PROPOSED COMMERCIAL DEVELOPMENT

28-32 SOMERSET STREET, KINGSWOOD

WASTE MANAGEMENT PLAN

PROPOSED COMMERCIAL DEVELOPMENT, 28-32 SOMERSET STREET, KINGSWOOD
Client: Boston Global
Report Reference: 20358W
File Path: C:\Users\jasre\Documents\SALT3\Somerset Road, Kingswood\20358WREP01F01.docx
Monday, November 16, 2020

Document Control

Version:	Prepared By:	Position:	Date:	Reviewed By:	Position:	Date:
D01	Jasreena Kaur	Project Environmental Scientist	9 November 2020	Jo Garretty	Director	9 November 2020
F01	Jasreena Kaur	Project Environmental Scientist	12 November 2020	Jo Garretty	Director	12 November 2020

MELBOURNE Level 3/51 Queen Street, Melbourne VIC 3000
+61 3 9020 4225

SYDNEY Level 17/40 Mount Street, North Sydney NSW 2060
+61 2 8415 9781

HOBART Level 4, 116 Bathurst St Hobart TAS 7000
+61 400 535 634

www.salt3.com.au

TRAFFIC ENGINEERS / WASTE ENGINEERS / TRANSPORT PLANNERS / ROAD SAFETY AUDITORS

EXECUTIVE SUMMARY

SALT has been engaged by Boston Global to prepare a Waste Management Plan (WMP) for a proposed commercial development located at 28-32 Somerset Street, Kingswood.

SALT understands that the proposal involves the development of 140 hotel beds, bar and lounge spaces, a gym, yoga and wellness space, meeting rooms, rooftop bar and dining space as well as a rooftop terrace,

A construction and demolition waste management plan has been enclosed in this report.

Any waste generated once the site is operational, would be stored on-site in the waste room located at the basement 1 level.

Waste generated by the proposed site would be collected by private contractor, with:

- Three 1,100L garbage bins collected three times per week;
- Three 1,100L commingled recycling bins collected three times per week; and
- Seven 240L organics bins collected three times per week;

Waste vehicles would prop safely at the loading dock to perform collections. Vehicle operators would ferry waste bins from the waste room to the collection vehicle and return upon emptying.

In the opinion of SALT the enclosed Waste Management Plan would provide efficient waste management for the proposed development. This report must be read in detail prior to implementation of the waste management strategy.

CONTENTS

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1 INTRODUCTION

SALT has been requested by Boston Global to prepare a Waste Management Plan for a proposed commercial development located at 28-32 Somerset Street, Kingswood.

This Waste Management Plan (WMP) has been prepared based on industry best practice and Penrith City Council *Industrial, Commercial and Mixed-use Waste Management Guidelines,*

In the circumstance that the development plans are amended or new legal requirements are introduced, a revision of the enclosed WMP may be required by the Responsible Authority. The developer would be responsible in engaging with a waste consultant or engineer to prepare the updated report accordingly.

Construction and demolition waste generation rates have been adopted from *The Hills Shire Council Development Control Plan* Appendix A (2012).

Ongoing waste generation rates have been adopted based on commercial waste generation rates enclosed in the Penrith City Council *Industrial, Commercial and Mixed-use Waste Management Guidelines,*

2 INCLUDED IN THIS REPORT

Enclosed is the Waste Management Plan for the proposed development at 28-32 Somerset Street, Kingswood. Included are details regarding:

- Land use;
- Demolition Waste Management Plan;
- Construction Waste Management Plan;
- On-going Waste Management Plan;
- Waste generation;
- Waste systems;
- Bin quantity, size and colour;
- Collection frequency;
- Bin storage area;
- Signage;
- Waste collection;
- Responsibilities;
- Ventilation, washing and vermin-prevention;
- Noise reduction;
- DDA compliance;
- Supplier contact information; and
- Scaled waste management drawings.

3 LAND USE

Planning application number: DA16/0597

Land Zone: Mixed Use

Land use type: Commercial

Number of levels: Six (with 2 additional basement levels)

Commercial Space:

- 140 hotel beds;
- 72.7m^2 bar space;
- 158.5m^2 lounge space;
- 46.3m^2 therapy/gym/spa;
- 21.8m^2 yoga/wellness space;
- 90.7m^2 meeting room;
- 12.6m^2 meeting room;
- 114.7m^2 rooftop bar and dining space; and
- 186.4m^2 rooftop outdoor terrace.

4 DEMOLITION AND CONSTRUCTION WASTE RESPONSIBILITIES

This Waste Management Plan must be adhered to during the demolition, construction and ongoing management of the proposed development.

During site inductions for the construction and demolition phase, all contractors must be made aware of the waste management obligations provided in this plan.

It is the responsibility of the Site Supervisor to ensure waste disposal is adequately tracked in a Waste Data File. Any associated receipt/invoices, waste classification and site validation certificate should be logged within this file.

All entries in the Waste Data File must include the following;

- Time and date;
- Description and size of waste;
- Waste facility used; and
- Vehicle registrations and company name.

Waste Data Files **may** be requested by Penrith City Council during the demolition and construction stages.

5 DEMOLITION WASTE MANAGEMENT PLAN

5.1 ASBESTOS AND OTHER HAZARDOUS WASTE

It is noted that the demolition works may involve asbestos or hazardous waste removal. Asbestos will be removed and disposed of by a licensed asbestos removalist in accordance with the relevant guidelines.

Asbestos and hazardous waste must be removed and disposed of in accordance with the requirements of Work Cover and relevant environmental legislations.

Any disposal of hazardous waste must be recorded in the Waste Data File or the EPA online trackable waste system.

The nearest facility that accepts asbestos waste is the SUEZ's Lucas Heights Resource Recovery Park, NSW 2234.

5.2 DEMOLITION WASTE GENERATION

Based on SALT's review of Penrith City Council *Industrial, Commercial and Mixed-use Waste Management Guidelines and* Penrith City Council *Development Control Plan Section C5* and *Appendix F3* 2014, it is understood that there are currently no construction and demolition generation rates provided by Council.

Therefore, demolition waste generation rates have been adopted from *The Hills Shire Council Development Control Plan* Appendix A (2012)

Based on a desktop assessment of the current site, it is noted that there is an existing one-storey weatherboard house located at 28 Somerset Street, Kingswood. The demolition waste generation rates for a two-bedroom townhouse have been adopted as these are found to be the most suitable rates for the existing site. The roof tile generation rate of the three-bedroom brick house were however adopted in lieu of the two-bedroom townhouse rate given the presence of roof tiles on the existing development. This ensures a conservative estimate in the assessment below.

These generation rates are shown in Table 1.

Table 1 Waste Generation Rates for Demolition Materials

Building Material	Waste Quantity (tonnes per 120m²)
Sandstone	67
Concrete	4
Bricks	3
Timber / Gyprock	18
Steel	0.7
Roof tiles	9

Others	3

The generation volumes of each material have been calculated based on the current building footprint of 202m^2. The estimated demolition waste generation volumes are presented in Table 2.

The assessment below assumes that most of the demolition waste generated will be recycled at the respective local recycling facility. As stated in the ESD report prepared by emf griffiths, the site will divert 80% of the demolition waste generated from landfill as an initiative to reduce waste to landfill and to minimise the site's emissions.

Based on the estimated demolition waste generation quantities, the site will need to divert 170 tonnes out of the total 211.5 tonnes generated. This may need to be revised by the Site Supervisor during the demolition works as other waste streams (i.e. green waste and general waste) would need to be accounted for as well.

Table 2 Estimated Demolition Waste Generation Volumes and Management Options

Type of Waste Generated	Most to Least Favorable			Specify method of onsite reuse, contractor and recycling outlet and /or waste depot to be used
	Reuse Estimate Volume Weight (t)	Recycle Estimate Volume Weight (t)	Disposal Estimate Volume Weight (t)	
Sandstone*	-	135.3	-	Demolish using excavator, crushed on site and delivered to an off-site recycler.
Concrete*	-	8.1	-	Demolish using excavator. crushed on site and delivered to an off-site recycler.
Bricks*	-	6.1	-	Demolish using excavator. crushed on site and delivered to an off-site recycler.
Timber / Gyprock	-	36.4	-	Delivered to the off-site recycler listed below.
Steel	-	1.4		Clean metal (i.e. without presence of other materials) will be delivered to the off-site recycler listed below. Any contaminated metal should be separated to be landfilled.
Roof tiles*	-	18.2	-	Delivered to the off-site recycler listed below.
Other	-	3.1	3.0	Delivered to the off-site recycler listed below.
Glass & Aluminium Windows	-	TBA	-	Aluminium would be removed manually by hand and delivered to the off-site recycler listed below. Glass would be removed and delivered to a suitable glass recycling facility or transfer station (i.e. i.e. SUEZ Seven Hills Resource Recovery Centre, 1300 651 116).
Floor Coverings	TBA	TBA	TBA	Depending on age and condition, materials would be removed and delivered to the off-site recycler listed below. Damaged fittings that cannot be recycled are to be delivered to the nearest landfill as listed below.

Fittings & Fixtures	TBA	TBA	TBA	Depending on age and condition, materials would be removed and delivered to the off-site recycler listed below. Damaged fittings that cannot be recycled are to be delivered to the nearest landfill as listed below.
Green Waste	TBA	TBA	-	Separated and some chipped for landscaping. Delivered to off-site recycler listed below.
General Waste	TBA	TBA	TBA	It is anticipated that garbage will be generated on the subject site during the demolition phase. Any garbage generated shall be sorted and stored onsite in general waste skips or bins, as deemed necessary.
Hazardous / special waste	Should hazardous materials be present within the current developments at the subject site, it must be disposed of in accordance with the appropriate guideline. The SUEZ's Lucas Heights Resource Recovery Park currently accepts asbestos, on the condition that a 24 hour notice is provided.			

*Excavated material is to be reused on-site as fill subject to a Virgin Excavated Natural Material (VENM) assessment. Any unused clean concrete (without the presence of metal or other materials), clay bricks, asphalt (ripped and profiled) can be recycled at SUEZ Seven Hills Resource Recovery Centre, 1300 651 116.

5.3 DEMOLITION WASTE STORAGE AND COLLECTION

Demolition material generated during the development of the site will be recycled where possible. Recyclable material will be sorted and stored onsite in separate skips.

On-site training and inductions would be conducted to ensure staff are informed about the implemented waste management procedures.

All materials would be delivered to the appropriate landfill and resource recovery centres as listed below.

