ratio:waste

Waste Management Plan

50 Queens Road, Melbourne, VIC

26 June 2024

Prepared for:
Atlis Property Partners
Our reference:
18734W-REP03-F01

Version	Date	Reason for Issue	Prepared By	Checked By
REP01-D01	29/04/2022	Town Planning – Draft	L Harris	M Fairlie
REP01-F01	27/05/2022	Town Planning – Final	L Harris	M Fairlie
REP01-F02	03/06/2022	Town Planning – Updated Final	L Harris	M Fairlie
REP01-F03	7/03/2023	Town Planning – Updated Final	W Psiwa	L Harris
REP01-F04	24/10/2023	Town Planning – Updated Final	W Psiwa	C Jarl
REP01-F05	20/12/2023	Council RFI	W Psiwa	L Harris
REP02-D01	1/03/2024	Revised Plans	W Psiwa	L Harris
REP02-F01	18/03/2024	Revised Plans	W Psiwa	L Harris
REP02-F02	25/03/2024	Revised Plans	W Psiwa	L Harris
REP03-F01	26/06/2024	RFI Response	W Psiwa	M Fairlie

Directory Path	https://ratioconsultants1.sharepoint.com/sites/18734W/Shared Documents/General/9. Reports/18734W-REP03-F01.docx

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1 Introduction

1.1 Project Details

Site Address

50 Queens Rd, Melbourne, VIC

Local Council

Port Phillip City Council (Phone: 03 9209 6777)

Planning Application Number

PDPL/00392/2022

Development Summary

Northern Building

Waste Source	Quantity
Studio Apartment	32
1-Bedroom Apartment	118
2-Bedroom Apartment	64
3-Bedroom Apartment	9
Total	**223**

Southern Building

Waste Source	Quantity
Studio Apartment	32
1-Bedroom Apartment	105
2-Bedroom Apartment	65
3-Bedroom Apartment	9
Total	**211**

1.2 Purpose

A planning permit (Ref No. PDPL/00392/2022) was issued via VCAT in July 2023 for the construction of a 15-storey apartment building at the land addressed as 50 Queens Road, Melbourne. An amendment to this planning permit is now sought for the subject site.

Ratio Consultants has been engaged by the permit applicant to prepare a waste management plan to facilitate amendment to the permit via S87a with VCAT.

1.3 Limitations

Waste management arrangements during the construction and fit-out stages of the development, and on-going operation and monitoring of the waste management arrangements for the development following the occupation of the development are outside the scope of this Waste Management Plan.

1.4 Relevant Guidelines and Policies

Relevant policies and guidelines considered as part of the preparation of this Waste Management Plan include:

— Australian Government – National Waste Policy: Less Waste, More Resources (2018).
— Victorian Government – Recycling Victoria: A New Economy (2020).
— City of Port Phillip – Guidelines for Preparing a Waste Management Plan (2019)
— City of Melbourne – Guidelines for Waste Management Plans (2021)
— EPA Victoria – Noise Control Guidelines (2021).

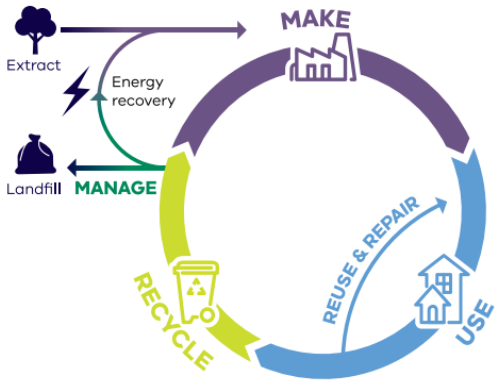
2 Operational Waste Management Guide

2.1 Recycling Victoria: A New Economy

The Victorian Government's Recycling Victoria: A New Economy was released in 2020 and sets out strategies to reduce the amount of waste generated in Victoria and increase the amount of materials for recycling and reprocessing to reduce damage to the environment caused by waste.

Ongoing education and dedicated ongoing management services are critical factors in encouraging users to continue to use the services and systems as intended. The future Occupiers of the development shall promote the above strategy where practicable and encourage users to participate in minimising the impact of waste on the environment. In particular, consideration should be made to the circular economy as shown in Figure 2.1 below.
A circular economy continually seeks to reduce the environmental impacts of production and consumption, while enabling economic growth through more productive use of natural resources.

Figure 2.1: The Circular Economy



Source: Recycling Victoria: A New Economy

Establishment of waste reduction and recycling targets, including conducting periodic waste audits, keeping records of waste streams, and monitoring of the quantity of recyclables found in landfill-bound bins. The results of such audits shall be shared with users to encourage further reductions in waste where possible.

2.2 Guide for Residents

This operational guide outlines a system for appropriately separating waste into distinct streams for residents and the building manager to adopt, and a copy should be provided by the building manager to all staff and residents.

2.3 General Waste

Sorting Responsibilities - Residents

— Receptacles shall be provided within the apartments for the temporary holding of general waste and emptied into the general waste chute when full.
— General waste should be placed within tied bags (non-degradable material recommended) prior to being placed into the general waste chute, when full.
— Soft plastics shall be thrown into general waste until a private waste management contractor is able to collect this stream separately.

2.4 Organics

Sorting Responsibilities - Residents

— Food organics must be separated from general waste.
— Kitchen caddies will be provided for separating food organics and emptied into the organics chute, when full.
— Food organics bins must be lined with a compostable bag only (approved by the collection contractor).
— Organics must be unbagged or placed within approved compostable bags prior to being placed into the organics processing unit.

2.5 Recycling

Sorting Responsibilities - Residents

— Receptacles shall be provided within the apartments for the temporary holding of recycling and emptied into the recycling chute, when full.
— Recycling must not be placed in bags: all recycling is to be kept loose
— No soft plastics should be thrown into the recycling bin.
— Bottles (excluding glass) and cans should be rinsed, cardboard flattened, and lids/packaging separated as per the Australasian Recycling Label Instructions (visit: https://recyclingnearyou.com.au/arl/) prior to being placed into the recycling collection bins.

2.6 Glass

Sorting Responsibilities - Residents

— Until a glass only collection service becomes available, glass is to be placed into the recycling receptacles. Once the service is available, glass receptacles shall be provided for each apartment. When full, residents will empty their receptacles into 100L glass crates provided in each chute room on each residential level. The building manager will empty crates into the glass collection bins located in the basement, as required. Glass must not be placed in bags.
— Bottles should be rinsed, and lids/packaging separated as per the Australasian Recycling Label Instructions (visit: https://recyclingnearyou.com.au/arl/) prior to being placed into the recycling collection bins.

2.7 E-Waste

Disposing of E-Waste into landfill is now prohibited.

Sorting Responsibilities – Residents

— Separate E-Waste, including batteries, and take to the designated hard waste/e-waste/soft plastics room, located in the basement, via the lift.

2.8 Hard Waste

Sorting Responsibilities – Residents

— Separate hard waste and transfer it to the designated hard waste/e-waste room, located in the basement, via the lift.

