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## **Traffix Group**

# Waste Management Plan

Proposed Retirement Living Facility
1-9 Allen Street & 777-781 Warrigal Road,
Oakleigh

Prepared for EBG

September, 2021

G30255R-01B(WMP)

### **Document Control**

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### 1. Introduction

Traffix Group has been engaged by EBG to undertake a Waste Management Plan for the proposed retirement living facility at 1-9 Allen Street & 777-781 Warrigal Road, Oakleigh.

It is noted that the Waste Management Plan is intended to act as a guideline for the proposed development and may be subject to the ongoing updates, post-development.

In accordance with City of Monash's *Multi-Unit and Commercial Developments Waste Management Plan Guide for Applications*, the purpose of the Waste management Plan is to:

- Demonstrate the development of an effective waste management system that is compatible with the design of the commercial or multi-unit development (MUD) and the adjacent built environment. An effective waste management system is hygienic, clean and tidy, minimises waste going to landfill, and maximises recycling,
- Provide a waste management system that is supported by scaled drawings to ensure the final design and construction is compliant with the WMP, and is verifiable,
- Form a document that achieves effective communication of the waste management system so that all stakeholders can be properly informed of its design, and the roles and responsibilities involved in its implementation, and
- Stakeholders are defined (but not limited to): owners, occupiers, body corporate, property managers/real estate agents, Council, neighbours and collection contractors.



## 2. Proposal

The proposal is for a retirement facility comprising a total of 84 retirement living apartments and associated ancillary communal facilities including lounges, physio, gardens, meeting rooms, gyms and cinema. These facilities will only be available for use by residents. For the purpose of the simplicity, the gym and office-like facilities have conservatively been included into the assessment. The proposal also includes a café for the use by both residents and the public.

The proposed development schedule is provided in Table 1.

Table 1: Proposed Development Schedule

Use		No. / Area		
Retirement living facility (Independent Living Units)	1 bed dwelling	5		
(independent Living onits)	2 bed dwelling	62		
	3+ bed dwelling	17		
	Total	84		
Food and drink premises (café)		90 m <sup>2</sup>		
Ancillary Facilities				
Admin/Office Space		30 m <sup>2</sup>		
Gym		40 m <sup>2</sup>		

Vehicular access is provided via two new crossovers to Allen Street. The western, double width, crossover will provide entry and exit to the lower ground car park as well as entry to the on-site porte-cochere. The eastern single width crossover will provide egress movements from the porte cochere.

Separate bin rooms will be provided for the residential and commercial components of the development. A dual-chute system will be provided for garbage and recycling waste associated with the residents.

Waste collection will be undertaken on-site by a private contractor using a 6.4m long Hino Mini Rear-loader truck.

A copy of the development plans is attached at Appendix A to this report.



## 3. Waste Management Plan

#### 3.1. Waste Generation

The following table sets out the expected waste generation for the proposed retirement living facility.

Table 2: Waste Generation Rates

Waste Source	Garbage <sup>(1)</sup>	Recycling <sup>(1)</sup>				
Independent Living Unit	80L/dwelling per week	80L/dwelling per week				
Café	300L/100m <sup>2</sup> FA per day	200L/100m <sup>2</sup> FA per day				
Office	10L/100m <sup>2</sup> FA per day	10L/100m <sup>2</sup> FA per day				
Gym	10L/100m <sup>2</sup> FA per day	10L/100m <sup>2</sup> FA per day				
Notes:  1. The waste generation rates are based on <i>Multi-Unit Developments Waste Management Plan</i> by City of Monash and <i>Better Practice Guide for Waste Management and Recycling in Multi-unit Developments</i> by Sustainability Victoria.						

An estimate of the total waste generated by the proposed development is detailed in Table 3.