The principal off-site recycler that can be used for this project is:

- SUEZ Seven Hills Resource Recovery Centre, 1300 651 116

The principal licensed landfill sites that can be used for this project are:

- SUEZ Seven Hills Resource Recovery Centre, 1300 651 116

Demolition waste will be sorted and stored on-site in skips.

Note: the capacities of the following centres in accepting and recycling the specified materials may differ during the demolition stage of the site hence it is recommended that they are contacted prior to transfers of waste to the site. Waste skips should be provided for the following:

- 1 or more general waste skips (Masonry products which include plasterboard, treated timber, residual waste and dust) to be delivered to SUEZ Seven Hills Resource Recovery Centre, 1300 651 116;
- 1 recycling skip for clean metal and aluminium to be delivered to SUEZ Seven Hills Resource Recovery Centre, 1300 651 116;
- 1 recycling skip for glass to be delivered to SUEZ's Ryde Resource Recovery Centre, 1300 651 116;
- 1 recycling skip per material type, for clean tiles, fittings and fixtures and floor coverings subject to approval by the recycler to be delivered to SUEZ Seven Hills Resource Recovery Centre, 1300 651 116;
- 1 organics waste skip for any VENM that is not reused on site, garden vegetation and untreated timber to be delivered to SUEZ's Lucas Heights Resource Recovery Park, NSW 2234.

Figure 1 shows the proposed storage area for demolition waste. Demolition waste shall not be stored along footpaths, public reserves and street gutters or in areas that would lead to contamination of stormwater and waterways.

Figure 1 Proposed Demolition Waste Storage Area

6 CONSTRUCTION WASTE MANAGEMENT PLAN

6.1 CONSTRUCTION WASTE GENERATION

As discussed in section 4.1 above, construction waste generation rates have also been adopted from *The Hills Shire Council Development Control Plan* Appendix A (2012) due to the lack of rates in Penrith City Council waste management guidelines and other relevant documentation.

Waste generation quantities for construction materials are shown in Table 1. The construction waste generation rates for blocks of flats (per 1000m^2) have been adopted as these are found to be the most suitable rates for the proposed use of the subject site. These generation rates are shown in Table 1.

Table 3 Estimate Waste Generation Rates for Construction Materials

Building Material	Waste Quantity (tonnes per 1000m^2)
Timber	0.70
Concrete	6.70
Bricks	3.20
Gyprock	1.30
Sand/Soil	28.70
Metal	1.30
Other	0.60

The total gross floor area of the proposed development is 5618.20m^2.

It is estimated that all building materials presented in Table 4 will be used on each floor, thus construction waste quantities are the product of the estimated waste generation rates presented in Table 3 and the gross floor area

Estimated waste quantity volumes and management strategies for construction works are presented in Table 4.

The assessment below assumes that most of the construction waste generated will be recycled at the respective local recycling facility. As stated in the ESD report prepared by emf griffiths, the site will divert 80% of the construction waste generated from landfill as an initiative to reduce waste to landfill and to minimise the site's emissions.

Based on the estimated demolition waste generation quantities, the site will need to divert 191.02 tonnes out of the total 238.8 tonnes generated. This may need to be revised by the Site Supervisor during the construction works as other waste streams (i.e. general waste) would need to be accounted for as well.

Table 4 Estimated Construction Waste Generation Volumes and Management Options

Type of Waste Generated	Most to Least Favorable			Specify method of onsite reuse, contractor and recycling outlet and /or waste depot to be used
	Reuse Estimate Volume Weight (t)	Recycle Estimate Volume Weight (t)	Disposal Estimate Volume Weight (t)	
Timber	-	3.9	-	Delivered to the off-site recycler listed below. Chip remainder may be used in landscaping.
Concrete	18.82	18.82	-	To be used as hardstand during construction, then as base under pavements. Any unused concrete would be returned to batch plant for re-use.
Bricks	-	18.0	-	Clean and reuse lime mortar bricks for footings. Delivered to the off-site recycler listed below. Noted: it should not be mixed with other materials from construction and demolition waste and reinforced concrete.
Gyprock	-	-	7.3	Disposed of in a designated general waste skip. Should asbestos be present, the waste must be removed and disposed of in accordance with the requirements of Work Cover.
Sand/Soil	-	161.2	-	Delivered to the off-site recycler listed below.
Metal	-	7.3	-	Clean metal (i.e. without presence of other materials) will be delivered to the off-site recycler listed below. Any contaminated metal should be separated to be landfilled.
General waste (including residual waste and dust)	-	TBA	TBA	Disposed into a general waste skip.
Other	-	-	3.4	Sorted accordingly based on recycling potential of each material

6.2 CONSTRUCTION WASTE STORAGE AND COLLECTION

Construction waste material generated during the construction of the proposed development will be recycled where possible. Recyclable material will be sorted and stored onsite in an appropriately labelled skip.

It is anticipated that garbage will be generated on the subject site during the construction phase. Any garbage generated shall be sorted and store onsite in waste skips.

Construction waste will be sorted and stored on-site in skips.

Note: the capacities of the following centres in accepting and recycling the specified materials may differ upon the time of construction hence it is recommended that they are contacted prior to transfers of waste to the site. Waste skips should be provided for the following:

- 1 or more general waste skips for products including sand and soil not classified as VENM, gyprock, treated timber, residual waste and dust, to be delivered to SUEZ Seven Hills Resource Recovery Centre, 1300 651 116;
- Recycling skips with one skip per material type for bricks, sandstone and concrete to be delivered to SUEZ Seven Hills Resource Recovery Centre, 1300 651 116;
- 1 recycling skip for clean metal to be delivered to SUEZ Seven Hills Resource Recovery Centre, 1300 651 116;
- 1 organics waste skip for untreated timber and VENM that is not reused on site including garden vegetation and untreated timber, to be delivered to SUEZ's Lucas Heights Resource Recovery Park, NSW 2234;
- Additional recycling skips, as required for paper & cardboard, glass, plastics and others to be delivered to SUEZ Seven Hills Resource Recovery Centre, 1300 651 116 or a suitable recycling facility.

Waste skips will be enclosed within waste bays. Waste bays will be lined with sediment fencing or shade cloth. Waste bays would be located in the same area as the demolition stockpiles, as shown in Figure 1.

Construction waste shall not be stored along footpaths, public reserves and street gutters or in areas that would lead to contamination of stormwater and waterways.

7 ONGOING WASTE MANAGEMENT PLAN

7.1 WASTE GENERATION

Commercial waste generation rates are shown in Table 5. Calculations are based on 7 days per week operation for all uses.

Generation rates have been adopted based on commercial waste generation rates enclosed in the Penrith City Council *Industrial, Commercial and Mixed-use Waste Management Guidelines*.

Restaurant waste generation rates have been adopted for the rooftop bar and dining space.

It is understood that the rooftop terrace space would be used as a general standing room and will provide furniture for seating. Licensed club generation rates have been adopted for this space to ensure a conservative waste generation estimate in the assessment below.

Licensed club waste generation rates have also been adopted for the bar and lounge spaces.

Gym generation rates have been adopted for the therapy/gym/spa and yoga/wellness spaces. Office generation rates have been adopted for the medical consult and meeting rooms.

Waste generation rates for organics generated within the rooftop bar and dining space have been calculated based on data enclosed within the NSW EPA *Reducing Business Waste – Cafés and restaurants* . This report states that the waste generated by restaurants and cafes has a general food waste composition of 62%. Therefore, this 62% generation rate have been applied to the residual waste generation rate to derive the organics waste generation rate in the following waste generation assessment.

The NSW EPA *Industry fact sheet for Pubs and Bars* 2012 states that pubs and bars typically have a food waste composition of 27% in their waste bins. This rate has therefore been applied to the following assessment as well.

It should be noted that the residual waste generation rate in the assessment below has been reduced accordingly based on the organics waste composition applied to each type of use.

The hotel, gym, office and rooftop terrace spaces are anticipated to generate minimal volumes of organics waste which would be considered negligible compared to the total volumes of organics generated by the other spaces. These volumes have therefore been excluded from the following assessment.

Any common spaces to the hotel areas, including the lobby and reception have not been included in these calculations as any waste generated in these areas is generated in service of the hotel areas and therefore incorporated into the below rates.

Table 5 Waste Generation Rates

Use	Residual Waste (L/100m²/week)	Commingled Recycling (L/100m²/week)	Organics (L/.100m²/week)
Hotel	35	35	N/A
Restaurant	1755	1400	2865
Licensed Club	245	350	105

Table 6 Waste Generation Assessment

Use	Area/No. of units	Waste Per Week		
		Residual Waste	Recycling	Organics
Hotel	140	4,900L	4,900L	N/A
Office	38.5m²	27L	27L	
Gym	68.1m²	48L	48L	
Restaurant	114.7m²	2,014L	1,606L	3,289L
Licensed Club	231.2m²	591L	809L	219L
Licensed Club (Rooftop)	186.4m²	653L	653L	N/A
Total Waste Generated per Week		**8,233L**	**8,043L**	**3,505L**

7.2 WASTE SYSTEMS

Waste would be sorted on-site by staff and cleaners as appropriate into the following streams:

- Residual Waste (General Waste);
- Commingled Recycling;
- Organics;
- Large Cardboard; and
- Hard Waste

7.2.1 BIN STATIONS

It is recommended that bin stations are provided throughout the public spaces.

Each bin station should be equipped with one bin for each waste stream. This would encourage the user to make a conscious decision before depositing their waste product into a specific bin and encourage appropriate segregation especially when bins are placed within an area open to public view.

An example bin station with vertical signage is shown in Figure 1. The vertical signage is recommended to be implemented at each bin station to educate the users on the appropriate separation methods. This would allow for maximum diversion of waste from landfill and recovery of the respective waste streams to be achieved.

Figure 1 Example Bin Station with vertical signage

7.2.2 RESIDUAL WASTE (GENERAL WASTE)

The commercial spaces would be furnished with plastic lined bins for the temporary holding of garbage waste, to have the following minimum cumulative capacities:

- Hotel – 5L
- Rooftop bar and dining space – 170L
- Bar and lounge space – 90L
- Rooftop outdoor space – 110L

These capacities are based on the transfer of waste to the waste room occurring three times per day for the rooftop bar and dining space and once per day for other uses.

Staff/cleaners would dispose of waste from these bins directly into the appropriate 1,100L bin provided within the basement 1 level waste room, accessed via the lift (refer to Appendix 1).

Garbage is to be disposed of bagged.

