



# Waste Management Plan

120 Marine Parade, Cottesloe

Prepared for Baltinas

14 January 2022

Project Number: TW19050

#### DOCUMENT CONTROL

Version	Description	Date	Author	Reviewer	Approver
1.0	First Approved Release	10/07/2019	RH	JW	RH
2.0	Second Approved Release	18/03/2020	RH	DP	RH
3.0	Third Approved Release	10/11/2020	DP	RH	RH
4.0	Fourth Approved Release	7/04/2021	RH	DP	RH
5.0	Fifth Approved Release	14/01/2022	DP	RH	DP

#### Approval for Release

Name	Position	File Reference
Dilan Patel	Project Manager – Waste Management Consultant	TW19050-02_Waste Management Plan_5.0
Signature		

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## Executive Summary

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

To satisfy the conditions of 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. Talis Consultants has been engaged to prepare this WMP to satisfy the Town's requirements.

A summary of the bin size, numbers, collection frequency and collection method 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 Bin Storage Area					
Refuse	1,680	660	Two	Two times each week	Town of Cottesloe
Recycling	1,680	660	Two	Two times each week	Town of Cottesloe
Commercial Bin Storage Area					
Refuse	2,961	1,100	Two	Two times each week	Private Contractor
Recycling	1,974	1,100	One	Two times each week	Private Contractor

The Town will collect all residential waste and a private contractor will collect all commercial waste from the verge on Napier Street.

Strata/building management will oversee the relevant aspects of waste management at the Proposal.

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## 1 Introduction

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

To satisfy the conditions of 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. Talis Consultants has been engaged to prepare this WMP to satisfy the Town's requirements.

The Proposal is bordered by 122 Marine Parade to the north, residential developments to the east and south and Marine Parade to the west, as shown in Figure 1.

### 1.1 Objectives and Scope

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

- Adequately cater for the anticipated volume of waste to be generated;
- Provide adequately sized Bin Storage Areas, 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 section shows 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 is based on the number of apartments and the floor area (m<sup>2</sup>) of the commercial tenancy at the Proposal, as follows:

#### Residential

- Dual Key (1 Bedroom + 1 Bedroom) Apartments – 2;
- Three Bedroom Apartments – 11; and
- Four Bedroom Apartments – 1.

#### Commercial

- Café (FOH) – 141m<sup>2</sup>.

### 2.2 Waste Generation Rates

In order to achieve an accurate projection of waste volumes for the Proposal, consideration was given to the Town's residential bin requirements and the City of Melbourne's *Guidelines for Preparing a Waste Management Plan* (2014).

It should also be noted that a conservative approach has been taken with regards to waste generation across the Proposal by overestimating the potential waste volumes for the commercial tenancy. This includes assuming seven days of operation which is considered to be an over estimation as it is not uncommon for food and beverage tenancies to close operations post weekend trading therefore resulting in an over estimation of waste volumes generated.

Table 2-1 shows the waste generation rates which have been applied to the Proposal.

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

Tenancy Use Type	Guideline Reference	Refuse Generation Rate	Recycling Generation Rate
<b>Residential</b>			
Three Bedroom Apartment	Cottesloe – Multi-Residential Dwellings	120L/week	120L/week
<b>Commercial</b>			
Café (FOH)	Melbourne – Café	300L/100m <sup>2</sup> /day	200L/100m <sup>2</sup> /day

### 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.

### 2.3.1 Residential Waste

Residential waste generation volumes in litres per week (L/week) adopted for this waste assessment are shown Table 2-2. It is estimated that the residential apartments at the Proposal will generate 1,680L of refuse and 1,680L of recyclables each week.

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

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

### 2.3.2 Commercial Waste

Commercial waste generation volumes in litres per week (L/week) adopted for this waste assessment are shown Table 2-3. It is estimated that the commercial tenancy at the Proposal will generate 2,961L of refuse and 1,974L of recyclables each week.

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

Commercial Tenancy	Area (m <sup>2</sup> )	Waste Generation Rate (L/100m <sup>2</sup> /day)	Waste Generation (L/week)
<b>Refuse</b>			
Café (FOH)	141	300	<b>2,961</b>
<b>Recyclables</b>			
Café (FOH)	141	200	<b>1,974</b>

### 3 Waste Storage

Waste materials generated within the Proposal will be collected in the bins located in the Bin Storage Area, as shown in Figure 2, and discussed in the following sub-sections.