Table 3: Expected Waste Generation for the proposed use

Waste Source	Size/No.	Garbage	Recycling
Residential Component			
Independent Living Unit	84 Apts.	6,720L per week	6,720L per week
Ancillary Facilities & Café			
Café	90m²	1,890L per week	1,260L per week
Office (5 days)	30m <sup>2</sup>	15L per week	15L per week
Gym (7 days)	40m <sup>2</sup>	14L per week	14L per week
	Sub-total	1,919L per week	1,289L per week
TOTAL		8,639L per week	8,009L per week

#### **Alternative Waste Streams**

In accordance with the Victorian Government's Circular Economy Policy: *Recycling Victoria*, consideration of additional waste streams including Food Organics Green Organics (FOGO), Glass and Paper & Cardboard is required in order to reduce landfill or help separate commingled recycling.

#### Residential Component

Organic waste is included within the 'garbage' waste rates. Based on the *Victorian Statewide Garbage Bin Audit – Food Waste 2016*, approximately 35% of garbage waste from residential uses are organics.

Glass waste is included within the 'recycling' waste rates. Approximately 30% of recycling waste from the residential uses is considered as glass.

Based on the above, the residential component will produce:

- 4,368L/week Garbage waste,
- 2,352L/week FOGO waste,
- 4,704L/week Commingled Recycling waste, and
- 2,016L/week Glass waste.

#### **Commercial Component**

Organic waste is included within the 'recycling' waste rates. Approximately 30% of recycling waste from the café tenancy is considered as organic.

Paper & Cardboard waste is included within the 'recycling' waste rates. Approximately 20% of the combined recycling waste from the commercial uses is considered as Paper & Cardboard.

Based on the above, the commercial component will produce:

- 1,343L/week Garbage waste,
- 567L/week FOGO waste,
- 1,031L/week Commingled Recycling waste, and
- 258L/week Paper & Cardboard.



#### 3.2. Waste Equipment

Based on those rates previously specified, Table 4 provides a summary of the waste storage requirements and the frequency of collection.

Table 4: Waste Bins and Collection Frequencies

Waste Source	Waste Stream	Waste Volume (L/week)	Bin Capacity	No. of Bins Required	Collection Frequency (per week)
	Garbage	4,368L	1,100L	2	2
Residential	FOGO	2,352L	240L	5	2
Component	Commingled Recycling	4,704L	1,100L	2	2
	Glass	2,016L	1,100L	2	1
	Garbage	1,343L	660L	1	2
Ancillany	FOGO	567L	240L	2	2
Ancillary Facilities & Café	Commingled Recycling	1,031L	1,100L	1	1
	Paper & Cardboard	258L	240L	1	1

The proposed development requires the following number of bins:

#### **Residential Component**

- 6 x 1,100L bins, and
- 5 x 240L bins.

#### **Commercial Component**

- 1 x 1,100L bin,
- 1 x 660L bins and
- 3 x 240L bins.

#### 3.2.1. Bin Colour and Dimensions

Further details regarding the waste equipment required for the proposed retirement living facility are detailed in Table 5 below.

Table 5: Bin details and colours

Waste Stream	Bin Capacity	Dimensions (H x W x D) <sup>(Note 1)</sup>	Bin Lid Colour (Note 2)	Bin Body Colour (Note 2)
Garbage	660L 1,100L	1,200 x 1,260 x 780mm 1,330 x 1,240 x 1,070mm	Red	Dark Green
FOGO	240L	1,030 x 600 x 750mm	Light Green	Dark Green
Commingled Recycling	1,100L	1,330 x 1,240 x 1,070mm	Yellow	Dark Green
Glass	1,100L	1,330 x 1,240 x 1,070mm	Purple	Dark Green
Paper & Cardboard	240L	1,030 x 600 x 750mm	Blue	Dark Green

#### Notes:

- Bin capacity and dimensions are provided by 'Sulo'.
   Bin lid and body colours are based on guidelines set out by City of Monash and Sustainability Victoria.

