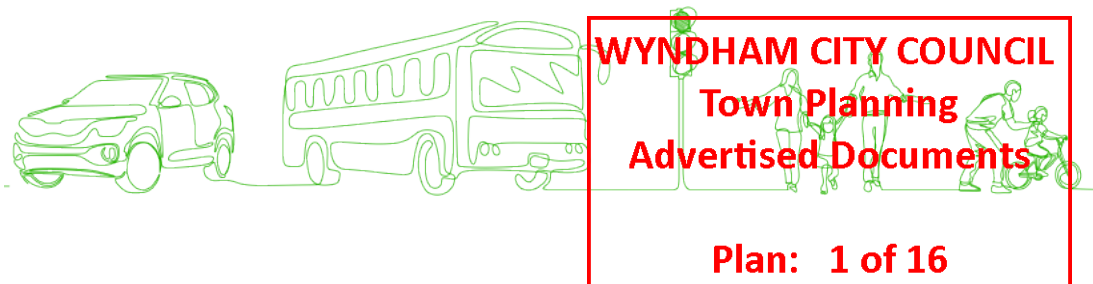




# Waste Management Plan

405-417 Sayers Road, Hoppers Crossing VIC 3029

*December 2023, Issue 2*



**Type of Report:** Waste Management Plan

**Site Location:** 405-417 Sayers Road, Hoppers Crossing VIC 3029

**Prepared by:** Fernway Engineering Pty Ltd (ABN 38 475 511 899)

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# 1. Introduction

Fernway Engineering has been engaged by Ravinder Singh to provide a Waste Management Plan for the proposed use and development of a Place of Worship, a Community Centre and an Education Centre at 405-417 Sayers Road in Hoppers Crossing ('subject site').

This report is structured as follows:

- **Section 2** Describes the details of the proposed development;
- **Section 3** Assesses the anticipated waste generation levels from the proposed development;
- **Section 4** Provides commentary on the required bin configurations, on-site bin storage and proposed collection method; and
- **Section 5** Summarises the responsibilities of the development's management.

## 2. Background

The subject site is located at 405-417 Sayers Road in Hoppers Crossing and is comprised of three rectangular lots of land fronting Sayers Road. These three lots provide a total land area of approx. 12,000 sqm. Each of the three land parcels forming the subject sites is currently occupied by single-storey brick dwellings and each lot has two vehicle crossovers off Sayers Road.

Sayers Road at the site frontage is categorised under TRZ2 (Principal Road Network) and includes two traffic lanes and a bicycle lane in each direction within a carriageway that is divided by a landscaped median. At the site frontage, Sayers Road includes a posted speed limit of 60 km/h. A school zone speed limit of 40 km/h applies to this section of Sayers Road on school days between 8-9.30am and 2.30-4pm.

**Figure 1** illustrates the location of the subject site in an aerial view.



**Figure 1: Location of the subject site**

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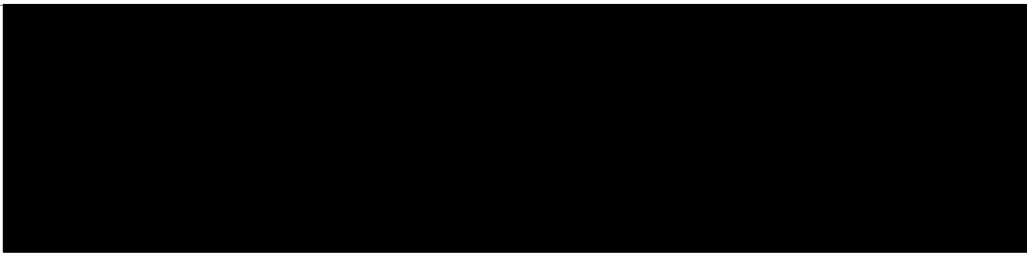
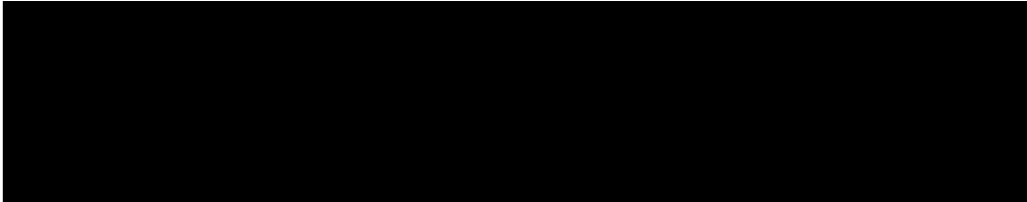
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The current proposal seeks to construct a new Sikh Gurdwara temple building within the site (as the anchor use) along with two other buildings. The specific details of each use proposed within each building of the site are outlined in **Table 1**.

