Waste Management Letter

To	Norbert Kaess		30 June 2025
Prepared by	Arthur Stamatiou, Modus Senior Waste Engineer	Reviewed by	Bradley Fuller, Modus Traffic Engineer
Location	500 Ross River Road, Cranbrook		
Subject	Proposed Residential Development – Waste Management Letter		
Status	Final	Attachments	**Appendix A:** Proposed Development Plans

1 Introduction

1.1 Overview

Modus has been commissioned by Norbert Kaess, to provide waste management advice in relation to the proposed Residential development located at 500 Ross River Road, Cranbrook.

This technical memorandum addresses the refuse components in support of the proposed development and to satisfy Townsville City Council's (TCC) requirements. A copy of the proposed development plans have been provided in **Appendix A.**

1.2 References

For the purpose of this assessment, the following references have been utilised:

- Townsville City Plan (2024) – SC6.4.22 Waste Management
- Development Plans, prepared by Arvo

1.3 Limitations

Modus has completed this waste report in accordance with the usual care and thoroughness of the consulting profession. The assessment is based on accepted waste management practises and standards applicable at the time of undertaking the assessment. Modus disclaims responsibility for any changes to project planning that may occur after completion of the assessment.

2 Existing Conditions

2.1 Site Location

The development site is located at 500 Ross River Road, Cranbrook and is bounded by Jannila Avenue to the southeast, Ross River Road to the northwest, Residential developments to the northeast and west.

The site is identified as a Low-Density Residential Zone and is surrounded by similar zones in all directions.

The site location is shown on Figure 2-1.

Figure 2-1 Site Location

Source: Nearmap

2.2 Existing Development and Refuse Arrangements

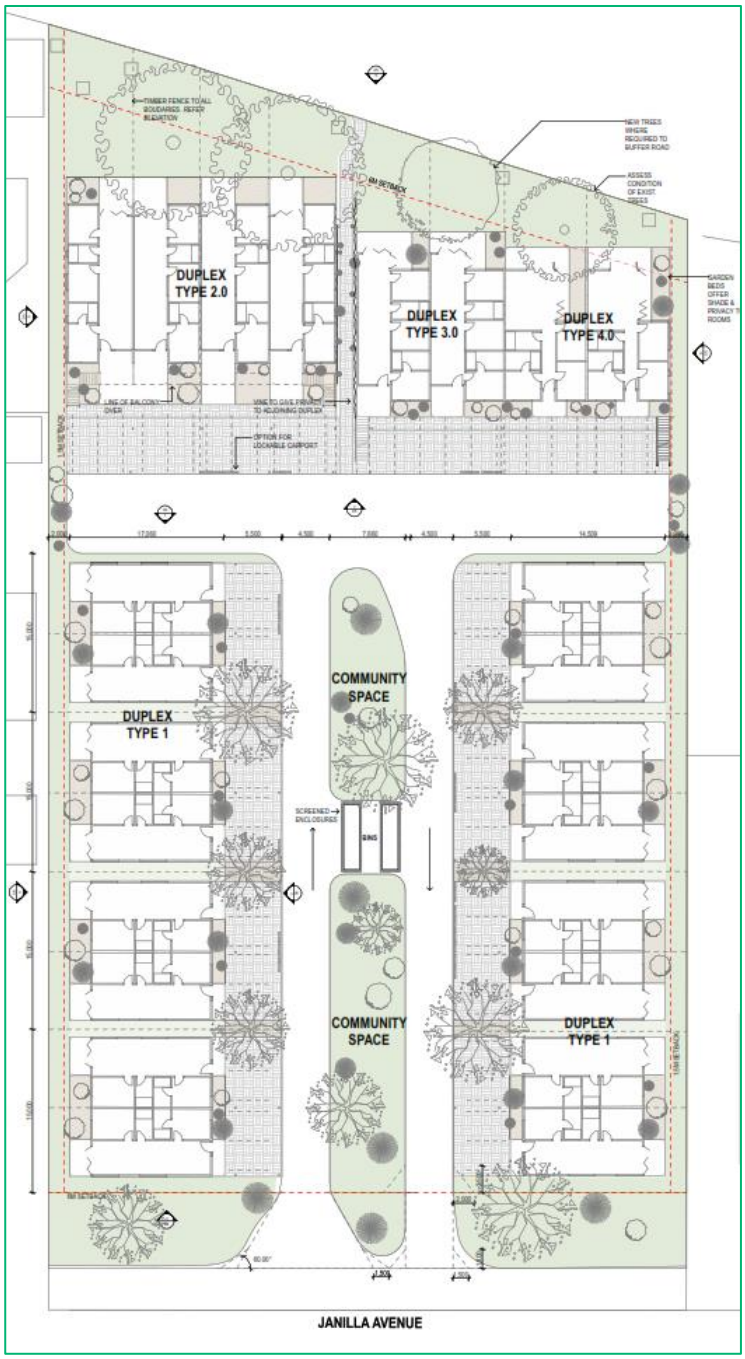
The site is currently occupied by three (3) dwellings, with 240L bins stored onsite and collected via the kerbside.

