



# Waste Management Plan

Anderson Street, Port Hedland

Prepared for DMG Architecture

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## Executive Summary

DMG Architecture is seeking development approval for the proposed hotel development located at Lots 465, 466, 470 & 471 (44-46) Anderson Street, Port Hedland (the Proposal).

To satisfy the conditions of the development application the Town of Port Hedland (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	Number of Bins	Collection Frequency	Collection
Refuse	38,570	3.0m <sup>3</sup>	Three	Five times each week	Private Contractor
Recycling	20,216	3.0m <sup>3</sup>	Two	Five times each week	Private Contractor

A private contractor will service the Proposal onsite, directly from the Bin Storage Area. The private contractor's waste collection vehicle will enter and exit the Proposal in forward gear via Anderson Street.

Hotel management will oversee the relevant aspects of waste management at the Proposal.

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## 1 Introduction

DMG Architecture is seeking development approval for the proposed hotel development located at Lots 465, 466, 470 & 471 (44-46) Anderson Street, Port Hedland (the Proposal).

To satisfy the conditions of the development application the Town of Port Hedland (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 Anderson Street to the north, and commercial developments to the east, south and 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 an adequately sized 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 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 hotel rooms and the floor area (m<sup>2</sup>) of the tenancies at the Proposal. The Proposal consists of the following:

- Hotel Rooms – 300;
- Bar/Restaurant – 270m<sup>2</sup>;
- Hotel Reception – 200m<sup>2</sup>;
- Dining – 300m<sup>2</sup>;
- Conference – 190m<sup>2</sup>;
- Gym – 90m<sup>2</sup>; and
- Multi-Function Room, Bar – 400m<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 City of Melbourne's *Guidelines for Waste Management Plans (2021)* and the City of Perth's *Waste Guidelines for New Developments (Revision 5, effective from June 2019)*.

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 tenancies. This includes assuming seven days of operation for all commercial tenancies.

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
Hotel Rooms	Melbourne – Hotel/Motel	5L/bed/day	5L/bed/day
Bar/Restaurant	Melbourne – Restaurants	660L/100m <sup>2</sup> /day	200L/100m <sup>2</sup> /day
Hotel Reception	Melbourne – Office	10L/100m <sup>2</sup> /day	10L/100m <sup>2</sup> /day
Dining	Melbourne – Restaurants	660L/100m <sup>2</sup> /day	200L/100m <sup>2</sup> /day
Conference	Melbourne – Office	10L/100m <sup>2</sup> /day	10L/100m <sup>2</sup> /day
Gym	Melbourne - Gym	10L/100m <sup>2</sup> /day	10L/100m <sup>2</sup> /day
Multi-Function Room, Bar	Perth – Hotel/Motel - Bar	50L/100m <sup>2</sup> /day	50L/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.

Waste generation volumes in litres per week (L/week) adopted for this waste assessment is shown in Table 2-2. It is estimated that the hotel rooms and associated tenancies at the Proposal will generate 38,570L of refuse and 20,216L of recyclables each week.

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

Tenancy Use Type	Number of Rooms / Floor Area (m <sup>2</sup> )	Waste Generation Rate	Waste Generation (L/week)
<b>Refuse</b>			
Hotel Rooms	300 Rooms	5L/bed/day	10,500
Bar/Restaurant	270m <sup>2</sup>	660L/100m <sup>2</sup> /day	12,474
Hotel Reception	200m <sup>2</sup>	10L/100m <sup>2</sup> /day	140
Dining	300m <sup>2</sup>	660L/100m <sup>2</sup> /day	13,860
Conference	190m <sup>2</sup>	10L/100m <sup>2</sup> /day	133
Gym	90m <sup>2</sup>	10L/100m <sup>2</sup> /day	63
Multi-Function Room, Bar	400m <sup>2</sup>	50L/100m <sup>2</sup> /day	1,400
<b>Total</b>			<b>38,570</b>
<b>Recyclables</b>			
Hotel Rooms	300 Rooms	5L/bed/day	10,500
Bar/Restaurant	270m <sup>2</sup>	200L/100m <sup>2</sup> /day	3,780
Hotel Reception	200m <sup>2</sup>	10L/100m <sup>2</sup> /day	140
Dining	300m <sup>2</sup>	200L/100m <sup>2</sup> /day	4,200
Conference	190m <sup>2</sup>	10L/100m <sup>2</sup> /day	133
Gym	90m <sup>2</sup>	10L/100m <sup>2</sup> /day	63
Multi-Function Room, Bar	400m <sup>2</sup>	50L/100m <sup>2</sup> /day	1,400
<b>Total</b>			<b>20,216</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 Diagram 1, and discussed in the following sub-sections.

Note: the waste generation volumes are best practice estimates and the number of bins to be utilised represents the maximum requirements once the Proposal is fully operational. Bin requirements may be impacted as the development becomes operational and the nature of the tenants and waste management requirements are known.

#### 3.1 Internal Transfer of Waste

To promote positive recycling behaviour and maximise diversion from landfill, internal bins will be available throughout the Proposal for the source separation of refuse and recycling.