2.9 Guide for Building Management

The Building Manager shall be responsible for the following:

- Provide residents and staff with a copy of the operational waste management guide (section 2 of this report).
- Ongoing management of the waste system including the maintenance of the bin rooms and associated equipment and components to the satisfaction of users and the relevant authority, and in accordance with relevant manufacturer specifications. When required, the Building Manager shall engage an appropriate contractor to conduct services, replacements or upgrades.
- Changing bins beneath the general waste and recycling chutes.
- Transferring the 120L bins in the linear bin changeover system beneath the organic chute to the organic processing unit. This would need to occur twice per day.
- Loading content from the 120L organic bins into the compost unit using the bin lift.
- Changing the fertiliser bins beneath the organic processing unit as required.
- Engaging the supplier of the organic processing to conduct servicing of the unit (twice per year).
- Managing the e-waste and soft plastics and arranging collections or drop-offs via the appropriate contractors as required
- Liquid waste such as cooking oil shall be collected and disposed of by a specialist contractor engaged by the café operator.
- Bin room access to the collection contractor/s
- Engage and manage the waste collection contractors;
- Securing the bin rooms and labelling/numbering the bins according to the property address to protect the equipment from theft and vandalism;
- Service all public areas through sweeping and removal of litter on a regular basis, to prevent stormwater pollution
- Publish and distribute information to ensure that users are familiar about the waste management system and the locations of waste disposal
- Preventing overfilled bins by keeping lids closed and ensuring bungs are leak free;
- Inform residents on how to separate and dispose of all waste correctly and that bagged recycling (commingled and glass) is not permitted. Note: Organics must not be contaminated prior to placing into the organics processing unit. Building management is to monitor and inform residents of this.
- Supplying residents with compostable kitchen caddy liners and informing residents that plastic bags are not permitted for disposing organics into the organics chute.
- Ensure that bins provided for use at the designated site are not removed; and
- Ensure that the waste storage area is provided as per the requirements set out in Section 4.
- Coordinated and safe access, and disposal of hard waste and E-waste by residents.

Note: a linear bin changeover system shall be utilised to provide a continuous service and to reduce manual handling of bins by the Building Manager.

2.10 Waste Management Plan Communication Strategy

It is Building Management's responsibility to ensure that all waste systems users are informed about the development's waste management system, including where and how to correctly dispose of each waste stream. It is highly recommended that this Waste Management Plan is electronically provided to all residents and commercial tenants.

The waste collection contractor(s), chute system supplier, and organics processing unit supplier (in conjunction with Building Management) shall provide educational material to inform all waste system users about the development's waste management system and advise all waste system users how to correctly separate and dispose of each waste stream with care, to minimise waste sent to landfill and reduce the contamination of recyclables.

2.11 Waste Management Plan Revisions

From time to time, due to changes in legislative requirements, changes in the development's needs and/or waste patterns (such as waste composition, volume, or distribution), or to address unforeseen operational issues, Building Management shall be responsible for coordinating the necessary Waste Management Plan revisions, including (on an as-required basis):

- A waste audit and new waste management strategy.
- Revision of the waste system (bin size / quantity / waste streams / collection frequency / update of equipment).
- Revision of the services provided by the waste collection contractor(s).
- Re-education of users.
- Any necessary statutory / regulatory requirements / approvals.

3 GreenStar Requirements: Performance pathway: Specialist Plan

Requirements	Summary
Identify the site boundary, the waste streams relevant to the project, and the individual roles	- Refer to Appendices for site boundaries - Refer to section 4 for waste streams - Refer to section 2 for individual roles
Set diversion from landfill targets and/or targets for reducing total materials generation (general waste materials and recyclable /reusable materials), as well as monitoring and measurement procedures for waste and recycling streams by weight	- Refer to section 3
Outline methods for encouraging the separation of waste streams, such as bins, storage areas, or recycling facilities in public areas as required	- Refer to section 5
Identify storage areas for all waste streams and outline best practice safety and access requirements for their collection	- Refer to Appendix A
Identify safe methods for vehicle access and transfer of waste	- Refer to Appendix B
Incorporate a review process to assess the success of the OWMP and make improvements, based on operational experience.	- Refer to section 3

Source: Green Building Council of Australia. 2017. Green Star – Design & As Built v1.2.

https://new.gbca.org.au/green-star/rating-system/design-and-built/

3.1 Diversion from landfill targets

Waste Stream	Volume (m^3/week)	*Density (kg/m^3)	Weight (kg)	Percentage, %
General waste	26.18	105	2,748	31.77
Organics	8.73	280	2,443	28.24
Recycling	24.43	53	1,295	14.96
Glass	10.83	200	2,166	25.03
Total	**70.16**	**-**	**8,652**	**100.00**

Diversion from landfill target (%): 68.23

**Source: Nabers Waste. List of Waste Streams. 2021. www.nabers.gov.au*

3.2 Operational Waste Management – Ongoing monitoring

- It is recommended that a qualified waste auditor is engaged annually to review the waste management plan.
- The building manager will be required to provide the auditor with data on the weekly weight of each waste stream, weight data will be obtained from the waste collection contractor or via bin scales to be installed in the bin room. The waste auditor will analyse the data and review the diversion targets and provide feedback and identification of areas for potential improvement.
- The waste auditor will also advise if an amendment to the waste management plan is required. If required, Ratio Consultants are to amend the report.
- A qualified waste auditor is defined as one of the following (Green Building Council of Australia, 2017):

    - An auditor holding Environmental Management Systems Auditor certification issued by Exemplar Global (formerly RABQSA Inc.). To find a certified auditor, refer to the 'Search for Certified Individuals' section of the Exemplar Global website (http://www.exemplarglobal.org/what-we-offer/search-for-certified-individuals-or-organizations/); or
    - An auditor employed by a waste management organisation, possessing a minimum of five years' experience, working in waste auditing in the built environment, with specific experience in conducting commercial audits in line with guidelines issued by State/Territory waste authorities; or
    - A waste auditor or waste specialist, working for a consultant, building owner or contractor, possessing a minimum of three years' experience developing OWMPs; or
    - An auditor who has undertaken at least one NABERS Waste audit as a certified assessor.

4 Residential Waste Volume Assessment

City of Port Phillip's 'Guidelines for Preparing a Waste Management Plan, 2019' specify the following general waste and recycling generation rates relevant to the residential component of the development:

1-Bedroom Apartments

- General Waste: 80 L/apartment/week
- Recycling: 80 L/apartment/week

2-Bedroom Apartments

- General Waste: 100 L/apartment/week
- Recycling: 100 L/apartment/week

3-Bedroom Apartments

- General Waste: 120 L/apartment/week
- Recycling: 120 L/apartment/week

To allow for the separation of organics and glass from the general waste and recycling streams, the above waste generation rates have been split as per the Melbourne City Council's 'Guidelines for Waste Management Plans, 2021' as outlined below:

General waste Generation Rates

- One-bedroom dwelling: 60 L/dwelling/week
- Two-bedroom dwelling: 75 L/dwelling/week
- Three-bedroom dwelling: 90 L/dwelling/week

Recycling Generation Rates

- One-bedroom dwelling: 56 L/dwelling/week
- Two-bedroom dwelling: 70 L/dwelling/week
- Three-bedroom dwelling: 84 L/dwelling/week

Organics Generation Rates

- One-bedroom dwelling: 20 L/dwelling/week
- Two-bedroom dwelling: 25 L/dwelling/week
- Three-bedroom dwelling: 30 L/dwelling/week

Glass Generation Rates

- One-bedroom dwelling: 24 L/dwelling/week
- Two-bedroom dwelling: 30 L/dwelling/week
- Three-bedroom dwelling: 36 L/dwelling/week

The waste generation rates, and volume estimates are outlined in Tables 3.1 to 3.4 below.