#### 3.1 Internal Bins

To promote positive recycling behaviour and maximise diversion from landfill, the residential apartments will have room to accommodate two under counter/kitchen bins for the separate disposal of refuse and recyclables. The resident will then take the contents of these internal bins to the Residential Bin Storage Area to deposit the waste into the appropriate bin.

The commercial tenancy will also have a minimum of two bins to facilitate the separate disposal of refuse and recycling. The bins will be transferred by tenants, staff or cleaners, or their authorised representative, to the Commercial Bin Storage Area and be deposited into the appropriate bin.

All bins will be colour coded and labelled in accordance with Australian Standards (AS 4123.7) to assist residents, tenants, visitors, staff and cleaners to dispose of their separate waste materials in the correct bins.

#### 3.2 Bin Sizes

Table 3-1 gives the typical dimensions of standard bins sizes that may be utilised at the Proposal. 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	1,100L*
Depth (mm)	545	730	780	1,070
Width (mm)	480	585	1,260	1,240
Height (mm)	930	1,060	1,200	1,300
Area (m <sup>2</sup> )	0.262	0.427	0.983	1.327

Reference: SULO Bin Specification Data Sheets

\* Commercial Bin Sizes Only

#### 3.3 Residential Bin Storage Area Size

To ensure sufficient area is available for storage of the residential bins, the amount of bins required for the Residential Bin Storage Area was modelled utilising the estimated waste generation in Table 2-2, bin sizes in Table 3-1 and based on collection of refuse and recyclables twice each week. Based on the results shown in Table 3-2 the Residential Bin Storage Area has been sized to accommodate:

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

**Table 3-2: Bin Requirements for Bin Storage Area – Residential**

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



The configuration of these bins within the Residential Bin Storage Area is shown in Figure 2. It is worth noting that the number of bins and corresponding placement of bins shown in Figure 2 represents the maximum requirements assuming two collections each week of refuse and recyclables.

### 3.4 Commercial Bin Storage Area Size

To ensure sufficient area is available for storage of the commercial bins, the amount of bins required for the Commercial Bin Storage Area was modelled utilising the estimated waste generation in Table 2-3, bin sizes in Table 3-1 and based on collection of refuse and recyclables twice each week

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

- Two 1,100L refuse bins; and
- One 1,100L recycling bin.

**Table 3-3: Bin Requirements for Bin Storage Area – Commercial**

Waste Stream	Waste Generation (L/week)	Number of Bins Required		
		240L	660L	1,100L
Refuse	2,961	7	3	2
Recycling	1,974	5	2	1

The configuration of these bins within the Commercial Bin Storage Area is shown in Figure 2. It is worth noting that the number of bins and corresponding placement of bins shown in Figure 2 represents the maximum requirements assuming two collections each week of refuse and recyclables.

### 3.5 Bin Storage Area Design

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

- Located behind the building setback line;
- Smooth impervious floor sloped to a drain connected to the sewer system;
- Taps for washing of bins and Bin Storage Areas;
- Undercover where possible and be designed to not permit stormwater to enter into the drain;
- Ventilated to a suitable standard;
- Not readily accessible by the public;
- Bins not to be visible from the property boundary or areas trafficable by the public; and
- Adequate aisle and door widths for easy manoeuvring of bins;
- No double stacking of bins;
- Doors to the Bin Storage Areas self-closing and vermin proof;
- Appropriate signage;
- Bins are reasonably secured from theft and vandalism.

Bin numbers and storage space within the Bin Storage Areas will be monitored by strata/building management during the operation of the Proposal to ensure that the number of bins and collection frequency is sufficient.

## 4 Waste Collection

It is proposed that the Town's rear loader waste collection vehicle will service the residential apartments and provide:

- Two 660L refuse bins, collected twice each week; and
- Two 660L recycling bins, collected twice each week.