7.2.3 COMMINGLED RECYCLING

The commercial spaces would be furnished with unlined bins for the temporary holding of recyclables, to have the following minimum cumulative capacities:

- Hotel – 5L
- Rooftop bar and dining space – 105L
- Bar and lounge space – 40L
- Rooftop outdoor space – 110L

These capacities are based on the transfer of waste to the bin room occurring three times per day for the rooftop bar and dining space and once per day for other uses.

Staff/cleaners would dispose of recyclables from these bins directly into the appropriate 1,100L bin provided within the basement 1 level waste room, accessed via the lift (refer to Appendix 1).

Commingled recycling would be disposed of loosely.

7.2.4 ORGANICS

The spaces classified as restaurant and licensed club would be furnished with unlined bins for the temporary holding of organics, to have the following minimum cumulative capacities:

- Rooftop bar and dining space – 170L
- Bar and lounge space – 40L

These capacities are based on the transfer of waste to the bin room occurring three times per day for the rooftop bar and dining space and once per day for the bar and lounge spaces.

Staff/cleaners would dispose of organics from these bins directly into the appropriate 240L bin provided within the basement 1 level waste room, accessed via the lift (refer to Appendix 1).

Organics would be disposed of loosely.

7.2.5 HARD WASTE

It is anticipated that the hard waste disposal volume of the site would be minimal thus a storage space within the waste room waste not deemed necessary.

Hard waste storage and collections will be coordinated by building management. Hard waste will be temporarily stored within the respective commercial space or within an appropriate storage area prior to when collections occur.

Building management would arrange for hard waste collections to occur via a private contractor, as required.

7.3 BIN QUANTITY, SIZE AND COLLECTION FREQUENCY

The bin quantity, size and the frequency of collection are shown below in Table 7 and Table 8.

Three waste collections per week is recommended given the volume and nature of the waste generated in the restaurant and bar spaces.

It is noted that only 5 X 240L organics bins would be required to accommodate the total volume estimated to be generated on-site. The two additional 240L bins can therefore be utilised for storage of any additional organics waste generated throughout the site.

Table 7 Bin Size and Collection Frequency

Waste Stream	Collections per Week	Bin Size	No. Bins	Weekly Capacity	Weekly Volume
Garbage	3	1,100L	3	9,900L	8,233L
Commingled Recycling	3	1,100L	3	9,900L	8,043L
Organics	3	240L	7	5,040L	3,505L

Table 8 Typical Waste Bin Dimensions

Capacity (L)	Width (mm)	Depth (mm)	Height (mm)	Area (m^2)
1,100	1240	1070	1330	1.33
240	585	730	1060	0.43

7.4 BIN COLOUR AND SUPPLIER

All bins would be provided by private supplier. The below bin colours are specified by Australian Standard AS4123.7-2006, however due the private nature of the collection, these are only recommendations and are not mandatory:

- Garbage (general waste) shall have red lids with dark green or black body; and
- Recycle shall have yellow lids with dark green or black body.

Note, private contractors often supply bins for collection.

7.5 WASTE STORAGE AREA

Table 9 demonstrates the cumulative space requirements and provision of waste areas in the proposed development.

Based on Council's waste guidelines, it is noted that a 1.8 metre unobstructed clearance zone and doorway width is required to permit access and manouevrability. Given that the largest bin size proposed is a 1,100L bin, it is noted that the maximum width of the bin would typically be 1,240mm. Therefore, a clearance of 1,500mm would be sufficient to allow for safe access and adequate space for manoeuvrability as it would provide an excess width of 260mm. The bins can also be conveniently transferred via the handle along the shorter end of the bin which would provide additional clearance space within the aisle.

The height clearance provided within the bin room is 3.80m².

Please refer to scaled drawing shown in Appendix 1.

Table 9 Waste Area Space Requirements

Stream	Space Required (excluding circulation)	Space Provided
General Waste	3.99m²	
Commingled Recycling	3.99m²	40.00m²
Organics	2.58m²	
TOTAL	**10.56m²**	**40.00m²**

Waste management would be overseen by building management.

7.6 WASTE COLLECTION

Commercial waste would be collected by private contractor as follows:

- Three 1,100L garbage bins collected three times per week;
- Three 1,100L commingled recycling bins collected three times per week; and
- Seven 240L organics bins collected three times per week.

Hard waste would be collected as required.

All waste bins would be stored on-site in the bin room provided at basement 1 level.

Waste collections would occur between 7am to 8pm on Mondays to Saturdays and between 9am to 8pm on Sundays and public holidays, in accordance with EPA Victoria *Noise Control Guidelines* 2008. This is to ensure minimal noise impacts to the neighboring properties.

Based on the prelodgment advice received from Council, it is understood that the waste collection vehicles proposed to service the site are to be designed in accordance with the vehicle specifications outlined in section 3.5 of the *Industrial, Commercial and Mixed-use waste management guidelines*. Given the spatial constraints and limitations of the site's layout, it is not able to accommodate collections by a 10.5m long waste collection vehicle on-site. Additionally, it would not be spatially efficient to provide the space required for this truck to manoeuvre within and access the basement level solely for waste collections.

Capital City Waste Services Pty Ltd has advised SALT that they are able to service the subject site with a small rigid vehicle. Therefore, waste collections would occur via a 6.4m small rigid waste collection vehicle which has an operating height of 2.10m. This height clearance allows the waste truck to access and operate within the basement 1 level. An unobstructed height clearance of 3.50m above the basement entry ramp is also provided to ensure safe access by the collection vehicle.

Additionally, a 2m unobstructed zone has been provided to the rear of the loading dock to allow for bin movement and lifting operations.

Hard waste collections would be performed by a utility vehicle or AustRoads B99 design vehicle equivalent.

Waste collection vehicles would enter the subject site via a forward motion from Hargrave Street.

Waste collection vehicles would prop safely at the basement 1 level loading dock.

Vehicle operators would ferry waste bins from the waste room and return upon emptying.

Waste collection vehicles would exit the loading dock in a forwards direction, exiting the subject site onto Hargrave Street.

The structural engineering report attached to the development application submission confirms that all infrastructure used for the ingress and egress movements of the waste collection vehicle can support the gross weight of a 6.4m small rigid collection vehicle.

Building management would ensure that waste vehicle operators are able to access the waste room.

7.7 RESPONSIBILITIES

Building management would be responsible for overseeing waste management within the development. Responsibilities would include:

- Provide commercial staff members and cleaners with a waste management handbook which would include information on bin storage areas, transfer paths and waste management methods onsite;
- Inspecting waste stores;
- Reviewing contamination within bins;
- Investigating incidents of inappropriate waste storage (or aggregation).

Building management would ensure anyone found responsible for inappropriate waste disposal would be appropriately educated and made aware of correct waste disposal techniques.

It is recommended that building management conducts a waste audit if waste is found to be inappropriately deposited by users or if the bin capacities need to be reviewed.

7.8 SIGNAGE

Waste storage areas and bins would be clearly marked and signed with the industry standard signage approved by NSW EPA, or equivalent, as illustrated in Figure 2. Illustrative graphics will form a minimum of 50% of the signage area.

Figure 2 NSW EPA Signage

Signage is to be posted in the appropriate waste storage area (as listed) indicating the following:

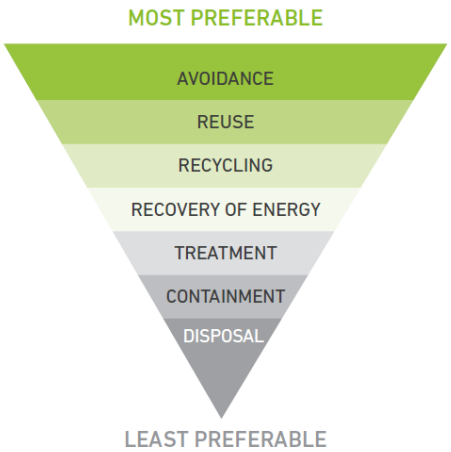
- Garbage is to be placed wholly within the garbage bin provided;
- Only recyclable materials accepted by the private contractor is to be placed within the commercial recycling bins;
- Only organics material accepted by the private contractor is to be placed within the organics bins and
- The area is to be kept tidy;

7.9 SUSTAINABILITY ACTION PLAN AND INITIATIVES

The importance of restructuring the institutional waste management methods in developments is becoming more apparent as we experience the adverse impacts of increasing waste volumes and declining recycling rates. Developments such as the proposed subject site can contribute towards the prevention and reduction of nationwide waste generation volumes as well as to promote a local circular economy system.

Building management should encourage users by demonstrating a commitment towards waste avoidance and minimisation initiatives. The waste hierarchy as detailed in the *Environmental Protection Act* 1970 should be observed in order of preference (refer to Figure 3).

Figure 3 Waste Hierarchy



In addition to the waste management strategy detailed in the enclosed report, building management can establish landfill diversion and recycling targets and conduct periodic waste audits to monitor contamination levels in recycling and organics bins. The results of the audit could be shared with commercial tenants and employees to encourage them to continue or to improve their waste separation efforts. The audit may also be beneficial from a cost perspective as it would inform building management of opportunities to reduce bin numbers or collection frequencies.

Commercial staff members should be inducted on on-site waste management practices and on the development's sustainability action plan via the provision of a handbook or in-person training, as deemed necessary. The commercial tenants and staff members should be encouraged to minimise single use packaging and promote re-use by providing opportunities to consumers to utilise their own reusable containers or bags.

7.10 WASTE AREA DESIGN REQUIREMENTS

7.10.1 CLEARANCE AND MATERIAL DESIGN

The following design aspects will be incorporated within the waste room design to permit a safe and efficient waste management strategy and collection service;

- The room will allow for 200mm between bins to allow adequate manoeuvraibility;
- An unobstructed clearance zone of 1,800mm would be provided between stored bins and at the entrance;
- The waste room will be equipped with dual door access with a minimum width of 1,800mm and this would be accessed by a 1,800mm wide corridor (at minimum);
- The room will be fully enclosed and walled;
- The floor will be waterproofed, non-slip and sealed in accordance with the Building Code of Australia (BCA) to permit use of washing facilities;
- A minimum height clearance of 2,700mm will be provided in the waste room, in accordance with BCA. This is currently met with the 3,800mm clearance provided.

All other design aspects in regards to drainage are listed in section 7.10.3 below.

7.10.2 VENTILATION

Ventilation would be provided in accordance with Australian Standard AS1668.

The waste room will be equipped with tight fitting doors and impervious flooring. Any openings within the waste room will be fitted with vermin-proof mesh.