3 Proposed Development

The proposed development comprised of a 32-unit residential development and a community space.

The proposed site plan is illustrated on Figure 3-1. A copy of the development plans can be found in **Appendix A**.

Figure 3-1 Proposed Development



Source: Arvo

4 Proposed Refuse Arrangements

4.1 Disposal and Transfer

Small bins/receptacles will be provided around various locations within each unit. At the end of each day or as required, residents will dispose of all waste and recyclables from their unit direct to the refuse enclosures into the appropriate bulk bins.

Residents will not travel more than 50m to the refuse enclosures, in accordance with best practice guidelines.

4.2 Refuse Generation

4.2.1 Refuse Calculations

Modus has applied the generation rates based on Table SC6.4.22.1 of the TCC Waste Management Plan. The refuse generation is outlined in Table 4-1.

Table 4-1 Refuse Generation

Use	General Waste (L/unit/week)	Commingled Recycling (L/unit/week)	Units	General Waste (L/Week)	Commingled Recycling (L/Week)
3 bedrooms	120	120	32	3,840	3,840

The refuse volumes are considered to be conservative and may vary according to the operation of the development and each dwelling. As such, bin numbers and collection frequencies may need to be altered to suit the building operation once operational.

4.2.2 Bin Numbers

The required bin numbers for the development are based on the volumes calculated in Table 4-2.

Table 4-2 Refuse Calculations and Bin Numbers

Description	No. Units	General Waste	Commingled Recycling
Multiple dwelling	32	3,840	3,840
Daily Volumes (L per day)		549	549
Collection Frequency (per week)		1	1
Collection Volumes (L per week)		3,840	3,840
Bin Size (L)		1100	1100
No. Bins		4	4
Bin Area		5.53m^2	5.53m^2
Refuse Enclosure		9m^2 (6.1m^2 x 1.48m^2) each enclosure	

Therefore, the proposed development requires and provides a minimum of eight (8) 1100L bulk bins. Further details on the refuse storage and servicing arrangements are provided in the following sections.

4.3 Refuse Storage

Based on the above assessment, the proposed arrangements are as follows:

- Two refuse enclosures are provided to accommodate all required bins (4 x 1100L bulk bins per enclosure) for storage and collection.
- The refuse room is screened to improve amenity impacts (odour, amenity and noise).
- Bin wash facilities will be provided in close proximity to the refuse enclosures.

The refuse enclosures are designed to ensure the bins are accessible to all users and provide a minimum 0.2m clearance between bins and walls.

4.4 Refuse Servicing

The proposed servicing provisions are as follows:

- Servicing will be conducted on-site by TCC via a rear-loading RCV.
- The RCV will enter and exit in a forward gear via Jannila Avenue and perform all turnaround movements on-site.
- The RCV will stand in an informal loading area within the driveway to service bins, with TCC contractors to directly collect bins and return them once, serviced.
- The servicing area will have a minimum area of 4.5m (W) x 12.5m (L). Servicing activities will be conducted on a flat grade and have an unrestricted height clearance, in accordance with the minimum TRC requirements.
- Vehicle access and on-site manoeuvring is demonstrated in the swept paths provided in the Traffic Engineering Report, prepared by Modus
- All streams will be serviced with a maximum collection frequency of once per week.