#### 3.3. Waste Systems

The waste management systems of the proposed development comprise of the following components:

- Caddy bins to temporarily store garbage, organics and recyclable waste prior to transferring to the Mobile Garbage Bins (MGB),
- Dual-chute system,
- MGBs, and
- Waste Areas.

Oakleigh

#### **Waste Management Plan**

#### 3.3.1. Waste Streams

The waste generated by the proposed development will be separated and managed into the following waste streams, as detailed below.

Table 6: Waste Streams

Waste Type	Waste Management			
waste Type	Residential Component	Ancillary Facility and Café		
Garbage	Residents will use plastic caddy bins for temporary storage of waste. Residents will place general landfill waste in tied plastic bags and dispose of the bagged garbage via the relevant chute.	The tenancies shall be provided with plastic bins for temporary storage of waste. Staff will place general landfill waste in tied plastic bags and dispose of the bagged garbage directly to the bin store within the lower ground floor.		
Commingled Recycling	Residents will use plastic caddy bins for temporary storage of recyclable items. Residents will dispose of loose recyclable items via the relevant chute. Cardboard items shall be folded where appropriate.	The tenancies shall be provided with plastic bins for temporary storage of recyclable items. Staff will dispose of loose recyclable items directly to the specific bin within the bin store within the lower ground floor		
FOGO	Residents will use plastic caddy bins for temporary storage of food waste and garden waste. Residents will dispose of the organic items directly into the respective MGB at the lower ground floor.	The café tenancy shall be provided with a small caddy bin for temporary storage of compost material. Staff of the tenancy will be able to empty the caddy bins directly into the larger bins within the bin store.  The ancillary facilities are expected to generate negligible organic waste and as such, any relevant organic waste will be disposed of via the garbage bin.		
Glass	Residents will use plastic caddy bins for the temporary storage of glass waste. Residents will disposed of the glass items directly into the respective MGB at the lower ground floor.	The commercial tenancies are expected to generate negligible glass waste and as such, any relevant glass waste will be disposed of via the commingled recycling bin.		
Hard Waste	Hard waste will be disposed of via a private contractor. Hard waste will be stored within the allocated hard waste area before collection.	Hard waste will be disposed of via a private contractor. Hard waste will be stored within each respective tenancy or the allocated hard waste storage area before collection.		

Waste Type	Waste Management		
	Residential Component	Ancillary Facility and Café	
Other	The property manager will be responsible for the collection and disposal of electric waste including batteries, phones, computers etc. via a private contractor or drop it off at Monash Waste Transfer and Recycling Station (380 Ferntree Gully Road, Notting Hill). E-waste must not be disposed in landfill.	Kitchen staff will engage a waste contractor who will be responsible for the storage and collection of any cooking oils and grease. Any servicing and maintenance of the Grease Trap will be advised and undertaken by a private contractor.  The property manager will be responsible for the collection and disposal of all other waste. This may be undertaken via a private contractor.	

#### 3.3.2. Dual Chute System

A dual waste chute system will be provided for residents on each level of the retirement living facility. A dedicated chute will be provided for garbage and recycling which will terminate into the appropriate bins located in the bin store area at ground level. Skirting/equivalent system should be provided at the termination of the chutes to reduce the impact of materials falling into the bins. Residential garbage and recycling bins can have reinforced bases to increase the durability of the bins.

The chutes shall be designed to the manufacturer's specifications and appropriate signage and instructions will be provided to residents to ensure correct and safe use of the chute system. Access to the chute outlet at ground level will be secured and accessible to trained personnel only. Bins would be rotated as required by trained personnel.

#### 3.3.3. Bin Storage Areas and Access

Separate bin storage areas are provided for the residential component and commercial component of the development.

#### Residential Component

Bin associated with the residential component are to be stored within a bin room located immediately west of the loading bay.

Pedestrian access to the bin storage area is available via the back-of-house accessways to the loading bay.