These internal bins will be collected by the staff/cleaners and transferred to the Bin Storage Area for consolidation into the appropriate bins, as required. This internal servicing method may be conducted outside of main operational hours to mitigate disturbances to guests/visitors.

All bins will be colour coded and labelled in accordance with Australian Standards (AS 4123.7) to assist guests/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 (m)	Bins Sizes		
	240L	3.0m <sup>3</sup>	4.5m <sup>3</sup>
Depth	0.73	1.505	1.600
Width	0.59	1.805	2.050
Height	1.06	1.225	1.520

*Reference: SULO and Veolia Bin Specification Data Sheets*

#### 3.3 Bin Storage Area Size

To ensure sufficient area is available for storage of the bins, the amount of bins required for the 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 five times each week.

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

- Three 3.0m<sup>3</sup> refuse bins; and
- Two 3.0m<sup>3</sup> recycling bins.

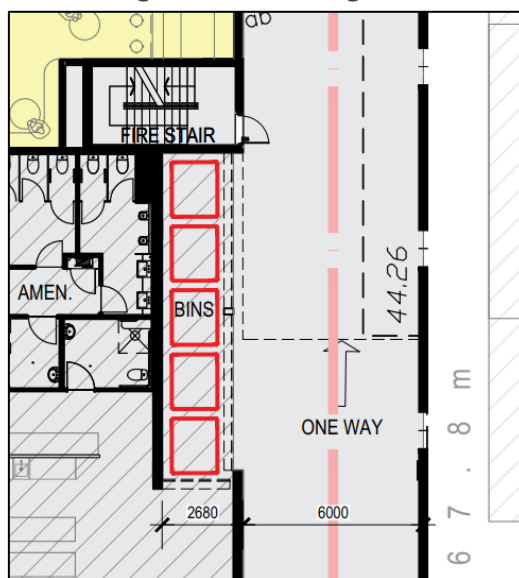


**Table 3-2: Bin Requirements for Bin Storage Area**

Waste Stream	Waste Generation (L/week)	Number of Bins Required		
		240L	3.0m <sup>3</sup>	4.5m <sup>3</sup>
Refuse	38,570	33	3	2
Recycling	20,216	17	2	1

The configuration of these bins within the Bin Storage Area is shown in Diagram 1. It is worth noting that the number of bins and corresponding placement of bins shown in Diagram 1 represents the maximum requirements assuming five collections each week of refuse and recyclables.

**Diagram 1: Bin Storage Area**



### 3.4 Bin Storage Area Design

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

- Smooth impervious floor sloped to a drain connected to the sewer system;
- Taps for washing of bins and Bin Storage Area;
- Adequate aisle width for easy manoeuvring of bins;
- No double stacking of bins;
- Doors to the Bin Storage Area self-closing and vermin proof;
- Doors to the Bin Storage Area wide enough to fit bins through;
- Ventilated to a suitable standard;
- Appropriate signage;
- Undercover where possible and be designed to not permit stormwater to enter the drain;
- Located behind the building setback line;
- Bins not to be 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 hotel management during the operation of the Proposal to ensure that the number of bins and collection frequency is sufficient.

## 4 Waste Collection

A private waste collection contractor will service the Proposal and provide three 3.0m<sup>3</sup> bins for refuse and two 3.0m<sup>3</sup> bins for recyclables.

The private contractor will collect refuse and recyclables five times each week utilising a front loader waste collection vehicle.

The private contractor's front loader waste collection vehicle will service the bins onsite, directly from the Bin Storage Area, with the vehicle stopping on the east driveway. The private contractor's waste collection vehicle will travel with left hand traffic flow on Anderson Street, turn into the Proposal in forward gear, and pull up directly opposite the Bin Storage Area for servicing, as shown in Diagram 2.

