zone Planning Group

Waste Management Report

DEVELOPMENT PERMIT
Material Change of Use
for a Multiple Dwelling

Prepared for Palm Lake Care Properties Pty Ltd

April 2022
Z21379

17-19 Weinam Street & 55-61 Hamilton Street,
Redland Bay

This report was prepared by

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Disclaimer

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Glossary of Terms

Bin carting route – the proposed route to move bins between the storage point and the servicing point.

Bulk bins – bins fitted with lids and side pockets to allow them to be serviced by a front-lift truck.

Clinical or related waste –waste that has the potential to cause disease, including, for example, the following –

- animal waste;
- discarded sharps;
- human tissue waste; or
- laboratory waste.

Commercial accommodation – for the purposes of this report means commercial development that includes a domestic or residential component, such as Retirement facility, Community care centre, Rooming accommodation, Short term accommodation or Resort complex.

Commercial premises – for the purpose of this report means any of the following types of premises:

- a Hotel, Short term accommodation, Tourist park, Food and drink outlet;
- an assembly building, institutional building, Child care centre, Educational establishment;
- premises where a sport or game is ordinarily played in public;
- an exhibition ground, show ground or racecourse;
- an Office, Shop or other premises where business or work other than a manufacturing process is carried out.

Commercial waste – means waste, other than green waste, recyclable waste, and interceptor waste or waste discharged to a sewer, produced as a result of the ordinary use or occupation of commercial developments.

Common servicing point – a common area where more than two dwellings/tenancies stand their wheelie bins for servicing.

Common storage point – a common area where more than two dwellings/tenancies store their wheelie bins.

Constructed hardstand area – a hardstand area, for example a concrete pad, which has been constructed for bin storage.

Digesters and dehydrators – machines specifically designed to reduce food waste volumes to allow for efficient disposal. Digesters typically process the material into sludge while dehydrators remove liquid from food waste generating a fertiliser as the end product. Disposal of end product can be used on either internal gardens or on external gardens/farms.

General waste – waste, other than domestic clean-up waste, green waste, recyclable waste, interceptor waste or waste discharged to a sewer, produced as a result of the ordinary use or occupation of domestic or commercial premises.

Glass crushers – machines that can reduce the volume of glass waste by up to 75%, saving valuable space.

Hazardous waste – solid waste that is or contains toxic material, for example light bulbs, fluorescence lights, batteries.

Internal servicing roadway – is a driveway, private roadway or other path intended for use by vehicles, in which the waste collection vehicle is required to use to service a bin.

Mixed-use development – for the purpose of this report, any building or development complex used, or intended to be used, for residential purposes in combination with other commercial uses (e.g. Offices, Food and drink outlets etc).

Organic waste – is waste that comes from plants or animal that is biodegradable for example green waste and food waste.

Recycling chute – a duct in which recycling descends from one point to another.

Recyclable waste – for a local government's area, means clean and inoffensive waste that is declared by the local government to be recyclable waste for the area. In the Redlands Shire Council the following wastes are deemed recyclable:

- all household plastics, bottles and containers;
- aluminium and steel cans and aerosols;
- bottles and jars made only of glass;
- clean cardboard, newspaper, loose paper, junk mail, magazines and cartons.

Related waste – means waste that constitutes, or is contaminated with, chemicals, cytotoxic drugs, human body parts, pharmaceutical products or radioactive substances.

Ro-Ro bin – roll-on roll-off bin.

Roll-on roll-off bin – large steel open top skip bins or enclosed bins. Bins are collected by a hook-lift truck.

Solid waste – any general or recyclable waste, be it commercial or domestic. Solid waste does not include waste discharges to sewer/water or the atmosphere.

Servicing point – the designated area allocated to the temporary storage of waste bins for the period of servicing only. The point may be within or external to a development.

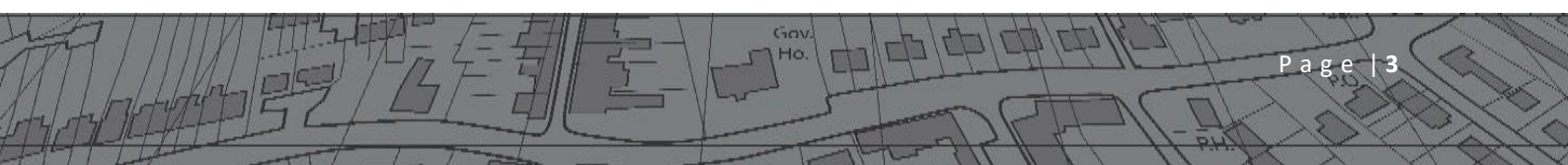
Storage point – the area allocated to the permanent storage of waste bins. This is the normal location of the waste bins and excludes the period where the bin is serviced. A storage point may be a common storage point or an individual bin storage point.

Waste – includes anything, other than a resource that is:

- left over, or an unwanted by-product from an industrial, commercial, domestic or other activity; or
- surplus to the industrial, commercial, domestic or other activity generating the waste.

Waste carting distance – the distance required for a person to transport their waste from the nearest point of exit of their dwelling/tenancy to a storage point (or in the case of a multi-level building, to the nearest waste disposal point).

Waste chute – a duct in which waste descends from one point/level to a collection bin.



Waste disposal point – the point where waste is disposed of into the chute, also known as waste hopper. It consists of a fixed frame and hood unit, covered with a hinged or pivoted door.

Waste storage room – the room at the base of the chute used for the storage of waste bins.

Wheelie bin – two wheeled mobile garbage bins, made from high density polyethylene (HDPE). Wheelie bins are collected by a side-lift truck.