**Table 1: Summary of proposed uses**

Building	Uses	Details	Operating Hours
<b>Building 1</b>	Khalsa Punjabi School	The Khalsa Punjabi School will serve members of the Sikh community and other interested individuals who wish to learn about Punjabi language and Sikh culture. The school will be open to all, with a focus on promoting inclusivity and cultural understanding.	Saturday and Sunday: 9am to 2pm
	Health and Fitness	The health and fitness room will offer a range of exercise and wellness services, such as yoga, Pilates, cardio, and strength training. These services will be provided by qualified instructors with expertise in a variety of fitness disciplines.	Monday to Friday 10am to 5pm
	Multicultural Hall	The multicultural hall will provide space for a range of events, such as cultural festivals, community celebrations, concerts, performances, and events related to community awareness about family violence and local police rules and regulations. The hall will also provide space for senior citizen seminars relating to health, teaching about Australian culture and way of life to international students and new migrants, and other events that promote community engagement and social inclusion.	Monday to Friday 10am to 5pm
<b>Building 2</b>	Sikh Gurdwara Temple Prayer Hall	The temple will serve as a place of worship, community service, and cultural education for members of the Sikh community and other interested individuals. The day-to-day operations of the temple will daily services, including prayer, meditation, and scripture recitation. These services will be open to all and will follow the traditional Sikh format.	Monday to Sunday: 5:30 am to 10 pm

<b>Building 3</b>		
Conference Area	The conference rooms within the community hub will provide space for meetings, seminars, and other events related to community engagement and development.	Monday to Friday 10am to 5pm
Staff Rooms	The staff rooms within the community hub will provide space for staff members to take breaks and have meetings. These rooms will be equipped with basic amenities such as tables, chairs, and a small kitchenette. The rooms will be accessible only to authorized staff members and will not be open to the public.	Monday to Sunday: 6am to 10pm
		

The anticipated distribution of patrons across the different areas is summarised in **Table 2**.

**Table 2: Anticipated patron capacities across buildings**

Building	Weekday Max. Patrons	Weekend Max. Patrons
<b>Building 1</b>	0	150
<b>Building 2</b>	350	500
<b>Building 3</b>	150	0
<b>Total</b>	<b>500</b>	<b>650</b>

