



APPENDIX H
WASTE MANAGEMENT PLAN

WASTE MANAGEMENT PLAN

**RESIDENTIAL MULTI-UNIT
DEVELOPMENT**

at

**CLARKSON AVENUE, CNR CORVUS
ROAD,
TAPPING**

DECEMBER 2018



**DALLYWATER
CONSULTING**

Prepared by Dallywater Consulting
for
Nicheliving

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TABLE OF CONTENTS

1 EXECUTIVE SUMMARY 4

2 INTRODUCTION 6

2.1 The Development 6

2.2 Onsite Waste Management 6

3 WASTE MANAGEMENT PROVISIONS 9

3.1 Local Government Requirements 9

3.2 Summation 9

4 BIN PRESENTATION AND COLLECTION 10

5 WASTE MANAGEMENT RESPONSIBILITIES 12

5.1 Strata or Building Owners/Management 12

5.2 Residents 12

5.3 Local Government 12

1 EXECUTIVE SUMMARY

Nicheliving have applied to the City of Wanneroo (the "City") to develop the property known as 20 Clarkson Avenue (cnr Corvus Road), Tapping. The Waste Management Plan applies to 84 strata lots contained within the development which are serviced by internal roads accessed from Hirundo Bend.

As part of the Development Approval process, the developer was requested by the City to submit a Waste Management Plan (WMP) for the development. Nicheliving employed the services of Dallywater Consulting to investigate the City's requirements in this regards and to develop the WMP.

It has been determined that one set of bins (i.e. 1 Mobile Garbage Bin (MGB) with either 120 or 240 litre capacity and one Mobile Recycling Bin (MRB) with either 240 or 360 litre capacity would be required for each dwelling.

Bins will be stored within individual dwellings (i.e. in the garages) and presented on collection days to the internal access road. Residents will be required to place their own bins out prior to the collection vehicle's arrival and retrieve the bins as soon as practical after they have been emptied.

The site will be serviced by private waste and recycling collection contractors where the City's vehicles are unable to traverse the internal access roads.

All the above arrangements will be re-assessed on a regular basis by both the owners and the City to ensure that the most efficient collection system is in place for the development.

DEFINITIONS

Mobile Garbage Bin (MGB): A wheeled receptacle used by domestic residences within the municipality for the deposit of waste materials for emptying by a Kerbside Waste Collection Service.

Mobile Recycling Bin (MRB): A wheeled receptacle used by domestic residences within the municipality to deposit materials for emptying by a Kerbside Recycling Collection Service.

Recyclables: Materials able to be recovered, processed and used as raw materials for the manufacture of new product(s) via a commercial process.

Waste*: Any recyclable and non-recyclable discarded solid, semi-solid, liquid or contained gaseous materials.

Waste Minimisation: A process to minimise the amount of waste requiring disposal via hierarchical activities such as behaviour and product modification, waste avoidance, reduction, reuse and recycling.

2 INTRODUCTION

2.1 The Development

Nicheliving have applied to the City of Wanneroo (the "City") to develop the property known as 20 Clarkson Avenue (cnr Corvus Road), Tapping. The Waste Management Plan applies to 84 strata lots contained within the development which are serviced by internal roads accessed from Hirundo Bend.

As part of the Development Approval process, the developer was requested by the City to submit a Waste Management Plan (WMP) for the development. Nicheliving employed the services of Dallywater Consulting to investigate the City's requirements in this regards and to develop the WMP.

Site plans of the rear loaded lots in Stage 4 and Stage 5 that are the subject of this WMP are included on the following pages. The house plans should be regarded as being indicative of the garage locations for the purposes of this Waste Management Plan. The City should have regard to the Development Application for the detailed dwelling design.

