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23-47 Villiers Street, North Melbourne

Waste Management Plan

230570WMP001B-F

28 August 2024

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1 INTRODUCTION

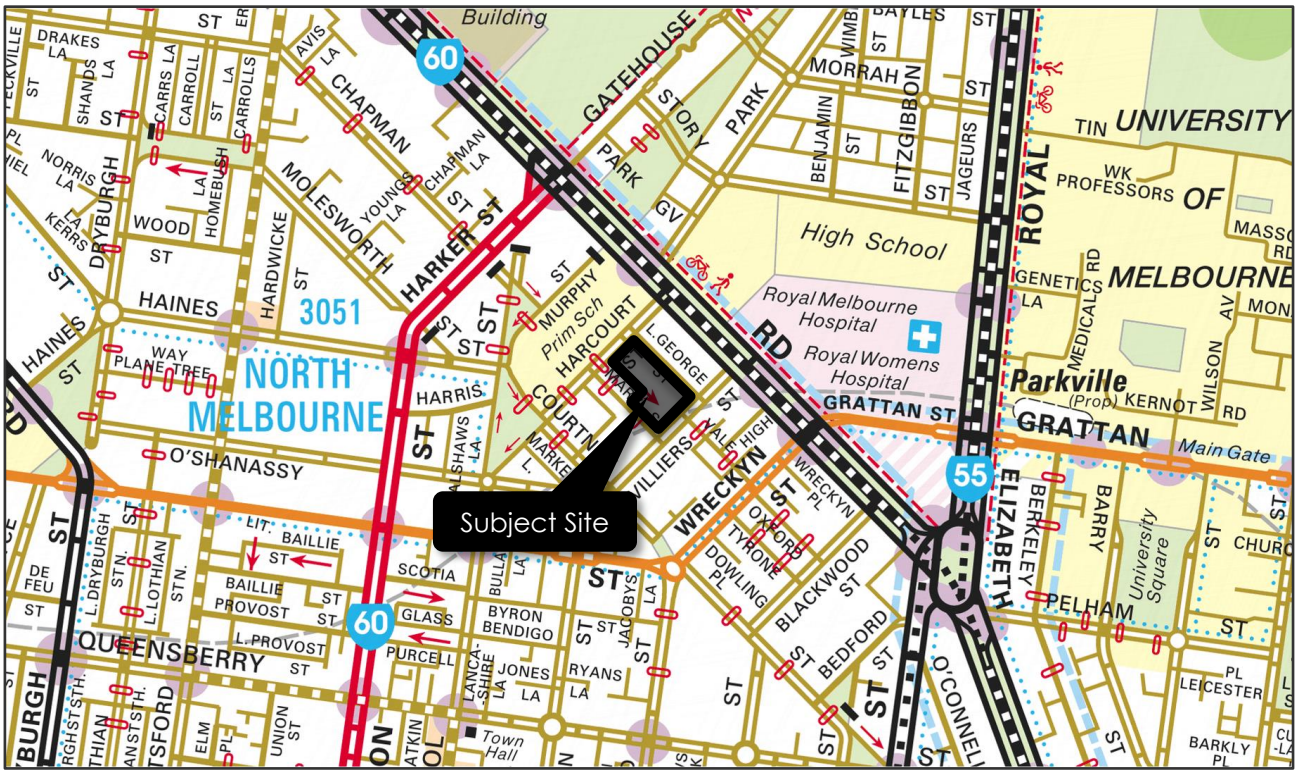
onemile**grid** has been requested by Sentinel Corporation to prepare a Waste Management Plan for the proposed build-to-rent residential development at 23-47 Villiers Street, North Melbourne.

The preparation of this management plan has been undertaken with due consideration of the Sustainability Victoria Better Practice Guide for Waste Management and Recycling in Multi-unit Developments and relevant Council documentation.

2 EXISTING SITE CONDITIONS

The subject site is addressed as 23-47 Villiers Street, North Melbourne and is located southwest of Flemington road, approximately 400 m northwest of the Haymarket roundabout, as shown in Figure 1.

Figure 1 Site Location



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The site is bound by Villiers Street, Mary Street, Harcourt Street and Little George Street for 74 m, 47 m, 56 m and 102 m respectively whilst encompassing a total site area of 6,528 m².

The site is currently occupied and operated by the Australian Red Cross National Office and is provided with front and rear at-grade car parks comprising 7 and 53 spaces, which are accessed via Villiers Street and Harcourt Street along the southeast and northwest boundaries of the site respectively.

Land use in the immediate vicinity of the site comprises of various commercial, medical and educational facilities, and includes The Royal Melbourne Hospital and Melbourne University to the east of the site.

An aerial view of the subject site is provided in Figure 2.

Figure 2 Site Context (6 July 2023)

Copyright Nearmap

3 DEVELOPMENT PROPOSAL

3.1 General

It is proposed to develop the subject site for the purposes of a multi-storey, high-density residential development associated with the build-to-rent (BTR) scheme.

The development will consist of two buildings, with the eastern building labelled as 'Building A (Villiers Street)' and western building labelled as 'Building B (Harcourt Street)'.

A breakdown of the proposed residential development schedule is shown in Table 1.

Table 1 Proposed Residential Development Schedule

Building	*Component*	*No./Area*
Building A (Villiers Street)	Studio Apartment	10
	1-Bedroom Apartment	107
	2-Bedroom Apartment	46
	3-Bedroom Apartment	18
	Sub-Total	**181**
Building B (Harcourt Street)	Studio Apartment	11
	1-Bedroom Apartment	103
	2-Bedroom Apartment	49
	3-Bedroom Apartment	9
	Sub-Total	**172**
Total		**353**

In addition, an ancillary office with a floor area of 108 m² is proposed in Building A along the Villiers Street frontage.

The development is proposed with two dedicated loading areas and two waste rooms, one for each building respectively, to facilitate the various loading requirements and waste collection. Access to each loading area is provided via a consolidated central access point located along Little George Street on the lower ground 1 level, and will permit forward entry and exit.

3.2 Waste Management

It is proposed to utilise a private contractor to manage the collection and disposal of all waste streams associated with the development.

Bins will be stored within two dedicated bin storage rooms, one per building, both located on the lower ground 1 level of the development adjacent the loading area, for use by both residents and staff.