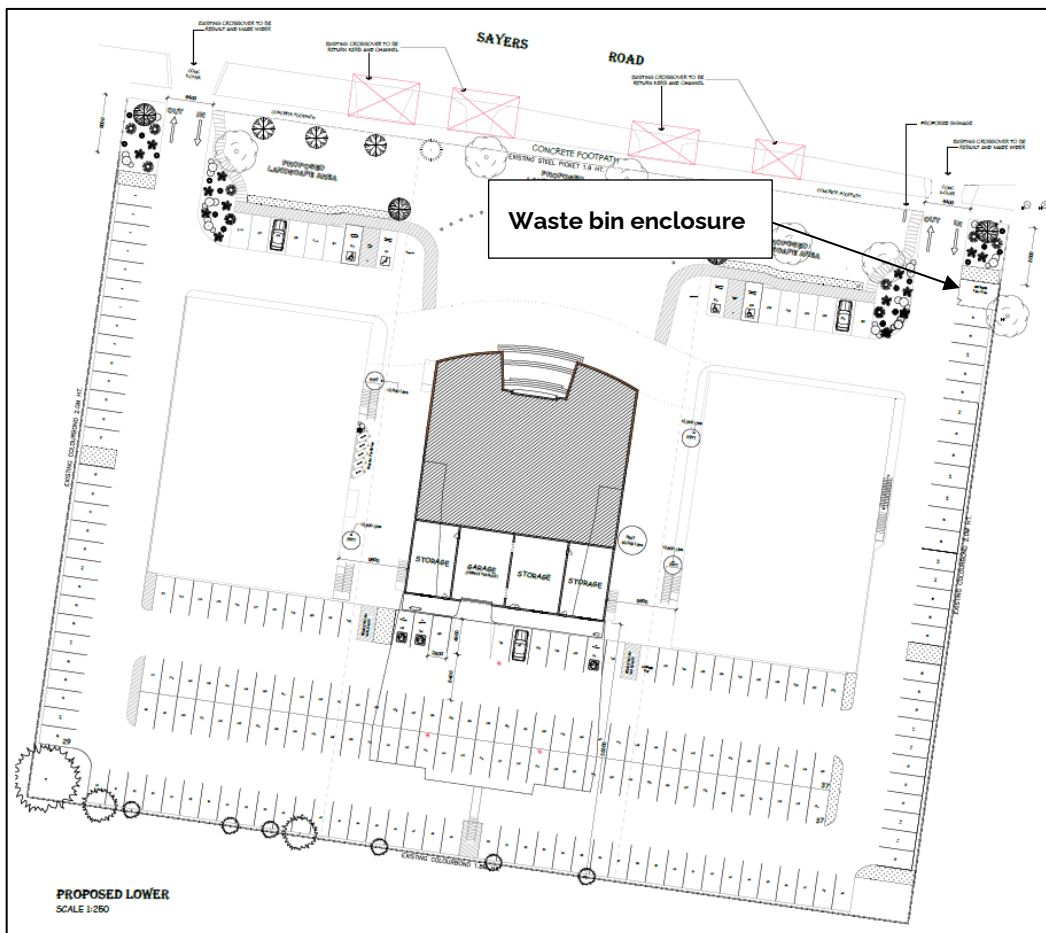


Based on **Table 2**, a maximum of 500 and 650 patrons can be expected on-site at any one time on a given weekday and a weekend day, respectively.

In addition to the above-identified operational details, the proposed development includes the following features:

- Total of 218 car spaces including 4 disability-accessible car spaces.
- 10 bicycle spaces (in the form of 5 two-sided racks)
- Two vehicular access points off Sayers Road (one at the eastern end of the site and the other at the western end).

