



Waste Management Plan

Lot 9046 Maritime Drive, Jindalee – Mixed Use Development



1.0 Introduction

This waste management plan (WMP) assists and supports a mixed use development to be located at Lot 9046 Maritime Drive, Jindalee, as part of a Development Application to the Metro Outer North Joint Development Assessment Panel.

The WMP has been developed on the basis of preliminary investigations with the project team, and discussions with the City of Wanneroo (City) around suitable waste storage, collection, and provision of waste facilities and infrastructure.

As the proposal has an undercroft basement level, and bin store in the basement, the use of 360L bins has been specified, as they are readily moved, as opposed to larger 660L bins. We are advised due to the aesthetic design, underneath clearances to enable a waste vehicle to enter the undercroft garage is not possible.

In this regard, and given there are a mix of uses, the waste methodology and approach is to provide for kerbside collection, by a private contractor twice weekly.

The methodology and approach of this report ensures the building can cater to the waste demands for the various uses, have a functional and adequate bin store, and have a method of collection that is appropriate to the operation of the building.

The WMP is based on the WALGA Guidelines for Waste Management and ensures the use of appropriate calculation rates, to supply suitable volumes of capacity for waste storage for the amenity of residents of the development.

2.0 SUMMARY OF DEVELOPMENT

The proposal, a high-quality mixed development, consists of a 3 storey development, including apartments, short stay apartments, and a commercial tenancy.

The building includes an undercroft basement, that includes the bin store.

2.1 Location of Development

The development is located on the corner of Maritime and Jindalee Drives in Jindalee. The site is located within the City of Wanneroo.

The subject site is located within the Jindalee Coastal Village.

2.2 Number of Floors

The proposal consists of multiple dwellings, short stay apartments and a café tenancy, and is located over 3 floors.

2.3 Number of Dwelling Units by Size

The following table sets out the number of units within the development relative to bedroom size breakdowns, treating the short stay accommodation units the same as single bedroom units:

Residential Dwelling Units	Number
1 Bedroom Unit	3
2 Bedroom Unit	30
Short Stay Unit	14
Total Unit Yield	47

2.4 Size of Each Commercial Unit

The proposed development includes the provision of a 97m² café tenancy.

2.5 Details of the Intended Use of the Development

The development is designed and proposed to be a landmark development at the Jindalee Beach foreshore, with a mix of housing, holiday accommodation and a café use.

3.0 WASTE GENERATION RATES

The City utilises the Western Australian Local Government Association (WALGA) Multiple Dwellings Waste Management Plan Guidelines.

Appendix C, Table 1 of the guidelines sets out the various waste generation rates for residential development projects, and the residential components of mixed-use development projects.

As this proposal relates to residential and commercial rates, both streams are accounted for in the calculations.

3.1 Waste Calculation Rates

The following table details the gross waste generation rates for the development.

Dwelling size	Refuse (L/week)	Recycling (L/fortnight)
2 bed apartment (160/120L)	5,440	4080
1 bed apartment (80L/80L)	1,040	1,040
Commercial Tenancy (300L per 100sqm per day)	2,100	1,400
Gross waste generation	8,580	6,520

3.1.1 Refuse

The proposal has a generation of 8,520 litres of general refuse. This will be stored in the central bin store, described in detail below.

3.1.2 Recycling

The proposal has a generation of 6,520 litres of co-mingled recycling per fortnight, and will be stored in the central bin store, described in detail below.

3.1.3 Other

As the proposal is below the 100 unit threshold for a bulky goods collection room, the proposal does not cater for this requirement.

4.0 BIN STORAGE AREA

The proposal caters to the whole development through a central bin store located in the basement parking area.

Figure 1 contained over leaf sets out the central bin store location, along with the location of the kerbside presentation.

4.1 Waste Disposal

Residents and visitors within the development will be required and advised through strata management and short stay management to present their own waste to the central bin store.

4.2 Bin Storage Area Size

The central bin store is based on the following generation rates and storage capacity:

Dwelling size	Refuse (L/week)	Recycling (L/fortnight)
2 bed apartment (160/120L)	5,440	4,080
1 bed apartment (80L/80L)	1,040	1,040
Commercial Tenancy (300L per 100sqm per day)	2,100	1,400
Gross waste generation	8,580	6,520

The above rates, if adjusted to a twice weekly private collection, means that the following adjusted rates apply, for the purpose of bin provision in the bin store:

Dwelling size	Refuse (L/week)	Recycling (L/fortnight)
2 bed apartment (160/120L)	2,720	1,020
1 bed apartment (80L/80L)	520	260
Commercial Tenancy (300L per 100sqm per day)	1,050	350
Adjusted waste generation for twice weekly collection	4,290	1,630