Table 3.1: General Waste & Organics Volume Estimates (Northern Building)

Waste Source	Quantity	General Waste Generation Rate (L/Apartment/Week)	General Waste Volume (L/Week)	Organics Generation Rate (L/Apartment/Week)	Organics Volume (L/Week)
Studio Apartment	150	60	9,000	20	3,000
2-Bedroom Apartment	64	75	4,800	25	1,600
3-Bedroom Apartment	9	90	810	30	270
Total	**223**	-	**14,610**	-	**4,870**

Table 3.2: Recycling & Glass Volume Estimates (Northern Building)

Waste Source	Quantity	Recycling Generation Rate (L/Apartment/Week)	Recycling Volume (L/Week)	Glass Generation Rate (L/Apartment/Week)	Glass Volume (L/Week)
Studio Apartment	150	56	8,400	24	3,600
2-Bedroom Apartment	64	70	4,480	30	1,920
3-Bedroom Apartment	9	84	756	36	324
Total	**223**	-	**13,636**	-	**5,844**

Table 3.3: General Waste & Organics Volume Estimates (Southern Building)

Waste Source	Quantity	General Waste Generation Rate (L/Apartment/Week)	General Waste Volume (L/Week)	Organics Generation Rate (L/Apartment/Week)	Organics Volume (L/Week)
Studio Apartment	137	60	8,220	20	2,740
2-Bedroom Apartment	65	75	4,875	25	1,625
3-Bedroom Apartment	9	90	810	30	270
Total	**211**	-	**13,905**	-	**4,635**

Table 3.4: Recycling & Glass Volume Estimates (Southern Building)

Waste Source	Quantity	Recycling Generation Rate (L/Apartment/Week)	Recycling Volume (L/Week)	Glass Generation Rate (L/Apartment/Week)	Glass Volume (L/Week)
Studio Apartment	137	56	7,672	24	3,288
2-Bedroom Apartment	65	70	4,550	30	1,950
3-Bedroom Apartment	9	84	756	36	324
Total	**211**	-	**12,978**	-	**5,562**

5 Waste Equipment & Storage Requirements

5.1 Residential Waste Storage Requirements

The waste storage requirements for the residential component of the development are outlined in Tables 5.1 to 5.4 below.

Table 5.1: Refuse Room Storage Requirements (Northern Building)

Waste Stream	Bin Size (L)/Equipment Type	Quantity	Height per bin (mm)	Width per bin (mm)	Depth per bin (mm)	Footprint (m^2)
General Waste	1100	4	1330	1240	1070	5.31
	Ecopack + Spare 1100L Bin	1	2455	1153	1837	2.12
Organics	Organics Processing Unit (Enrich 360 ES-300L with FAS lift)	1	1880	1160	2630	3.05
	3x120L FOGO linear bin changeover system	1	1715	3389	840	2.85
	Spare 120L FOGO Bin (for organic fertiliser)	9	930	480	545	2.35
Recycling	1100	7	1330	1240	1070	9.29
	Spare 1100L Bin	1	1330	1240	1070	1.33
Glass	660	5	1200	1260	780	4.91
Total Footprint Required Excluding Circulation (m^2):						**31.21**
Total Area Provided (m^2):						**124.00**

Note: As the organic processing unit reduces waste volumes by approximately 80%, it is expected that 9 x120L organics bins will be filled per week with fertiliser (by-product of the processing unit), to be collected by the processing unit supplier, or used on gardens.

Table 5.2: Refuse Room Storage Requirements (Northern Building)

Waste Stream	Bin Size (L)/ Storage Area (m^2)	Quantity	Height per bin (mm)	Width per bin (mm)	Depth per bin (mm)	Footprint (m^2)
Hard Waste	Drop-Off Area	1	1000	4000	1000	4.00
E-waste	120	1	930	480	545	0.26
Soft Plastic	120	1	930	480	545	0.26
Total Footprint Required Excluding Circulation (m^2):						**4.52**
Total Area Provided (m^2):						**8.00**

Table 5.3: Refuse Room Waste Storage Requirements (Southern Building)

Waste Stream	Bin Size (L)/Equipment Type	Quantity	Height per bin (mm)	Width per bin (mm)	Depth per bin (mm)	Footprint (m^2)
General waste	1100	4	1330	1240	1070	5.31
	Ecopack + Spare 1100L Bin	1	2455	1153	1837	2.12
Organics	Organics Processing Unit (Enrich 360 ES-300L with FAS lift)	1	1880	1160	2630	3.05
	3x120L FOGO linear bin changeover system	1	1715	3389	840	2.85
	Spare 120L FOGO Bin (for organic fertiliser)	8	930	480	545	2.09
Recycling	1100	6	1330	1240	1070	7.96
	Spare 1100L Bin	1	1330	1240	1070	1.33
Glass	660	4	1200	1260	780	3.93
Total Footprint Required Excluding Circulation (m^2):						**28.64**
Total Area Provided (m^2):						**100.00**

Note: As the organic processing unit reduces waste volumes by approximately 80%, it is expected that 8 x120L organics bins will be filled per week with fertiliser (by-product of the processing unit), to be collected by the processing unit supplier, or used on gardens.

Table 5.4: Refuse Room Waste Storage Requirements (Southern Building)

Waste Stream	Bin Size (L)/ Storage Area (m^2)	Quantity	Height per bin (mm)	Width per bin (mm)	Depth per bin (mm)	Footprint (m^2)
Hard Waste	Drop-Off Area	1	1000	4000	1000	4.00
E-waste	120	1	930	480	545	0.26
Soft Plastic	120	1	930	480	545	0.26
Total Footprint Required Excluding Circulation (m^2):						**4.52**
Total Area Provided (m^2):						**7.00**

Note: The bin rooms have ample space allocated for storing all bins and equipment. Refer to Appendix A for the bin room layouts.

6 Waste Collection Details

6.1 Residential Waste Collection Requirements

Table 5.1: Northern Building Waste Collection Requirements

Waste Stream	Volume (L/week)	Volume after 2:1 compaction (L/Week)	Bin Size (L)/Equipment Type	Quantity	Collection Frequency	Capacity (L/week)
General Waste	14,610	7,305	1100	4	Twice weekly	8,800
Organics	4,870	NA	Organics Processing Unit (Enrich 360 ES-300L with FAS lift)	1	NA	200-300 kg/day
	609	NA	120	9	1	1,080
Recycling	13,636	NA	1100	7	Twice weekly	15,400
Glass	5,844	NA	660	5	Twice weekly	6,600
Hard Waste	NA	NA	Drop-Off Area	1	6 times per year	NA
E-waste	NA	NA	120	1	On-call	NA
Soft Plastic	NA	NA	120	1	On-call	NA

Note: Based on Nabers Organics Density Data of 280 kg/m³, the development is expected to produce 1,364 kg of waste per week, or 194.80 kg of waste per day. Therefore, the recommended organic processing unit capacity is sufficient.

Table 5.2: Southern Building Waste Collection Requirements

Waste Stream	Volumes (L/week)	Volume after 2:1 compaction (L/Week)	Bin Size (L)/Equipment Type	Quantity	Collection Frequency	Capacity (L/week)
General waste	13,905	6,953	1100	4	Twice weekly	8,800
Organics	4,635	NA	Organics Processing Unit	1	NA	200-300 kg/day
	579	NA	120	8	1	960
Recycling	12,978	NA	1100	6	Twice weekly	13,200
Glass	5,424	NA	660	4	Twice weekly	5,940
Hard Waste	NA	NA	Drop-Off Area	1	6 times per year	NA
E-waste	NA	NA	120	1	On-call	NA
Soft Plastic	NA	NA	120	1	On-call	NA

Note: Based on Nabers Organics Density Data of 280 kg/m³, the development is expected to produce 1,298 kg of waste per week, or 185.40 kg of waste per day. Therefore, the recommended organic processing unit capacity is sufficient.

6.2 Residential Waste Collection Methodology

Waste collection is to be performed on site by a private contractor via a 6.4-metre-long mini rear loading vehicle. The mini rear loader has a travel height of 2.20 metres high and headroom clearance height of 2.50 metres. No headroom clearance issues have been identified at the proposed waste collection point.

The waste contractor will park in the loading bays, next to the bin rooms located at basement level 01; and transfer the bins to the rear of the collection vehicle for emptying. Once collections are complete, the contractor will then return bins to the bin rooms. The building manager must ensure the collection contractor has access to the basement level bin rooms during waste collection.

The collection of the fertiliser will be performed on site by the organic processing unit supplier via a 6.4-metre-long mini rear loading vehicle.

A swept path assessment has been prepared using Autodesk vehicle tracking software, demonstrating that vehicles up to the size of a small rigid vehicle can perform collection from the basement, and exit the site in a suitable manner (refer to Appendix B for the swept path assessment).

The waste collection contractor will also be responsible for the development of a Safe Work Method Statement (SWMS) to ensure safety is considered for every aspect of the collection process.