A dual chute system will be utilised for residents for both buildings for garbage, and recycling and will terminate within each buildings dedicated bin room. Residents will be responsible for disposing of recyclables, or bagged garbage into the appropriate waste chutes located on each floor of the development, or directly into the appropriate bins located within the bin storage room. Maintenance staff will be responsible for rotating bins within the bin storage room to ensure the bins do not overflow.

In addition, additional area is provided within each bin storage room for temporary hard waste storage, e-waste and charity bins.

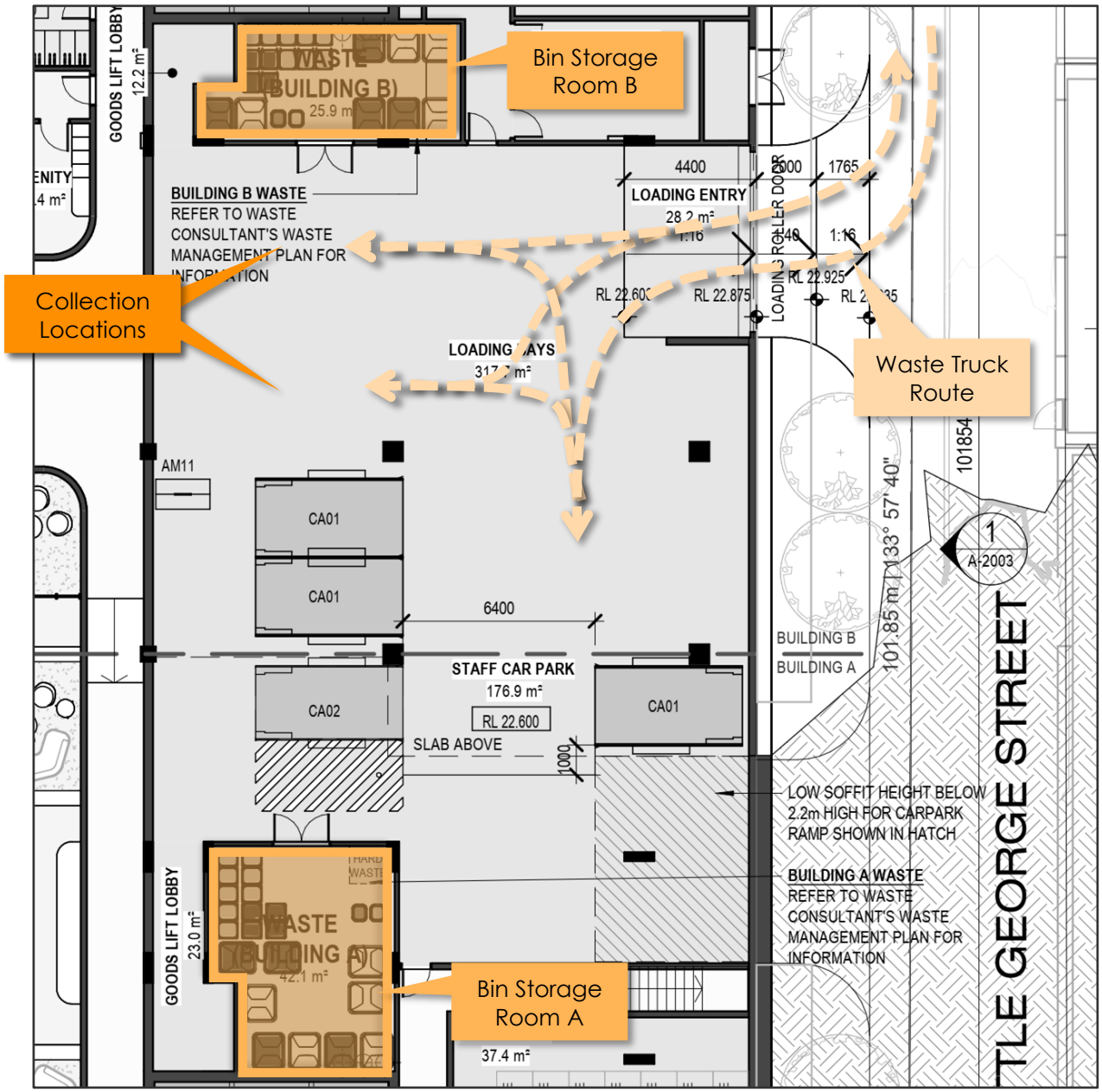
The waste collection vehicle, an 8.8 m service vehicle, will enter the lower ground 1 level via Little George Street (from Harcourt Street), turnaround within the loading area and prop adjacent the

bin store, from where the bins will be transferred directly to the waiting truck for emptying. The bins will be returned to the bin storage area immediately following collection.

The leasing office on the ground floor level will dispose of their waste within the residential bins, given the minimal waste generation of the office.

The location of the two dedicated bin storage rooms, collection location and waste vehicle route within the lower ground 1 level is shown in Figure 3.

Figure 3 Bin Storage Rooms and Collection Details (Lower Ground 1 Level)



Swept path diagrams showing the movements of the waste collection vehicle are attached in Appendix A.

4 WASTE GENERATION

4.1 Green Star Buildings Waste Requirements

Green Star Buildings sets out the criteria that must be met to deliver healthy, resilient, and positive places for people and nature. It aims to meet current and future demands on the built environment with aspirational benchmarks for addressing the key issues of the next decade: Climate action, resource efficiency, and health and wellbeing.

The Green Star requirements relating to waste are provided below:

The building must provide bins or storage containers to building occupants to enable them to separate their waste. These bins must be labelled and easy to access, and evenly distributed throughout the building. They must also allow for separating the following as a minimum:

- *General waste going to landfill*
- *Recycling streams to be collected by the building's waste collection service, including paper and cardboard, glass and plastic*
- *One additional waste stream identified by the project team. This may include collecting any of the following waste types:*
  - *organics, e-waste, batteries etc.*

Any other single waste stream (except food waste) that is expected to represent more than 5% of total annual operational waste and resources (by volume) must also be included.

Waste streams may be collected in separate bins or in the same bin where commingled recycling is available.

4.2 Sustainability Victoria Recommended Rates

4.2.1 Residential

Waste generation rates published within Sustainability Victoria's "Better Practice Guide for Waste Management and Recycling in Multi-unit Developments" suggest the following rates for multi-unit developments:

Table 2 Sustainability Victoria Recommended Rates – Residential

Dwelling Size	*Garbage*	*Recycling and Paper*
1 bedroom apartment or studio	80 L	80 L
2-bedroom apartment	100 L	100 L
3-bedroom apartment or greater	120 L	120 L

In relation to residential dwellings, Sustainability Victoria indicates that approximately 35% of garbage is made of food waste, therefore, the provision of organics waste collection can result in a reduction in garbage generation by 35%.

