

365 Princes Highway, Officer Waste Management Plan



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1 August 2023

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1 INTRODUCTION

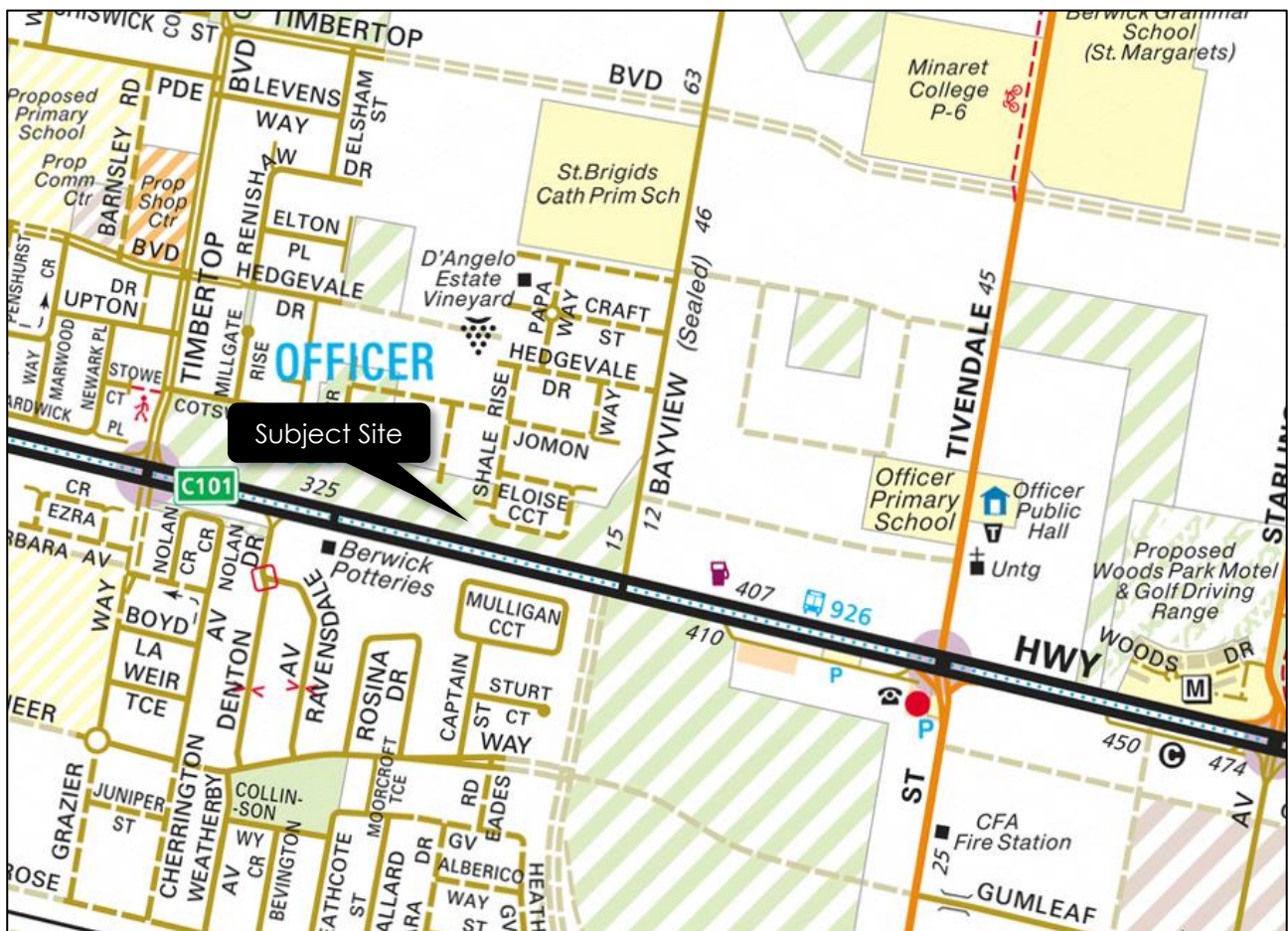
onemilegrid has been requested by Morgan Development Group to prepare a Waste Management Plan for the proposed mixed-use development at 365 Princes Highway, Officer.

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 located on the northern side of Princes Highway, approximately 200 m west of the intersection between Princes Highway and Bayview Road, as shown in Figure 1.

Figure 1 Site Location



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The site has a frontage to Princes Highway along the southern boundary and a frontage to Grace Street along the northern boundary.