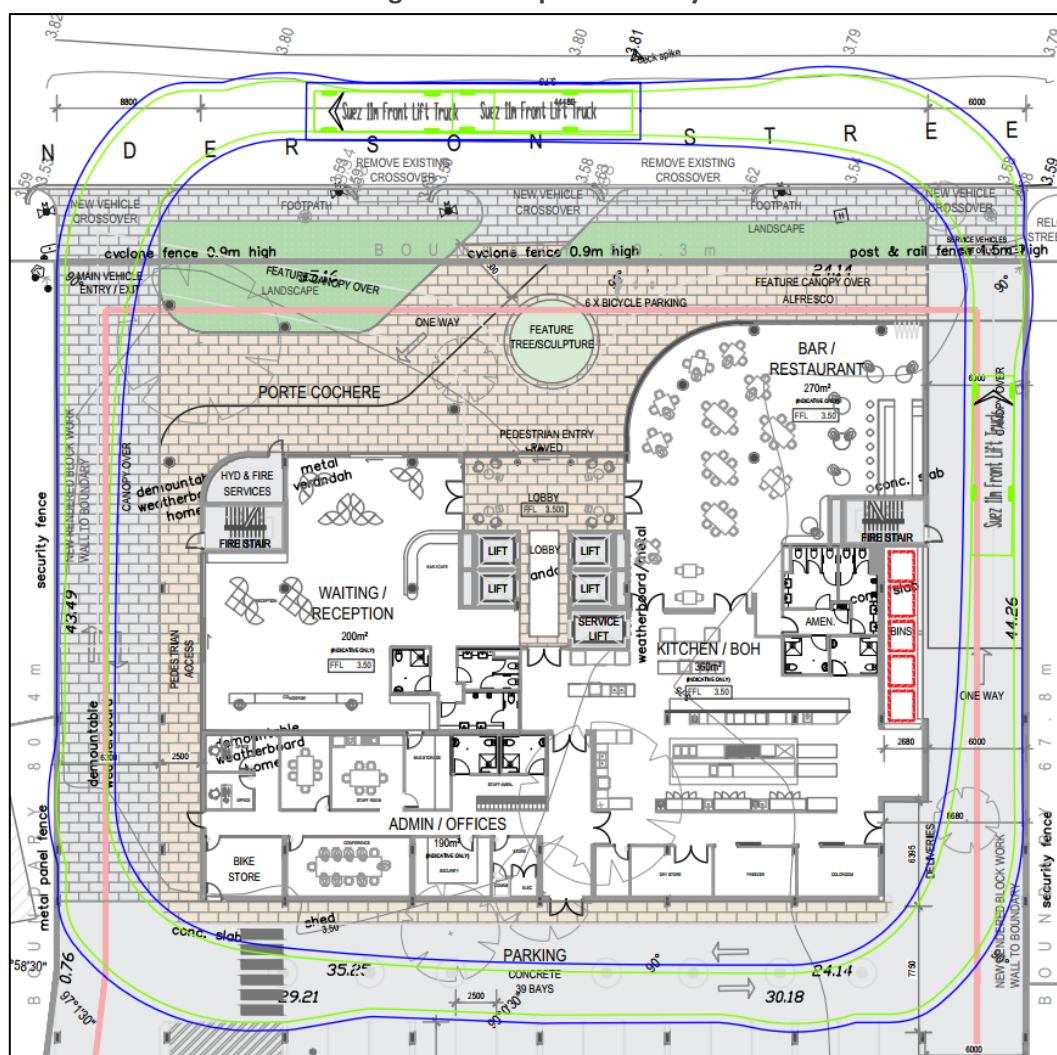
Private contractor's staff, with assistance from hotel management if required, will manoeuvre bins to facilitate servicing by the front loader waste collection vehicle. The private contractor will be provided with key/PIN code access to the Bin Storage Area and security access gates to facilitate servicing, if required.

Once servicing is complete the private contractor's front loader waste collection vehicle will exit in a forward motion, turning onto Anderson Street moving with traffic flow, as shown in Diagram 2.

The above servicing method will preserve the amenity of the area by removing the requirement for bins to be presented to the street on collection days. In addition, servicing of bins onsite will reduce the noise generated in the area during collection. Noise from waste vehicles must comply with the Environmental Protection (Noise) Regulations and such vehicles should not service the site before 7.00am or after 7.00pm Monday to Saturday, or before 9.00am or after 7.00pm on Sundays and Public Holidays.

The ability for the private contractor's front loader waste collection vehicle to access the Proposal in a safe manner has been assessed by Urbii and will be included within their traffic impact statement.

Diagram 2: Swept Path Analysis



#### 4.1 Bulk and Speciality Waste

Adequate space may 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 Bin Storage Area. These may include items such as:

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

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. Bulk and specialty waste collection will be monitored by hotel management who will organise their transport to the appropriate waste facility, as required.

## 5 Waste Management

Hotel management 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;
- Assisting private contractor's manoeuvre bins for collection, when required;
- Ensure all staff/cleaners at the Proposal are made aware of this WMP and their responsibilities thereunder;
- Monitor staff/cleaner 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 staff/cleaners to develop opportunities to reduce waste volumes and increase resource recovery; and
- Regularly engage with the 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 Area for storage of refuse and recyclables, based on the estimated waste generation volumes and suitable configuration of bins. This indicates that an adequately designed Bin Storage Area has been provided, and collection of refuse and recyclables can be completed from the Proposal.

The above is achieved using:

- Three 3.0m<sup>3</sup> refuse bins, collected five times each week; and
- Two 3.0m<sup>3</sup> recycling bins, collected five times each week.

A private contractor will service the Proposal onsite, directly from the Bin Storage Area. The private contractor's waste collection vehicle will enter and exit the Proposal in forward gear via Anderson Street.

Hotel management will oversee the relevant aspects of waste management at the Proposal.

## Figures

Figure 1: Locality Plan



### LEGEND

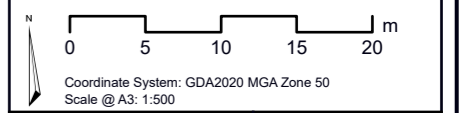
- Site Boundary
- Cadastre**
- Crown Allotment
- Freehold
- Road
- Reserve

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### LOCALITY

Anderson St  
Port Headland 6271 WA  
DMG Architecture



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Figure 01

Data source: Roads, Cadastre - Landgate, 2023. Imagery: Landgate, 2023.



Assets | Engineering | Environment | Noise | Spatial | Waste

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