#### **Commercial Component**

Bin associated with the ancillary facilities and café are to be stored within a bin room located immediately northwest of the loading bay.

Pedestrian access to the bin storage area is available via the back-of-house accessways to the loading bay.

The bin rooms are illustrated at Figure 1.



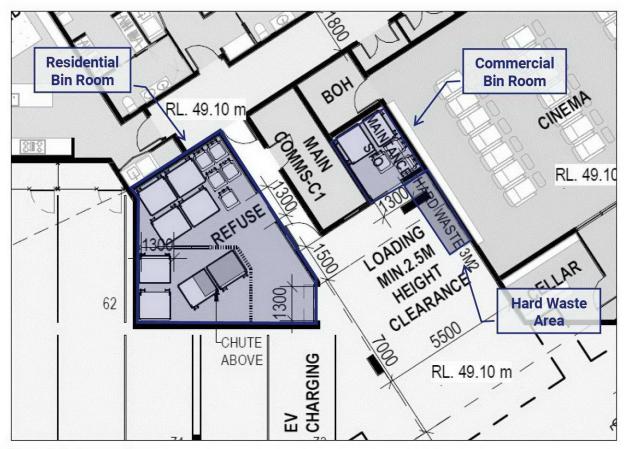


Figure 1: Bin Storage Areas

Table 7 details the storage area requirements based on the waste equipment proposed.

Table 7: Bin Store Area Requirements

Use	Waste Equipment	Net Area	Quantity	Net Waste Storage Area Required	Bin Store Area Provided
Residential	240L	0.29m <sup>2</sup>	5	1.45m <sup>2</sup>	35.80m²
Component	1,100L	1.33m <sup>2</sup>	6	7.98m <sup>2</sup>	35.80m²
	240L	0.29m <sup>2</sup>	3	0.87m <sup>2</sup>	
Ancillary Facility & Café	660L	0.99m <sup>2</sup>	1	0.99m <sup>2</sup>	6.50m <sup>2</sup>
	1,100L	1.33m <sup>2</sup>	1	1.33m <sup>2</sup>	
External Area	Hard Waste	3.00m <sup>2</sup>	1	3.00m <sup>2</sup>	3.00m <sup>2</sup>

#### 3.4. Signage

Appropriate signage will be displayed on the bins, within the bin storage area in accordance with Sustainability Victoria. Indicative signage is illustrated in Figure 2. Noting that any signage provided will initially be requested from Council.

The signage will assist in guiding and encouraging guests of the proposed development to dispose of waste correctly into the appropriate waste streams.

It is noted that the indicative posters are available for download from the Sustainability Victoria website.



Figure 2: Waste Signage Examples

#### 3.5. Waste Collection Arrangements and Vehicle Access

It is proposed that waste collection will occur on-site by private contractor. The private contractor will use a 6.4m long Hino Mini Rear-Loader truck and reverse into the loading area where it will empty the relevant bins. The vehicle will then exit the site in a forwards direction.

Waste collection will be undertaken outside of commuter peak periods and business operating hours with:

#### Residential Component

- Garbage waste collected twice per week,
- · FOGO waste collected twice per week.
- Recycling waste collected twice per week, and
- Glass waste collected once per week

#### **Commercial Component**

- Garbage waste collected twice per week,
- FOGO waste collected twice per week.
- Recycling waste collected once per week, and
- Paper & Cardboard waste collected once per week

### 4. Amenity Impacts

It is the responsibility of the property manager to carry out the ongoing maintenance of all waste areas to minimise the following amenity impacts:

#### **Ventilation/Odour Prevention**

For developments using forced ventilation or air-conditioning system, adequate ventilation will be provided within the bin store areas in accordance with AS1668.2 to ensure waste-related odours are minimised. Waste areas and chutes will be frequently cleaned to prevent the retainment of odours. This will include the provision of a spray nozzle at the head of each chute to assist with cleaning.

#### **Noise Reduction**

The waste facilities will comply with BCA and AS2107 acoustic requirements.