Hard waste, e-waste and soft plastics (providing a soft plastics collection contractor can be found) shall be collected by a private contractor on an as-required basis.

6.3 Residential Waste Collection Time

Residential waste collection shall be undertaken in accordance with *Environment Protection (Residential Noise) Regulations 2008* as outlined below:

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

7 Design Standards

7.1 Refuse Room Design Requirements

The refuse rooms shall meet the following requirements:

- Comply with Building Code of Australia (BCA) and all relevant Australian Standards.
- Allow storage of all collection bins on site at all times.
- Allow easy access for users of the bins.
- Allow easy, direct and convenient transfer of bins to the collection point.
- Bin rooms shall be appropriately screened to prevent unsightly impacts on amenity.
- Artificial light shall be provided where necessary outside the bin room to enable occupiers of the site to always dispose of waste safely and appropriately.
- Triple chutes (general waste, recycling, and organics) are required, with access on all residential floors. A total of two (2) sets of triple chutes are required (total of 6 chutes).
- Both general waste chutes are required to have an Ecopack compactor fitted beneath, to reduce general waste volumes. A total of two (2) compactors are required.
- One organic processing unit (Enrich 360 ES-300L with FAS lift) per bin room (total of two) is required.
- One 3x120L FOGO linear bin changeover system per bin room (total of two is required).
- A minimum of 3000mm (floor to ceiling) is required for the Ecopack, with no offset to chutes. For chute offsets, an assessment is required.
- The bin rooms shall be sized to accommodate all waste arising on the premises together with any associated equipment for handling the generated waste. The area designated for bin storage is based on the number of bins and the physical dimensions of the bins.
- The bin room shall be maintained to ensure that the aesthetics of the development are not compromised.
- Each bin shall be accessible and manoeuvrable in and out of the bin room with minimum handling of other bins.
- The floor of the bin rooms shall be constructed of concrete (or similar) and shall be finished to a smooth even surface covered at the intersection of walls and plinths.
- The bin rooms are required to ensure inclusive accessibility for individuals with disabilities to all waste and resource recovery facilities and services, including access to bin chutes and bin rooms.
- The bin rooms shall be ventilated in accordance with the requirements of the Building Code of Australia and AS1668.2.
- Ventilation openings shall be protected against flies and vermin.
- Doors shall be tight fitting.
- A graded bin washing area (connected to wastewater, with a litter trap connected to prevent wastewater pollution) and wall-mounted hosecock should be provided for washing bins, in accordance with the relevant authority requirements.

7.2 Chute and Linear Bin Changeover System

The chute and linear bin changeover systems shall meet the following requirements:

- Designed in accordance with the manufacturer's specifications.
- Chute System: Designed to have maximum chute deviations angle of 22.5 degrees.
- Designed to comply with Building Code of Australia (BCA) and all relevant Australian Standards.
- Designed to achieve minimum fire rating requirements of the BCA and/or Building Surveyor and fitted with fire sprinklers and any other safety devices as required by the manufacturer or certifier of the system.
- Refer to Appendix C for further details.

7.3 Residential Bin Colour Requirements

— General waste bins with a dark green body and dark green lid.
— Recycling bins with a dark green body and yellow lid.
— Organics bins with a dark green body and lime green lid.
— Glass recycling bins with a dark green body and purple lid.

Note: Each bin within the bin rooms should be accompanied by information on bin colours, sizes, and locations to ensure easy identification.

7.4 Signage

— Signage will be required in the waste and recycling bin areas/drop off points to encourage correct recycling and disposal of general waste and organics.
— Bin chutes doors are to be colour coded red for general waste, green for organics and yellow for recycling.
— There should also be adequate space allowed for signage and educational materials located within and adjacent to the bin storage area, bins, and equipment.
— Appropriate signage must be provided, and instructions and precautions should be considered when handling composting and soil materials.
— All collection bins shall be provided with Sustainability Victoria or equivalent signage. Figure 6.3 below illustrates some examples of waste and recycling signs.

Figure 7.3: Signage examples

7.5 Internal Residential Waste Receptacle Requirements

Under bench waste receptacles for the apartments, should meet the following requirements:

— **General waste**: Large enough to hold at least 2 days' worth of waste, but no larger than 25 litres to ensure ease of manual handling and prevent chute blockages (if applicable).
— **Recycling:** Large enough to hold at least 2 days' worth of recycling, but no larger than 25 litres to ensure ease of manual handling and prevent chute blockages (if applicable).
— **Glass:** Large enough to hold at least 2 days' worth of glass, but no larger than 10 litres
— **Organics:** A kitchen caddy large enough to hold at least 1 days' worth of organics, but no larger than 10 litres.

8 Contact Information

Table 7.8.1 below includes a complimentary listing of contractors and equipment suppliers. The Project Principal shall not be obligated to procure goods / services from these companies. Ratio Consultants does not warrant or make representations for the goods / services provided by these contractors and suppliers.

Table 7.8.1: Contractors and Supplier Details

Service	Contractor/ Supplier	Phone	Website
Private Waste Collection Contractor and/or Bin Supplier	Cleanaway	13 13 39	www.cleanaway.com.au
	CSC Waste & Recycling	1300 499 927	www.cscwaste.com.au
	iDump	1300 443 867	www.idump.com.au
	JJ Richards	03 9794 5722	www.jjrichards.com.au
	SUEZ	13 13 35	www.suez.com.au/en-AU
	Wastewise Environmental	1300 550 408	www.wastewise.com.au
	Sulo Australia	1300 364 388	www.sulo.com.au
Chute and Ecopack Suppler	Wastech Engineering	1800 957 973	https://wastech.com.au/
Organic Processing Unit Supplier	Enrich 360	0499 360 360	www.enrich360.com.au
Bin Washing	The Bin Butlers	1300 788 123	www.thebinbutlers.com.au
	Kerbside Clean-A-Bin	03 9830 7381	www.kerbsidecleanabin-srp.com.au
Odour Control	Eco-Safe Technologies	1300 135 039	www.eco-safe.com.au
	WBCM Environmental Australia	1300 800 621	www.wbcm-aust.com.au
E-Waste Collection	Tech Collect	1300 229 837	www.techcollect.com.au

Appendix A : Plans Assessed

50 Queens Road, Melbourne
Waste Management Drawings - Rev. 03
25.06.2024
Prepared by: W Psiwa
Ratio Consultants

Check all dimensions and site conditions prior to commencement of any work, the purchase or ordering of any materials, fittings, plant, services or equipment and the preparation of shop drawings and or the fabrication of any components.

Do not scale drawings - refer to figured dimensions only. Any discrepancies shall immediately be referred to the architect for clarification.

Legend - General Arrangement Plans

APARTMENT TAG
00.00 — ROOM ID
APT A01 — APARTMENT TYPE
REFER A13. XXX — REFERENCING SHEET NAME

XX-XX — Refer to A40.*** for Master Schedule code references
DXX — Door Code #
W XX — Window Code #
Property Boundary
Concrete Wall / Column
Precast Concrete Wall / Column
Full Height Wall
Blockwork Wall
Planter. Refer Landscape Architects Documentation
Refer Landscape Architect and Civil Engineers Documentation
Ballast
Penetration Void/Zone
Hose cock - no exposed plumbing
FFL. XX.XX — Finished Floor Level
SSL. XX.XX — Structural Slab Level
AFFL. XX.XX — Above Finished Floor Level
Trench grate
Fire Extinguisher

GENERAL NOTES:

- Refer to A05 series Wall Type & Setout Plan drawings for wall setout & detail wall types
- Refer to A40.*** for Master Schedule for code reference descriptions.
- Refer Arborist + Landscape Architect's report for trees to be removed
- Refer to A13 series for all details of apartments
- Refer to A14 series for all details of communal areas
- No exposed plumbing and electrical conduits
- Allow paint finish to all BOH walls
- Conrete sealer to all BOH areas where floor finish not nominated otherwise
- Wheelstop setout to be confirmed by Traffic Engineer
- Distance of vehicle protection bololards in front of electrical and comms riser setout 1000mm in front of riser cupboard or 600mm clear from swing door of distribution cupboard, whichever is greater in accordance with AS3000