Sustainability Victoria does not provide any guidance on the breakdown of glass as part of the recycling stream. Assessment of waste generation from a number of Councils indicates that approximately 10-15% (by volume) of the recycling stream consists of glass. A rate of 15% will be adopted, therefore the provision of glass waste collection will result in a reduction in recycling generation by 15%.

Based on the above, the waste generation rates for each dwelling type are as follows:

Table 3 Adopted Waste Generation Rates / Week – Residential

Dwelling Size	Garbage	Organics	Recycling	Glass
1 bedroom or studio apartment	52 L	28 L	68 L	12 L
2-bedroom apartment	65 L	35 L	85 L	15 L
3-bedroom apartment or greater	78 L	42 L	102 L	18 L

4.2.2 Commercial

Waste generation rates published within Sustainability Victoria's "Better Practice Guide for Waste Management and Recycling in Multi-unit Developments" suggest the following rates for commercial uses, based on the rates published by the City of Melbourne.

Table 4 Sustainability Victoria Recommended Rates / Day – Commercial

Use	Garbage	Recycling
Offices	10 L / 100 m^2	10 L / 100 m^2

It is noted that waste generation for office uses are highly dependent on the specific tenant and use for both garbage and recycling generation.

It is expected that organic waste generation for the office will be minimal, and a separate organic waste service is not expected to be advantageous.

4.3 Expected Waste Generation

4.3.1 Garbage, Organics, Recycling and Glass Recycling

Based on the Sustainability Victoria's adopted waste generation rates, the following weekly waste generation is expected for each of the two proposed residential buildings (Table 5), as well as individually for the leasing office, assuming a 5-day operation of the office (Table 6)

Table 5 Expected Weekly Waste Generation – Residential

Component	No./Area	Garbage	Organics	Recycling	Glass
Building A					
1-BR Apartment	117	6,084 L	3,276 L	7,956 L	1,404 L
2-BR Apartment	46	3,128 L	1,610 L	3,910 L	690 L
3-BR Apartment	18	1,404 L	756 L	1,836 L	324 L
Total	**181**	**10,616 L**	**5,642 L**	**13,702 L**	**2,418 L**
Building B					
1-BR Apartment	114	5,928 L	3,192 L	7,752 L	1,368 L
2-BR Apartment	49	3,332 L	1,715 L	4,165 L	735 L
3-BR Apartment	9	702 L	378 L	918 L	162 L
Total	**172**	**9,662 L**	**5,285 L**	**12,835 L**	**2,265 L**

Note: *1-BR component inclusive of studio apartments*

As the waste generation volumes are less than 25,000 L per week per stream per building, waste compactors are not required as per Melbourne City Council waste guidelines. Further detail is provided in Section 9.

Table 6 Expected Weekly Waste Generation – Commercial

Component	No./Area	Garbage	Organics	Recycling	Glass
Office	108 m²	54 L	-	54 L	-

4.3.2 Container Deposit Scheme (CDS)

On 1 November 2023, Victoria's Container Deposit Scheme (CDS) commenced, which marked a significant milestone towards Victoria achieving its Circular Economy goal.

The CDS rewards Victorians with a 10c refund for all eligible cans, cartons and bottles that are returned. Most aluminium, glass, plastic, and liquid paperboard (carton) drink containers, between 150 mL and 3 L are eligible, with a 10c mark provided on the drink container label, often located near the barcode. Container lids are able to be kept on, as they can also recycled.

There are multiple ways to receive the 10c refund, including vouchers, which can be spent and participating shops, cash, electronic payment, and the option to donate the refund to charities and community groups.

The eligible containers can be returned to several different types of container refund points, in many locations across Victoria, with the number of locations expected to continue to grow. Typical refund points include the following:

- Reverse Vending Machines (RVMs) – Typically located in shopping centre and supermarket car parks, eligible containers are inserted into the machine, where the containers are scanned and verified;
- Depots – Larger refund points which typically offer a walk-in or drive-through services to get containers counted and refunded on the spot. Best suited for larger loads;
- Over the counter (OTC) – Some small businesses or organisations provide over-the-counter services, which essentially work like a miniature depot; and
- Pop-ups – Zone operators may offer pop-up services or events, that will have set times and locations that drinks containers can be returned.

The locations of the CDS refund points are provided at https://cdsvic.org.au/locations.

Staff and residents should be encouraged to contribute to the CDS, by the provision of specific CDS bins throughout the building to assist in separating eligible containers, with staff and residents to regularly take the containers for to a refund point.

4.3.3 Green Waste

Given the nature of the proposed development and dwellings (being multi-unit/multi-level), it is expected that green waste generation will be minimal or negligible, and therefore a green waste collection service is not expected to be required.

It is expected that any maintenance and gardening undertaken on common property will be managed by a contractor appointed by the Owner's Corporation. The appointed contractor will be responsible for the disposal of any green waste accumulated during the course of their duties.

4.3.4 Hard Waste

Hard waste will be stored within individual dwellings between collections, and placed within the bin room prior to scheduled collections. Owing to the limited space within the bin room to accommodate large items, it may be necessary to stagger hard waste collections.

The City of Melbourne offers a hard waste collection service for residents only. Apartments within high-rise buildings (250-500 apartments) may book a once monthly 4 cubic metre collection. To minimise the number of collections it is recommended that the Owner's Corporation manage combined collections for residents.

In addition to the above, hard waste may be disposed of independently by residents, at Council's Recycling Centre/Transfer Station.

Hard waste must not be left in common areas including the loading bay and the bin rooms if unscheduled.

4.3.5 Electronic Waste (E-Waste)

E-waste includes all manner of electronic waste, such as televisions, computers, cameras, phones, household electronic equipment, batteries and light bulbs. E-waste contains valuable materials that can be recovered and reused such as tin, nickel, zinc, aluminium, copper, silver and gold.

On 1st July 2019, the disposal of E-waste to landfill was banned by the Victorian Government.

A large number of e-waste collection points are available in Victoria and private contractors are equipped with the resources to undertake E-waste collections.