7.10.3 LITTER MANAGEMENT, WASHING AND STORMWATER POLLUTION PREVENTION

An appropriately drained wash down area would be provided within the bin room in which each bin is to be washed regularly by building management. The following will be provided within the bin wash area to ensure all waste is contained and safely discharged of:

- A centralised hose cock and mixing valve;
- Discharge point to a litter trap and grease trap;
- Central drainage point connected to sewer; and
- Graded flooring.

Alternatively, a third-party bin washing service can be engaged to perform this service. Bin washing suppliers must retain all waste water to within their washing apparatus so as to not impact on the drainage provisions of the site.

Building management and cleaners would be responsible in ensuring the following to prevent or minimise the dispersion of litter throughout the site:

- Prevent overfilling of bins by ensuring bin lids are closed at all times;
- Require waste contractor to remove any spillage that may occur during waste collections; and
- Ensure anyone found responsible for inappropriate waste disposal or dumping would be appropriately educated and made aware of correct waste disposal techniques.

7.10.4 NOISE REDUCTION

All waste areas would meet EPA, BCA and AS2107 acoustic requirements as appropriate within operational hours assigned to minimise acoustic impact on surrounding premises.

Waste collection timings in accordance with EPA Victoria *Noise Control Guidelines* 2008 have been stipulated in the waste collection section above.

Waste contractors should also abide by the following regulations to ensure minimal noise impacts to the neighboring properties:

- Compaction only to be carried while on the move;
- Bottles should not be broken up at the point of collection
- Routes that service entirely residential areas should be altered to reduce early morning disturbances; and
- Noisy verbal communication between operators should be avoided where possible.

7.11 DDA COMPLIANCE

All waste areas to be accessed by commercial staff would comply with AS1428.1:2009.

8 RISK AND HAZARD ANALYSIS

Table 10 shows the potential risks, severity and suggested control methods that could be considered to avoid the risks from occurring during waste collections.

Note that this is a preliminary risk assessment and does not replace the need for the building management and collection contractors to complete their respective OHS assessment for waste collections.

The information provided below have been adopted from WorkSafe Victoria *Non-Hazardous Waste and Recyclable Materials* (2003). The severity of each risk has been determined based on the risk rating table enclosed in Department of the Environment *Environmental Management Plan Guidelines* 2014.

Table 10 Potential risks and control methods during waste collection

Area	Risk	Severity	Suggested controls
Waste collection	Incidents during waste collection vehicle ingress or egress movements	Low	Vehicle operators would be trained in ensuring the following ▪ Tailgate is closed after clearing waste area ▪ Move vehicle slowly when tailgate or body is raised ▪ Clear waste from tailgate seal and from rear of machine before depature from the subject site ▪ Ensure tailgate is locked after unloading operation Vehicle operators should not exit the vehicle body unless engine is switched off, ignition key is removed, safety prop is in position and the vehicle body is well ventilated. Regular safety checks and inspection of vehicles should be conducted.
	Incidents during manual handling of bins	High	Vehicle should meet relevant Australian Design Rules. Ensure that vehicles with low bowl height are used to avoid lifting of bins above shoulder height. Vehicle operator should be clear of the equipment before activation of packing or tipping controls.
	Slip and trip hazards in moving into and out of the vehicle	Medium	Maintain sufficient and frequent communication between driver and runner. The hose should not be used as handholds when mounting or dismounting.
	Slips and trips while transporting bins	Low	As the loading dock is at the same grade with that of the waste storage area, there are no hazards presented from the presence of slopes or steps. The loading dock, car park and waste room would also be well lit at all times to ensure good visibility to staff/vehicle operators. However, to ensure that any other potential risks are mitigated, frequent communication should be maintained between the driver and runner and the runner should only transfer one bin at a time.
Surrounding traffic	Conflict with other vehicle operators and commercial tenants/cleaners within the car park during collection	Medium	Ensure that collection is to occur only at off-peak hours. The collection area should also be well-lit to allow for better visibility of oncoming traffic and pedestrians.
Waste bins	Type of wastes handled – risk associated in contact with unknown hazardous substances or sharp objects	Medium	Commercial tenants and cleaners should be educated on safe disposal of hazardous substances and sharp objects. Waste vehicle operators should be trained and informed on safe handling of unknown substances. Operators could be provided with PPE to avoid infections and to assist in handling of waste bins.
Waste Bins	Overflowing bins affecting the transport of bins to the waste collection vehicle or presenting as a trip hazard.	Low	The recommended number of bins enclosed in this WMP provides a larger capacity than the volume generated for all waste streams hence there would be a low likelihood of this occurring.

9 SUPPLIER CONTACT INFORMATION

Table 11 provides a list of equipment specified by this waste management plan.

Below is a complimentary listing of contractors and equipment suppliers. You are not obligated to procure goods/services from these companies. This is not, nor is it intended to be, a complete list of available suppliers.

SALT does not warrant (or make representations for) the goods/services provided by these suppliers.

Table 11 High Level Purchasing Schedule

Item	Quantity	Supplier	Notes
1,100L Bins	6	Private Supplier*	3 x 1,100L garbage bins 3 x 1,100L commingled recycling bins
240L Bins	7		7 x 240L organics bins
*Private waste collection contractors often supply their own bins for collection.			

9.1 EQUIPMENT SUPPLIERS

9.1.1 BIN SUPPLIER

- Sulo MGB Australia (wheelie bin) – 1300 364 388
- Method Recycling (bin stations) – 0477 630 220 / 0412 001 686
- Source Separation System (wheelie bin and bin stations) – 1300 739 913

9.1.2 ORGANICS BIN BIO-FILTER

The bio bin-filter may be purchased for odour and vermin prevention purposes.

- Smart Biz Oz – 02 9160 7833 (NSW)

9.2 DEMOLITION AND CONSTRUCTION WASTE COLLECTORS

The principal off-site **recycler** and landfill site that can be used for this project is:

- SUEZ Seven Hills Resource Recovery Centre, 29 Powers Rd, Seven Hills NSW 2147 – 1300 651 116
- SUEZ's Ryde Resource Recovery Centre, 145 Wicks Road, North Ryde NSW 2113 – 1300 651 116

An additional **landfill** site that can be used for this project is:

- SUEZ's Lucas Heights Resource Recovery Park, Little Forest Road, Lucas Heights NSW 2234 – 13 13 35

9.3 ONGOING WASTE COLLECTORS

9.3.1 GARBAGE, RECYCLING AND ORGANICS

- Capital City Waste Services – 02 9599 9999
- JJ Richards –1300 971 325
- SUEZ Environment – 13 13 35
- VISY Waste Management – 03 9369 7447
- Veolia Environmental Services – 132 955

9.4 BIN WASHING SERVICES

- Bin2Clean – 0400 383 848/ 0433 038 222
- myBins – 1300 692 467

10 PURPOSE AND LIMITATIONS

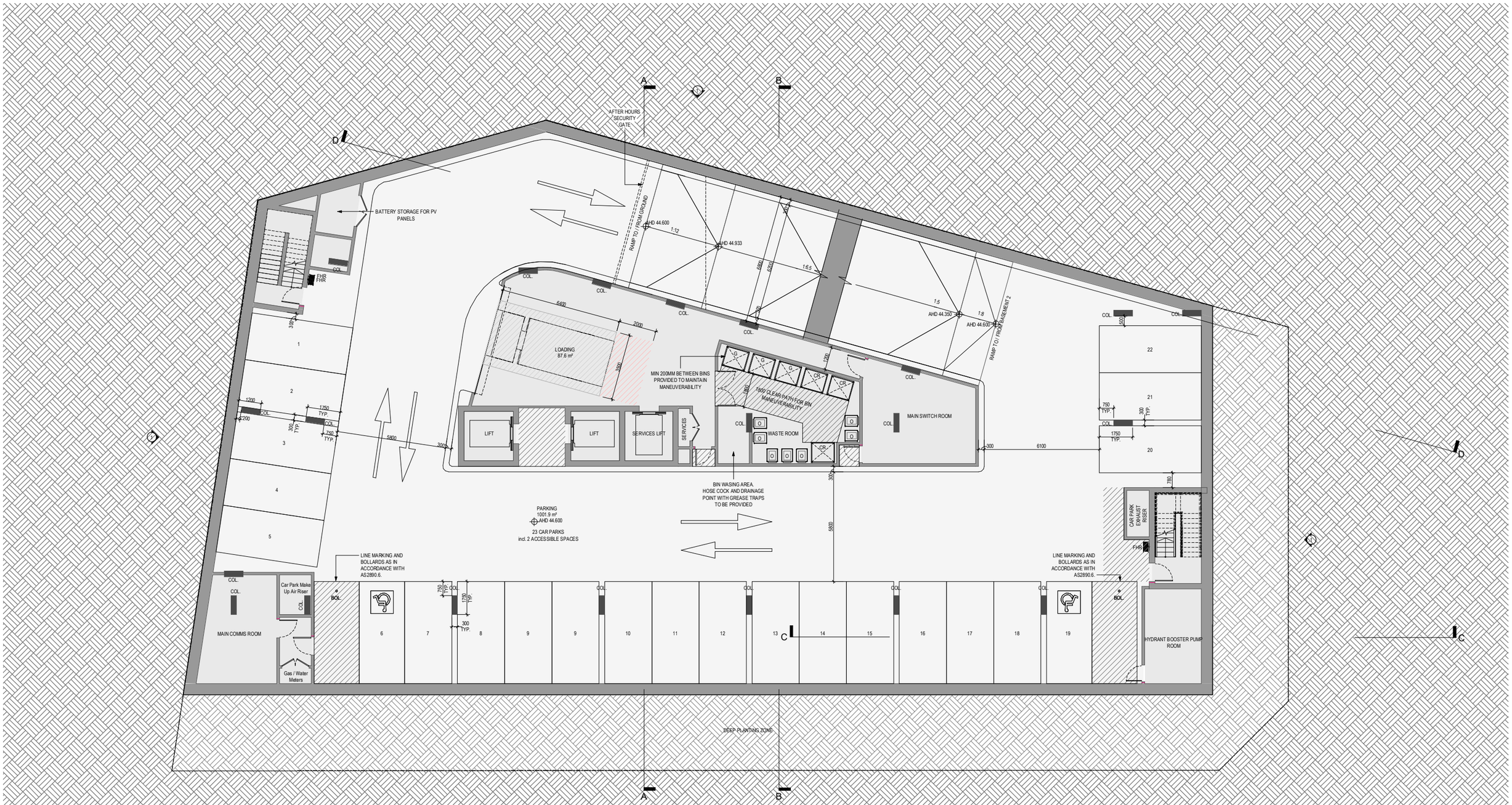
This Waste Management Plan has been prepared to form a part of the development application. The report is prepared to:

- Demonstrate that an effective waste management system is compatible with the design of the development. An effective waste management system comprises of a system that is hygienic, clean, tidy, minimises waste being landfilled and maximises recycling and resource recovery;
- Ensure stakeholders are well informed of the design, roles and responsibilities required to implement the system;
- Provide supporting scaled drawings to confirm that the final design and construction is compliant with the report;
- Define the relevant stakeholders involved in ensuring the implementation of the waste management system; and
- Ensure tenants are not disadvantaged in access to recycling and other sustainable waste management options.