1.0 Introduction

1.1 Site & Application Details

Table 1: Site & Application Details

Address	17-19 Weinam Street & 55-61 Hamilton Street, Redland Bay
Real Property Description	Lot 1 on SP169111 & Lot 2 on SP115173
Site Area	7,026m^2
Applicant	Palm Lake Care Properties Pty Ltd C/- Zone Planning Group
Applicant Contact Details	Sam Monaghan Zone Planning Group 07 5562 2303 | smonaghan@zoneplanning.com.au
Local Government	Redlands Shire Council
SEQ Regional Plan Designation	Urban Footprint
Planning Provisions	Weinam Creek Priority Development Area within Precinct 1 – Mixed Use Village

1.2 Site Location & Characteristics

The subject site consists of two allotments with a total site area of 7,026m2. The site is bound by Hamilton Street to the north-east with a frontage width of approximately 71m; Weinam Street to the south with a frontage width of 108m and Pitt Street to the west with a frontage width of 80m. An informal park, Hamilton Street Park adjoins the site to the north. The site slopes from Weinam Street towards Hamilton Street Park with a relatively sharp fall from Weinam Street into the site where the verge is at 5.2m AHD and the site is approximately 3.76m AHD.

The eastern portion of the site hosts the Palm Lakes Care Redland Bay aged care accommodation facility with the balance of the land being unimproved. The existing aged care facility consists of access from Hamilton Street and waste servicing is undertaken from within the site. The overhead waste vehicle drives into the site via the southern crossover, services the bulk bins and reverses back out onto Hamilton Street.

Table 2: Site Location & Characteristics

Topography	The site slopes from Hamilton Street towards the Hamilton Street Park.
Vegetation & Waterways	The site has all services available to it – water, sewer, stormwater, electrical and telecommunications.
Availability of Services	The site is of irregular shape with a frontage width to Hamilton Street of approximately 71m, a frontage width to Weinam Street of approximately 108m and a frontage width of approximately 80m to Pitt Street. The site has a 67m long boundary with Hamilton Street Park north of the site.
Allotment Dimensions	The site is occupied by a double storey aged care accommodation facility.
Current Use & Improvements	The site slopes from Hamilton Street towards the Hamilton Street Park.

Figure 1: Aerial Photograph of Subject Site (Source: Nearmap)

1.3 Proposed Development

This Development Application seeks approval for a Material Change of Use to establish Multiple Dwelling and land use over the site in the form of a 6-storey residential apartment building containing 77 units and six town houses fronting Weinam Street.

The development is arranged to include a single level basement; ground level visitor car parking, services, access and lobby area; Levels 2-5 apartments and rooftop communal area. The six townhouses are spread over two storeys where the garages are provided below ground level, ground level consists of living, kitchen and dining areas and bedrooms are located on Level 2. The development's unit mix is broken down as follows:

- 21 x 2-bedroom units
- 51 x 3-bedroom units
- 11 x 4-bedroom unit (including 6 townhouses)

A waste storage room is proposed within the basement and is accessible via doors on the room's south-eastern façade, refer to **Figure 2**. General and recycling waste will be conveyed from the apartments to the basement waste storage room via a waste chute. An e-diverter is proposed to divert recycling and general waste into the correct bins.

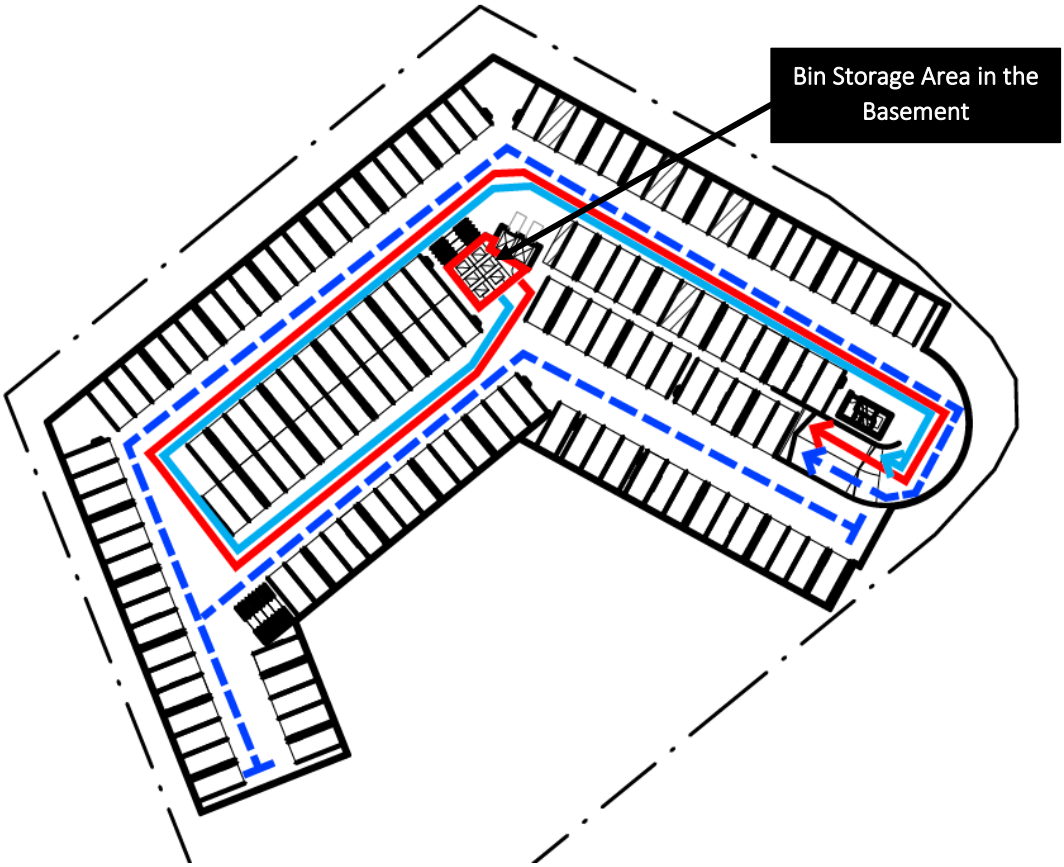


Figure 2: Basement Level Plan indicating the Waste Storage Area (Source: Archidiom)

The townhouses are provided with a waste storage room below the ground level in the centre of the run of townhouses. Residents will be required to walk their general and recycling rubbish from their townhouses to the bins.