A 120 L E-waste bin will be provided within the bin storage area for use by staff and residents. The owner's corporation will arrange for the disposal of E-waste at an appropriate collection point as required.

Council does not provide a residential kerbside pick-up service for E-waste, therefore E-waste must be taken by residents to the appropriate collection centre, as described below:

- Planet Ark operate a number of e-waste recycling drop-off locations throughout Victoria (https://recyclingnearyou.com.au/electrical);
- Officeworks stores accept small amounts of personal E-waste;
- Aldi stores accept batteries; and
- Some Bunnings stores accept batteries.

Additional recycling locations are provided at https://recyclingnearyou.com.au/

4.3.6 Charity Bins

For a development of this size, it is deemed practical to provide charity donation bins within the development. These bins allow residents to dispose of clothing or other items that are no longer wanted but is otherwise in good condition.

A number of charities will provide a bin for donations and organise regular collection free of charge.

It is proposed to provide a 120 L charity bin within each of the waste storage rooms for use by residents.

5 BIN REQUIREMENTS

5.1 Bin Provision and Specifications

It is proposed to utilise a private waste contractor for all waste services, for both the residential and commercial components of the proposed development.

A dual chute system will be utilised for residents for both buildings for garbage, and recycling, and will terminate within each building's dedicated bin room

As such, the following bins will be required for each bin room for the residential component (Table 7).

Table 7 Bin Provision – Residential

Stream	*Waste / Week*	*Bin Size*	*Collection Freq.*	*Bins Required*
		Bin Room A		
Garbage	10,616 L	1,100 L	3 x Weekly	4 bins
Organics	5,642 L	240 L		8 bins
Recycling	13,702 L	1,100 L		5 bins
Glass	2,265 L	240 L		4 bins
E-Waste	N/A	120 L	As required	1 bin
Charity	N/A	120 L	As required	1 bin
Total				**23 bins**
		Bin Room B		
Garbage	9,662 L	1,100 L	3 x Weekly	4 bins
Organics	5,285 L	240 L		8 bins
Recycling	12,835 L	1,100 L		4 bins
Glass	2,265 L	240 L		4 bins
E-Waste	N/A	120 L	As required	1 bin
Charity	N/A	120 L	As required	1 bin
Total				**22 bins**

In relation to the commercial component of the proposed development, it is anticipated the office will generate approximately 54 L / week of garbage and 54 L / week of recycling, of which will be disposed of into the residential bins calculated above.

Typical bin specifications for each bin size are provided in Table 8.

Table 8 Bin Specifications

Capacity	*Width*	*Depth*	*Height*	*Area*
120 L	0.50 m	0.55 m	0.95 m	0.28 m²
240 L	0.60 m	0.75 m	1.10 m	0.45 m²
1,100 L	1.25 m	1.10 m	1.35 m	1.38 m²

Bin lids will be colour coded to the Australian Standard (AS4123) or to the standard colour specifications of the private contractor.

5.2 Bin Storage

As indicated in Figure 3, it is proposed to provide a two dedicated bin storage rooms, one per building, both located on the lower ground 1 level of the development adjacent the loading area.

The layout of the bin storage area is shown in Figure 4, which demonstrates that the area is capable of accommodating the required bins.

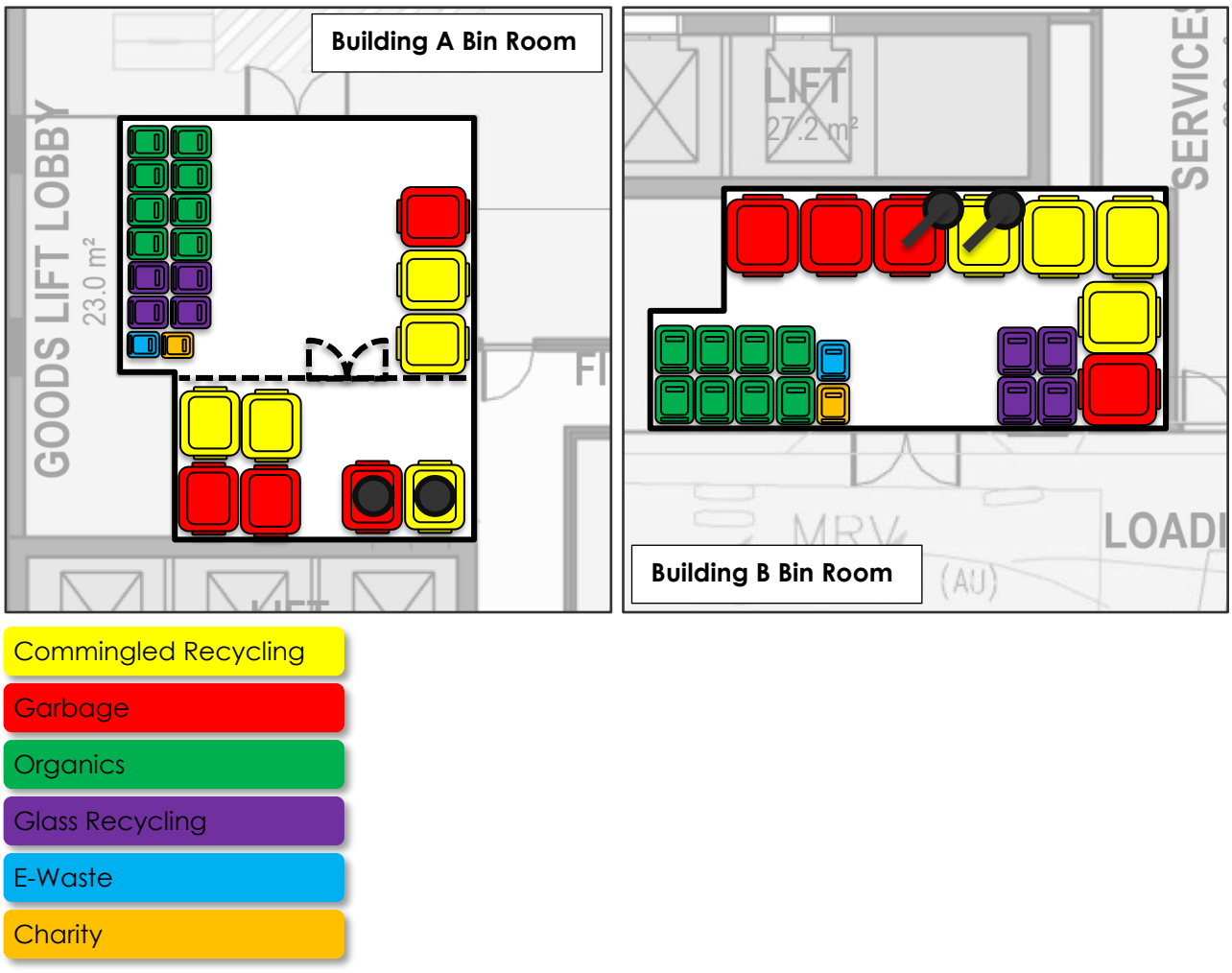
Some additional area is also provided within the bin storage room to allow for the temporary storage of bulk items and packaging, under the control of the Owners Corporation.