The eastern portion of the site is occupied by a kiln, though is not currently operating.

3 DEVELOPMENT PROPOSAL

3.1 General

It is proposed to develop the site for the purposes of a mixed-use development, comprising a restaurant, café, office and the refurbishment of an existing kiln for use as a wine bar.

Vehicle access to the site is provided from separate left-in/left-out crossovers to Princes Highway leading to an undercroft carpark below the office building.

The proposed development yield is summarised below in Table 1.

Table 1 **Table Title**

<i>Component</i>	<i>Area</i>
Office	537 m ²
Café	39 m ²
Restaurant	110 m ²
Kiln / Wine Bar	57 m ²

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 are proposed to be shared between all uses on-site, and will be stored within communal bin storage area located to the north of the lift, fronting Grace Street.

Staff of the café, restaurant and wine bar will be responsible for disposing of waste into the appropriate bins located within the bin storage area.

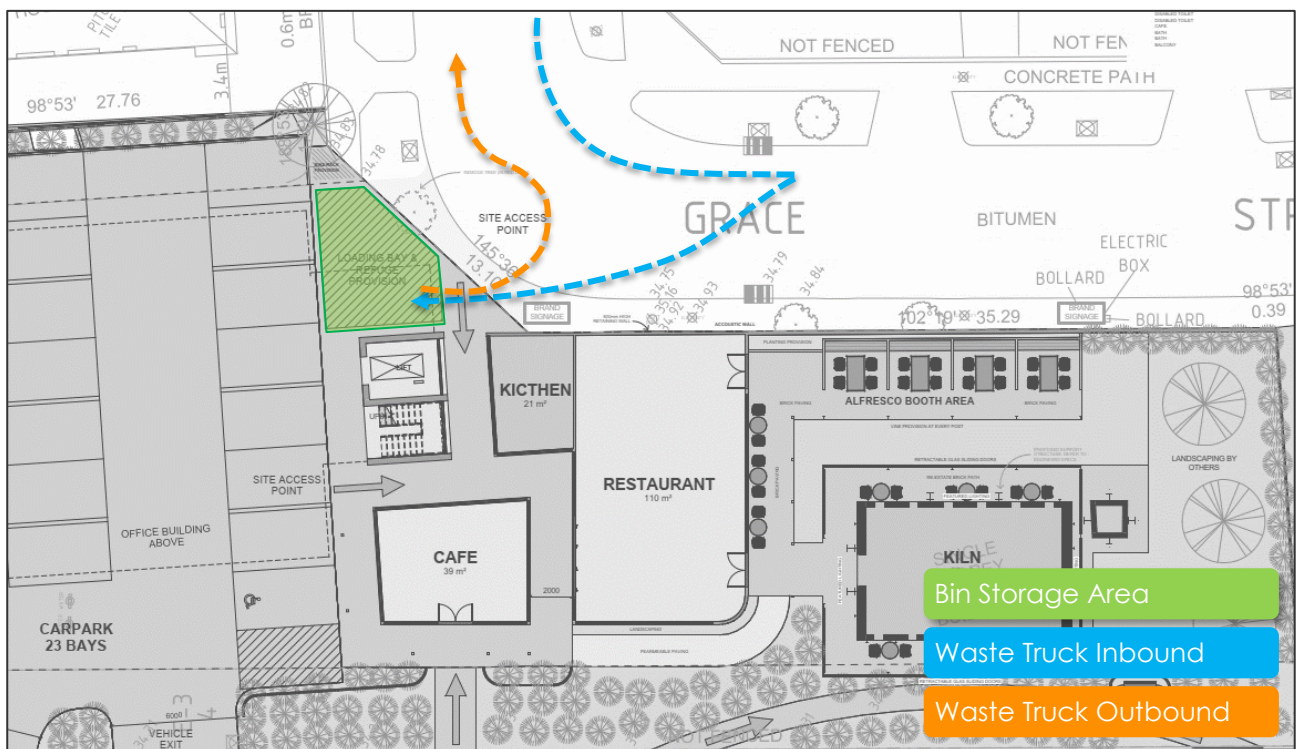
Waste generated from the office use will be collected and transferred to the bin storage area by the office tenants or a third party cleaning contractor engaged by the business operator. The allocated contractor will transfer the waste to the ground floor storage area via the lift.

The waste collection vehicle, a 6.4 m rear-lift waste collection vehicle (mini-loader), will enter the site from Grace Street and prop within the bin storage area, from where the bins will be transferred directly to the waiting truck for emptying. The bins will be returned to their appropriate position following collection.