Vehicular access to the site is proposed via a double width crossover positioned along Weinam Street, refer to **Figure 3** below. A dedicated on-site waste servicing area is proposed on the eastern side of the driveway just inside the south-eastern boundary. This area is to be screened by a landscaping and will be partially below the level the verge to remain relatively obscured from street view. The waste servicing point will house majority of the development's bins and the body corporate will be responsible for exchanging the bins on an as needed basis.

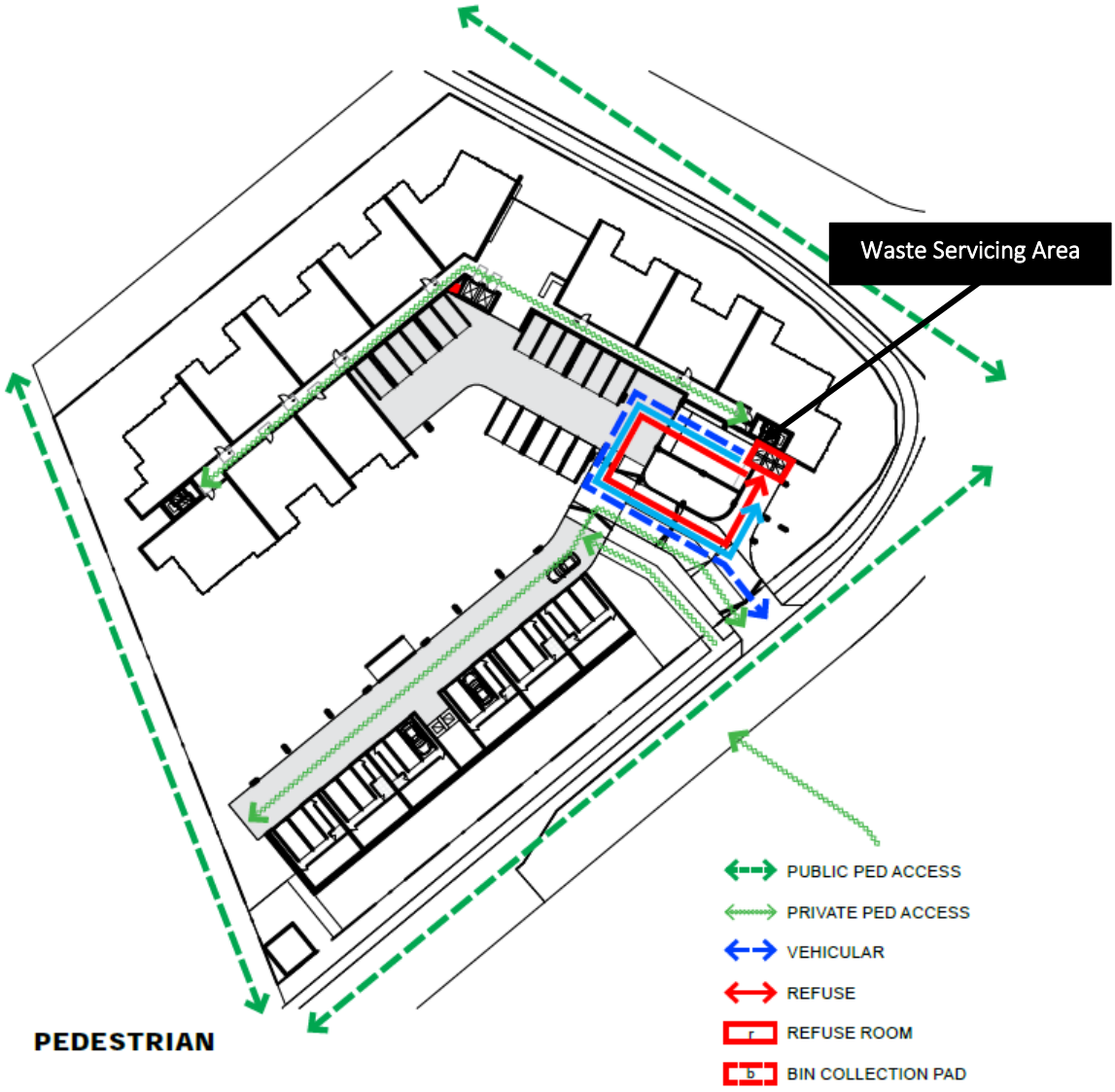


Figure 3: Ground floor plan (Source: Archidiom, 2022)

1.4 Scope of Report

This Report presents a Waste Management Plan for the operation of the development which includes:

- details of the anticipated type and quantity of waste;
- details of the waste storage room requirements, waste chutes and waste storage bins; and
- details of the proposed waste collection arrangements.

This Report is based on the plans referenced in **Appendix 2** and presents conceptual information on the abovementioned elements rather than detailed design and calculations and presents the 'end case' scenario once the proposed development has been constructed and is operational.

2.0 Waste & Recycling Generation

2.1 Type of Waste Streams

The proposed development is anticipated to generate residential general and recycling waste.

No commercial waste is anticipated to be generated by the development.

2.2 General & Recycling Waste Quantities

Calculations of the general and recycling waste predicted to be generated by the development have been prepared using the typical waste generation rates provided within the Redlands Shire Council City Plan, *Planning Scheme Policy 2 – Infrastructure Works, Section 2.4 Waste Management*.

Table 3: Waste Generation Calculations

LAND USE	GENERAL WASTE RATE	TOTAL	RECYCLING RATE	TOTAL
Multiple Dwellings				
77 units (apartments)	100L/unit/week	7,700L	70L/unit/week	5,390L
6 units (townhouses)	120L/unit/week	720L	60/unit/week	360L
TOTAL		**8,420L/week**		**5,750L/week**

3.0 Waste & Recycling Storage

3.1 Waste & Recycling Bin Requirements

Table 4 below provides a breakdown of the general and recycling waste bins required by the development based on the calculations in Section 2.2 of this Report. The screened temporary servicing point is located at ground level behind the front boundary and has been designed to accommodate the required bins.