The following should be noted regarding the enclosed information:

- The waste generation volumes provided are estimates based on the best available waste generation rates. The actual waste volumes generated on-site may differ slightly from that estimated as it would depend on the occupancy rate of the development; and
- The report should be updated if the development plans are amended or if new legal requirements are introduced.

APPENDIX 1 DESIGN DRAWINGS



TOWN PLANNING

Revisions				
-	16.11.20	Town Planning	HB	

Abbreviations:

BOL	BOLLARD	ST	STORE
BR1	BIKE RACK	ERV	ENERGY RECOVERY VENTILATOR
COL	COLUMN TO ENGINEERS DETAILS	TPZ	TREE PROTECTION ZONE
COMMS	COMMUNICATIONS BOARD REFER TO CONSULTANTS DRAWINGS	TEL	TELECOMMUNICATIONS BOX
DP	DOWNPIPES	W	WINDOW
ELEC	ELECTRICAL METERS REFER TO CONSULTANTS DRAWINGS	PP	POWER POLE
F.E.	FIRE EXTINGUISHER	XO	EXISTING CROSSOVER
FHR	FIRE HOSE REEL	BOH	BACK OF HOUSE
T	TERRACE	DCP	DEVELOPMENT CONTROL PLAN
PV	PHOTOVOLTAIC PANEL		

Project: **28-32 SOMERSET STREET, KINGSWOOD**
28-32 SOMERSET STREET, KINGSWOOD

Drawing: **Basement 1**

Project No.: **220027**

Date: **16.11.2020**

Author: **HB**

Scale: @ A1 **1 : 100**

Drawing No.: **TP01.02** -

rothelowman
Brisbane, Melbourne, Sydney
www.rothelowman.com.au

APPENDIX 2 REFERENCE DOCUMENTATION FOR ORGANICS WASTE GENERATION RATES

Reducing business waste – Cafés and restaurants

Serve great food with green benefits

Businesses in NSW could recover an additional 140,529 tonnes of food waste or prevent 281 million meals from going to landfill each year[1].

Food waste fills over 60% of the bin of an average café or restaurant, with paper and cardboard occupying another 18%[2]. That means about 80% of the bin contents could be recycled or recovered instead of going to landfill.

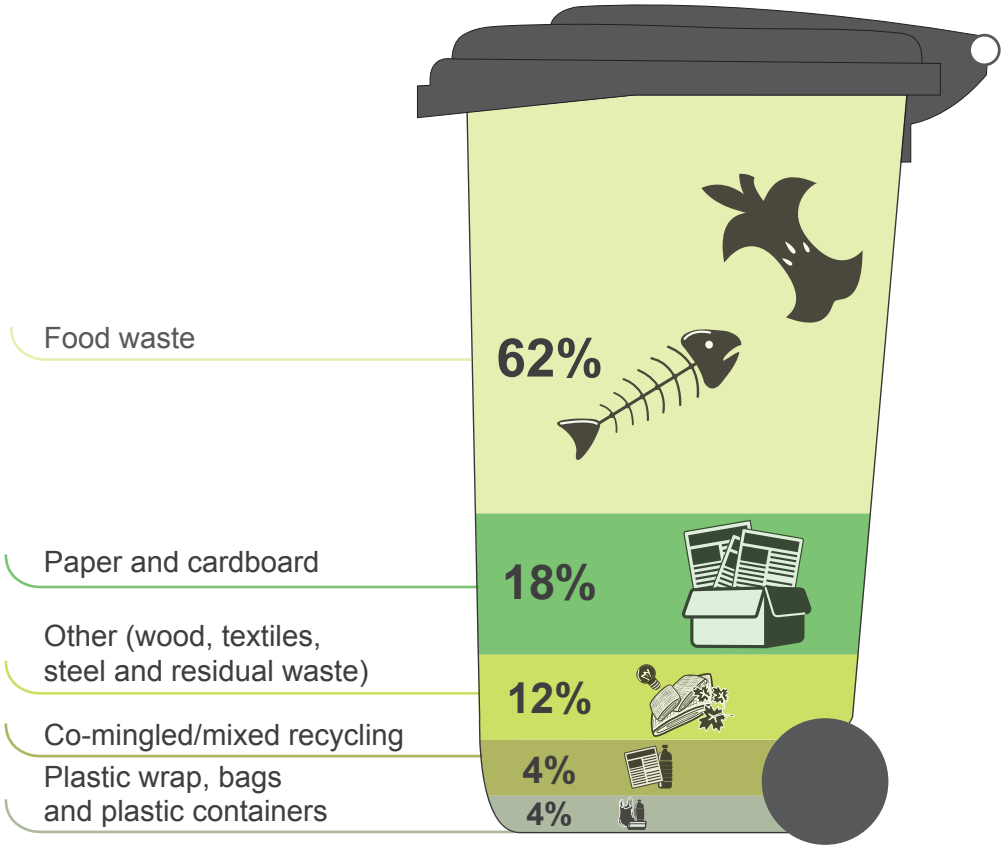
Seventy-five per cent of cafés, restaurants and accommodation businesses agree that reducing waste and increasing recycling is part of being a sustainable and ethical business[3].

Fifty-three per cent of businesses agree that efficient waste and recycling gives them a competitive edge[3].

Quick fact

Each year a typical café or restaurant generates up to 17.5m^3 of waste per employee, or 1.7m^3 of waste for every 1m^2 of floor space[2].

Contents of a typical waste bin in a café or restaurant



Typical waste profile of a cafe or restaurant (% weight of waste generated)[2]

Want to save on waste?

Join 20,000 businesses already recycling more with the EPA's Bin Trim Program. Get free advice and support to waste less and recycle more. Get up to $50,000 back on recycling equipment. Find a Bin Trim assessor online.

What you can do

Avoid – how can you do it?

- Declutter and organise your storage spaces. Label and date food as it comes in.
- Avoid overloading the fridge or freezer to ensure food stays fresh.
- Use airtight containers or vacuum packing to keep prepared food fresh for longer.
- Check your stock regularly and purchase only what you need.
- Buy local and seasonal products – they are fresher and cheaper.
- Order smaller quantities of fresh produce more frequently to save on storage space and minimise spoilage.
- Order meat and fish cut to specifications to reduce preparation time and minimise food waste.
- Request less packaging on goods.
- Move to paperless electronic ordering systems.
- Explore ways of using the same ingredients for different dishes.
- Employ 'nose to tail' cooking methods for meats, fruits, vegetables and herbs to avoid wastage.
- Be creative by using leftover ingredients and offcuts in 'daily specials' and other menu items.
- Offer portion size options, so customers leave less on their plates and have space for dessert.
- Offer garnishes and side orders by request.
- Offer customers take away containers for their leftovers.
- Love Food Hate Waste has easy-to-follow advice on how to reduce your business food waste.

Reduce – how can you improve on it?

- If you are licensed, buy spirits in large bottles that can be used with a dispensing system.
- Rotate stock – first-in first-out.
- Check the temperatures and seals on fridges and freezers regularly to keep food fresher for longer. Maintain correct temperatures: fridge 3–4°C and freezer less than minus 18°C.
- Consult the Environmental Health Officer at your local council or the NSW Food Authority for advice on food storage techniques and how to avoid spoilage and maintain food-safe conditions.

Reuse – how can you use it again?

- Ask suppliers to deliver stock in reusable crates that can be returned to your suppliers.
- Buy post-mix drinks in reusable containers such as kegs and plastic drums.
- Use refillable sugar and condiment dispensers, and reusable cutlery, tableware and food storage containers.

Donate – how can someone else benefit from it?

- If you have surplus, edible food you can donate it to a food distribution charity. These charities will collect the food from your business and distribute it to those in need.

Coffs Harbour restaurant reduces waste by 130,000 kg

Hello Sawtell managed to reduce its waste to landfill by over 130,000 kg per year through the EPA's Bin Trim Program. The restaurant worked with Handybin Waste Services Coffs Harbour to improve the separation of food waste and educate staff on the materials to place in each recycling bin. The restaurant now has six (120-litre) food organics recycling bins collected three times a week for reprocessing. An additional 11,000 kg of paper towels are also recycled. Join Bin Trim now.

Recycle – how can you do more?

- Ask your waste/recycling service provider to show you how to recycle more. Many have services to educate your staff, and can help with signage to support your recycling program.
- If you are a tenant in a shopping complex, ask the centre management to set up a recycling service.
- Consider sharing recycling bins and equipment with neighbouring businesses.
- Use compost bins or large in-vessel composters to process food organics on site. This reduces the volume of waste and also creates a useful soil enhancer (compost).
- Organise for separated food waste to be collected by a commercial contractor for transport to a processing facility.
- Recycle more packaging materials like cardboard and plastic wrap.
- Make sure staff, contractors and cleaners follow your recycling program and that they put materials in the correct bins.
- Install clear recycling signs in the bin room, staff areas, stock rooms, and in the kitchen.
- Keep bins and bin rooms clean and uncluttered.

You are responsible for making sure that your waste is transported to a facility that is lawfully able to accept that type of waste. Make sure that you understand your responsibilities under the law.

What else can you do?

- Conduct a food waste review to find out where food is being wasted.
- Gain a commitment from management, or the owner, to waste less and recycle more.
- Appoint a staff champion to drive your waste reduction and recycling program.
- Include your recycling program in your staff induction program.
- Regularly check the amount and type of waste that goes into your waste and recycling bins.
- Put together a plan to improve your waste and recycling.
- Reward staff for reducing waste, recycling more and using the correct bins.

How can you get more information?

Contact the EPA Business Recycling Unit, Waste and Resource Recovery. Phone: 131 555 | Email: info@environment.nsw.gov.au

References

[1] EPA 2015, *Disposal-based Audit Commercial and Industrial Waste Stream in the Regulated Areas of New South Wales – Main Report*, NSW Environment Protection Authority, Sydney (www.epa.nsw.gov.au/resources/warrlocal/150209-disposal-audit.pdf).