**Figure 2** shows the proposed site layout plan while **Figure 3** shows the area summary.



**Figure 2: Proposed site layout plan**



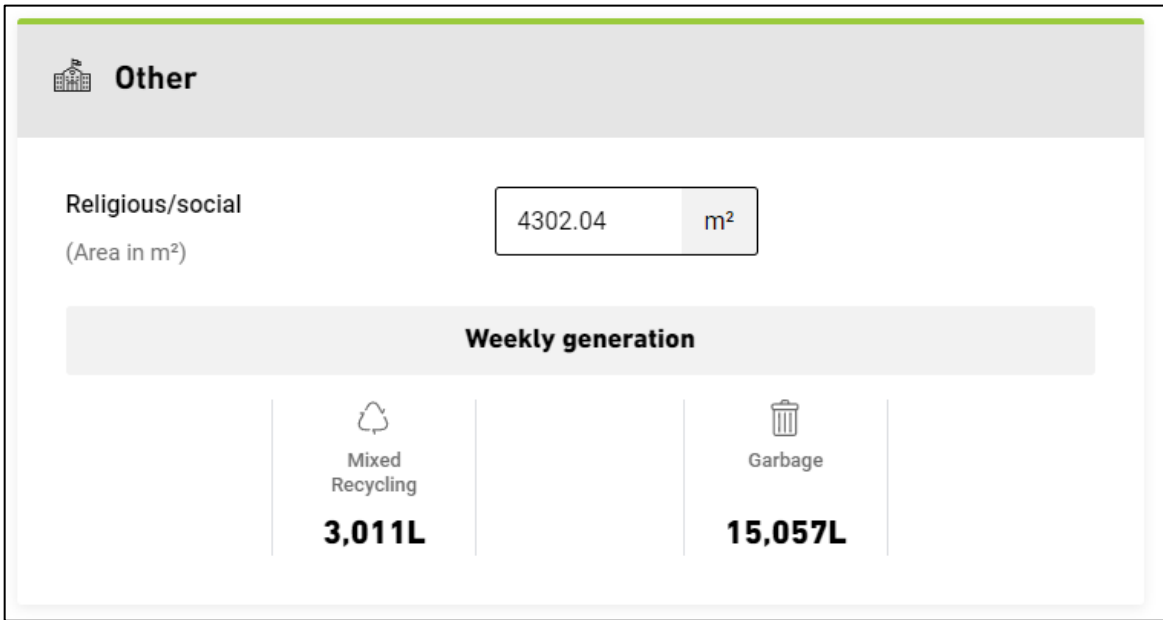
SITE ANALYSIS SUMMARY	
SITE AREA	12004.80 sqm
<b>LOWER</b>	
BUILDING 1 (NO.411)	1497.11 sqm
BUILDING 2 (NO.405)	944.32 sqm
BUILDING 3 (NO.417)	944.32 sqm
TOTAL =	3385.75 sqm
LOWER	3385.75 sqm
<b>UPPER</b>	
BUILDING 2 (NO.405)	995.90 sqm
BUILDING 3 (NO.417)	995.90 sqm
TOTAL =	1991.80 sqm
UPPER	1991.80 sqm
BUILDING SITE COVERAGE	30.67 %

Figure 3: Summary of proposed building areas

### 3. Waste Generation

The waste (i.e., garbage and recycling) levels expected to be generated by the proposed development have been estimated using the Sustainability Victoria's Development Waste and Recycling Generation Rates Calculator (<https://calculators.sustainability.vic.gov.au/mud-waste-management/>). This Calculator tool provides weekly garbage and recycling generation estimates for land uses involving religious/social uses, which was adopted for the proposed development. The net floor area of the development was assumed to be 80% of the gross floor areas of all buildings as outlined in **Figure 3** (the total gross floor area of the development is 5,377.55 sqm – leading to a net floor area estimate of 4,302.04 sqm).

**Figure 4** shows the weekly garbage and recycling estimate obtained from the Calculator tool.



**Figure 4: Estimated weekly garbage and recycling generation levels**

## 4. Waste Storage and Collection

### 4.1 Proposed Bin Configuration

As outlined in **Section 3**, the proposed development is estimated to generate the following garbage and recycling levels per week:

- Garbage – 15,057 L
- Recycling – 3,011 L

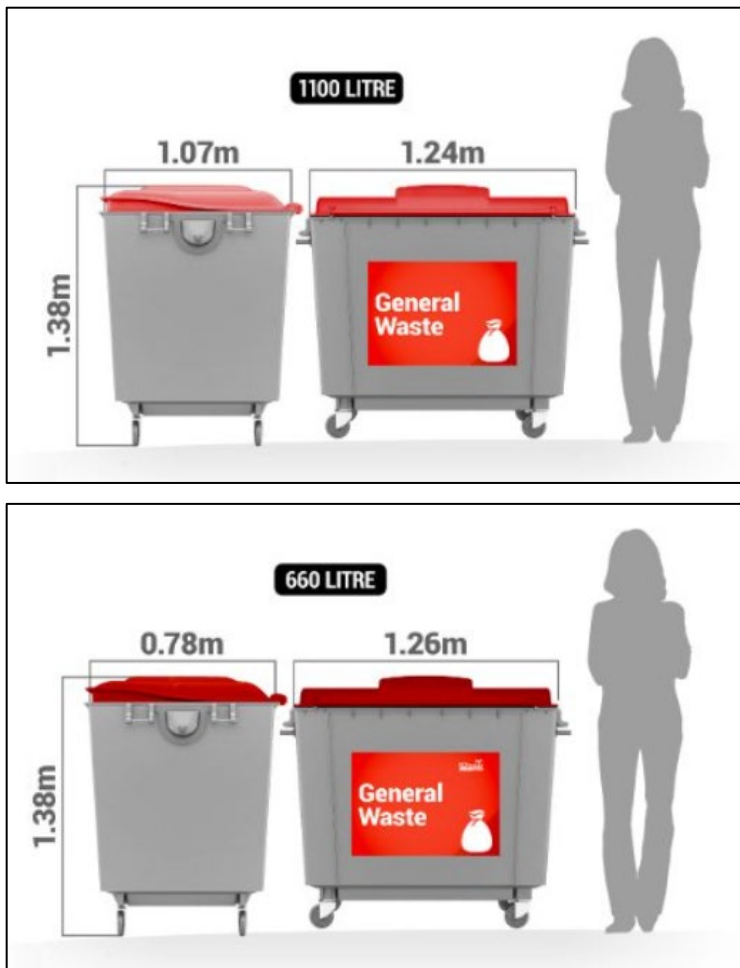
Based on the above weekly generation levels, it is recommended both waste and recycling are collected twice a week. Based on twice-a-week collection, the following maximum waste accumulation levels are relevant:

- Garbage – 7,528.50 L
- Recycling – 1,505.5 L

Based on the above waste generations levels, the following bin configuration is proposed:

- Garbage - 7 x 1,100 L bins (providing a total capacity of 7,700 L), emptied twice a week
- Recycling – 1 x 1,100 L bin + 1 x 660 L bin (providing a total capacity of 1,760 L), emptied twice a week

**Figure 5** shows the sizes of the above-identified bins.



**Figure 5: Standard mobile bin sizes**

(Source: Waster.com.au)