Table 4: Refuse Bin Requirements

General Waste Storage Requirement	Recycling Waste Storage Requirement	Total Waste Storage Requirement
MULTIPLE DWELLING APARTMENTS		
7,700L/week 4 x 1,100L bulk bin + 1 x 1,100L bulk bin proposed to be located under the chute during servicing periods.	5,390L/week 3 x 1,100L bulk bin + 1 x 1,100L bulk bin proposed to remain within the bin store area during servicing periods.	General Waste: 5 x 1,100L bulk bin Recycling Waste: 3 x 1,100L bulk bin
MULTIPLE DWELLING TOWNHOUSES		
720L/week 1 x 1,100L bulk bin	360L/week 1 x 1,100L bulk bin	General Waste: 1 x 1,100L bulk bin Recycling Waste: 1 x 1,100L bulk bin

Based on the scale of the development and amount of waste generated, both recycling and general waste will require servicing twice per week for the apartments and once per week for the townhouses.

Due to the accommodation of waste servicing on the site, the applicant has elected to utilise rear lift waste servicing and the bin sizes have been chosen to reflect this arrangement.

Bin Dimensions	
1,100L bulk bin	Dimensions: Length 1,240 x width 1,070 x height 1,330

3.2 Waste Storage Area

The waste storage area associated with the apartments is proposed to be located within the basement and will accommodate 6 x 1,100L rear lift waste bins. The area is proposed to be encased by solid walls and will have a roller door access on the south-eastern side the room. Access to the waste storage room will be limited to authorised personnel only. The bin storage areas have been designed to accommodate the required bins, refer to **Figure 4** below.

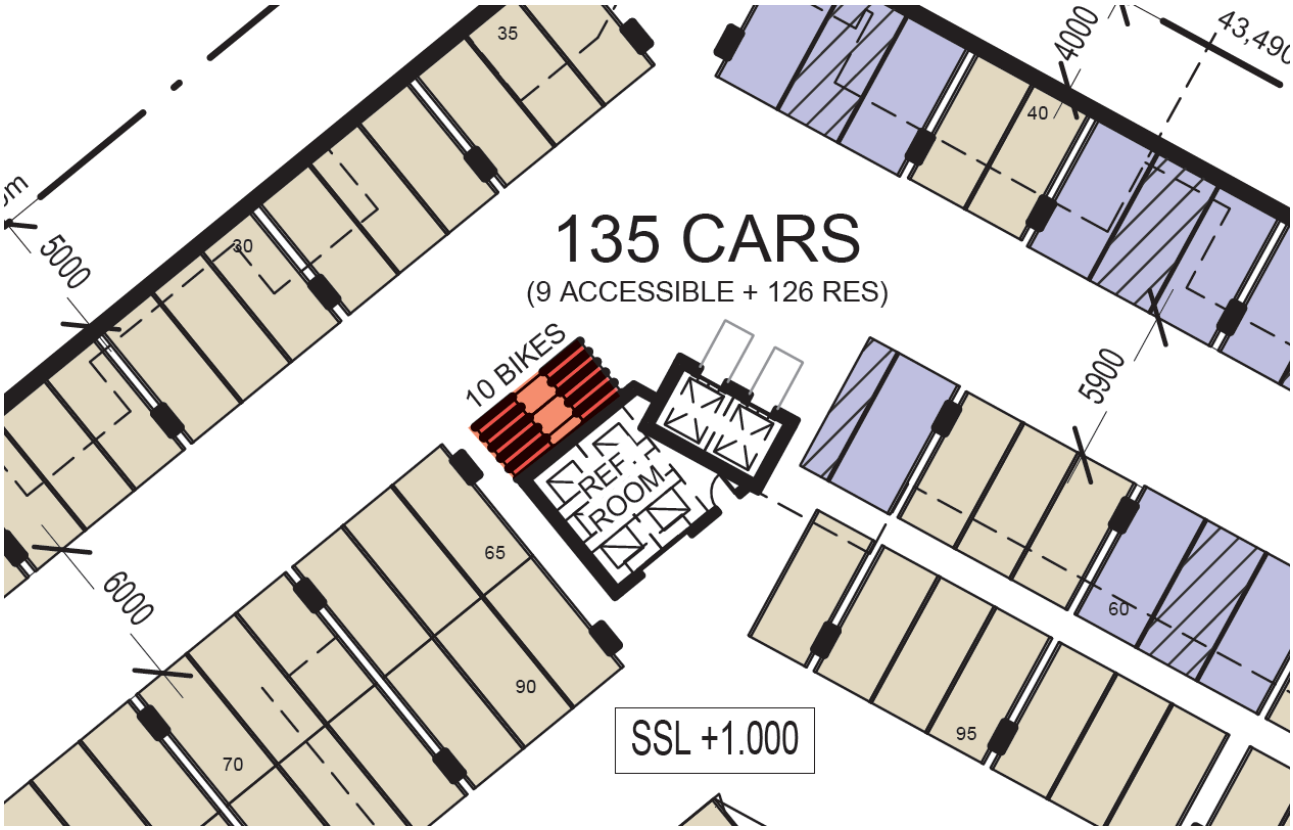


Figure 4: Proposed Bin Storage Area (Source: Archidiom, 2022)

The proposed bin storage area for the townhouses is to be positioned between the townhouses below the ground level. The storage area will consist of gates that will be accessible to residents.