TYPICAL APARTMENT CEILING HEIGHTS:

-Bedrooms & living areas
Levels 1-14: 2.7m clear
Level Ground: 3m clear

-Kitchens & wet areas 2.4m clear

CARPARK LIFT LOBBIES

DESCRIPTION	FINISH
Walls	PAL503
Skirt	SKR502 / PUR501
Floor	CPT505
Lift Threshold	TIL501
Ceilings	CLG001 / PAF001
Storage doors	PAS501
Storage walls	PAL501 / SKR501

Revision	Date	Description	Initial	Checked
B	19.06.24	ISSUED FOR CONSTRUCTION	CL	DR
A	31.05.24	ISSUED FOR CONSTRUCTION	CL	DR
16	10.05.24	Issued for Permit	CL	DR
15	02.05.24	Issued for Permit	CL	DR
14	12.04.24	Issued for Coordination	CL	DR
13	28.03.24	MILESTONE 3 - Remix	CL	DR

50 QUEENS RD
-

General Arrangement Plan Level B1

Status	FOR CONSTRUCTION
Scale	1 : 100 @ A0
Drawn	CL
Checked	DR
Project No.	M12568
Plot Date	19/06/2024 4:40:39 PM
Plot File	
Drawing no.	A03.0B1
Revision	B

REVISION SUMMARY

Stair press extend to basement as per hickory request HICKORY-GCOR-001283

EV location moved for >6m from egress

FOR CONSTRUCTION

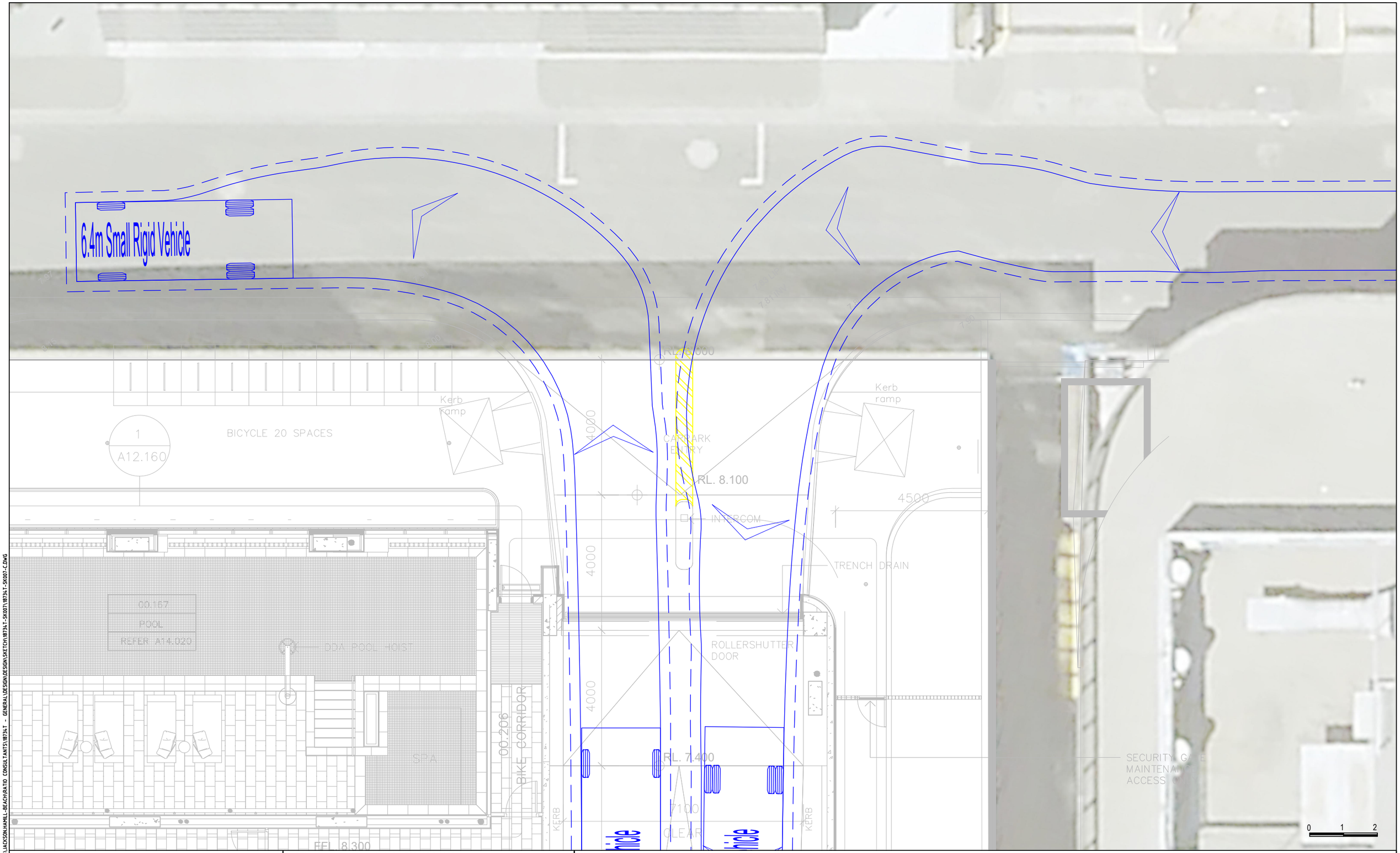
Melbourne 1 Nicholson Street
Melbourne VIC 3000 Australia
T 03 8664 6200 F 03 8664 6300
email mel@batessmart.com.au
http://www.batessmart.com.au

Sydney 43 Brisbane Street
Surry Hills NSW 2010 Australia
T 02 8354 5100 F 02 8354 5199
email syd@batessmart.com.au
http://www.batessmart.com.au

Bates Smart Pty Ltd ABN 70 004 999 400

BATESSMART

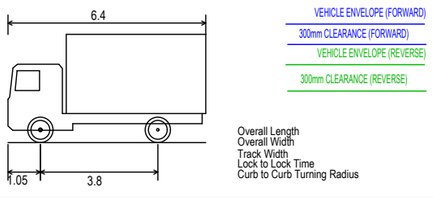
Appendix B : Waste Truck Swept Paths



ratio:

RATIO CONSULTANTS PTY LTD
ABN 005 422 104
8 GWYNNE STREET
CREMORNE, VICTORIA 3121
TELEPHONE (03)9429 3111

SRV - Small Rigid Vehicle (AS/NZS2890.2:2002)



VEHICLE ENVELOPE (FORWARD)
300mm CLEARANCE (FORWARD)
VEHICLE ENVELOPE (REVERSE)
300mm CLEARANCE (REVERSE)