2.2 Onsite Waste Management

The following provisions have been made for waste and recycling on the site:

- **Bin Storage**
 - All residences will store their own bins within their premises (i.e. the garage).
- **Bin Presentation**
 - Bins are to be presented to the driveways of each residence or to nominated bin stands.
 - Bins are to be presented the evening before the collection day and then retrieved by residents and stored as soon as possible after collection occurs.
- **Hardwaste**
 - Residents will be required to organise their own immediate disposal of large or bulky items not suitable for disposal in the receptacles.
 - While no provision has been made for permanent bulky waste storage, there are locations on the site and adequate verge area where commercial sized receptacles (e.g. 1.1m³ or larger skips) could be sited for short periods for tenancy upgrades (e.g. builders waste) or removals (where tenants do not have the capacity to trailer large items away). Because these occasions are infrequent, no permanent hardstand infrastructure is deemed required within the site.
- **Waste Collection**
 - The City provides a side-lift service for the collection of waste and recycling bins.
 - The City sets the specifications for acceptable collection parameters (e.g. number of bins, frequency of collections, maximum bin weights, etc).
 - The design of the internal road system and associated truncations has had specific regard for the turning movements of a refuse collection vehicle to allow the City or contractor to service the development internally using an 8.8m Medium Rigid vehicle.
 - Due to the size of the vehicle required, private collection of the material is anticipated in the first instance.
 - , it is likely that Plans showing the necessary turning movements for collection vehicles within the development are included here-in to demonstrate how this will safely occur.
 - If the City is ultimately able to service the site, the developer/strata company will enter into a typical agreement indemnifying Council and its staff from any damage resulting from refuse collection activities.