This leads to the central bin store including:

- 12x 360L general refuse bins
- 6 x 360L recycling bins

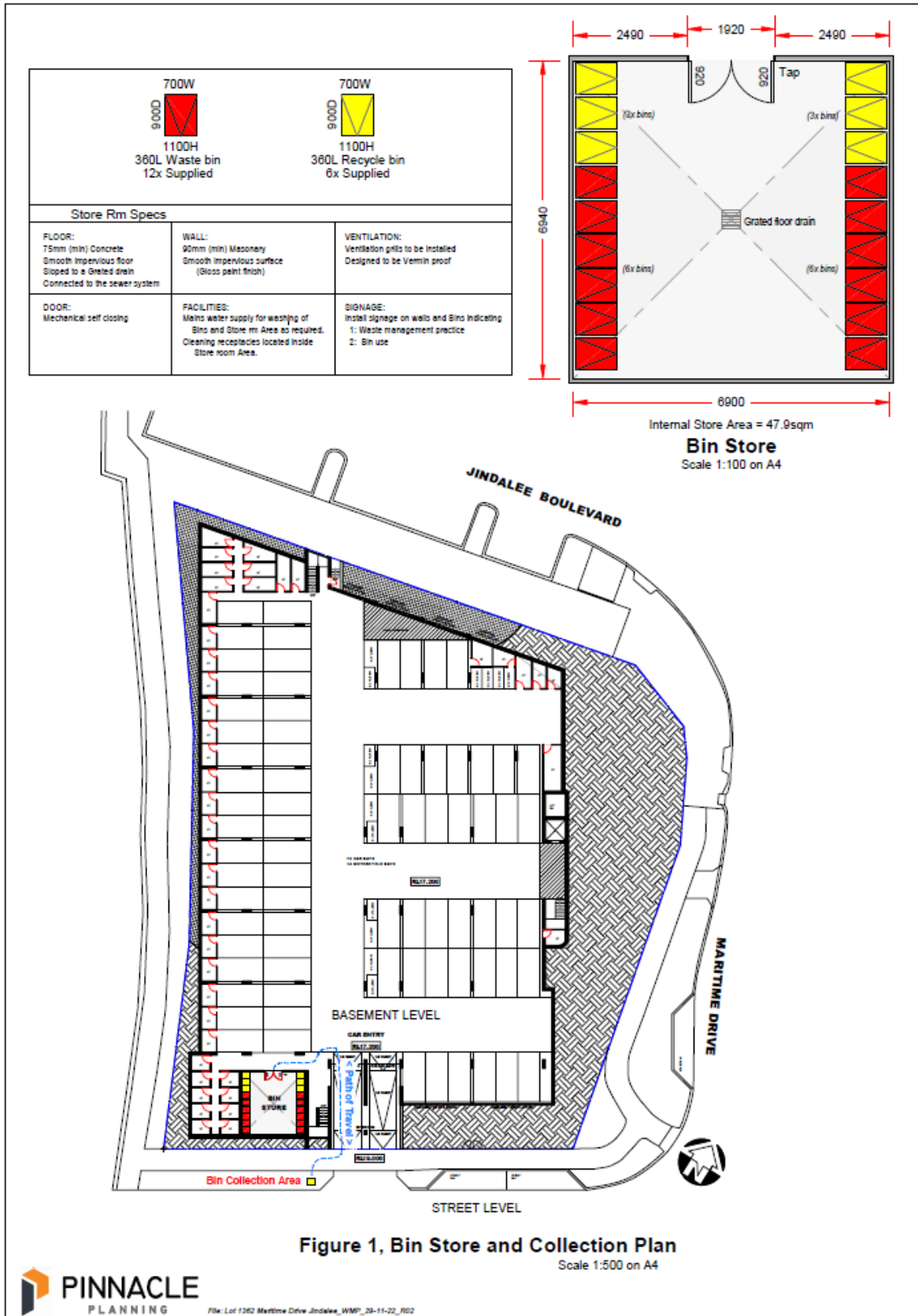
Figure 1 shows that the bin store adequately caters to the bin sizes for the waste requirements of the development. Notwithstanding, the bin store has capacity for further bins, should there be a desire to increase waste capacity.

4.3 Bin Storage Area Layout

The central bin store is designed to enable access through an access door, facing the undercroft car park, with circulation centrally in the bin store.

4.4 Alternative Waste

Any alternative waste such as hard, bulk or hazardous waste is to be coordinated for separate removal through residents and tenants alike coordinating with strata management.