[2] EPA (unpub.), 'Final Report and Attachments: Industry Specific Data Analysis of Bin Trim Round 1, 2016', Environment Protection Authority, Sydney.

[3] EPA 2016, *Social Research on Small to Medium Entreprises (SME) Waste and Recycling: Summary Benchmark Study*, NSW Environment Protection Authority, Sydney (www.epa.nsw.gov.au/resources/waste/small-medium-business-recycling-research-160139.pdf)

Photos
page 1: Greg Carroll, NSW EPA
page 2: Coffs Coast Waste Services, Hello Sawtell, Derek Paulsen
page 3: Coffs Coast Waste Services, Hello Sawtell, Derek Paulsen
page 4: Ethnic Communities Council of NSW Jin Wei Gu, Yuling Du

25,000 litres of food saved from landfill

Jinweigu Food is a small shop in Campsie that is now diverting 25,000 litres of food waste from landfill per year as a result of a free EPA Bin Trim assessment. The Mandarin speaking Bin Trim assessor found that 53% of the waste in the bin was food, and helped the business organise a food waste collection. Join Bin Trim now.

Find a recycler

Visit BusinessRecycling.com.au or phone the Business Recycling Hotline on 1300 763 768 to find a recycling service to suit your business. Use the Planet Ark resource on choosing the right recycler.

Environment Protection Authority
Email: info@environment.nsw.gov.au
Website: www.environment.nsw.gov.au
ISBN 978-1-76039-630-5 | EPA 2016/0773
March 2017

Industry fact sheet — Pubs and bars

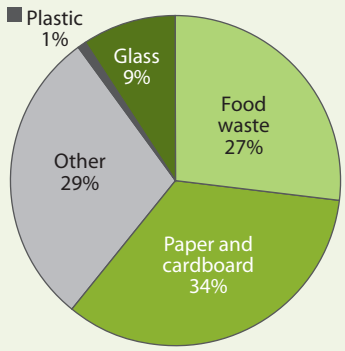
Recycle and save

Around 60 per cent of what is thrown into a typical pub or bar waste bin consists of food, paper and cardboard, while another ten per cent is glass and plastic[1].

You probably know that most of this material can be recycled instead of being sent to landfill. But did you realise that by putting these materials in the correct bins your business could save money via a reduced waste collection charge? The wider benefit is that by recycling you will be helping our environment.

In NSW, food waste accounts for the second largest identifiable portion of commercial and industry waste. In Sydney alone, the total food waste amounts to over 300,000 tonnes[2].

Between June and August 2008, DECCW found that 74 per cent of food wasted in Sydney was thrown away even before it got to the consumer [3].This means that you or your staff could literally be throwing money in the bin.



Typical composition of pub and bar waste bins

You can recycle everything from coffee grounds, which can be composted, to cooking oils, which can be converted to biofuels. Paper, cardboard and plastic can be recycled instead of going to landfill.

If you collect enough material like cardboard and paper, you could even be paid for your recycling efforts.

Simple ways pubs and bars can reduce waste and save

Think in terms of the waste hierarchy. How can you avoid, reduce, reuse or recycle.

Avoid → Do we need it?
Reduce → Do we need so much?
Reuse → Can we use it again?
Recycle → Can someone else use it or turn it into other products?

AVOID

To avoid food waste, make sure products from suppliers are in good condition. You should store or refrigerate perishable items immediately to maintain food safety and quality. Give preference to local suppliers who can deliver fresh produce frequently. Consider these steps:

- Order and prepare appropriate amounts of food.
- Give customers the choice of serving sizes to reduce waste.
- Move to paperless systems such as electronic order taking.
- When you're comparing products, take into account waste. Cheaply priced goods may end up costing you more than an expensive item, when you consider their waste due to poor packaging or quality. Avoid over-packaged goods.
- Avoid items that only get used once and then thrown away such as plastic cutlery, paper plates and cups.

Visit **lovefoodhatewaste.nsw.gov.au/business** for information on food waste avoidance.

1 DECCW, unpublished data
2 DECCW (2009), *Commercial and industrial waste in Sydney – overview*, http://www.environment.nsw.gov.au/warr/CommercialIndustrialWaste.htm
3 DECCW (2010), *Audit of commercial and industrial waste in Sydney – full report*, http://www.environment.nsw.gov.au/warr/CommercialIndustrialWaste.htm

REDUCE

Buy perishable and non-perishables in bulk. It will mean you pay for less packaging and have to dispose of less material. For example, spirits come in bulk bottles that you can attach to a dispensing system.

When possible, buy items in returnable containers, such as milk crates. Set up a system to return containers to your suppliers.

Keep your work areas clean and tidy. If things are well-organised and labelled clearly, you know where everything is. This encourages you and your staff to use only resources you need. Put up signs about reducing waste and recycling.

REUSE

Buy products with reusable packaging. Great examples are beer kegs and plastic drums for post-mixes. When suppliers suggest moving away from reusable packaging, remind them that you pay for extra disposal costs.

Speak to your meat and fish supplier about using reusable plastic tubs instead of disposable polystyrene and cardboard packaging. These are some other reuse examples:

- Filter and reuse cooking oil before you collect it in an oil drum for recycling. The useful life of oil can be prolonged by ensuring it is only heated in equipment like deep fryers when necessary for cooking.
- Return wooden and plastic pallets to suppliers.
- Return clean, undamaged polystyrene and waxed cardboard boxes if possible to your suppliers.
- Reuse or return chemical containers and drums to your suppliers. If your supplier won't collect them, there may be others who will.

RECYCLE

First consider donating unused food to a suitable charity which supplies needy clients. Then sort out what can be recycled. It can be cheaper to have recycling bins picked up rather than general waste bins that go to landfill.

Go to **BusinessRecycling.com.au** to find if there are any local charities where you can make donations of food as well as details of recycling service providers. This website allows you to search for service providers in your area that collect specific materials for recycling or allow you to drop them off. It will provide information on services that deal with everything from cardboard to cooking oil recycling.

Make sure any staff or cleaners follow your recycling program and that they put materials in the correct bin. Save money by matching your bin collection timetable to your business needs. If your bins are not normally full after a week then consider moving to a fortnightly collection cycle.

Here are some other ways to improve your recycling:

- Look for extra places where recycled material can be stored for collection inside and outside the building.
- Share recycling bins and baling equipment with a neighbouring business if necessary.
- Establish a commingled recycling system that takes a mix of aluminium cans, recyclable plastic drink bottles, containers, steel cans and glass. Check with your recycling service about what materials they can accept.
- Cooking oil can be recycled into useful things like vehicle fuel, animal feedstock components, fertiliser and soil conditioner. Find a recycler who does this and get them to collect your oil. It is illegal to dispose of cooking oil or fat down the drain.
- Buy products with recycled content such as paper napkins, toilet paper, stationary and packaging.
- If your brochures, catalogues, sales letters and other promotional material are printed on recycled paper, mention that in the content. This helps to build demand for more products made from recycled materials.

Your sustainable waste policies could save you money, help attract or retain customers and preserve the environment.

For further information

Waste and Resource Recovery
Resource Recovery Unit
Email: info@environment.nsw.gov.au

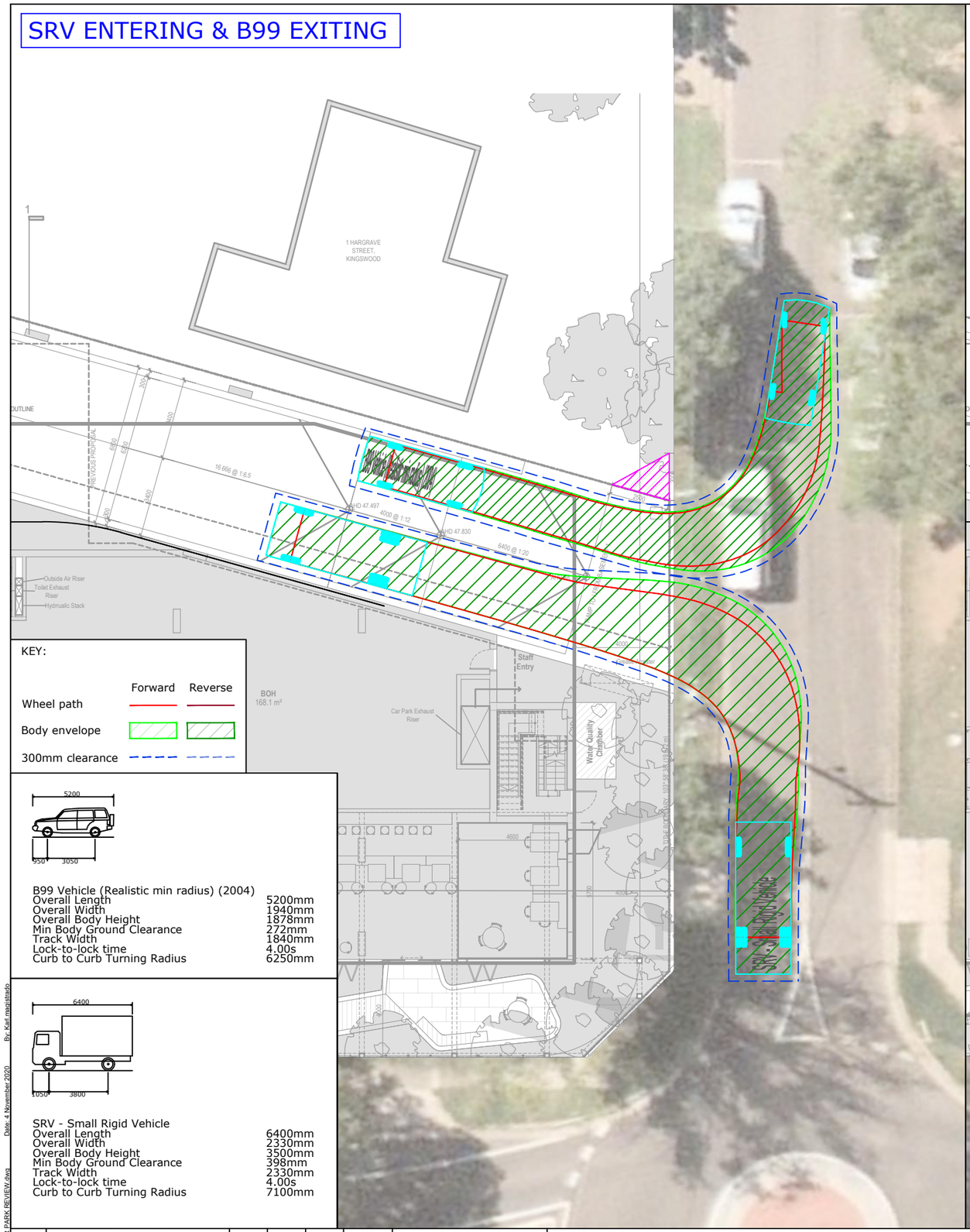
EPA 2012/0344 November 2012
ISBN 978-1-74293-879-0