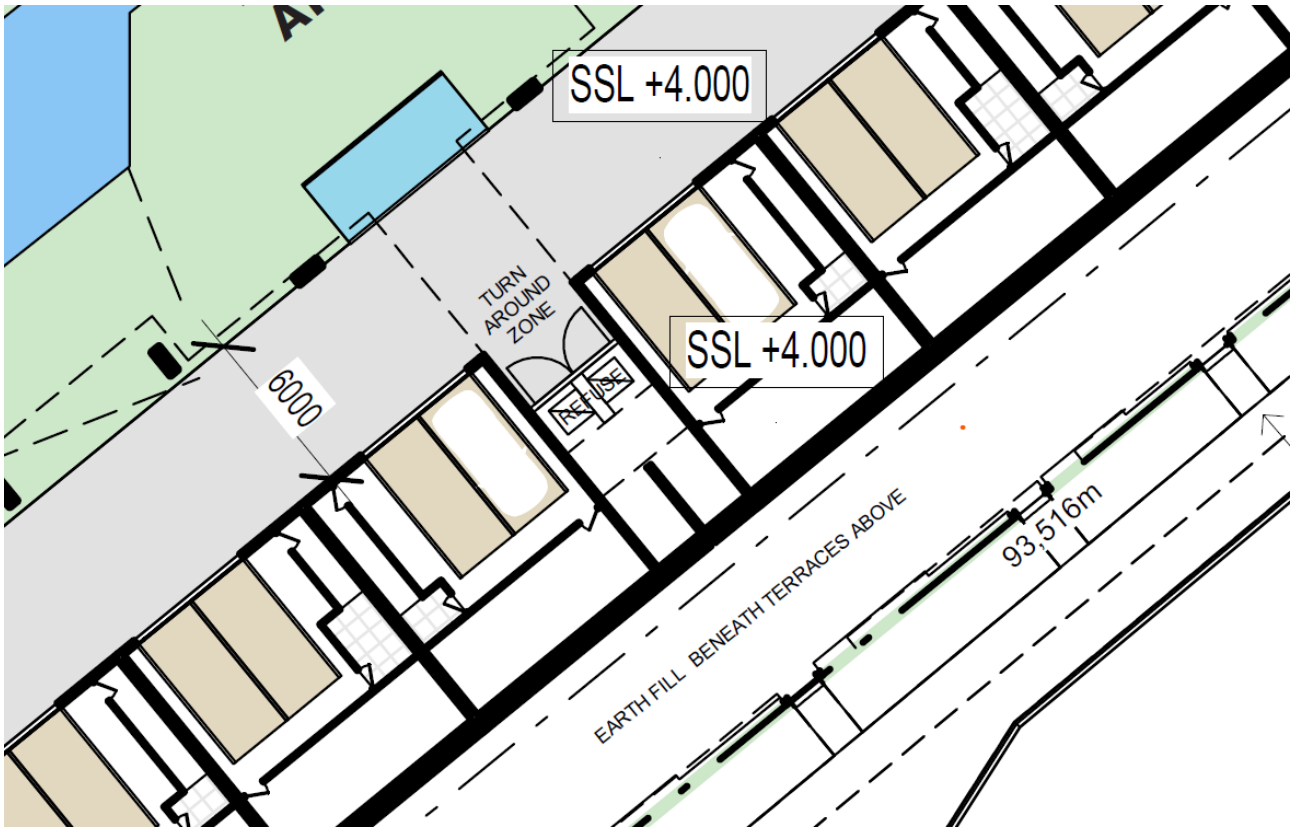


Figure 5: Proposed Townhouse Bin Storage Area (Source: Archidiom, 2022)

3.2.1 General Design Requirements

The waste storage / collection area will be subject to detailed design, subject to the following requirements. The waste storage / collection area must be:

- located at least 5m from any door, window or fresh air intake within the development or any adjoining site;
- connected to the crossover by a paved path so that the bin can be manoeuvred for servicing within living the bin over raised surfaces (pram ramp);
- allow for bin carting via hard stand pathways or internal roads and ensure bins can be easily moved to the temporary storage area wither side of the property entry point and are not stored on a section of the driveway that falls away;
- inclusive of clear and safe access to the disposal area for all users of the storage point;
- screened to ensure bins are not visible from passing vehicles and pedestrian traffic external to the site, or inhabitants of adjoining properties;
- ventilated in accordance with the Building Code of Australia (BCA);
- designed to allow for at least an additional 0.3m clearance surrounding each bin/container;
- comprised of a hardstand area with solid concrete base or equivalent;
- provided with a hose cock for cleaning of bins and the room;
- graded to fall to a drainage point within the storage area;
- connected to the sewer in accordance with trade waste requirements;
- fire rated in accordance with the BCA;
- designed to permit access for the transfer of bins/containers to the storage and servicing point and for the positioning of bins/containers in appropriately in relation to the waste chute;
- designed to ensure doors are wide enough to allow for the easy removal of the largest bin/container to be stored;
- designed to ensure the walls, ceiling, floor and equipment of the waste storage room are constructed of impervious material with a smooth finish to allow for easy cleaning; and
- designed to be insect and vermin proof.

3.3 Waste Chutes

General waste associated with the development will be transferred to the waste storage room at ground level via waste chutes accessible from each residential floor.

The waste chute is to be constructed to meet the following requirements:

1. be adequate in strength for its purpose, including additional reinforcing where necessary at joins, bends and hopper intersections;
2. be insect and vermin proof;
3. the chute must be constructed and installed to prevent the following issues during use and operation:
   a. transmission of vibration to the structure of the premises;
   b. excessive odour;
   c. excessive noise to the occupants of the development;
4. the waste chutes must be installed in a fire rated duct and ventilated in accordance with the requirements of the BCA;
5. the chute should comply with the technical specifications of the manufacturer; and
6. shutters should be fitted at the base of the chute for closing off the chute manually during bin exchange and automatically in the case of fire.

Waste hoppers are to be constructed to meet the following requirements:

- be housed in a dedicated room/compartment as illustrated on the proposal plans;
- be located to ensure the handle of the hopper is at least 1,200mm above finished floor level;
- the hopper door is to automatically return to the close position after use;
- be designed to permit free flow of waste into the chute;
- be constructed so that the diameter or largest dimension of the service opening does not exceed three quarters of the diameter of the chute with which the hopper is connected; and
- the floor adjacent to the hopper is to be constructed of a durable impervious material with a smoot finished surface.