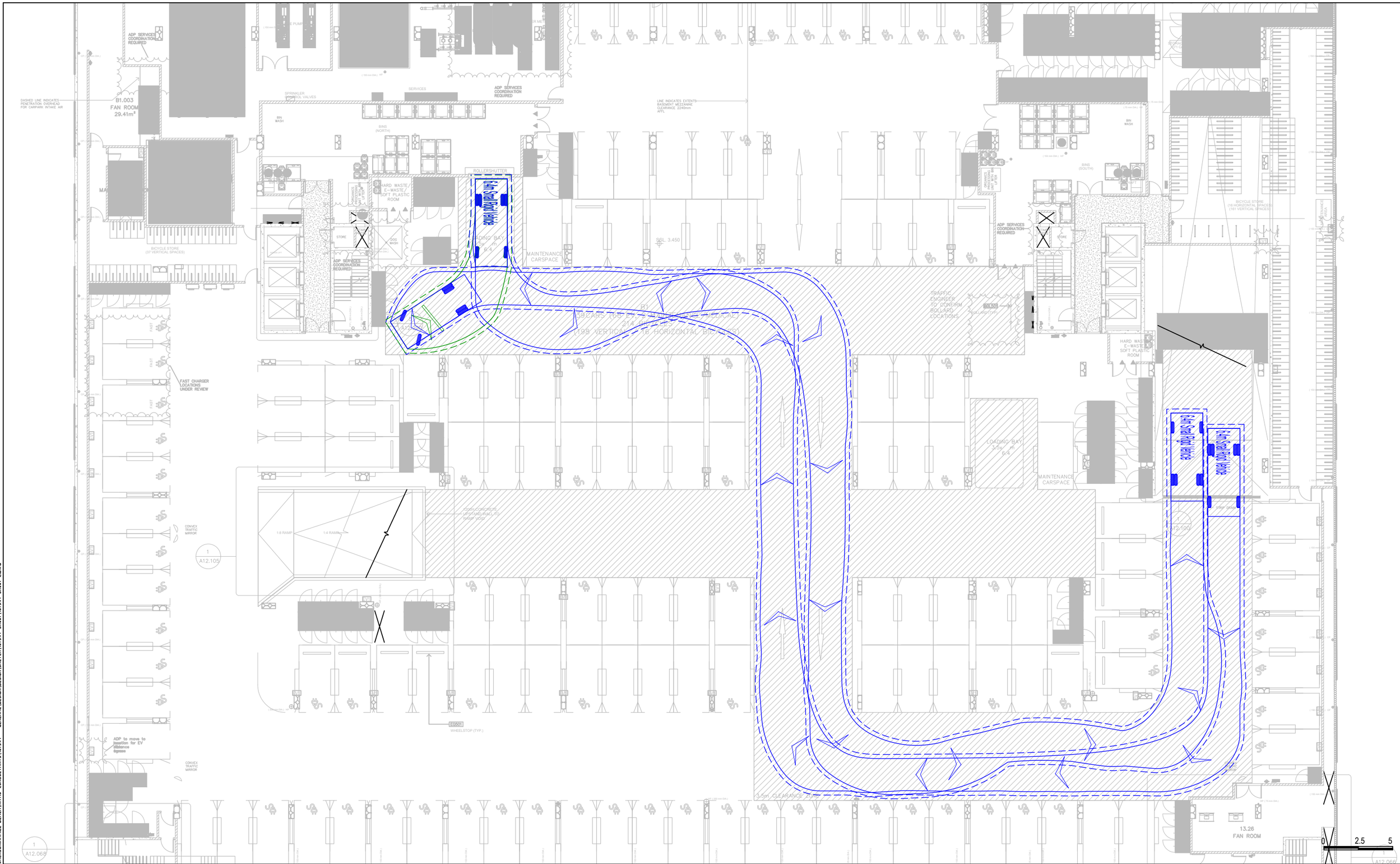
Overall Length	6.400m
Overall Width	2.330m
Track Width	2.330m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	7.100m

Proposed Residential Development
50 Queens Road, Melbourne
Swept Path Assessment - Ground Floor

NOTE:
1) Base plan supplied by Bates Smart, Rev 18, dated 19 June 2024
2) Maximum Design Speed 5km/h

RATIO REFERENCE	SHEET No.	PREPARED BY	SCALE	DATE
18734T-SK007-C	2 of 16	P.M.	1:100 @A3	21/06/2024

C:\USERS\JACKSON.HAMILL-BEACH\RATIO CONSULTANTS\18734T - GENERAL\DESIGN\DESIGN\SKETCH\18734T-SK007\18734T-SK007-C.DWG
21/06/2024 4:36:31 PM



ratio:

RATIO CONSULTANTS PTY LTD
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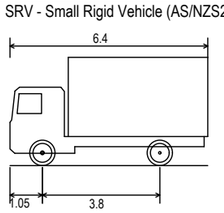
TELEPHONE (03)9429 3111

SRV - Small Rigid Vehicle (AS/NZS2890.2:2002)



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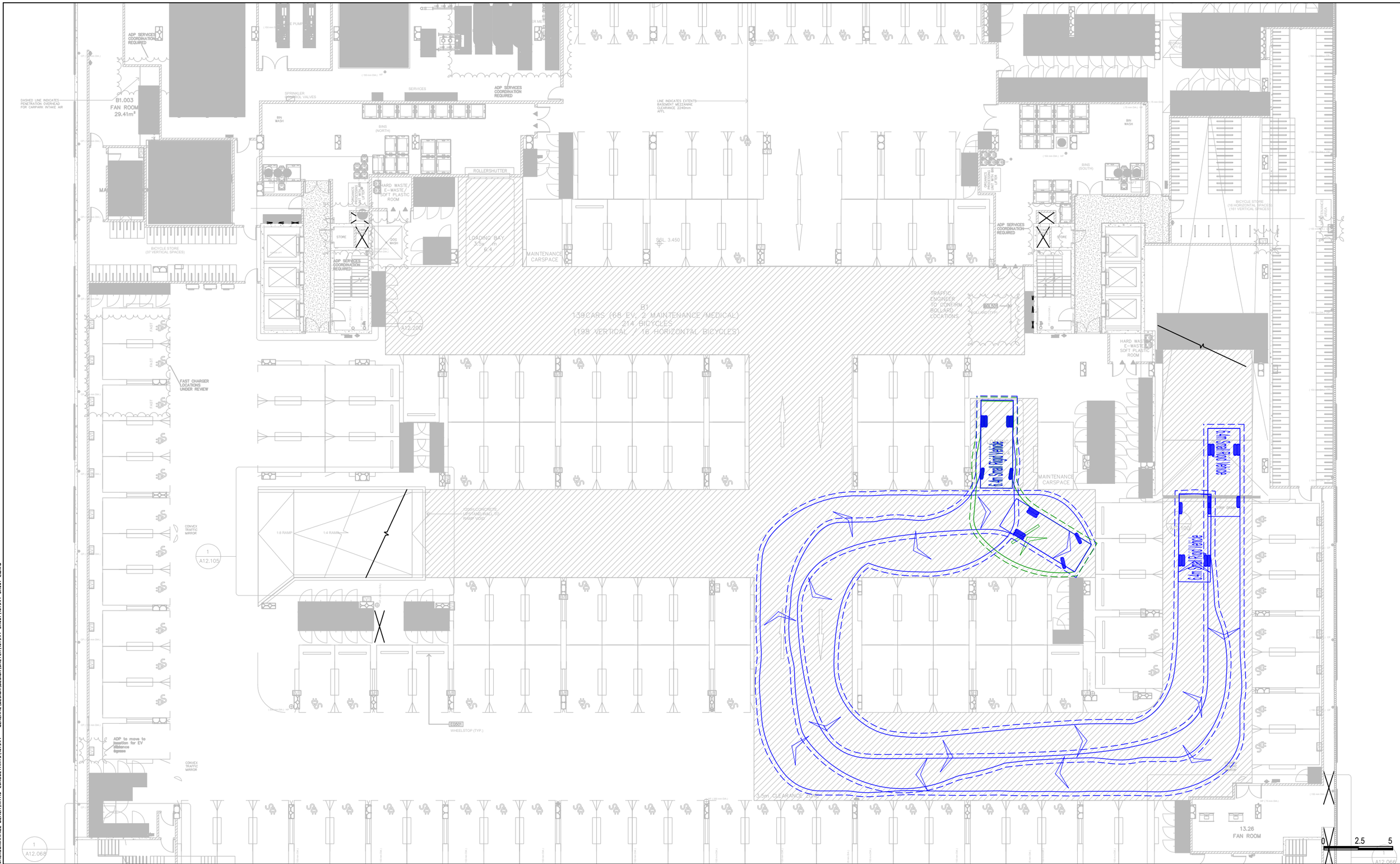
300mm CLEARANCE (FORWARD)
VEHICLE ENVELOPE (REVERSE)
300mm CLEARANCE (REVERSE)