Furthermore, the bin storage room is located appropriately for access by residents and staff, and is secured from the common areas.

The bin storage room shall be ventilated, and shall be cleaned regularly by the operator or waste collection contractor, to minimise odour. A ventilation system will be provided within the basement car park and garage areas as required to facilitate the removal of odours and gases generated by the storage of waste bins, and through the operation of the car parking area by vehicles, including the waste collection vehicle.

The two retail tenancies will manage their own waste and store own smaller bins within the tenancy, and will be transferred to either bin room for disposal as required.

Figure 4 Building A / Building B Bin Storage Room Layout



5.3 Waste Chute Rooms

Waste Chute Rooms are located on each level of the apartment building. The waste room will include dual chutes and a self-closing door to ensure that odours do not permeate into the lobby.

The waste chutes terminate in a separate area to the organic waste bins, to ensure the safety of organic waste bin users.

The following general rules apply when using the waste chutes:

- General household rubbish (essentially kitchen & bathroom rubbish) is the ONLY waste that should be placed in the garbage chutes;
- All rubbish must be securely bagged & tied before placing down the garbage chute;
- NO cardboard, open food containers, plastic or papers is to be placed down the garbage chute; ***use the recycling chute***;
- Recyclable materials should not be bagged before placing down the recycling chute; and
- No rubbish is to be left on floor in the waste chute room.

Signage should be placed inside each waste chute disposal room on each floor to inform residents of the correct waste disposal procedures and to ensure waste chutes are not contaminated with the incorrect waste stream.

5.4 Bin Collection

Bins for the development are to be collected by private waste management contractor utilising vehicles with the following dimensions and parameters:

- Minimum height 4.0 m
- Minimum width 2.6 m
- Minimum length 8.8 m
- Maximum weight load 24 T
- 2.0 m clearance at the rear of the vehicle to allow for emptying of bins
- 1.0 m clearance at the sides of the waste vehicle to allow occupants of the vehicle to exit safely
- Bins located within an area immediately accessible to the loading area

Bins will be stored within two dedicated bin storage rooms, one per building, both located on the lower ground 1 level of the development adjacent the loading area.

The waste collection vehicle, an 8.8 m service vehicle, will enter the lower ground 1 level via Little George Street (from Harcourt Street), turnaround within the loading area and prop adjacent the bin store, from where the bins will be transferred directly to the waiting truck for emptying. The bins will be returned to the bin storage area immediately following collection.

The office on the ground floor level will manage waste individually, with bins to be stored within the tenancy and disposed within the residential bins given the reduced waste generation of the office.

Swept path diagrams showing the movements of the waste collection vehicle are attached in Appendix A.

5.5 Bin Cleaning

The Owners Corporation shall ensure that the shared residential bins are kept in a clean state, to minimise odours and to discourage vermin. This may include regular cleaning by a third party, cleaning by the waste contractor, bin swapping by the waste contractor, or maintenance by residents.

A bin cleaning area should be provided within the bin storage area, with a drain connected to sewer.

6 WASTE MANAGEMENT

6.1 Best Practice Waste Management

Best Practice Waste Management is an initiative designed to reduce the amount of waste generated through encouraging a change of behaviour and action on waste management and moreover recycling.

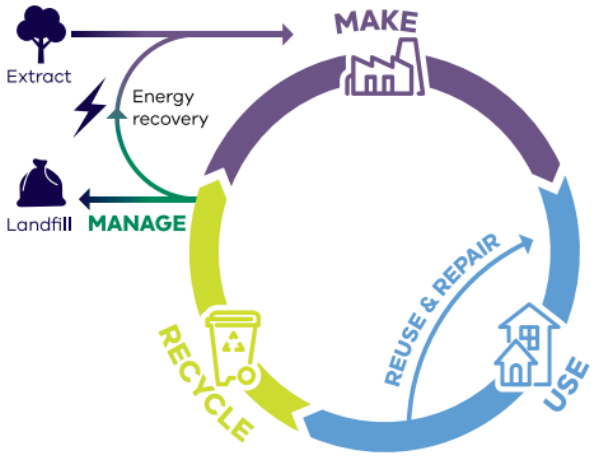
The benefits of reducing waste generation are far reaching and have been identified as significantly important by Council and the Victorian Government.

Recycling Victoria: A New Economy is a policy and 10-year action plan, prepared by the Victoria Government, to "deliver a cleaner, greener Victoria, with less waste and pollution, better recycling, more jobs and a stronger economy".

Four overarching goals have been identified in order to achieve a circular economy in relation to waste, as below:

1. MAKE – Design to last, repair and recycle;
2. USE – Use products to create more value;
3. RECYCLE – Recycle more resources;
4. MANAGE – Reduce harm from waste and pollution.

Figure 5 Resource Flows in a Circular Economy



In relation to the proposed development, recycling is of key importance, and in this regard, the Owners Corporation shall encourage residents and staff to participate in minimising and reducing solid waste production by:

- Promoting the waste hierarchy, which in order of preference seeks to:
  - Avoid waste generation in the first place;
  - Increase the reuse and recycling of waste when it is generated;
  - Recover, treat or contain waste preferentially to; and
  - Its disposal in Land Fill (which is least desirable).
- Providing information detailing recyclable materials to ensure that non-recyclable materials do not contaminate recycling collections;

- Providing information regarding safe chemical waste disposal methods and solutions, including correct battery and electronics disposal methods;
- Encouraging composting for residents and staff; and
- Providing tips for recycling and reusing waste, including encouraging the disposal of reusable items in good condition via donations to Opportunity Shops and Charities.