4.0 Collection Details

The following provides an overview of the refuse bin collection and servicing details relevant to this proposal.

Based on the calculations provided in this Report, and the bin requirements determined in Section 3.1, the general and recycling waste will require servicing twice per week. Once the development is operational, the collection frequency should be reviewed to ensure that efficient practice is in place.

4.1 Bin Servicing Point

The on-site manager will be responsible for the carting of the bins from the waste storage rooms to the temporary servicing point. The waste contractor will drive into the site and reverse into the waste servicing area and drag the bins to be serviced. The development has made provision for the rear loading waste servicing clearance. Once the bins have been serviced, the waste vehicle will exit the site in a forward gear onto Weinam Street, refer to the swept path diagrams provided below.

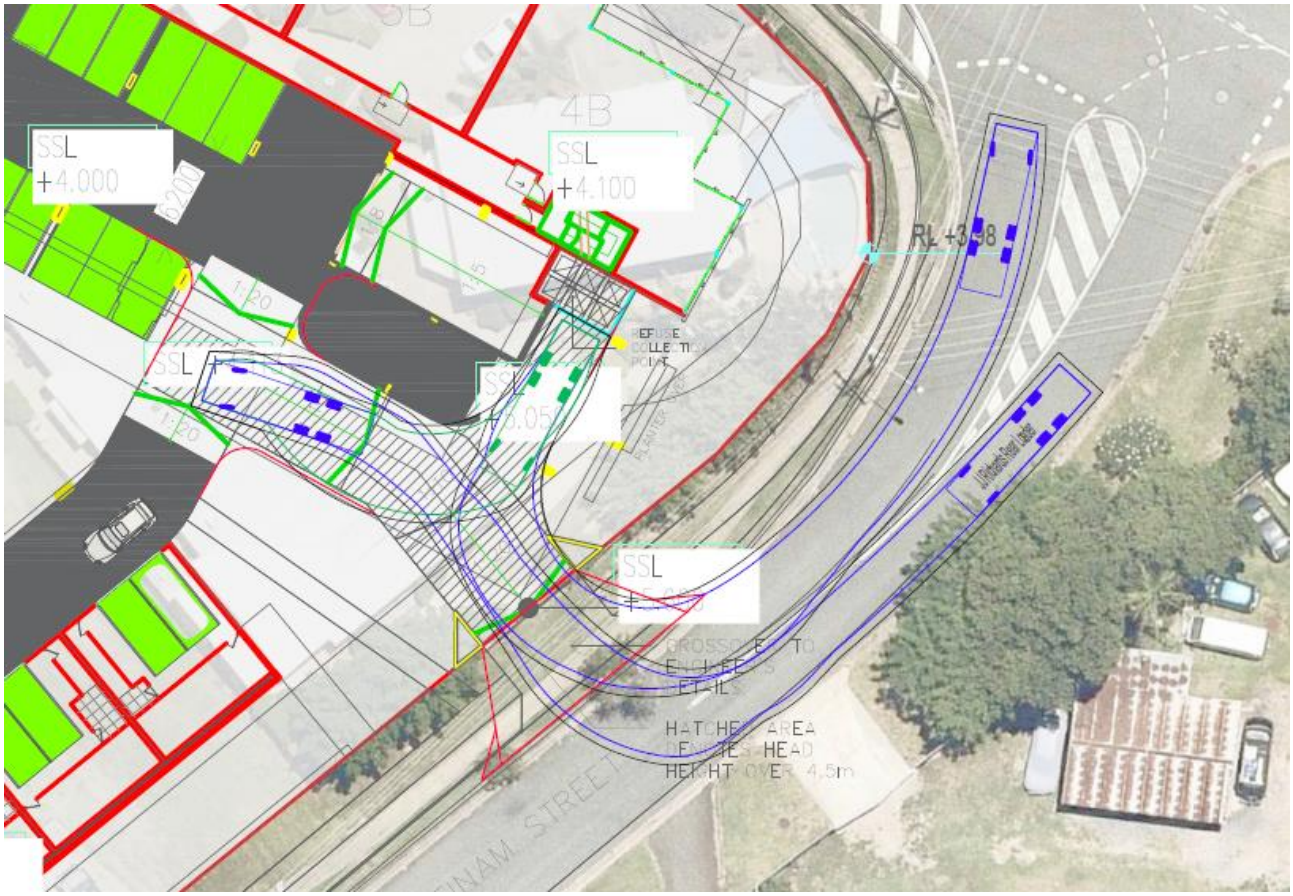


Figure 6: Ground Level Plan showing the Temporary Bin Servicing Point Swept Path for Waste Vehicle

4.2 Collection Vehicle Access

The development will be required to be serviced by a rear-loading refuse collection vehicle. Servicing is proposed to be undertaken on-site within the dedicated loading area. Sufficient vertical clearance is provided above the waste servicing area to accommodate the required waste servicing vehicle servicing height of 3.4m. The development also makes provision for a side lift truck to utilise the driveway to turnaround within Weinam Street as is currently the case on the crossover into the site at the western end of Weinam Street.

6.0 Conclusion

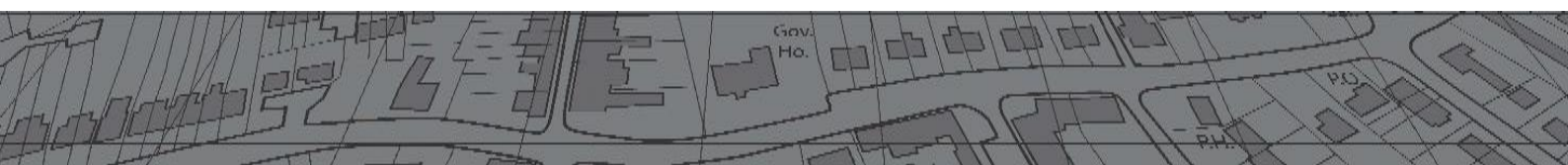
This Report has been prepared to demonstrate the proposed waste management practices to be implemented during the operational phase of the proposed development. Additional detailed engineering designs regarding waste area size, drainage and service vehicle access are to be completed by others during the detailed design stage of the development.