Overall Length	6.400m
Overall Width	2.330m
Track Width	2.330m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	7.100m

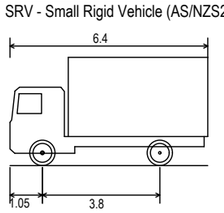
Proposed Residential Development
50 Queens Road, Melbourne
Swept Path Assessment - Basement 01

NOTE:
1) Base plan supplied by Bates Smart, Rev 18, dated 19 June 2024
2) Maximum Design Speed 5km/h

RATIO REFERENCE	SHEET No.	PREPARED BY	SCALE	DATE
18734T-SK007-C	3 of 16	P.M.	1:250 @A3	21/06/2024



SRV - Small Rigid Vehicle (AS/NZS2890.2:2002)



VEHICLE ENVELOPE (FORWARD)
300mm CLEARANCE (FORWARD)
VEHICLE ENVELOPE (REVERSE)
300mm CLEARANCE (REVERSE)

Overall Length	6.400m
Overall Width	2.330m
Track Width	2.330m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	7.100m

ratio:
RATIO CONSULTANTS PTY LTD
ABN 005 422 104
8 GWYNNE STREET
CREMORNE, VICTORIA 3121
TELEPHONE (03)9429 3111

Proposed Residential Development
50 Queens Road, Melbourne
Swept Path Assessment - Basement 01

NOTE:
1) Base plan supplied by Bates Smart, Rev 18, dated 19 June 2024
2) Maximum Design Speed 5km/h

RATIO REFERENCE	SHEET No.	PREPARED BY	SCALE	DATE
18734T-SK007-C	4 of 16	P.M.	1:250 @A3	21/06/2024

Appendix C : Equipment Specifications

ENRICH360 DEHYDRATOR ES - 300L WITH FAS LIFT

DIMENSIONS

MODEL	Capacity (kg)	Width (mm)	Depth (mm)	Height (mm)	Cycle (hrs)
ES-300L FAS Lift	200-300	1160	2630	1880	13-15

SPECIFICATIONS

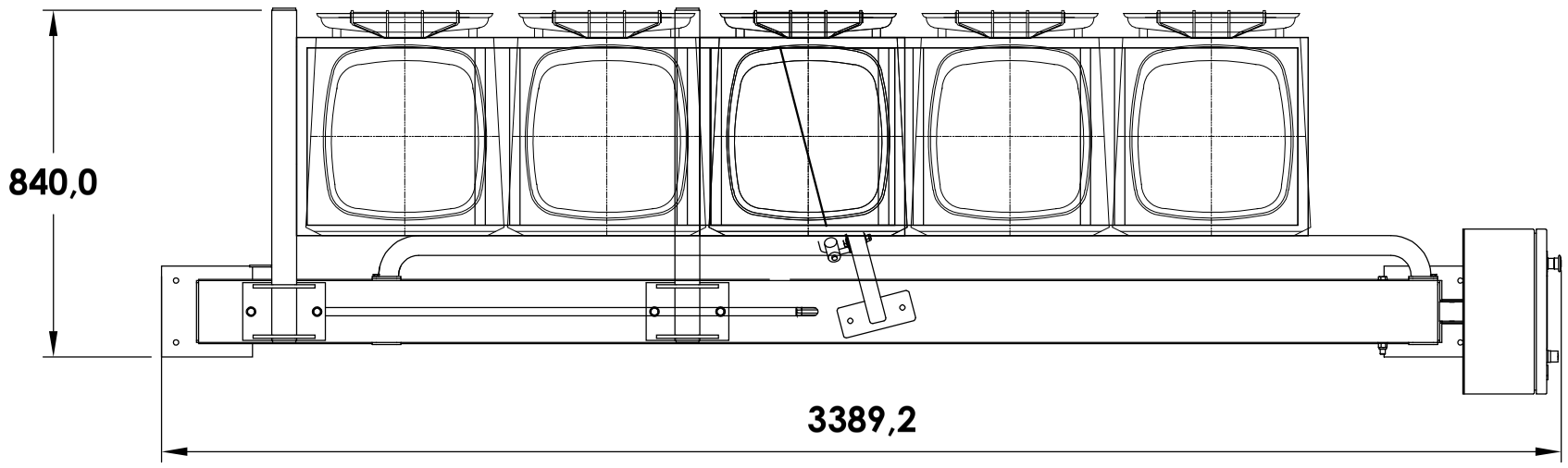
Max power consumption	Average power consumption	Motor	Max amp	Voltage	CO2E per cycle saved
13.0Kw/hr	7.0Kw/hr	2HP	20	3 Phase 4 Wires 380V.410 V/ 50.60Hz	477.97 per cycle

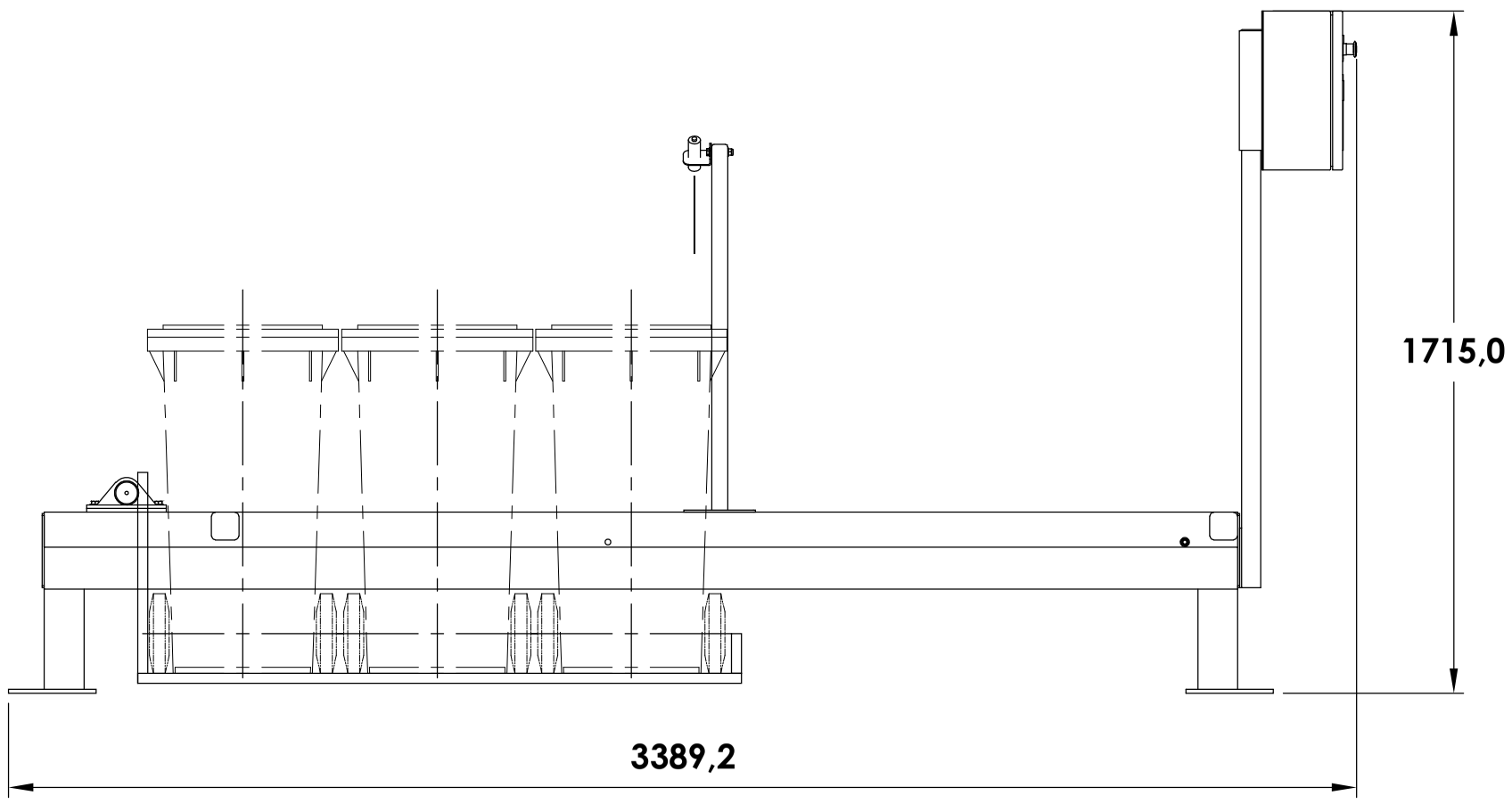
Oil heater	Air heater	Blower Watts	Height with lift	Weight	Drum volume
(R)2.0KWX 4EA,750L, 4M	(P)1.5KWX 1EA,450L, 3M	50	2350mm	840	410L