Collection days and times are pre-determined in accordance with Council collection schedules. Waste collection times should comply with the EPA Noise Control Guidelines (Publication 1254):

#### Domestic Waste Collection

- Collections occurring once a week should be restricted to the hours 6am 6pm Monday to Saturday,
- Collections occurring more than once a week should be restricted to the hours 7 am
   6 pm Monday to Saturday

#### Industrial Waste Collection

- Collections occurring once a week should be restricted to the hours 6:30am 8pm Monday to Saturday, 9am — 8pm Sunday and public holidays
- Collections occurring more than once a week should be restricted to the hours 7 am
   8pm Monday to Saturday, 9am 8pm Sunday and public holidays

#### **Vermin Prevention**

All access doors and bin lids will be kept closed at all times to prevent vermin access to the bin storage areas.

Appropriate washing facilities including water supply and hose will be provided for the regular washing of the bins and waste area.



#### **Litter Management and Stormwater Pollution**

The waste areas will be secured to prevent any unauthorised use of waste areas. Bins will be monitored by the property manager to ensure that they are not overfilled and any spillage resulting from waste collection is appropriately addressed.

## 5. Ongoing Maintenance and Suitable Initiatives

#### 5.1. Maintenance Management

Further to the occupation of the proposed development, it is the responsibility of the property manager for the ongoing operation and maintenance of the Waste Management Plan.

The property manager will ensure that maintenance work and upgrades are carried out on the waste areas and components of the waste system. When required, the property manager will engage an appropriate contractor to conduct maintenance services, replacements or upgrades.

All ongoing costs are to be fully met by the operator of the building.

#### 5.2. Waste Reduction Strategies

The property manager will be responsible to encourage the residents and staff of the proposed retirement living facility to reduce waste disposal and recycle materials based on the waste management hierarchy set out by Sustainability Victoria.

The hierarchy is detailed at Figure 3 below.

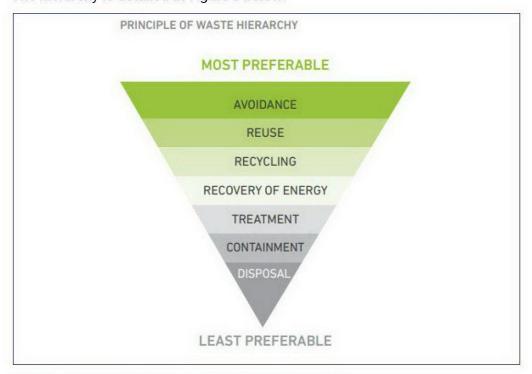


Figure 3: Sustainability Victoria's Waste Management Hierarchy



Additionally, the property manager can set targets and measures to reduce garbage going to landfill and increase recycling and choose to participate in Council's waste programs to promote sustainability initiatives.

#### 5.3. Waste Management Rules

It will be the responsibility of the property manager to ensure all residents and staff are provided with the relevant information and materials regarding the waste management system and sustainability strategies of the proposed development.

Relevant information will be provided at the waste areas to ensure that all users will operate and maintain safe practice when utilising the waste facilities.

#### 5.4. Monitoring and Review

This Waste Management Plan should be monitored and reviewed on a regular basis to ensure that it meets the regulatory requirements and the expected waste generation rates outlined in Section 3.1. The property manager will be responsible for monitoring the Waste Management Plan. Where required, the property manager should undertake a waste audit to identify any modifications and/or improvements to the waste management system.

## 6. Contact Information

Below is a list of common waste collection service contractors and waste equipment suppliers. The property manager is not obligated to procure goods/services from the following suppliers and reserves the right to choose their own preferred suppliers. Traffix Group does not make representations for the goods/services provided by the suppliers listed below.