Summary

Modus has undertaken a review of the refuse management arrangements for at the proposed residential development located at 500 Ross River Road, Cranbrook.

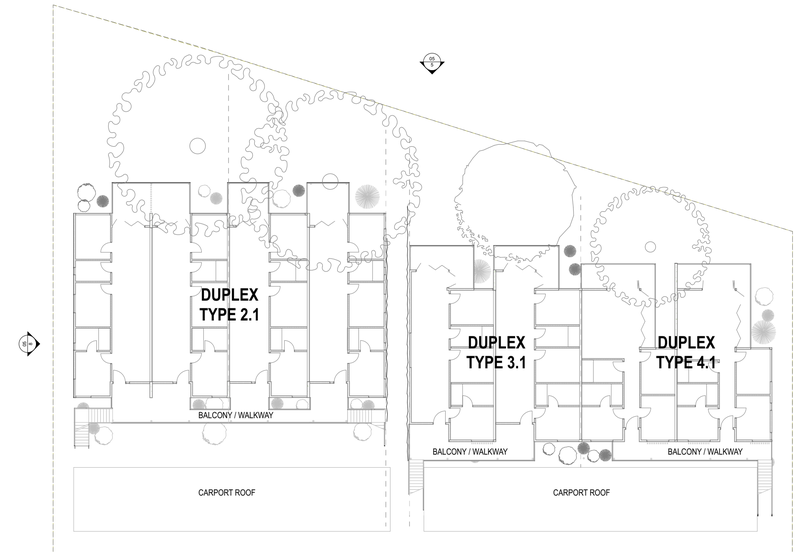
Based on our assessment, Modus has the following findings:

- Residents will dispose waste and recycling refuse to the appropriate bulk bins as required throughout the day.
- The proposed development requires and provides a minimum of eight (8) 1100L bulk bins.
- The bins will be stored in two (2) refuse enclosures and will be provided with bin wash facilities within or in close proximity to the refuse enclosures.
- All bins will be serviced by TCC via a rear-loading RCV that will enter and exit the site via a forward gear from Jannila Avenue.
- All refuse streams will be serviced with a maximum collection frequency of once per week.

APPENDIX A

Proposed Development Plans

1. SITE PLAN 1:250 @ A1



1. FIRST FLOOR 1:250 @ A1

AREA SCHEDULE

TOTAL AREA	**6,106 M2**		
GFA			
DUPLEX TYPE 1 (X8)	**1,387.7M2**	**(173.5M2 EA)**	**22%**
DUPLEX TYPE 2 (X4)	**882M2**	**(220.8M2 EA)**	**14%**
DUPLEX TYPE 3 (X2)	**442M2**	**(221M2 EA)**	**8%**
DUPLEX TYPE 4 (X2)	**424M2**	**(212M2 EA)**	**6%**
TOTAL DUPLEX	**3,127.7M2**		**51%**
PRIVATE OPEN SPACE			
DUPLEX TYPE 1 (X8)	**30M2 EA**		
DUPLEX TYPE 2 (X4)	**49M2 + EA**		
DUPLEX TYPE 3 (X2)	**50M2 + EA**		
DUPLEX TYPE 4 (X2)	**55M2+ EA**		
ROAD	**1057M2**		**17.5%**
SHARED PATH	**107M2**		**1%**
PARKING	**860M2**		**14%**
GRASS AREA	**1,423M2 (388M2 SHARED COMMUNITY)**		**25%**
GRAVEL GARDEN BEDS	**330M2**		**5.5%**
TOTAL RESIDENTS	**80**		
TOTAL CARPARKS	**49 (INCLUDING VISITOR)**		

***SURPLUS EFFICIENCY DUE TO 2ND STORY DUPLEX - EXCEEDS 100% OF GROUND SPACE**

500 - 504 Ross River Rd
Cranbrook

Kaenetto Investments

PRELIMINARY
SITE PLAN

DRAWING NO.
03