The proposed development consists of a 6-storey Multiple Dwelling development comprising 77 units and six townhouses. The development is anticipated to generate general and recycling waste streams consistent with the residential nature of the development.

The proposed waste management arrangements consist of the following:

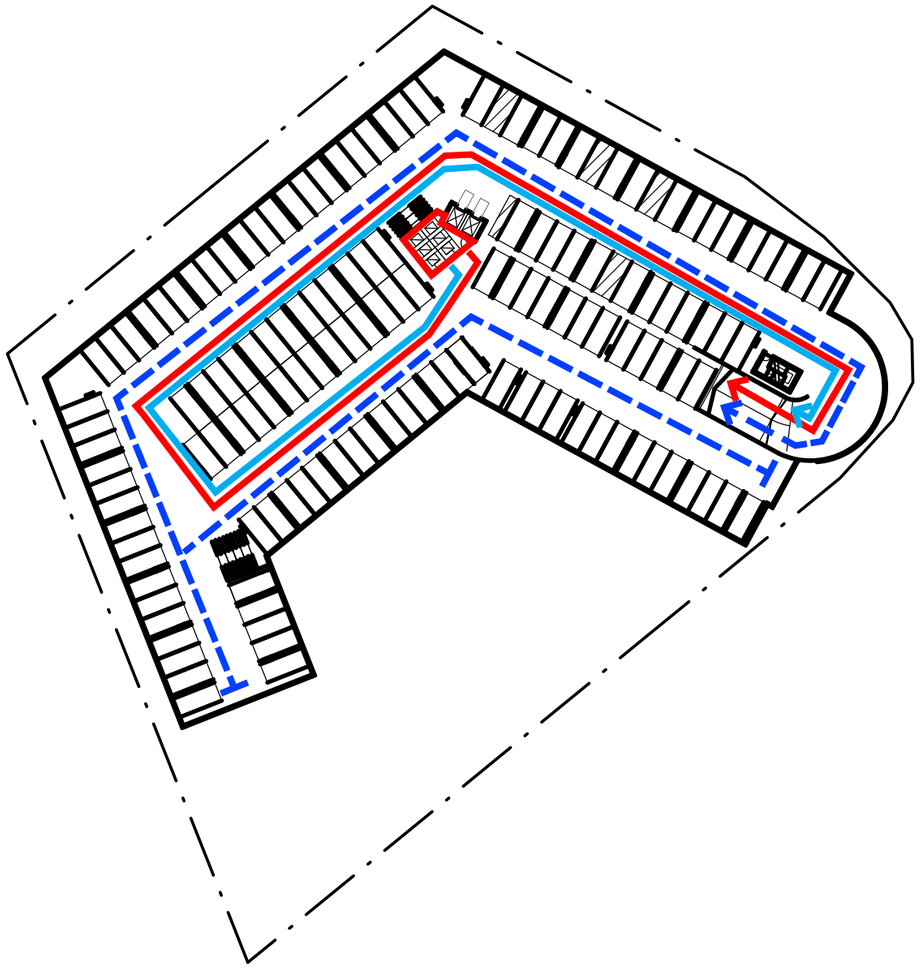
- upon completion, the development is anticipated to generate 8,420L of general waste per week and 5,750L of recycling per week;
- for the apartments, the development will require 5 x 1,100L bulk bins for general waste and 3 x 1,100L bulk bins for recycling waste;
- for the townhouses, the development will require 1 x 1,100L general waste bin and 1 x 1,100L recycling waste bin;
- the waste chutes will direct general waste into the bins within the waste store room for the apartments and the townhouse residents will be required to dispose of their rubbish within the townhouse waste storage area;
- bins will be relocated on service day to the temporary service point via the driveway by the body corporate or on-site manager; and
- bins will be serviced on the site by the contractor.

