse bins (780mm x 1260mm)
- RESIDENTIAL** 2 x 660L residential recycling bins (780mm x 1260mm)
- COMMERCIAL** 1 x 660L commercial refuse bins (780mm x 1260mm)
- COMMERCIAL** 1 x 660L commercial recycling bins (780mm x 1260mm)



# BIN STORAGE AREA AND PRESENTATION AREA - COLLECTION

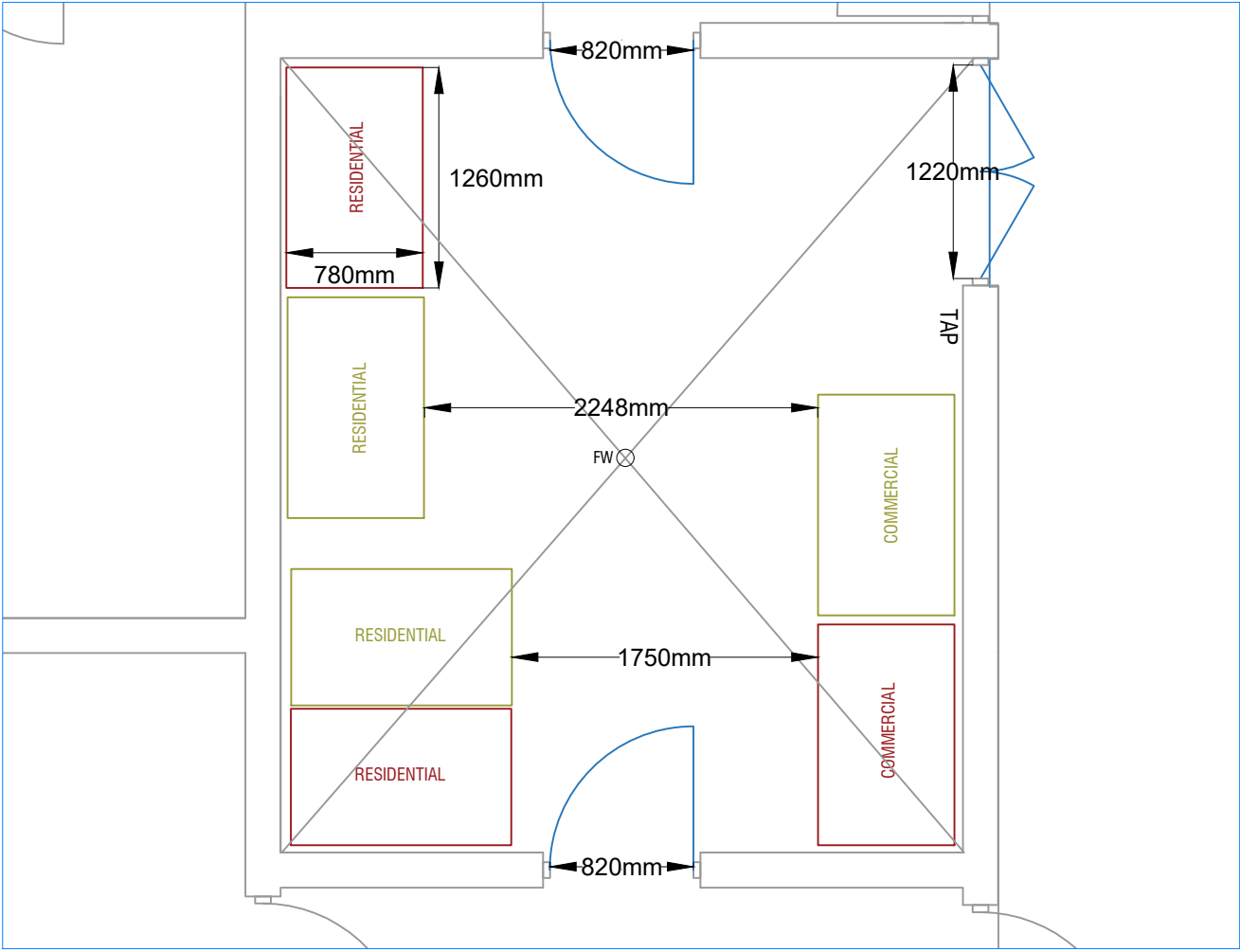
## OPTION 2



### Legend:

#### Bin Storage Area

- RESIDENTIAL** 2 x 660L residential refuse bins (780mm x 1260mm)
- RESIDENTIAL** 2 x 660L residential recycling bins (780mm x 1260mm)
- COMMERCIAL** 1 x 660L commercial refuse bins (780mm x 1260mm)
- COMMERCIAL** 1 x 660L commercial recycling bins (780mm x 1260mm)



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