Figure 1: Location Plan

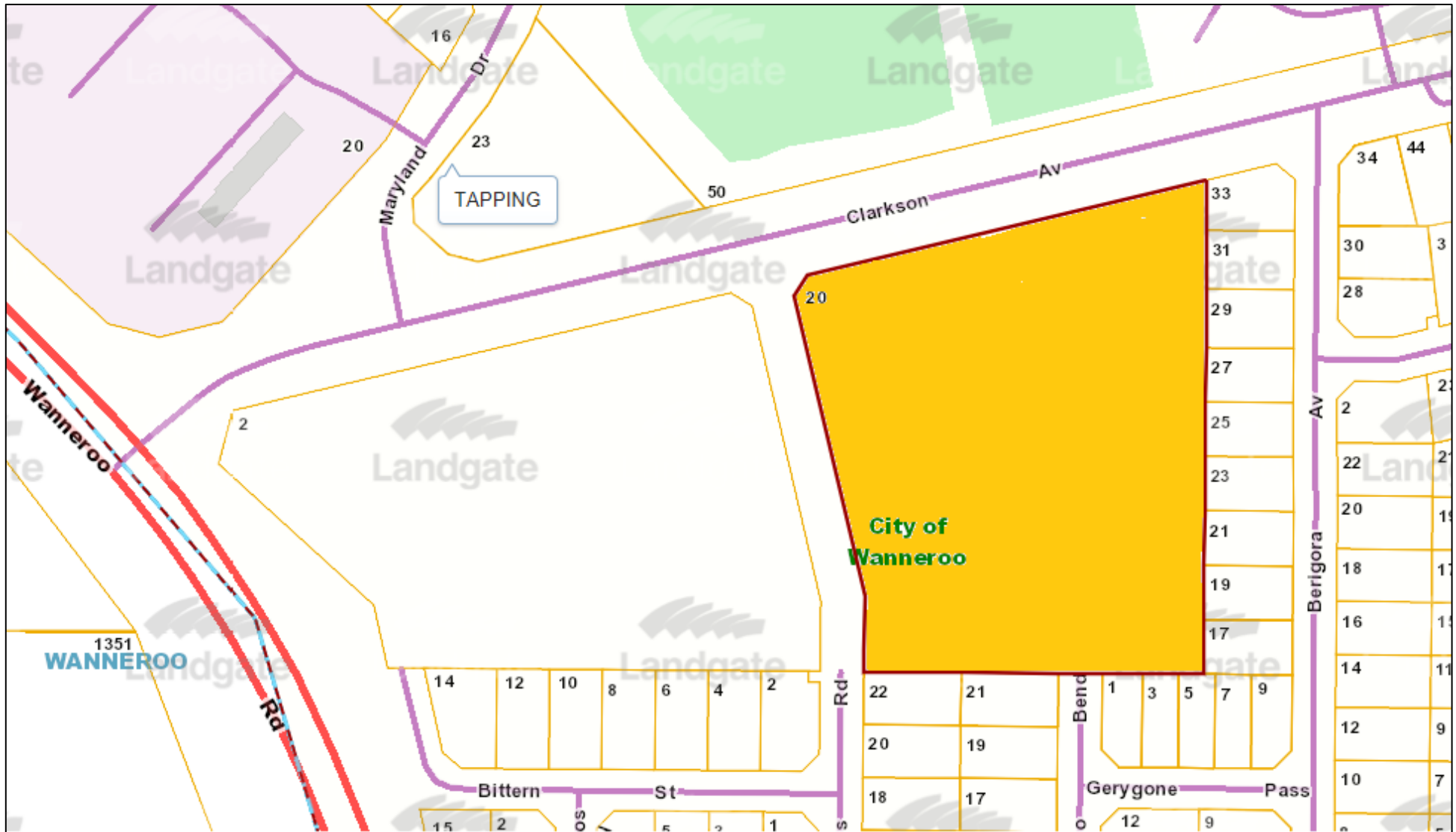


Figure 2 – Overall Development



3 WASTE MANAGEMENT PROVISIONS

3.1 Local Government Requirements

The following provisions are based on the Consultant's understanding of the City's requirements.

- A waste and recycling bin will be provided for each dwelling;
- Either a 120 litre or 240 litre bin is usually used for the disposal of residential waste material. Subject to negotiation with the City, 120 litre waste bins may be considered for these dwellings;
- 360 litre bins are generally used for the disposal of residential recycling material;
- All waste and recycling bins are to be located within each strata lot and screened from any street frontage when not presented for collection.
- If the City services the site, an agreement is to be prepared by the proponent indemnifying the City from any claims for damages as a result of the collection vehicle conducting the collection service within the land upon which the development is located, other than where the driver is shown to be negligent in the conduct of that service.
- This waste management plan will be formalised as part of the City's approvals process and the management requirements here-in will be binding on the residents of the dwellings within the development, in this form or in future amended forms approved by the City.

- **Bin Stores**
 - Bins will be stored within each dwelling unit (i.e. garage).

- **Bin Weights**
 - Bin weights should not exceed the lifting capacity of the side-load or rear-load vehicle (e.g. nominally 70kg).

- **Bin Maintenance**
 - Residents are required to maintain their bins in accordance with the City's Health Local Law.

3.2 Summation

Based on the above;

- Subject to direction by the City, 120 or 240 litre receptacles will be used for waste material and it is the proponent's preference that 360 litre receptacles will be used for recycling, with weekly collections of waste and fortnightly collection of recyclables. It is believed that 120 litre waste MGBs would be adequate to service the waste generation for this development.
- Each premises is required to have its own waste and recycling bin.
- The City has indicated that, subject to the internal road access (i.e. size of swept path radii), it may not be able to service the site and the proponents will need to employ the services of a private collection contractor with smaller vehicles (i.e. 8.8m medium rigid vehicle).

With regards the last dot point, it is noted that the City has already indicated that it is accepting of a private collection arrangement for this development.

4 BIN PRESENTATION AND COLLECTION

Residential waste and recycling bins will be collected from the internal streets/accesses.

Bins are to be placed on or beside the driveway of each residence in a position allowing enough space behind the bins for the waste vehicle's collection arm to lift the bins clear of the buildings.

Residents will be required to place their own bins out prior to the collection vehicle's arrival and retrieve the bins as soon as practical after they have been emptied.

An example plan showing bin storage and presentation for a representative portion of the development is included below.