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

The collection location and expected transfer route is shown in Figure 2.

Figure 2 Bin Storage Area and Collection Details



4 WASTE GENERATION

4.1 Sustainability Victoria Recommended Rates

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 2 Sustainability Victoria Recommended Rates – Commercial

Use	Garbage Rate	Recycling Rate
Restaurant	660L per 100 m ² per day	200L per 100 m ² per day
Café	300L per 100 m ² per day	200L per 100 m ² per day
Office	10L per 100 m ² per day	10L per 100 m ² per day

Sustainability Victoria indicates that approximately 35% of garbage is made of food waste. It is noted that Sustainability Victoria recommends this rate for residential dwellings, however it is expected that the proposed restaurant, café and office uses will generate a similar level of organic waste.

Therefore, the provision of organics waste collection can result in a reduction in garbage generation by 35%.

4.2 EPA New South Wales Generation Survey

Waste generation rates for a range of commercial properties were estimated by the EPA NSW, based on a survey of a range of different businesses in August 2012.

For the kiln / war bar component of the proposed development, the surveyed average garbage and recycling generation rates are shown below.

Table 3 EPA NSW Waste Generation Rates – Litres per 100 m² per day

Land Use	Garbage	Recycling
Hotels, bars, pubs	80	35

4.3 Glass Recycling

It is understood that the City of Cardinia will commence operation of a fourth Glass Recycling bin for residents in the future.

Noting that private collection is proposed for the development, a glass recycling stream will be provided for the uses on-site.

It is generally considered reasonable that 10% of comingled recycling is comprised of glass. Consequently, a 10% reduction in comingled recycling will be applied to the office, restaurant and café components of the proposed development.

In regards to the wine bar, it is expected that a larger percentage of waste will be comprised of glass. For the purposes of this assessment, it is assumed that 30% of recycling will be comprised of glass for the wine bar.

4.4 Expected Waste Generation

Based on the Sustainability Victoria and the EPA NSW waste generation rates, the following weekly waste generation is expected.

Table 4 Expected Waste Generation

<i>Stream</i>	<i>Use</i>	<i>Area</i>	<i>Rate/100 m²/Week</i>	<i>Total Waste/Week</i>
Garbage	Café	39 m ²	1,365 litres	532 litres
	Restaurant	110 m ²	3,003 litres	3303 litres
	Wine Bar	57 m ²	364 litres	207 litres
	Office	537 m ²	32.5 litres	175 litres
	Total Garbage			4,217 litres
Commingled Recycling	Café	39 m ²	1,260 litres	491 litres
	Restaurant	110 m ²	1,260 litres	1386 litres
	Wine Bar	57 m ²	171.5 litres	98 litres
	Office	537 m ²	45 litres	242 litres
	Total Commingled Recycling			2,217 litres
Organics	Café	39 m ²	735 litres	287 litres
	Restaurant	110 m ²	1,617 litres	1779 litres
	Wine Bar	57 m ²	196 litres	112 litres
	Office	537 m ²	17.5 litres	94 litres
	Total Organics			2,272 litres
Glass Recycling	Café	39 m ²	140 litres	55 litres
	Restaurant	110 m ²	140 litres	154 litres
	Wine Bar	57 m ²	73.5 litres	42 litres
	Office	537 m ²	5 litres	27 litres
	Total Glass Recycling			278 litres

4.4.1 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.

E-waste may be taken 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/>

4.4.2 Green Waste

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.

4.4.3 Hard Waste

Hard waste services will also be provided by the private contractor, under the management of the Owners Corporation.

5 BIN REQUIREMENTS

5.1 Bin Provision and Specifications

It is proposed to utilise a private waste contractor, providing weekly waste and recycling collection. Consequently, the following bins will be required for the proposed development.

Table 5 Bin Provision

Component – Stream	Total Waste/Week	Bin Size	Collection Frequency	Bins Required
Garbage	4,217 litres	1,100 litres	Twice Weekly	2 bins
Recycling*	2,217 litres	1,100 litres	Twice Weekly	2 bins
Organics	2,272 litres	240 litres	Twice Weekly	5 bins
Glass	278 litres	360 litres	Weekly	1 bin
Total				12 bins

*The total recycling bin capacity is slightly less than the expected generation (17 litres per week or 8.5 litres per collection), and may require some minor compaction.