Table 8: Supplier Contact Information

Service Type	Business Name	Phone	Website
	Citywide Waste	03 9261 5000	www.citywide.com.au
	SUEZ	13 13 35	www.suez.com.au
	Cleanaway	13 13 39	www.cleanaway.com.au
Private Waste	Veolia	13 29 55	www.veolia.com/anz
Collectors	JJ Richards	03 9794 5722	www.jjrichards.com.au
	Waste Wise Environmental	1300 550 408	www.wastewise.com.au
	Kartaway	1300 362 362	www.kartaway.com.au
	iDump	1300 443 867	www.idump.com.au

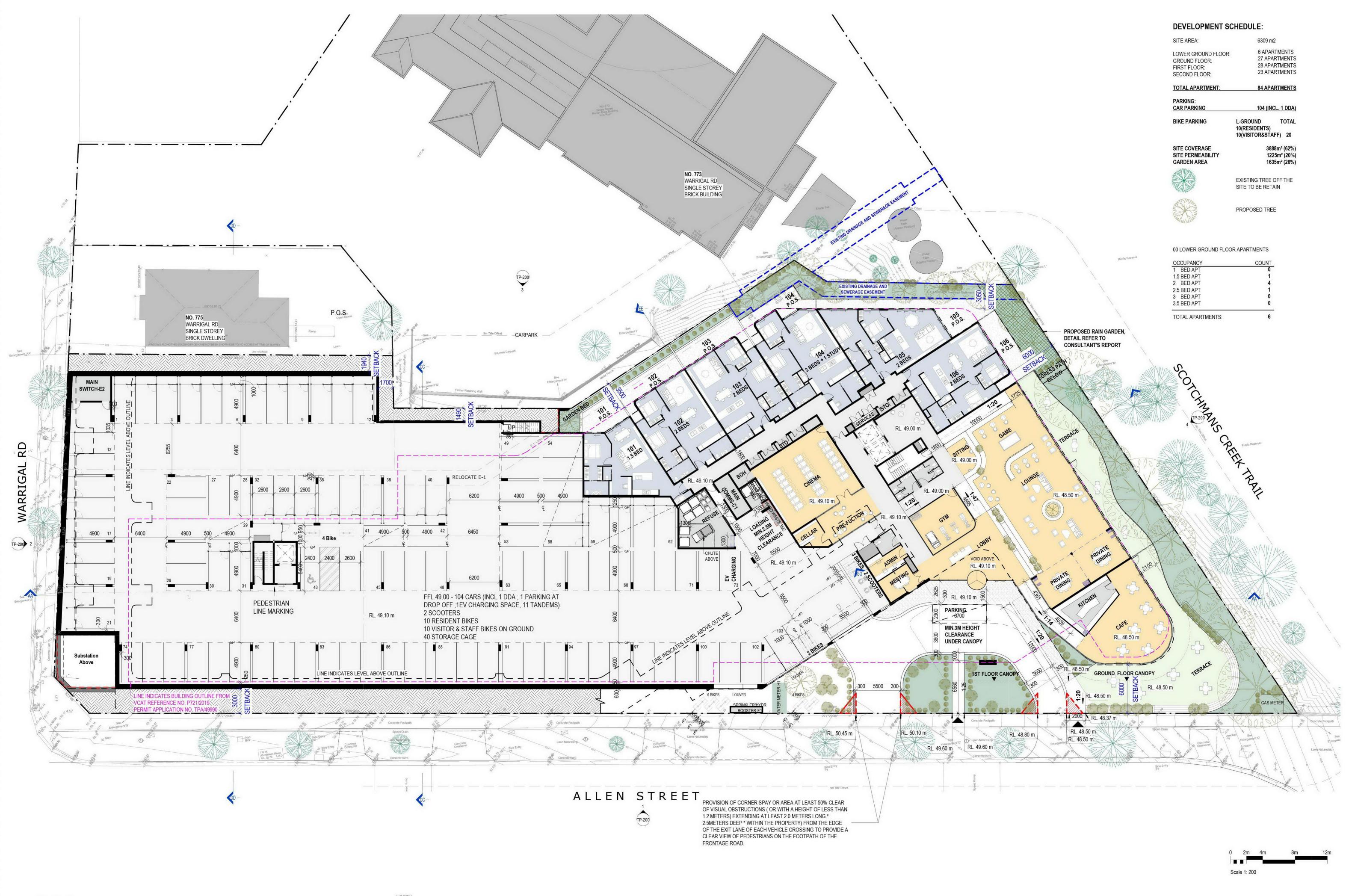


Service Type	Business Name	Phone	Website
E-Waste Collection	TechCollect	1300 229 837	www.techcollect.com.au
	ToxFree	1300 869 373	www.toxfree.com.au
Equipment Supplier	Sulo Australian (bin supplier)	03 9357 7320	www.sulo.com.au
	Mr Wheelie Bin (bin supplier)	03 9912 2850	www.mrwheeliebin.com.au
	Electrodrive (tug supplier)	1300 934 471	www.electrodrive.com.au
	Warequip (tug supplier)	1800 337 711	www.warequip.com.au
	Wastech Engineering (compactors & chutes)	1800 465 465	www.wastech.com.au