It is proposed that a private contractor's rear loader waste collection vehicle will service the commercial tenancy and provide:

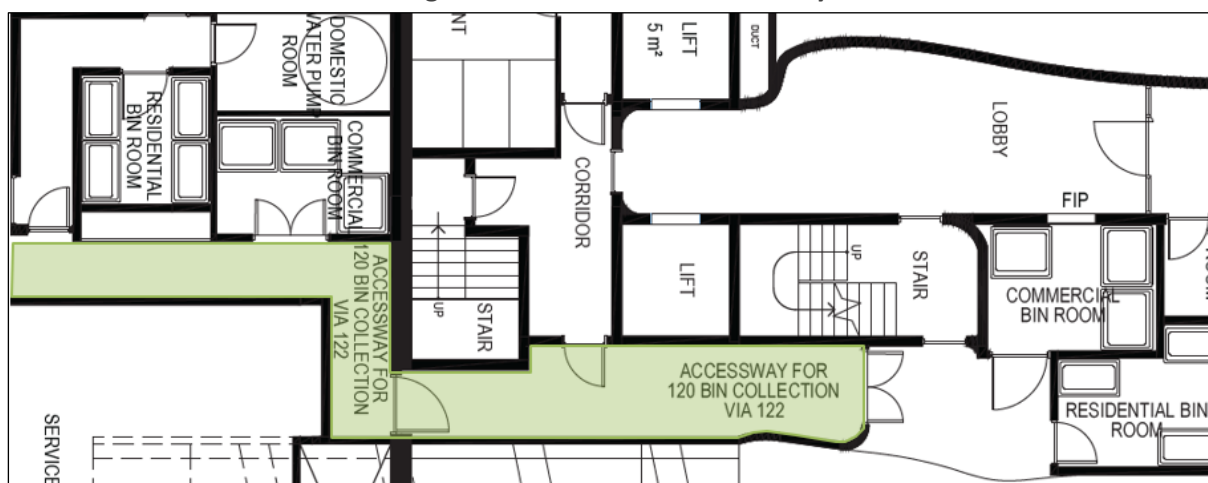
- Two 1,100L refuse bins, collected two times each week; and
- One 1,100L recycling bin, collected two times each week.

The Town's and private contractor's rear loader waste collection vehicle will service bins from the bin presentation area on the Napier Street verge at the front of the Proposal in line with the proposed waste collection methodology for the adjacent property (122 Marine Parade, Cottesloe).

The bins will remain clear of obstructions such as power poles, signs and street trees, and will be placed so as not to obstruct pedestrians, footpaths or bike lanes. Bins will be placed neatly to facilitate collection by the Town's and private contractor's rear lift waste collection vehicle.

Strata/building management will ferry the bins to and from the bin presentation area on collection days via the dedicated Accessway as shown in Diagram 1. The travel path between the Bin Storage Areas and the bin presentation area will be of flat surface and kept free of obstacles. Strata/building management will return the bins to the respective Bin Storage Area as soon as possible on the same day following collection.

**Diagram 1: Bin Collection Accessway**



### 4.1 Residential Bulk Waste

Residential 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. Strata management 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.

## 4.2 Commercial Bulk and Speciality Waste

Commercial bulk and speciality waste materials will be removed from the Proposal as they are generated. Adequate space will be allocated throughout the Proposal for placement of cabinets/containers for collection and storage of bulk and specialty wastes that are unable to be disposed of within the bins in the Commercial Bin Storage Area.

These materials will be removed from the Proposal once sufficient volumes have been accumulated to warrant disposal. A temporary skip bin could be utilised for collections, if required.

These may include items such as:

- Refurbishment wastes from fit outs;
- Batteries and E-wastes;
- White goods/appliances;
- Used cooking oil;
- Cleaning chemicals; and
- Commercial Light globes.

## 5 Waste Management

Strata/building management will be engaged to complete the following tasks:

- Monitoring and maintenance of bins and the Bin Storage Areas;
- Ferrying of bins to and from the Bin Storage Areas and bin presentation area on the Napier Street verge at the front of the Proposal on collection days;
- Cleaning of bins and Bin Storage Areas, when required;
- Ensure all residents and tenants at the Proposal are made aware of this WMP and their responsibilities thereunder;
- Monitor residents and tenants behaviour and identify requirements for further education and/or signage;
- Monitor bulk and speciality waste accumulation and assist with its removal, as required;
- Regularly engage with residents and tenants to develop opportunities to reduce waste volumes and increase resource recovery; and
- Regularly engage with the Town and private contractors to ensure efficient and effective waste service is maintained.