Table 6 Bin Specifications

Capacity	Width	Depth	Height	Area
240 litres	0.60m	0.75m	1.10m	0.45m ²
360 litres	0.70m	0.85m	1.10m	0.60m ²
1,100 litres	1.25m	1.10m	1.35m	1.38 m ²

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

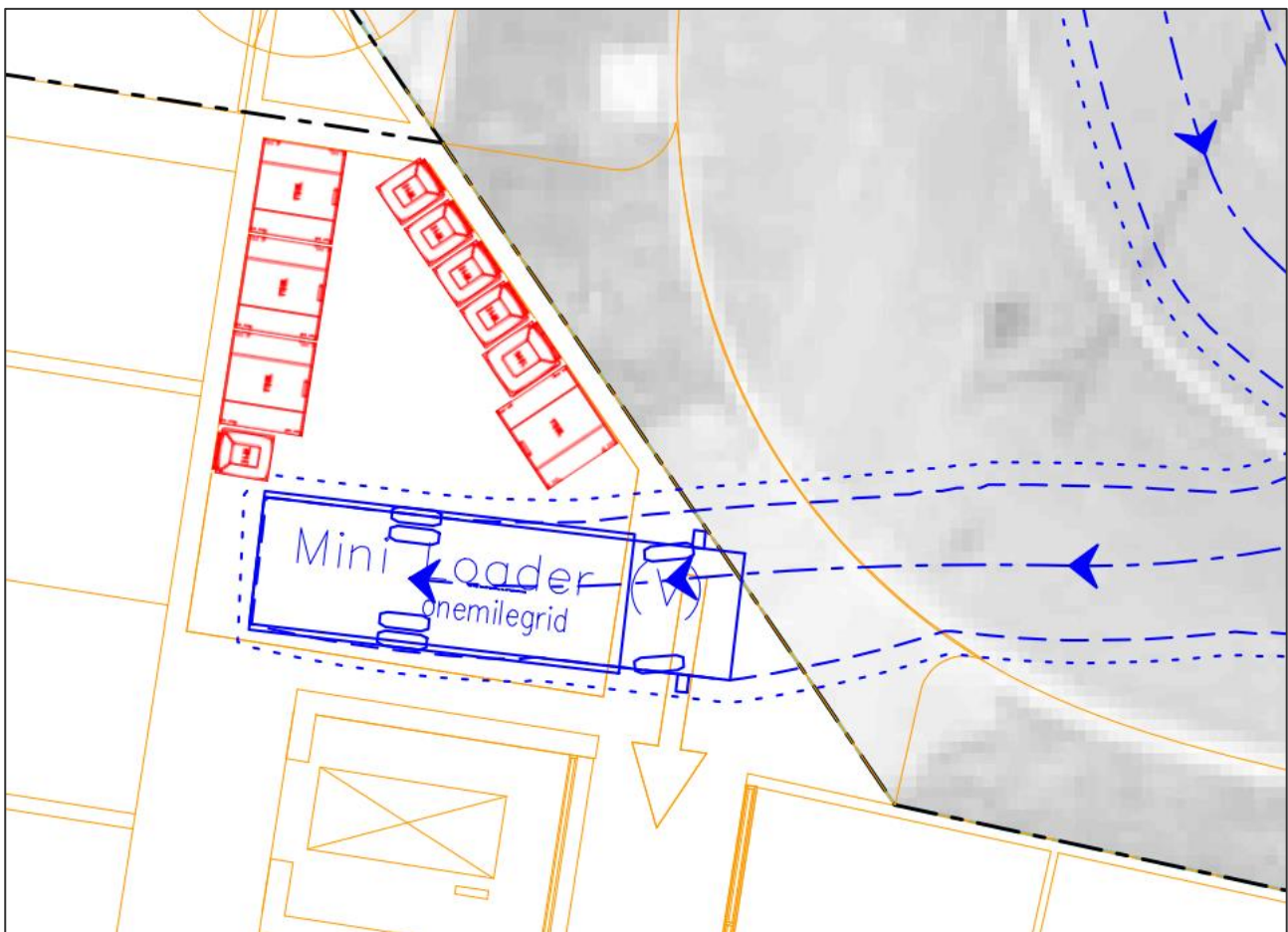
As indicated in Figure 2, it is proposed to provide a bin storage area to the north of the lift which will service all waste generated by the proposed development.

The layout of the bin storage area is shown in Figure 3, which demonstrates that the area is capable of accommodating the required bins, as calculated in Table 5.

Furthermore, the bin storage area is located appropriately for access by staff, and will be secured from the public areas.