Figure 3: Representative Bin Storage and Presentation 1

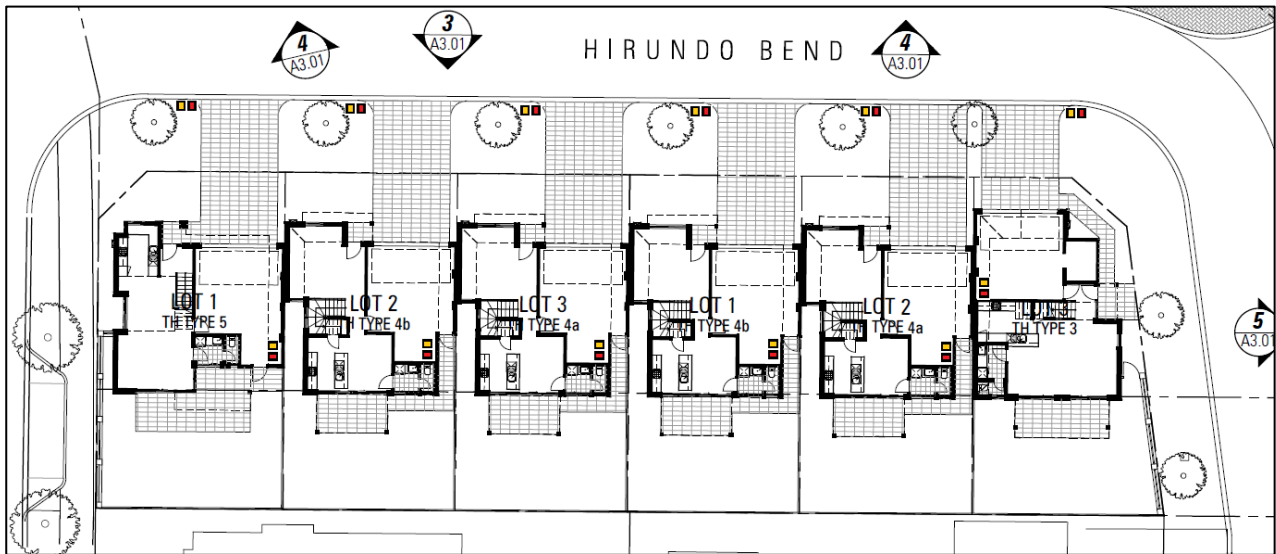


Figure 4: Representative Bin Storage and Presentation 2

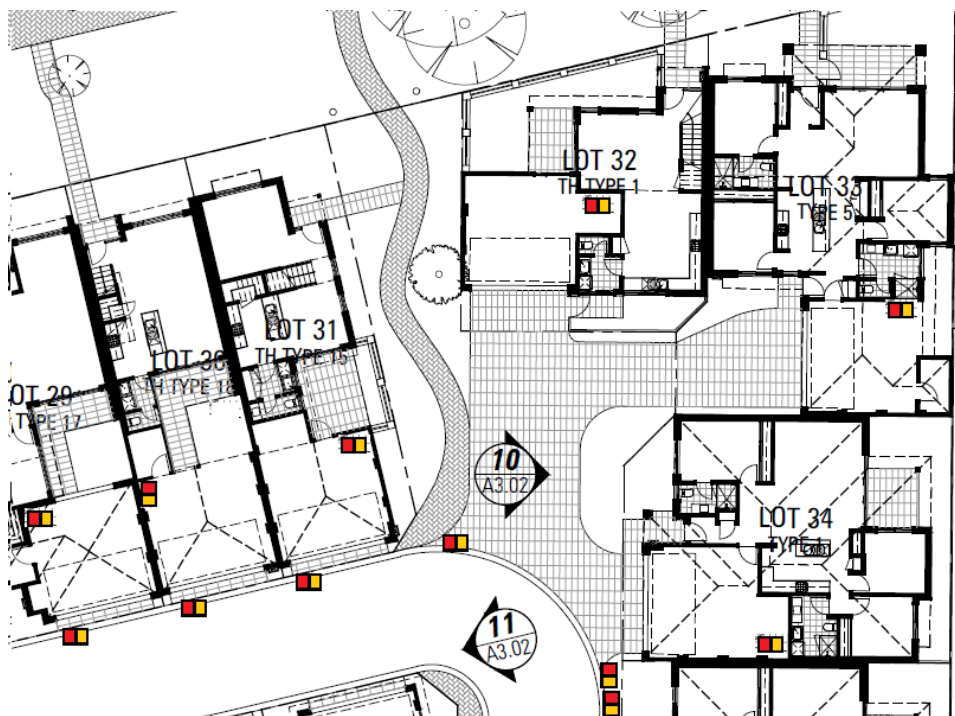
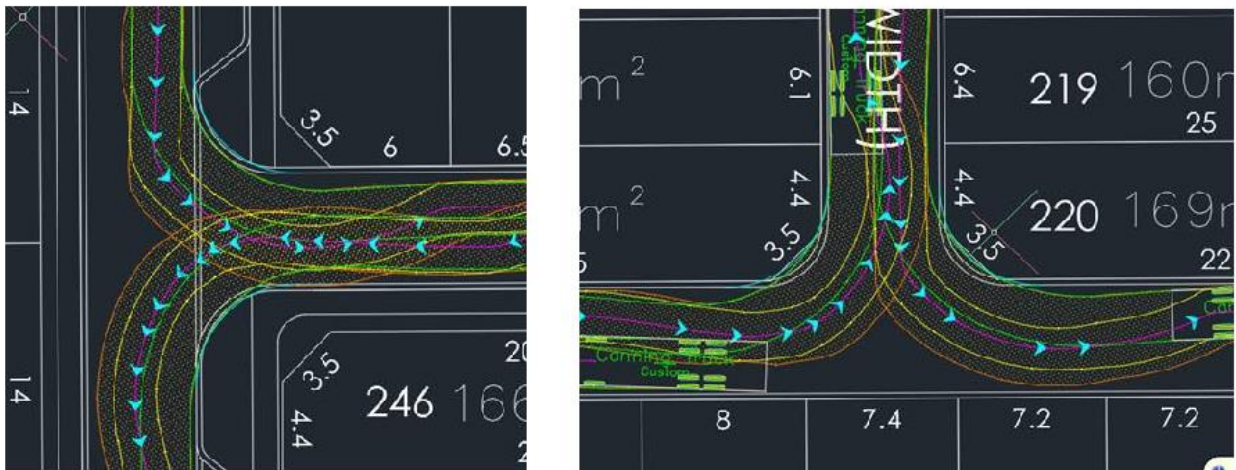


Figure 5: Representative Bin Storage and Presentation (Cul-de-sac)



The internal road design predicates the use of smaller 8.8 metre medium rigid vehicles under private contract to collect the waste and recycling from the development until such time as the City is able to offer a similar service. Indicative swept path diagrams for the development are included below.

Figures 6 & 7: Indicative Swept Path Drawings (8.8m MRVs)



5 WASTE MANAGEMENT RESPONSIBILITIES

5.1 Strata or Building Owners/Management

Where properties are retained within a strata arrangement, the Strata or Building Management/Owners recognise that they have an obligation to manage the waste processes on the site and that they have a responsibility to ensure that they and their residents observe the waste management arrangements detailed in this Plan.

5.2 Residents

All residents would be instructed via the strata or building management of the various waste management requirements and expectations. This would include direction on the available services and correct placement and management with regards to disposal of bulky and other problematic waste.

In addition, owners/residents will be made aware of the usual waste and recycling arrangements via the City's resident education program (e.g. annual waste and recycling brochure).

5.3 Local Government

The City of Wanneroo has the responsibility to provide a regular (i.e. weekly or other agreed servicing rate) waste and recycling collection service to the development. However, where the City cannot service the site, an arrangement with a private collection contractor will be formalised by the proponent/strata management.

If in the future, the City adopts new and more flexible servicing arrangements opportunities, they may liaise with the residents (and their representative body) to promote the provision of the most efficient, safe, compliant and economic service to the development.

Other services provided by the City will include the usual provision of hard and other waste services offered to residential premises and arrangements around the management of greenwaste throughout the site from the common areas.