6.2 Common Property Litter and Waste Removal

The proposed development includes a number of common property areas, including foyers, hallways, parking areas and the bin storage area.

The Owners Corporation shall ensure that all common areas are kept clear of litter, and that all waste is removed from common areas on a regular basis. This includes the bin storage area in particular, to discourage vermin.

6.3 Signage

To avoid contamination between streams, bin lids will be colour coded generally in accordance with contractor standards, to ensure the bin type is easily distinguishable. Furthermore, bins should include typical signage (preferably on the bin lid) to reinforce the appropriate materials to be deposited in each bin.

Example signage is shown in Figure 6.

Figure 6 Example Waste Signage

6.4 Noise Control

It is noted that with the bin storage and collection area being situated within the basement car park, disturbance to residents during waste collection will be minimal. Regardless, to minimise the disturbance to residents during waste collection, the collection should follow the criteria specified below:

- Collections should be restricted to the hours 7:00am to 6:00pm, Monday to Saturday;
- Compaction should only be carried out while on the move;
- Bottles should not be broken up at the point of collection;
- Routes that service entirely residential areas should be altered regularly to reduce early morning disturbance; and
- Noisy verbal communication between operators should be avoided where possible.

6.5 Resident and Staff Information

To ensure all residents and staff are aware of their responsibilities with regard to waste and bin management, an information package will be provided by the Owners Corporation to all residents and staff, including the following information:

- A copy of this Waste Management Plan;
- Methods and techniques for waste reduction and minimisation;
- Information regarding bin collection days and requirements;
- Resident and staff responsibilities with regard to bin usage, storage, and collection; and
- Resident and staff responsibilities with regard to litter and waste removal from the common property.

6.6 Waste Management Plan Implementation

The implementation, coordination and funding of the Waste Management Plan is the responsibility of the operator, and should be a dynamic document, reflecting changes in on-site and off-site conditions e.g., varying bin requirements, or changing waste collection methodology. As such, the plan should be regularly revisited and amended to provide the most accurate and relevant information to achieve the desired objectives of effectively managing the storage and disposal of waste generated on-site.

Should any significant operational changes occur on-site, a new or amended Waste Management Plan prepared by a suitable qualified and experienced person or firm may be required, detailing changes to the storage and disposal of the general, recyclable and e-wastes, responsibility in management and maintenance of the bins, location and area of bin rooms, etc.

7 PLANNING SCHEME REQUIREMENTS

7.1 Clause 58.06-3

Clause 58.06-3 of the Melbourne Planning Scheme identifies the waste and recycling objectives for Apartment Developments, including:

- To ensure dwellings are designed to encourage waste recycling.
- To ensure that waste and recycling facilities are accessible, adequate and attractive.
- To ensure that waste and recycling facilities are designed and managed to minimise impacts on residential amenity, health and the public realm.

In particular, Standard D24 indicates that developments should include dedicated areas for:

- Waste and recycling enclosures which are:
  - Adequate in size, durable, waterproof and blend in with the development.
  - Adequately ventilated.
  - Located and designed for convenient access by residents and made easily accessible to people with limited mobility.
- Adequate facilities for bin washing. These areas should be adequately ventilated.
- Collection, separation and storage of waste and recyclables, including where appropriate opportunities for on-site management of food waste through composting or other waste recovery as appropriate.

- Collection, storage and reuse of garden waste, including opportunities for on-site treatment, where appropriate, or off-site removal for reprocessing.
- Adequate circulation to allow waste and recycling collection vehicles to enter and leave the site without reversing.
- Adequate internal storage space within each dwelling to enable the separation of waste, recyclables and food waste where appropriate.

Waste and recycling management facilities should be designed and managed in accordance with a Waste Management Plan approved by the responsible authority and:

- Be designed to meet the better practice design options specified in Waste Management and Recycling in Multi-Unit Development (Sustainability Victoria, 2019).
- Protect public health and amenity of residents and adjoining premises from the impacts of odour, noise and hazards associated with waste collection vehicle movements.

7.2 Clause 15.01-2L-01

Clause 15.01-2L-01 of the Melbourne Planning Scheme identifies the energy and resource efficiency objectives (including waste objectives) for accommodations developments, specifically encourage use and development to minimise waste.

The clause details the application must be accompanied by a Waste Management Plan prepared in accordance with the Guidelines for Preparing a Waste Management Plan (City of Melbourne, 2017).

Further discussion in relation to the Guidelines for Preparing a Waste Management is detailed in Section 9.

8 GREEN STAR BUILDINGS WASTE REQUIREMENTS

Green Star Buildings sets out the criteria that must be met to deliver healthy, resilient, and positive places for people and nature. It aims to meet current and future demands on the built environment with aspirational benchmarks for addressing the key issues of the next decade; climate action, resource efficiency, and health and wellbeing.

The Green Star requirements relating to waste are provided below:

The building must provide bins or storage containers to building occupants to enable them to separate their waste. These bins must be labelled and easy to access, and evenly distributed throughout the building. They must also allow for separating the following as a minimum:

- *General waste going to landfill*
- *Recycling streams to be collected by the building's waste collection service, including paper and cardboard, glass and plastic*
- *One additional waste stream identified by the project team. This may include collecting any of the following waste types:*
  - *organics, e-waste, batteries etc.*

Any other single waste stream (except food waste) that is expected to represent more than 5% of total annual operational waste and resources (by volume) must also be included.

Waste streams may be collected in separate bins or in the same bin where commingled recycling is available.

The proposed development proposes the separation and regular collection of four dedicated waste streams including glass, organics, recycling and garbage with scheduled collections of hard

waste provided for residents. In addition, it is expected that provision for e-waste and charity goods will be accommodated on-site.

The proposed waste collection for the development is in accordance with the Green Star Building Guidelines.

9 MELBOURNE CITY COUNCIL REQUIREMENTS

Melbourne City Council provides guidance and specific requirements for waste collection for proposed residential developments within the municipal area as detailed within the *'Guidelines for Waste Management Plans 2021'*.

The prescribed requirements and a response to the applicable requirements is detailed in Table 9.