The bin storage area shall be ventilated, and shall be cleaned regularly by the operator or waste collection contractor, to minimise odour.

Figure 3 Bin Storage Room Layout



5.3 Bin Collection

Bins will be stored within a dedicated bin storage area on the ground floor of the development fronting Grace Street. The waste collection vehicle, a 6.4 m rear-lift waste collection vehicle (mini-loader), will enter the site from Grace Street and prop within the bin storage area, from where the bins will be transferred directly to the waiting truck for emptying. The bins will be returned to their appropriate position following collection.

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

Each waste stream is to be collected by dedicated trucks and waste streams are not to be collected in one truck. Each waste stream is to be taken to dedicated waste facilities for disposal and processing.

5.4 Bin Cleaning

The Owners Corporation shall ensure that the shared 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 staff.

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.

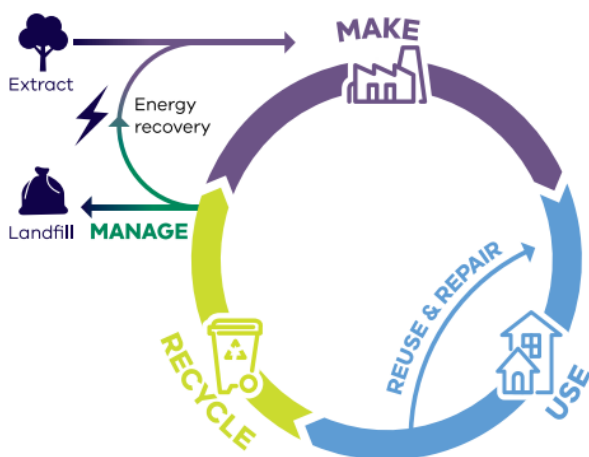
The benefits of reducing waste generation are far reaching and have been identified as significantly important by Council and the Victorian Government.

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 4 Resource Flows in a Circular Economy



In relation to the proposed development, recycling is of key importance, and in this regard, the operator shall encourage 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; and
 - + Recover, treat or contain waste preferentially to;
 - + 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 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 Restaurant Waste Minimisation

Restaurants can do a lot to minimize or reduce waste, by incorporating simple recycling and waste reduction programs and procedures that will eliminate much of the waste otherwise disposed of. These can include the following:

- Avoid over-purchasing. Over-purchasing causes spoilage and waste. Take inventory frequently and adjust orders where necessary;
- Store items in the order you purchase them. Use older items first. Place newly purchased items at the back of the shelves and train employees on the order of use;
- Inspect deliveries. Many deliveries include unusable meats and perishable items which may have opened or spilled during shipment;
- To avoid spoilage, store food tightly and appropriately, eliminating air in containers;
- Use storage containers that can be reused and request that food be delivered in reusable and recyclable containers;
- Use up all of a food product by reviewing your menu; and
- Consider the use of composting for all perishable items instead of discarding them as waste.

6.3 Bin Usage

Tenants will dispose of waste within the appropriate bin, located in the bin storage area. Cardboard boxes should be flattened, and containers rinsed and cleaned prior to disposal in the provided bins.

6.4 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.

6.5 Signage

To avoid contamination between garbage streams, bin lids will be colour coded 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 below.

Figure 5 Example Waste Signage



6.6 Noise Control

To minimise the disturbance to the surrounding residential areas during waste collection, the collection should follow the criteria specified by the EPA, as below:

- Collections occurring more than once a week should be restricted to the hours:
 - + 7:00am to 8:00pm, Monday to Saturday;
 - + 9:00am to 8:00pm, Sunday and Public Holidays;
- Refuse bins should be located at sites that provide minimal annoyance to residential premises;
- Compaction should be carried out while the vehicle is moving;
- Bottles should not be broken up at the collection site;
- Routes which service predominantly residential areas should be altered regularly to reduce early morning disturbances; and
- Noisy verbal communication between operators should be avoided where possible.

6.7 Food Standards Code

Division 2 of the Food Standard Code details requirements for the design and construction of food premises. With regard to garbage and recycling, Section 6 of Division 2 details 3 requirements for the storage of garbage and recyclable matter. A review of these requirements with respect to the proposed café and restaurant waste storage area follows:

(a) adequately contain the volume and type of garbage and recyclable matter on the food premises;

The proposed bin storage area has been designed to accommodate the required number of bins for the volume of garbage and recycling generated by the restaurant and café uses.