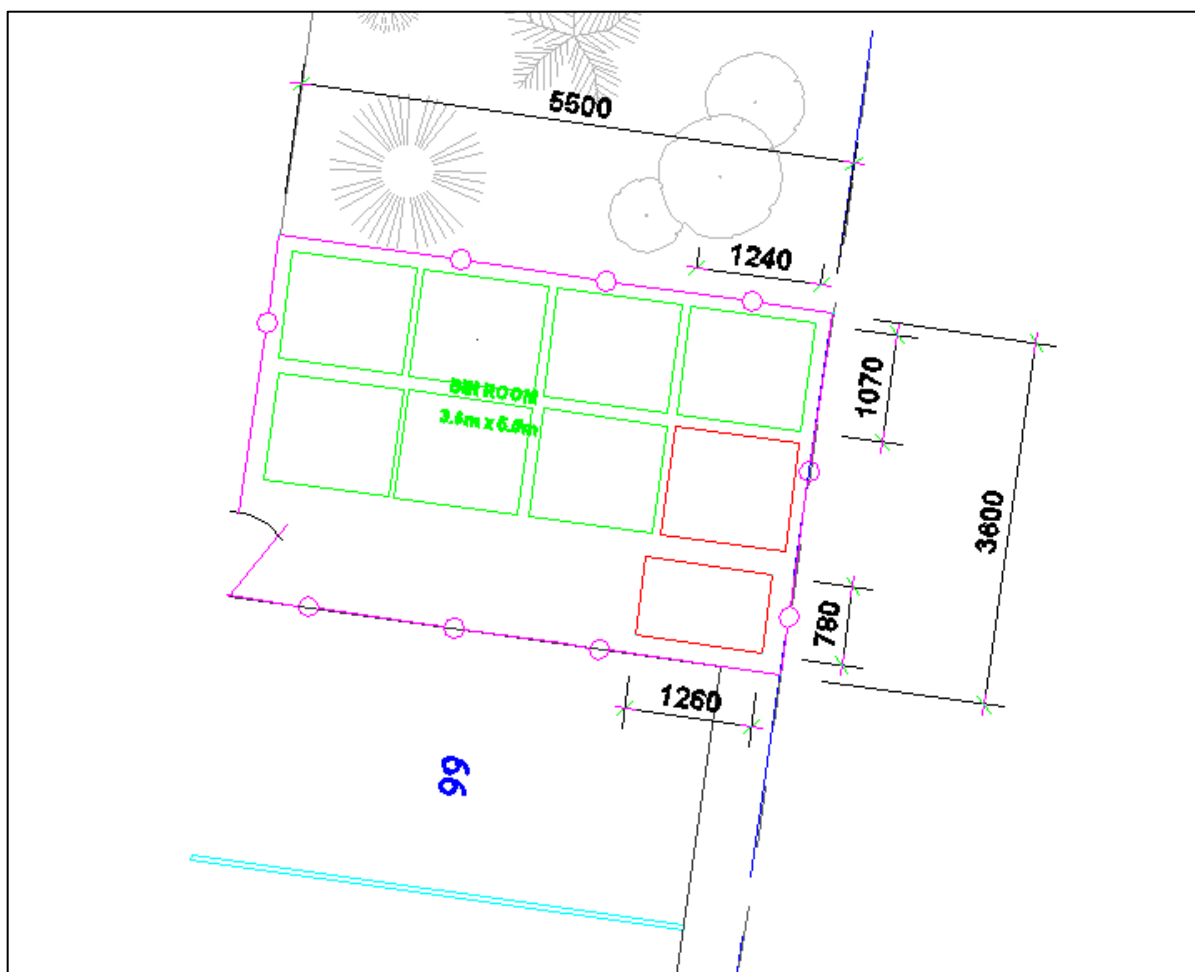
## 4.2 Waste Bin Enclosure

The location of the proposed waste bin enclosure within the car parking area is shown in **Figure 2**. This enclosure is 3.6m wide by 5.5m long. **Figure 6** shows the scaled bin area diagram with garbage bins shown in Green and recycling bins shown in Red (based on the bin dimensions outlined in **Figure 5**) demonstrating how the proposed 9 bins (8 x 1,100 L bins + 1 x 660 L bin) will be accommodated within this enclosure. As can be seen, the enclosure area is sufficient to accommodate all the bins with additional area around each bin for manoeuvring. The door to this enclosure should be constructed at a 1.5m minimum width to enable convenient movements of bins in and out.

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**Figure 6: Scaled bin area diagram**

### 4.3 Bin Collection

All 9 bins associated with garbage and recycling storage should be collected twice weekly by a private waste management contractor. The operator should monitor the ongoing weekly garbage and recycling generation levels from the development and vary the collection frequency as required.

The maximum size of the waste collection vehicle will be an 8.8m long Medium Rigid Vehicle (MRV). **Figure 7** shows the manoeuvrability of this MRV within the site when collecting the bins. As can be seen, an MRV can sufficiently manoeuvre within the site.

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car park while retaining the clearance envelope of any obstructions, to collect the bins at the enclosure and exit the site in forward gear. The waste collection activities should be scheduled to occur outside the peak operational periods of the development (either early mornings or late evenings), to minimise disruptions to the operations of the car park.