Published by:

Environment Protection Authority
59–61 Goulburn Street, Sydney South 1232
Ph: 131 555 (environment information and publications requests)
TTY: (02) 9211 4723
Email: info@environment.nsw.gov.au Web: www.epa.nsw.gov.au
Report pollution and environmental incidents: Environment Line: 131 555 (NSW only)

APPENDIX 3 SWEPT PATH ANALYSIS (PREPARED BY OTHERS)

SRV ENTERING & B99 EXITING



KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

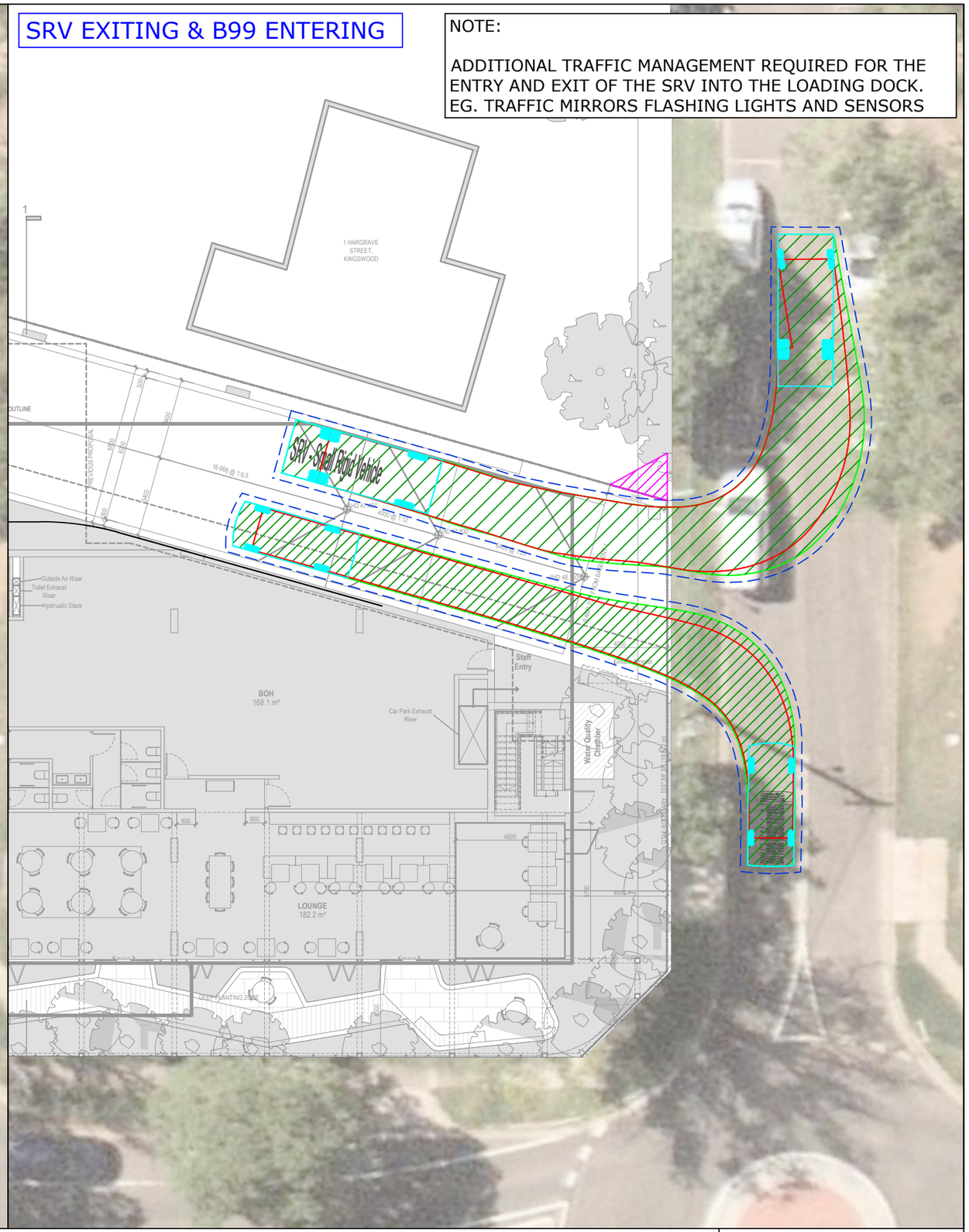
B99 Vehicle (Realistic min radius) (2004)

Overall Length	5200mm
Overall Width	1940mm
Overall Body Height	1878mm
Min Body Ground Clearance	272mm
Track Width	1840mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6250mm

SRV - Small Rigid Vehicle

Overall Length	6400mm
Overall Width	2330mm
Overall Body Height	3500mm
Min Body Ground Clearance	398mm
Track Width	2330mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	7100mm

SRV EXITING & B99 ENTERING



NOTE:

ADDITIONAL TRAFFIC MANAGEMENT REQUIRED FOR THE ENTRY AND EXIT OF THE SRV INTO THE LOADING DOCK. EG. TRAFFIC MIRRORS FLASHING LIGHTS AND SENSORS