(b) enclose the garbage or recyclable matter, if this is necessary to keep pests and animals away from it; and

The proposed bin storage area is secured and will be vermin proof.

(c) are designed and constructed so that they may be easily and effectively cleaned.

The proposed bin storage area will be constructed to ensure effective cleaning.

6.8 Tenant Information

To ensure all 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 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;
- Tenant responsibilities with regard to bin usage, storage, and collection; and
- Tenant responsibilities with regard to litter and waste removal from the common property.

6.9 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 OCCUPATIONAL HEALTH & SAFETY RESPONSIBILITIES

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

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

8 CONTACT INFORMATION

8.1 Council

Cardinia Shire Council

Phone: 1300 787 624 (Customer Service)

Web: www.cardinia.vic.gov.au

Email: mail@cardinia.vic.gov.au

8.2 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/

Corio Waste Management

Services: Private contractor
Phone: 1300 267 4696
Web: www.coriowm.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

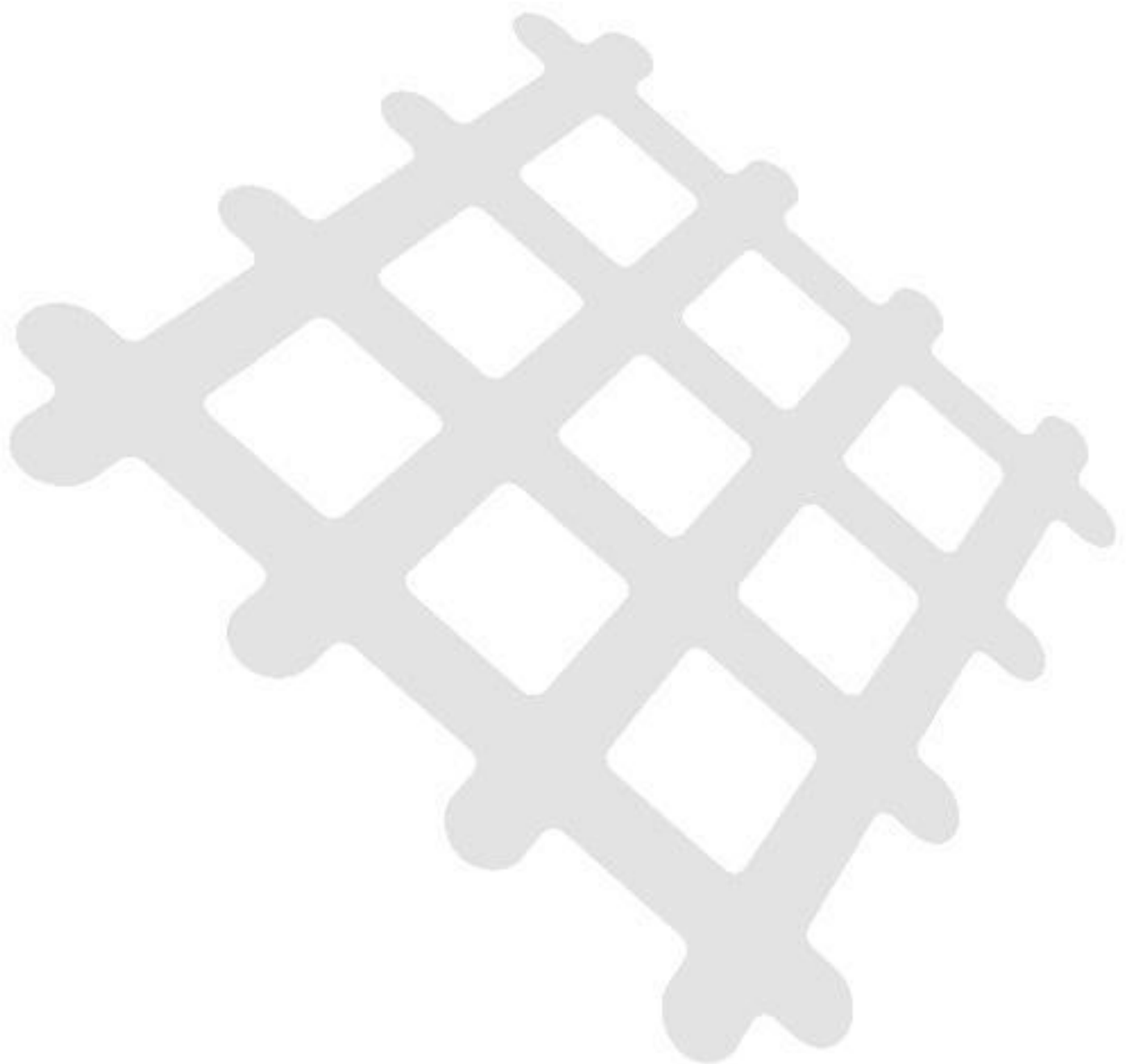
Services: Private contractor
Phone: 1300 550 408
Web: www.wastewise.com.au