4.5 Wash Down Area

The central bin store area is treated with both a water source, and central floor waste, that enables convenient and on site wash down on bins following collection, as per the architectural plan set, and Figure 1 of this report.

4.6 Ventilation

Ventilation grilles are to be provided to the bin store to aid with ventilation.

4.7 Vermin Protection

The bin store is to be treated with vermin proof solutions, with final detailing to occur at building permit stage of the project.

4.8 Noise Reduction

As the bin store is enclosed, save for ventilation, and does not include any mechanical infrastructure by way of compactors, the noise emanating from the bin store is limited to opening and closing of bins, which is a minimal acoustic impact.

4.9 Stormwater Ingress Prevention

The central bin store is sealed at the floor, and suitably protected against stormwater entering the bin store.

5.0 COLLECTION METHOD AND FREQUENCY

5.1 Collection Vehicle to be Utilised

The proposal is to be serviced by private contractors, given the mix of residential and commercial uses on the site.

The use of private collection also enables the use of a smaller bin room, and bins, that can be wheeled out of the parking area to be serviced on the verge, by private contractors.

5.2 Movement of Collection Vehicles/Swept Path Analysis

The development does not cater to internal collection, given the use of private collection, which enables a greater frequency of collection. As such, smaller 360L bins can be used in the bin store, and presented to the street by the strata management, or waste contractor, depending on the level of service engagement, and roles and responsibilities for

5.3 Collection Location

The internal bin store area provides bins to be wheeled out via strata management, and accessed via private waste service vehicles.

5.4 Transfer of Waste to the Collection Vehicle

Bins will be required to be wheeled to the street by the strata management, or private waste contractor, and thereafter transferred to the collection vehicles.

5.5 Frequency of Collection

The provision of waste receptacles for the development is based on collection of all waste by private contractors, with frequency 2 times a week.

5.6 Chutes

The proposal only caters to at grade waste disposal, and does not include any provisions for a bin chute.

5.7 Compactor

The proposal is shown to adequately cater to the waste generation rates through the various selection of bin types and sizes nominated in this report. Accordingly, there is no requirement for a compactor in the development, and the avoidance of such infrastructure reduces acoustic impacts on site and to abutting residents.

5.8 Bin Lifter

The units will be serviced by the central bin store. Accordingly, there is no requirement or need to be providing bin lifters, as the residents of the development will not be expected to utilise small bins, and lift into larger bins, given the waste approach for the development does not propose such methods of waste double handling.

6.0 WASTE PROVIDER

Initial engagement and discussions with the City's staff confirm no objection to the proposal for private contractor servicing of waste.

The bin store is appropriately sized to cater to the generation rates and needs of both the residents and commercial tenants alike, with the flexibility to allow private contractors to collect more frequently than the City's services, enabling the size of the bin room to be contained, and not be excessive for the scale of the development.

7.0 EDUCATION

The education of residents, commercial tenants, and short stay guests alike within the development will be required, to confirm to the obligations with respect to waste management presentation to the bin store.

The central bin store area to include signage, encouraging the residents of the development to report any issues associated with the bin store, to the strata management for resolution of issues.

The use of strata management, and instructing residents and guests as to obligations around good waste management to ensure on-site amenities will be an essential component for incoming residents. This is particularly important with respect to pro-active reporting of residents of bin room capacity, and requirements for the removal of larger bulky waste items, which residents will be required to arrange with strata management, to avoid the bin room being clogged with bulky items and becoming inaccessible for other residents and commercial tenants.

8.0 ONGOING MANAGEMENT

Subject to the approval of the City of Wanneroo, the ongoing management and coordination of the waste management approach for the development will be deferred to the responsibility of the strata management.

The strata body corporate is therefore tasked with the appropriate use of the bin store, which includes upholding the requirements of residents to appropriately dispose of waste, and to alert the grounds keeper or maintenance person tasked with management of any issues.

Similarly, the strata body corporate is required to assign services attributed to the good and regular functioning of waste services at the property, including:

- Regular cleaning and checking of the bin store room;
- Regular inspection of the bin store to ensure functioning of all bins;
- Coordination of presentation of bins for collection by the building's nominated private waste contractor prior to waste collection days;
- Timely returning of bins to the bin store following waste collection;
- Coordination with short stay accommodation around waste generation, and alerting the operator to large generation of waste;
- Coordination of other incidental waste collection, such as bulk or hazardous waste; and
- Regular monitoring of waste levels, and ensuring adequate service for all users, relative to frequency of collection;
- Auditing of waste capacity to ensure the provision as part of the waste management plan remains suitable, or if further bins are required.

Incidental waste collection such as bulk or hard waste, or building materials waste is to be coordinated between residents and the building's strata management.