APPENDIX 1
Waste Management Plan

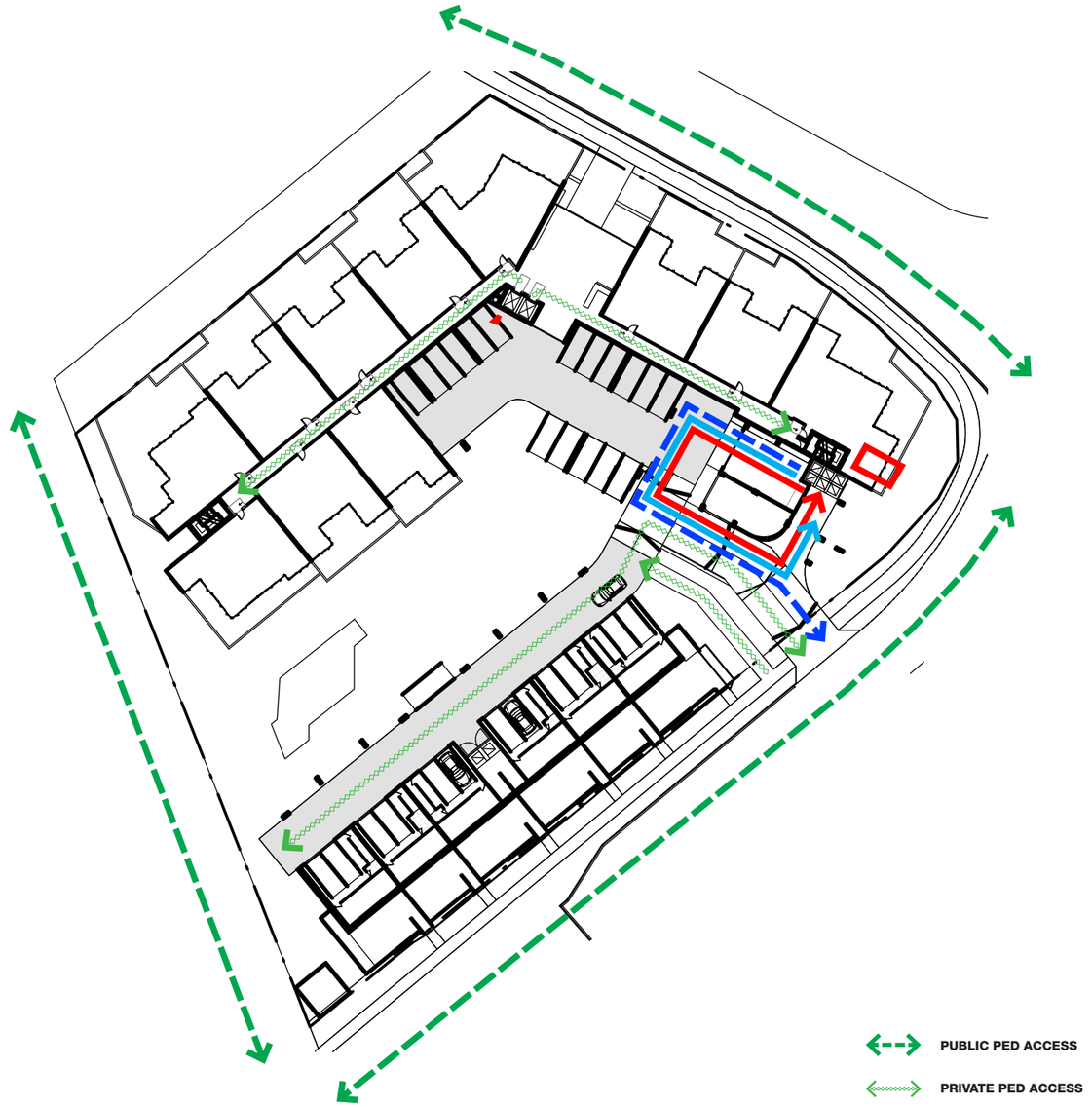


MISCELLANEOUS

refuse & vehicular diagrams



REFUSE + VEHICULAR



PEDESTRIAN

TO BE UPDATED

APPENDIX 2
Architectural Plans

STATISTICS

site plan + development statistics

DEVELOPMENT STATISTICS

1. Site Area	Total 7026m²			
2. Zoning	Weinam Creek PDA - Precinct 1 - Mixed use village			
3. Land Use	Multiple Dwellings			
4. Site Coverage	Ground (L1) - 2390m² | 34.0%		Level 3 - 3932m² | 56.0%	
	Level 2 - 4113m² | 59%		Roof - 4015m² | 58%	
5. Height	Zoned - 5 Storeys	Proposed - 5 Storeys | 24.23m		
6. Setbacks	As shown			
7. Residential Density	Proposed - 83 Units | 239Beds [1 Unit per 84.6m² & 1 bedroom per 29.3m²]			

8. Proposed Unit Mix

Unit Types	No. of Units	Accessible Units	No. of Beds	Units %
2 Bed / 2 Bed+	17	4	42	25%
3 Bed / 3 Bed+	46	5	153	62%
4 Bed / 4Bed+	11		44	13%
TOTAL	**83 Units**		**239 Beds**	**100%**

9. Proposed Carparking No.

Use	Quantity	No. of Units	RCC Rate	Required	Provided
Units	(2B/2B+)	17	1.5/Unit	25.5 (26)	26
	2B Accessible	4	(1 Accessible + 0.5)/Unit	4 Accessible + 2	4 Accessible + 2
	(3B/3B+)	46	2/Unit	92	92
	3B Accessible	5	(1 Accessible + 1)/Unit	5 Accessible + 5	5 Accessible + 5
	(4B/4B+)	11	2/Unit	22	22
	Vis		1/10Units	8.3 (9)	9
TOTAL		**83**		**9 Accessible + 156 = 165**	**9 Accessible + 156 = 165**

	No. of Units	Rate	Required	Provided
Res Bikes (Tower Only)	77	1 / 3 Units	26	26
Vis Bikes	83	1 / 12 Units	7	7 *within landscape

10. Landscape Area

Communal Open Space - Refer SLI

Landscape Area - Refer SLI

Deep Planting - Refer SLI

basement 1

NOTE.
ALL CARPARKS TO BE ALLOWED POWER AND CONDUITS FOR CHARGING STATION INSTALLATION IF REQUIRED.

CARPARKING FACILITIES LEGEND
(To comply with AS2890.1:2004)

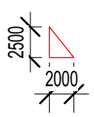
Cars			Dim. (Size)
1		Residential car space	2.4 x 5.4m
2		Circulation aisles adj. resident cars	5.8m min. clear aisles
3		Accessible car space	3.8 x 5.5m
4		Circulation aisles adj. resident cars	5.8m min. clear aisles
5		Visitor car space	2.6 x 5.4m
6		Circulation aisles adj. visitor cars	6.2m min. clear aisles
7		Electric Vehicle Charging Bay	1 every 100 cars
Bikes			
8		Vis Bikes	0.5 x 1.8m
9		Bike storage in accordance with Austroads Part 14 requirements).	1.5m clear aisles min.
10		Horizontal Residential bike space	0.5 x 1.8m
11		Bike storage in accordance with Austroads Part 14 requirements).	1.5m clear aisles min.
Ramps			
12	Width	Ramp widths	6.1min clear
13	Grade	Top of ramp - 2m transition	1:8
		Bottom of ramp - 2m transition	1:8
		Ramp < 20m long	1:5 max

FLOOR PLANS

level 1 (ground)

LEGEND

SIGHT TRIANGLES



PEDESTRIAN SIGHT TRIANGLES TO BE KEPT CLEAR OF OBSTRUCTIONS TO VISIBILITY. LANDSCAPING UP TO 500MM IN HEIGHT IS PERMITTED WITHIN THIS AREA.

Q100 3.23 AHD

CARPARKING FACILITIES LEGEND
(To comply with AS2890.1:2004)

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