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	PD	PD	04/11/20

ttpp transport planning

PROJECT

28-32 SOMERSET STREET, KINGSWOOD

TITLE

SWEPT PATH ANALYSIS - GROUND LEVEL
AS2890.2 6.4m SMALL RIGID VEHICLE & AS2890.1 5.2m B99 VEHICLE

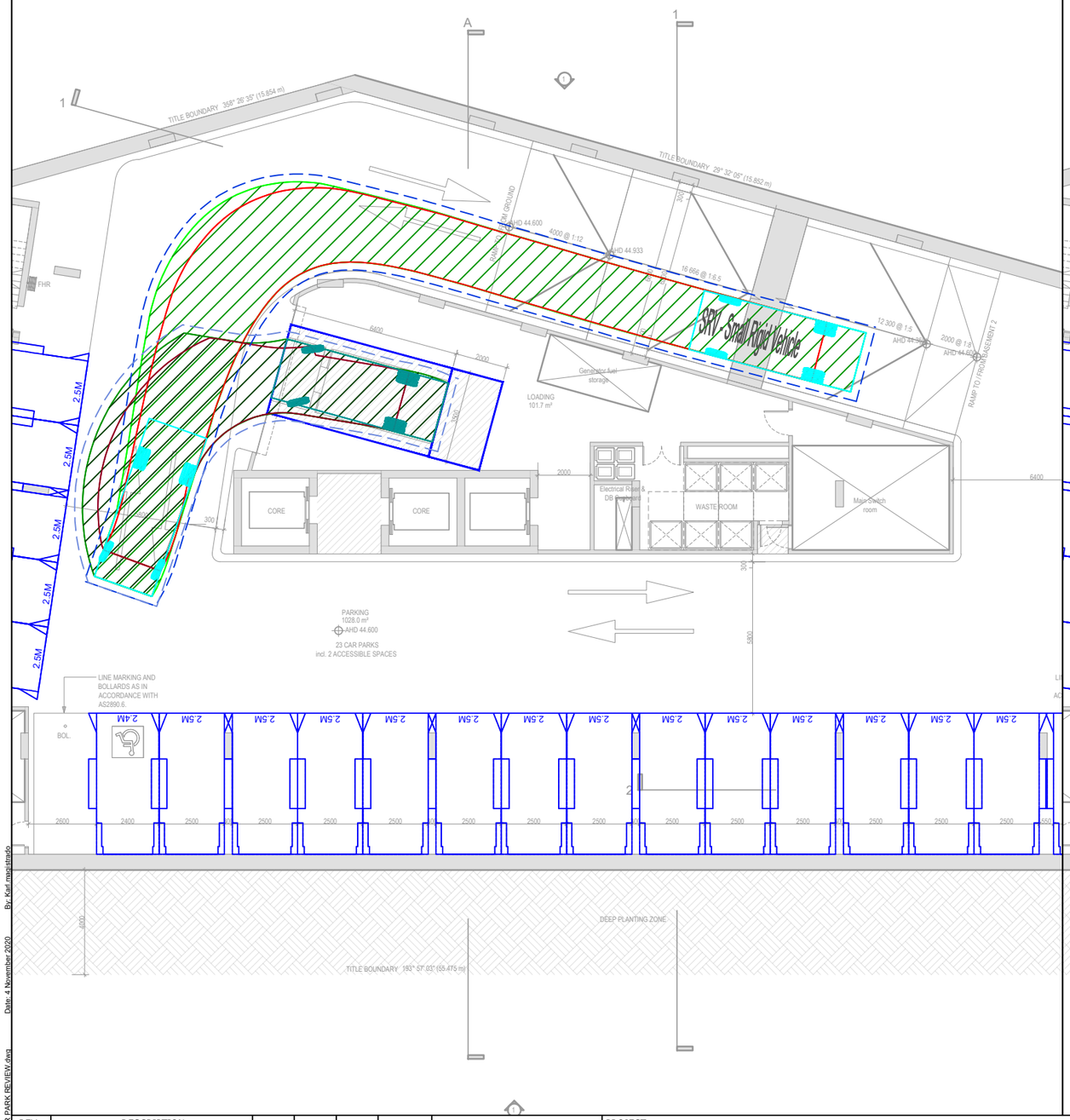
DWG No. 20227CAD007
FIGURE 4

DATE STAMP 04 NOVEMBER 2020

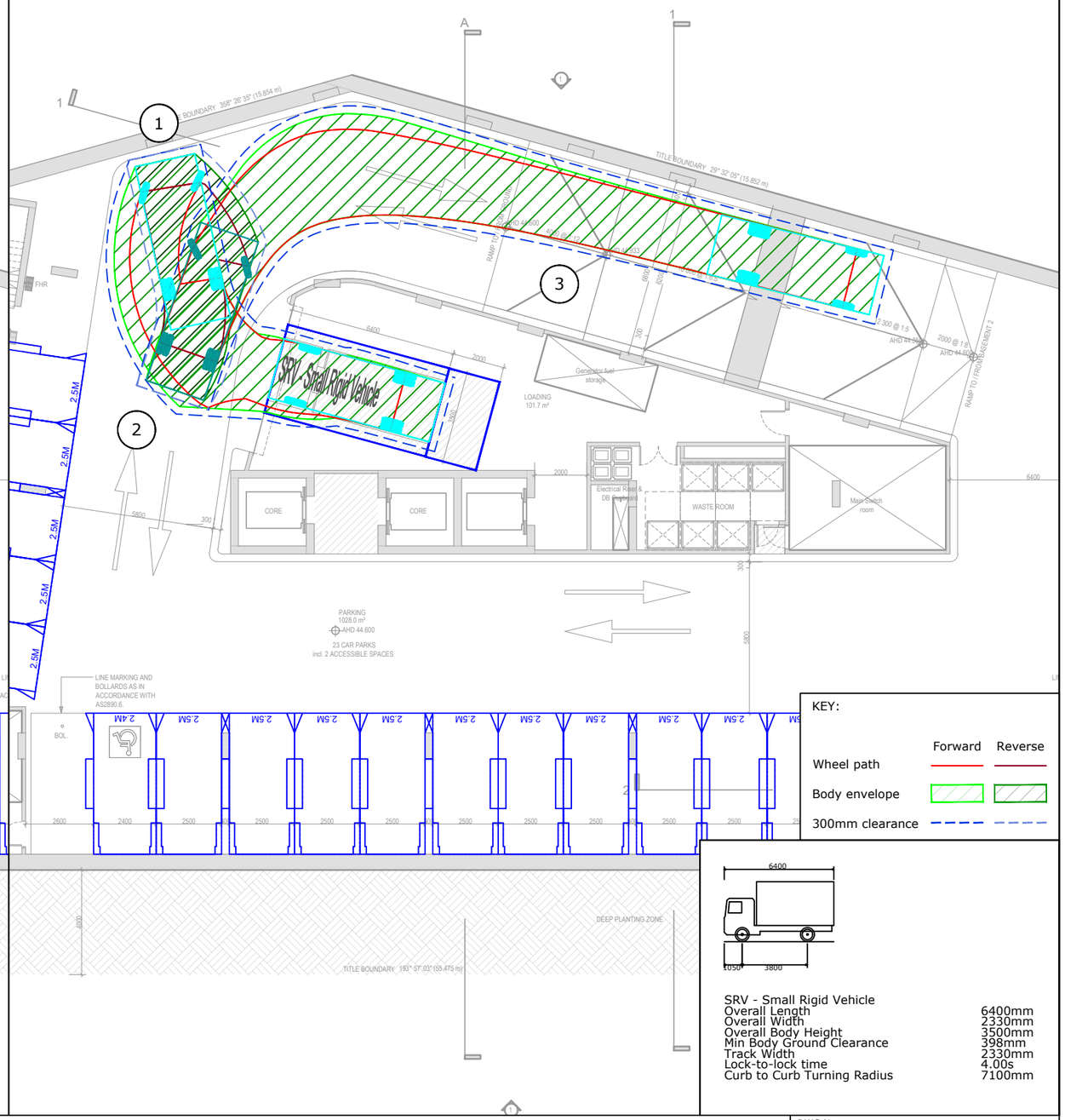
PROJECT No.	SCALE	REV.
20227	1:200 @A3	A

Filename: 20227CAD007-201104-CAR PARK REVIEW.dwg Date: 4 November 2020 By: Karl magistrado

VEHICLE ENTERING



VEHICLE EXITING



NOTE:

ADDITIONAL TRAFFIC MANAGEMENT REQUIRED FOR THE ENTRY AND EXIT OF THE SRV INTO THE LOADING DOCK. EG. TRAFFIC MIRRORS FLASHING LIGHTS AND SENSORS

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

SRV - Small Rigid Vehicle	
Overall Length	6400mm
Overall Width	2330mm
Overall Body Height	3500mm
Min Body Ground Clearance	398mm
Track Width	2330mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	7100mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	PD	PD	04/11/20

ttpp transport planning

PROJECT: 28-32 SOMERSET STREET, KINGSWOOD

TITLE: SWEPT PATH ANALYSIS - BASEMENT LEVEL 1 - LOADING DOCK
AS2890.2 6.4m SMALL RIGID VEHICLE

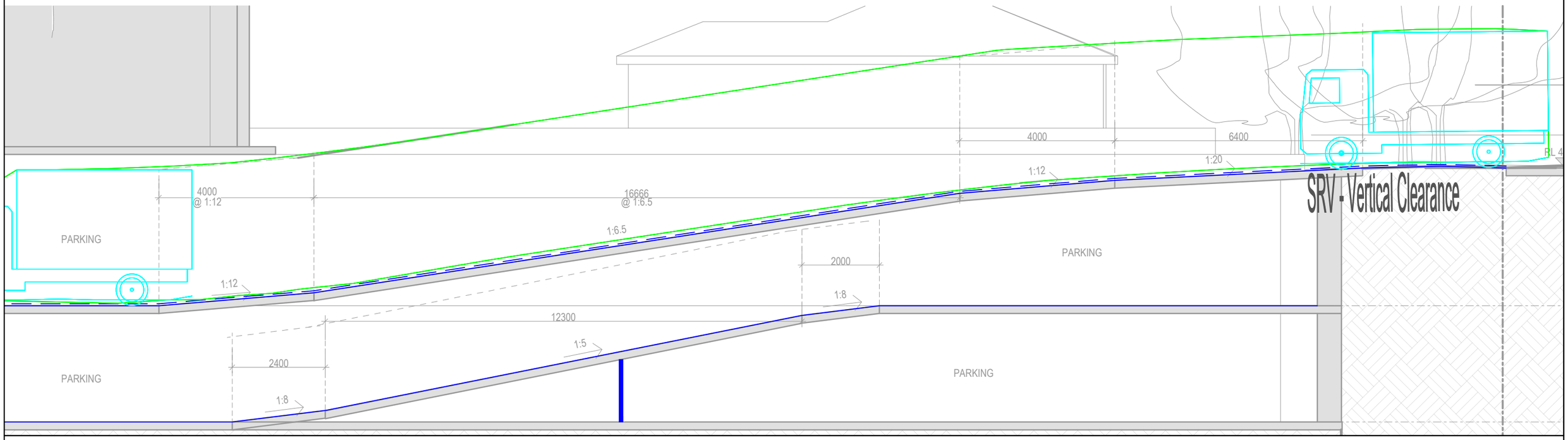
DWG No. 20227CAD007
FIGURE 6

DATE STAMP 04 NOVEMBER 2020

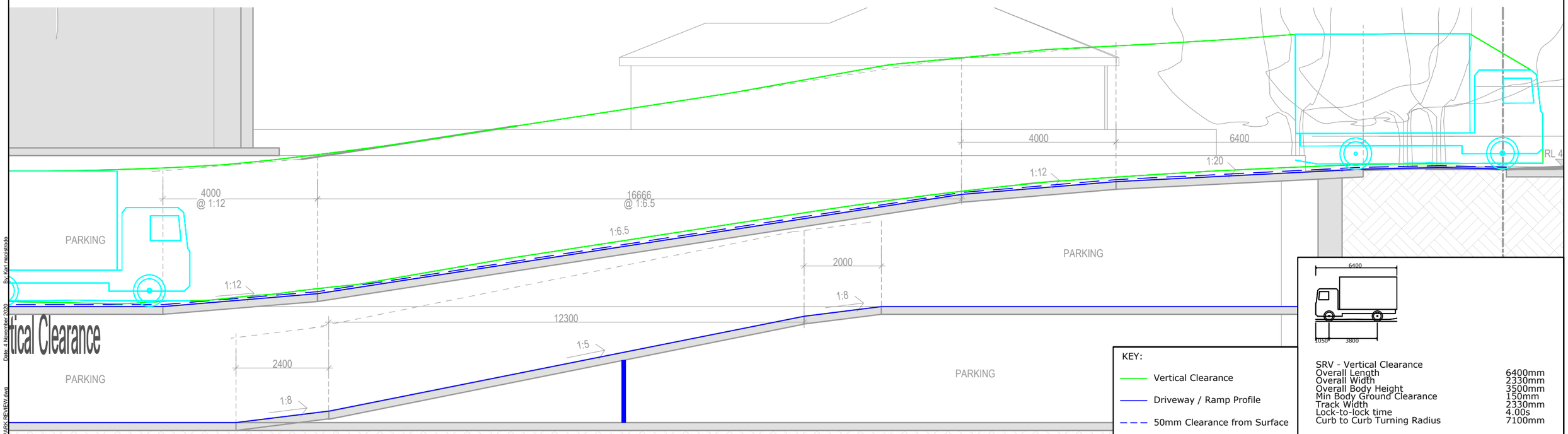
PROJECT No.	SCALE	REV.
20227	1:200 @A3	A

By: Karl magistrado
Date: 4 November 2020
Filename: 20227\CAD\07-201104-CAR PARK REVIEW.dwg

VEHICLE ENTERING



VEHICLE EXITING



KEY:

- Vertical Clearance
- Driveway / Ramp Profile
- 50mm Clearance from Surface

SRV - Vertical Clearance	
Overall Length	6400mm
Overall Width	2330mm
Overall Body Height	3500mm
Min Body Ground Clearance	150mm
Track Width	2330mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	7100mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	PD	PD	04/11/20

ttpp transport planning

PROJECT: 28-32 SOMERSET STREET, KINGSWOOD

TITLE: GROUND & VERTICAL CLEARANCE ASSESSMENT - GROUND TO BASEMENT 1
AS2890.2 6.4m SMALL RIGID VEHICLE

DWG No. 20227CAD007 FIGURE 9

DATE STAMP 04 NOVEMBER 2020

PROJECT No.	SCALE	REV.
20227	1:100 @A3	A

By: Karl.mastrodo
Date: 4 November 2020
Filename: 20227CAD007-201104-CAR PARK REVIEW.dwg

Service. Approachability. Loyalty. Transparency.

MELBOURNE Level 3/51 Queens Street Melbourne VIC 3000
+61 3 9020 4225

SYDNEY Level 17/40 Mount Street, North Sydney NSW 2060
+61 2 8415 9781

HOBART Level 4, 116 Bathurst St Hobart TAS 7000
+61 400 535 634

www.salt3.com.au

TRAFFIC ENGINEERS / WASTE ENGINEERS / TRANSPORT PLANNERS / ROAD SAFETY AUDITORS

2016 EAST GIPPSLAND BUSINESS AWARDS FINALIST
Professional Services, Innovation, Child & Family Friendly