Table 9 MCC Guidelines for Waste Management Plans Requirements

Item	Requirement	Comment
1	*Staged development or occupancy*	-
2	*Land Use Details*	Land use details are provided in Section 3.
3	*Waste Generation*	The waste generate rates and calculations are detailed in Section 4.2 and 4.3.
4	*Waste Systems*	The various waste systems associated with the proposed development is provided in Section 4 and Section 5, including types of waste streams, waste chutes and collection arrangement.
5	*Bin quantity, size and colour*	Bin quantity, size and colour are calculated and detailed in Section 5.1. Waste compactors are not required as the generated waste equates to less than 25,000 L per building.
6	*Collection Frequency*	Each building is to be provided between 151-250 apartments, which requires 3 collections per week. As such, 3 collections per week for each building as been adopted.
7	*Bin Storage*	The bin storage room detailed within the guidelines have been addressed in Section 5 and Section 6, including bin room size, layout, bin washing, ventilation, vermin proof and noise control.
8	*Collection Location*	As detailed throughout the report, collection is to occur on-site (swept paths attached in Appendix A). The waste collection clearance dimensions specified within item 8 of the guidelines are satisfied as detailed in Section 5.4 for the private waste management contractor.

9	*Additional waste requirements*	Each waste room has sufficient room for hard waste and been provided with the provision of an E-waste and charity bin.
10	*Scaled waste management drawings*	-
11	*Collection Contractors*	It is proposed to utilise a private waste contractor for all waste services, for both the residential and commercial components of the proposed development.
12	*Signage*	Section 6.3 details the required signage for the proposed waste streams.

10 OCCUPATIONAL HEALTH & SAFETY RESPONSIBILITIES

The Owners Corporation shall ensure compliance to all relevant OH&S regulations and legislation, including the following:

- Worksafe Victoria Guidelines for Non-Hazardous Waste and Recyclable Materials.

11 CONTACT INFORMATION

11.1 Council

Melbourne City Council

Phone: (03) 9658 9658 (Customer Service)

Web: www.melbourne.vic.gov.au

11.2 Contractors

ASI JD MacDonald

Services: Waste collection and management equipment

Phone: 1800 023 441

Web: www.jdmacdonald.com.au

Email: enquiry@asijdmacdonald.com.au

CSC Waste & Recycling

Services: Private contractor

Phone: 1300 499 927

Web: www.cscwaste.com.au

Email: info@cscwaste.com.au

Urban Waste

Services: Private contractor
Phone: 0429 309 269
Web: www.urbanwaste.com.au
Email: info@urbanwaste.com.au

iDump

Services: Private contractor
Phone: 1300 443 867
Web: www.iDump.com.au
Email: info@idump.com.au

Cleanaway

Services: Private contractor
Phone: 131 339
Web: www.cleanaway.com.au/

JJ Richards & Sons

Services: Private contractor including bin tugs
Phone: (03) 9703 5222
Web: www.jjrichards.com.au
Email: operations.melbourne@jjrichards.com.au

WasteWise

Services: Private contractor
Phone: 1300 550 408
Web: www.wastewise.com.au

BioPak (Organic Waste Compost Service)

Services: Private contractor
Phone: 1300 246 725
Web: www.biopak.com.au/compost-service

11.3 Equipment

OzChutes (waste chutes, diverters, carousels, compactors)

Phone: (03) 9716 7557

Web: www.ozchutes.com.au

Email: sales@ozchutes.com.au

11.4 Others

Sustainability Victoria

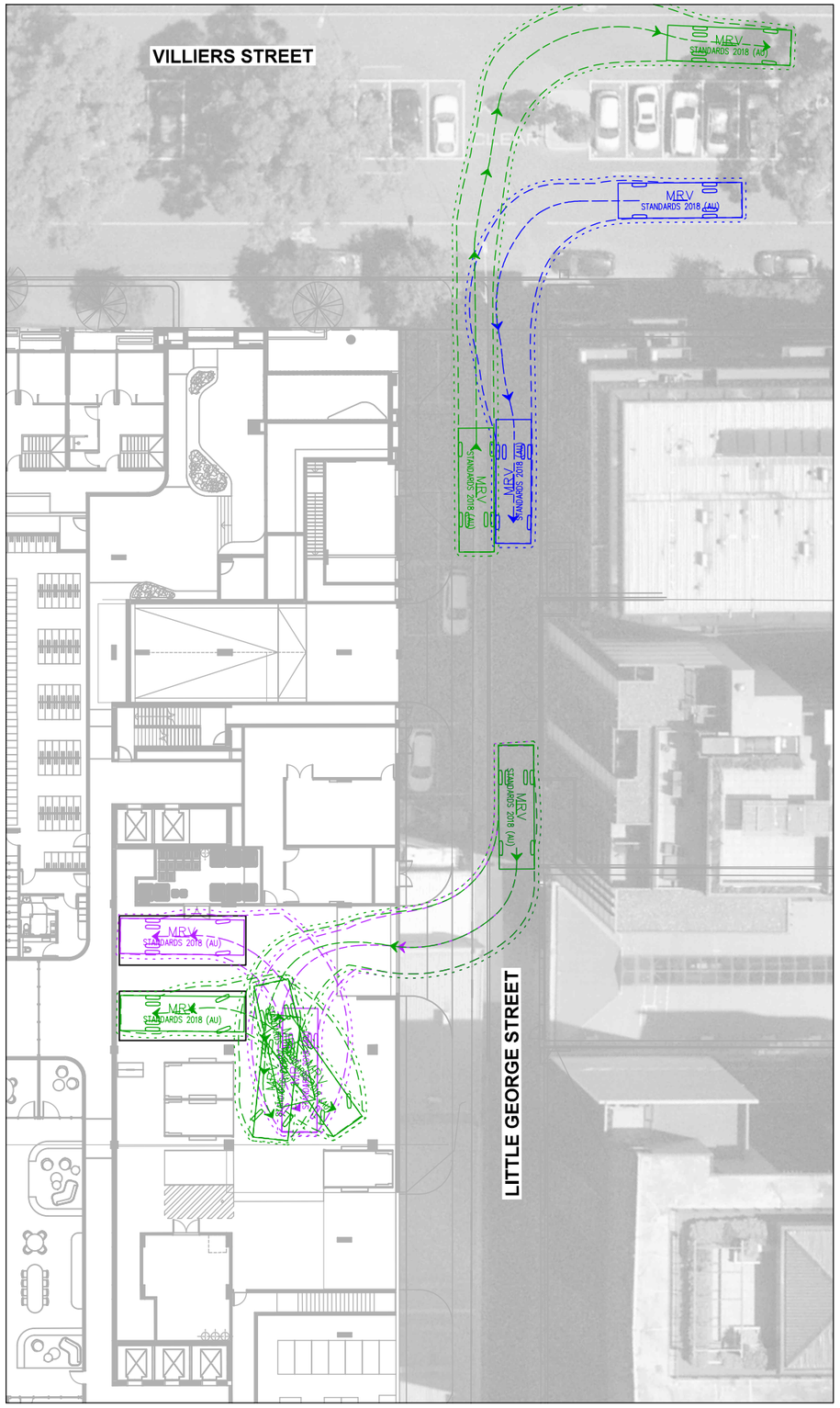
Services: Sustainable Waste Management initiatives and information