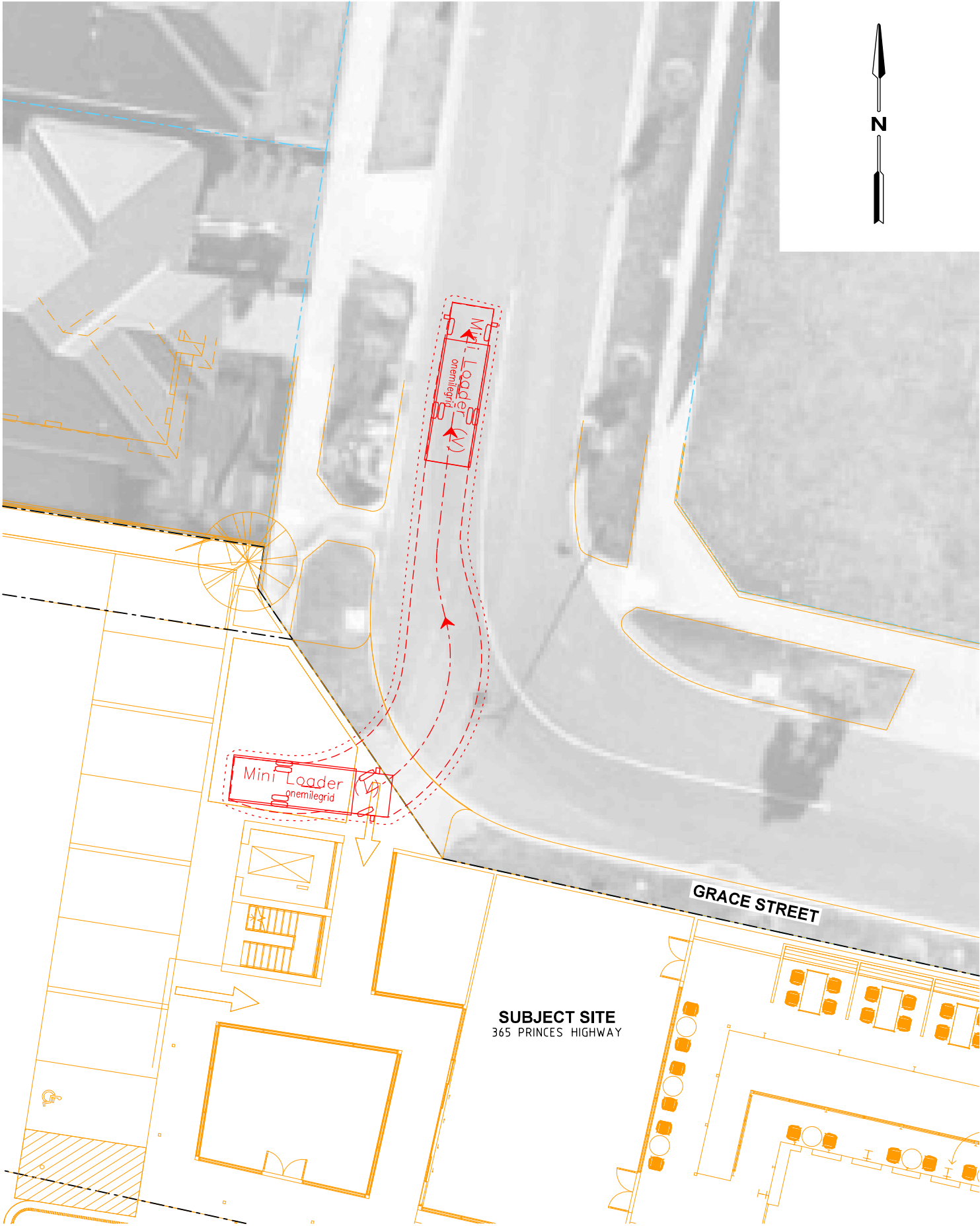
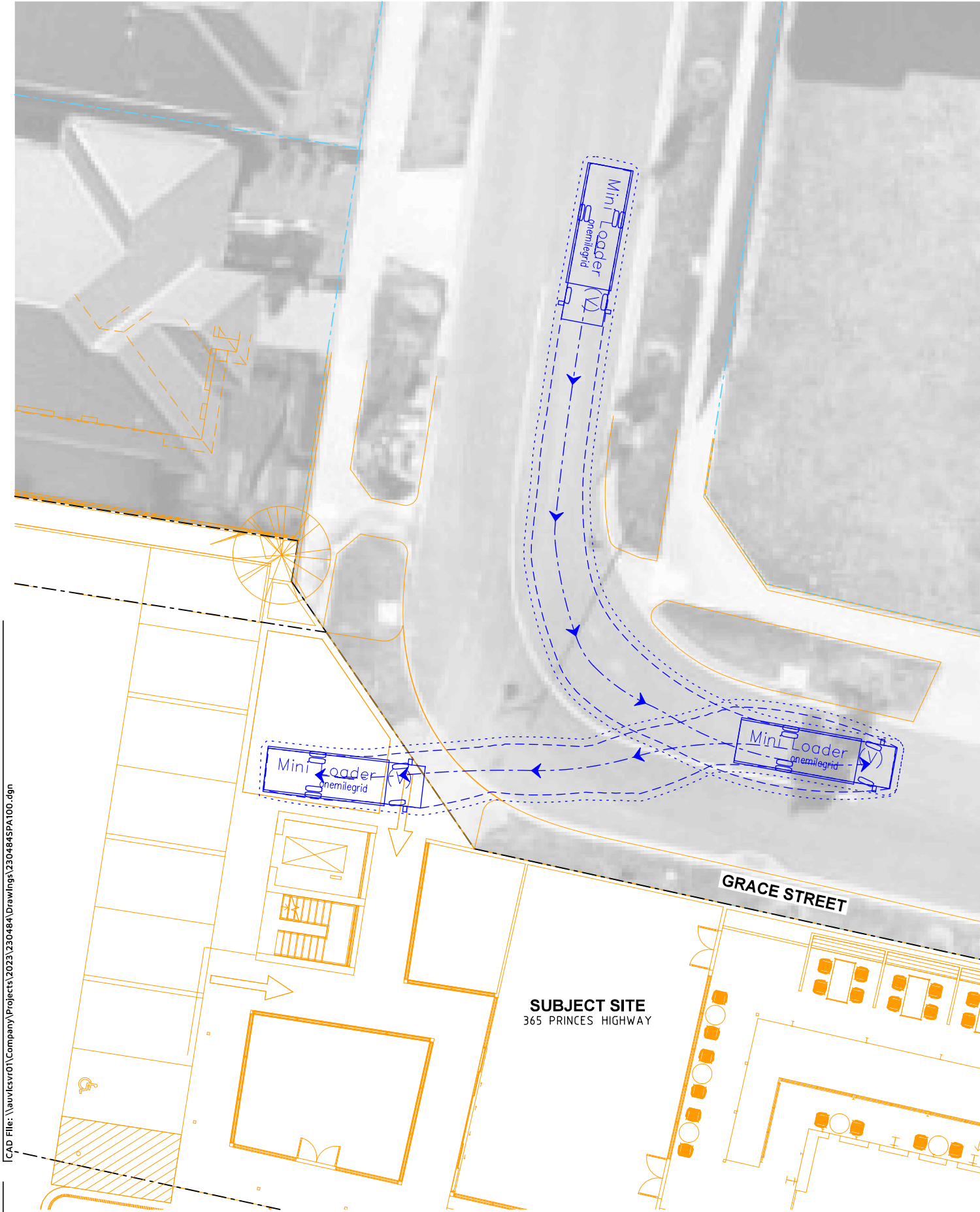
8.3 Others

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

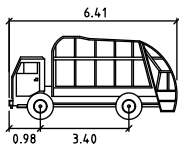
Appendix A Swept Path Diagram





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Date Plotted: 31-07-2023 11:16:33



WASTE MINI LOADER meters
Width : 1.85
Track : 1.85
Lock to Lock Time : 4.9
Steering Angle : 33.6

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

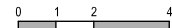
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Aerial Photography
Aerial photography provided by Nearmap



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Scale
1:200 @ A3



Drawing Title
365 PRINCES HIGHWAY, OFFICER
VEHICLE SITE ACCESS
SWEPT PATH ANALYSIS

Designed DA	Approved JM	Melway Ref 214 G3
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Project Number 230484	Drawing Number SPA100	Revision A
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