## 6 Conclusion

As demonstrated within this WMP, the Proposal provides a sufficiently sized Bin Storage Areas for storage of refuse and recyclables, based on the estimated waste generation volumes and suitable configuration of bins. This indicates that adequately designed Bin Storage Areas have been provided, and collection of refuse and recyclables 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:
  - Two 1,100L refuse bins, collected twice each week; and
  - One 1,100L recycling bin, collected twice each week.

The Town will collect all residential waste and a private contractor will collect all commercial waste from the verge on Napier Street.

Strata/building management will oversee the relevant aspects of waste management at the Proposal.

## Figures

Figure 1: Locality Plan

Figure 2: Bin Storage Areas





LEGEND

- Site Boundary
- Cadastre

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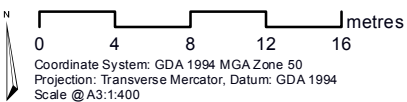
LOCALITY



LOCALITY

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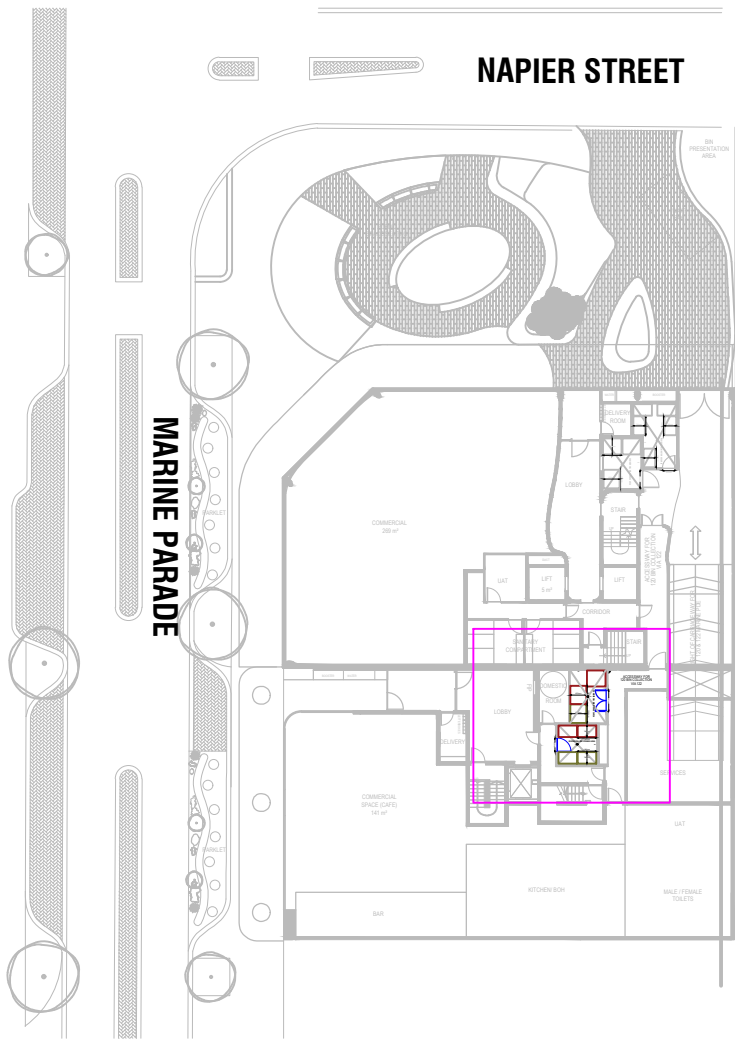
Prepared: F Walker	Date: 28/05/2019
Checked: J Wroe	Project No: TW19050
Reviewed: R Hayton	Revision: A



Figure 01



# Bin Storage Areas



## Legend:

### Residential Bin Storage Area

- 2 x 660L refuse (780mm x 1,260mm)
  - 2 x 660L recycling (780mm x 1,260mm)
- ### Commercial Bin Storage Area
- 2 x 1,100L refuse (1,070mm x 1,240mm)
  - 1 x 1,100L recycling (1,070mm x 1,240mm)





**Assets | Engineering | Environment | Noise | Spatial | Waste**

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