	Elephants Foot (compactors & chutes)	1300 435 374	www.elephantsfoot.com.au
	ASI JD MacDonald (chutes)	1800 023 441	www.jdmacdonald.com.au
	Eco-safe Technologies (odour control system)	1300 135 039	www.eco-safe.com.au
Bin Washing Services	The Bin Butlers	1300 788 123	www.thebinbutlers.com.au
	WBCM Environmental Australia	1300 800 621	www.wbcm-aust.com.au
	Kerbside Clean-A-Bin	03 9588 1944	www.kerbsidecleanabin.com.au



## Appendix A

**Development Plans** 



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EBG 1-9 ALLEN ST & 777-781 WARRIGAL RD OAKLEIGH RETIREMENT APARTMENT PROJECT NUMBER 2110004

**DATE** 2021.09.10

/ DRAWING TITLE
LOWER GROUND FLOOR PLAN

SCALE @ A1 1:200

DRAWING No.
TP-101

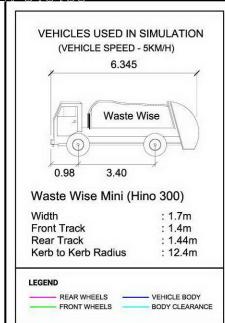
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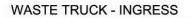


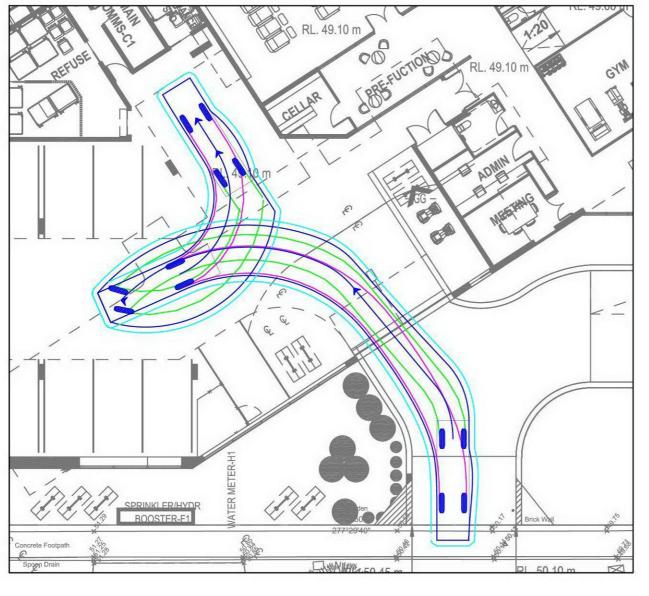
## **Appendix B**

**Swept Path Diagrams** 

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#### **WASTE TRUCK - EGRESS**