Phone: 1300 363 744 (Energy, Waste and Recycling)

Web: www.sustainability.vic.gov.au

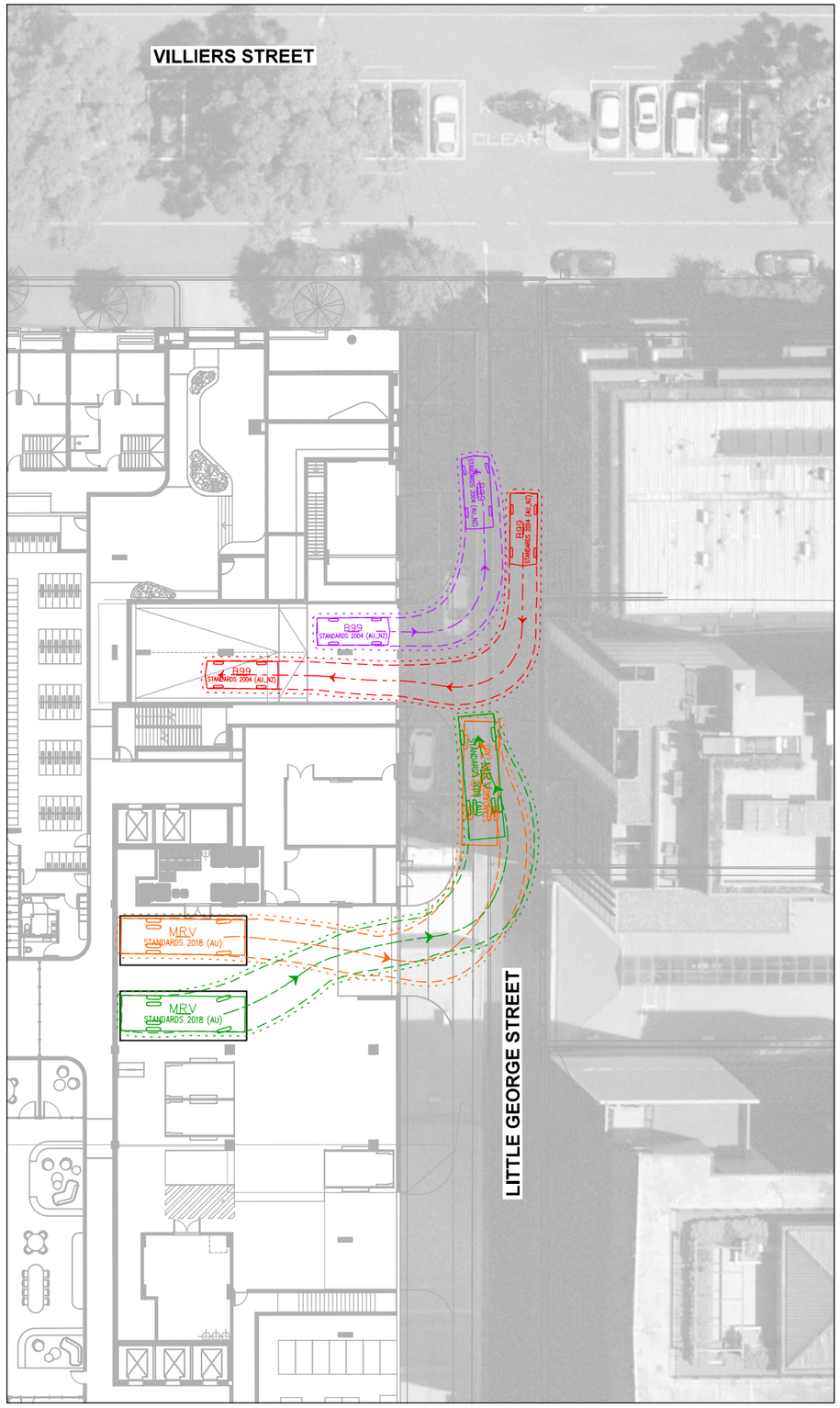
Email: info@sustainability.vic.gov.au

Appendix A Swept Path Diagram



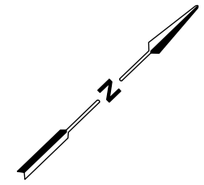
ENTRY MANOEUVRES

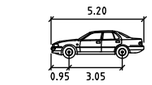
- — — — — DESIGN VEHICLE SWEPT PATHS SHOWN DASHED
- - - - - - - - - 300mm CLEARANCE ENVELOPE SHOWN DOTTED



EXIT MANOEUVRES

- — — — — DESIGN VEHICLE SWEPT PATHS SHOWN DASHED
- - - - - - - - - 300mm CLEARANCE ENVELOPE SHOWN DOTTED





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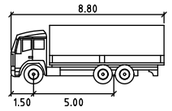
Lock to Lock Time	: 6.0
Steering Angle	: 33.9



MRV	meters
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Steering Angle	: 34.0

CAD File: N:\Projects\2023\230570\Drawings\230570SPA200.dgn

Date Plotted: 18-04-2024 8:45:42 AM

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onemilegrid operates from Wurundjeri Woiworung Country of the Kulin nation.
We acknowledge and extend our appreciation to the Wurundjeri People, the Traditional Owners of the land. We pay our respects to leaders and Elders past, present and emerging for they hold the memories, the traditions, the culture, and the hopes of all Wurundjeri Peoples.

Aerial Photography
Aerial photography provided by Nearmap

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Scale
1:400 @ A3
0 2 4 8

Drawing Title
27-47 VILLIERS STREET, NORTH MELBOURNE
VEHICLE SITE ACCESS - LOWER GROUND 1
SWEPT PATH ANALYSIS

Designed	Approved	Melway Ref
TCW	JS	43 E4

Project Number	Drawing Number	Revision
230570	SPA200	F