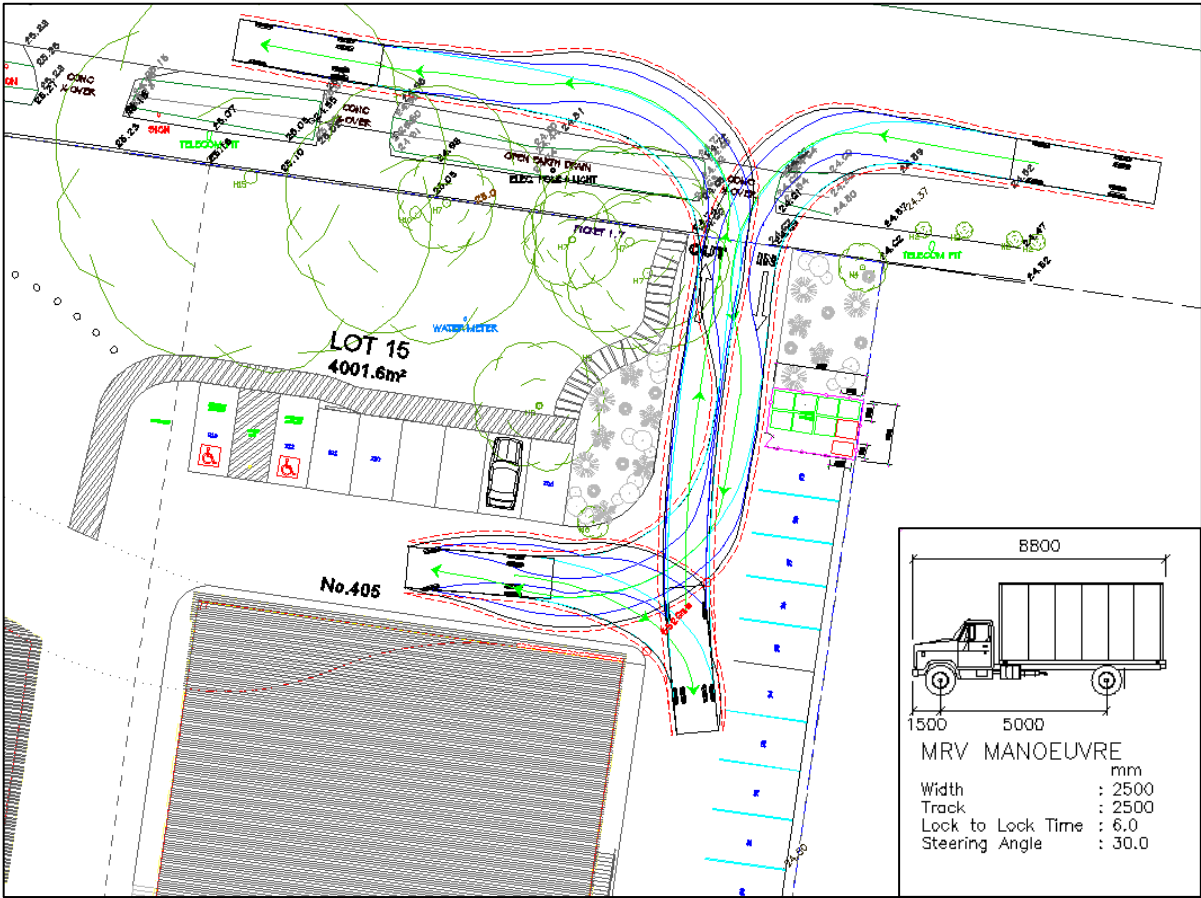


Figure 6: Manoeuvrability of an MRV within the site for waste collection



## 5. Management Responsibilities

### 5.1 Green Waste

The development's management committee should employ a gardener to maintain the landscaped areas. It will be the responsibility of the gardeners to remove any green waste and dispose of them.

### 5.2 Responsibility

The development's management shall be responsible for the following:

- Ordering initial bins.
- Organising twice weekly collection of all bins through a private waste management contractor (noting the largest collection vehicle as an 8.8m medium rigid truck or an equivalent sized vehicle).
- Providing the waste bin enclosure with water taps for cleaning purposes. Alternatively, this service can be organised through a private waste contractor.
- Cleaning and maintaining the bin storage area.

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