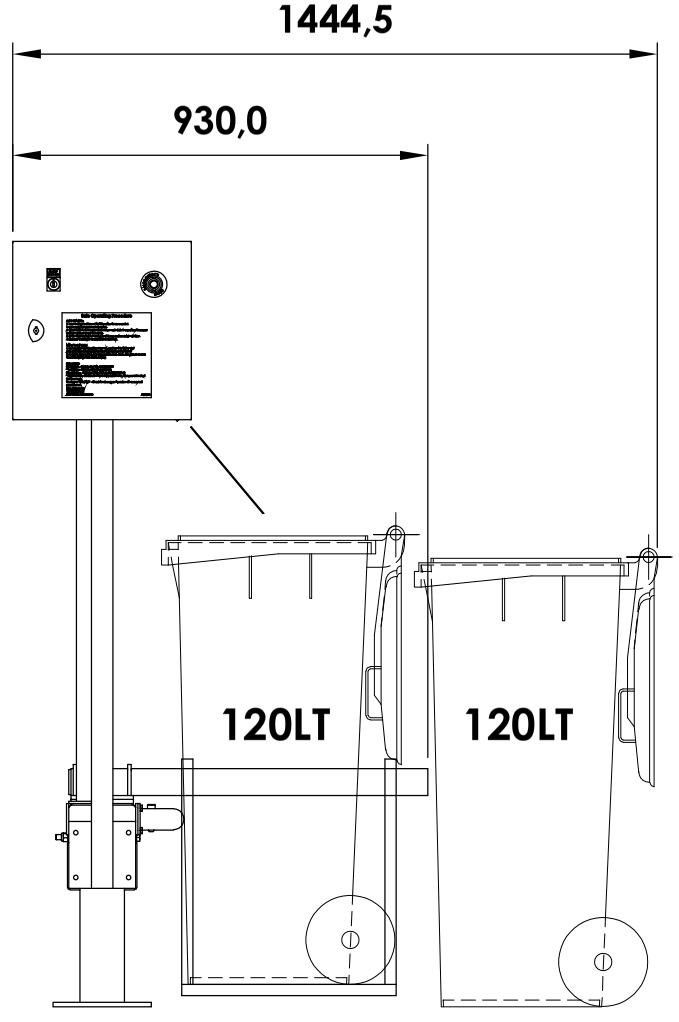
FEATURES

- Programmable Logic Controller (PLC)
- Motor Overload Sensor
- Moisture Sensor
- Paddle Shaft with Dull Blades
- Proprietary Cooling System
- Automatic Bin/Tote Lifter
- Simple One-Button
- Stainless Steel Body
- Airtight Sealing
- Quiet Operation
- Unique Heating System
- Discharge Safety Lock
- Emergency Shut-off Button

LOAD BINS THIS WAY







TOLERANCES UNLESS OTHERWISE SPECIFIED:	
UP TO 10	± 0.25
OVER 10 UP TO 100	± 0.5
OVER 100	± 1
ALL ANGLES	± 1°

File:

DRAFTING STANDARD AS1100 - 1992

All Welds to A.S. 1554

WASTECH ENGINEERING
33 Wedgewood Rd, Hallam
Victoria, Aust, 3803
Ph: +61 3 8787 1600
Fax: +61 3 8787 1670

MATERIAL: A.S.

FINISH: A.S.
.

DRAWN: A.H.

CHECKED: S.F.

DATE: 22/06/2021

MASS:

TITLE: BIN CHANGE SYSTEM
3X120LT BIN CHANGE

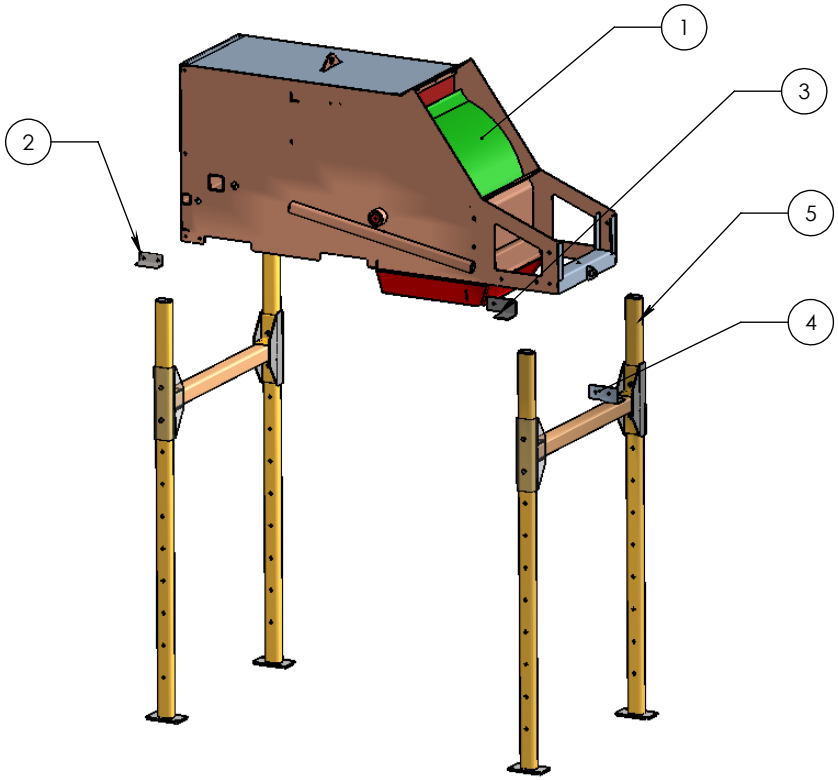
SCALE: 1:25

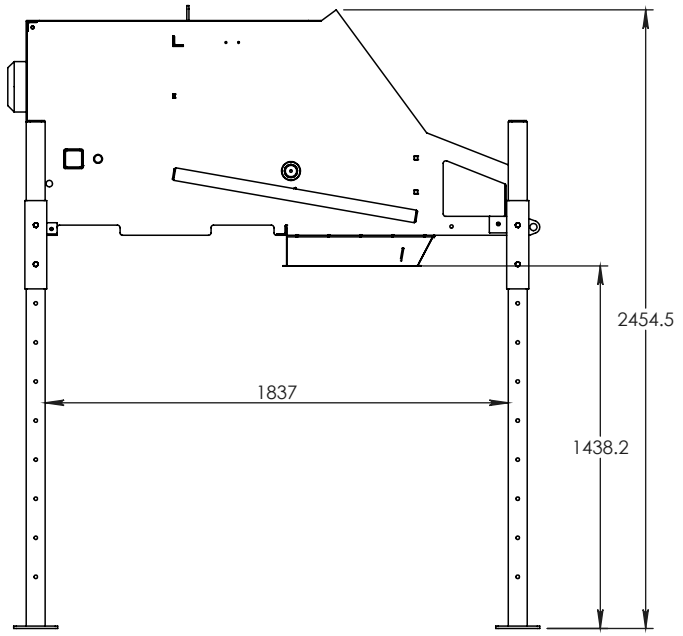
File:

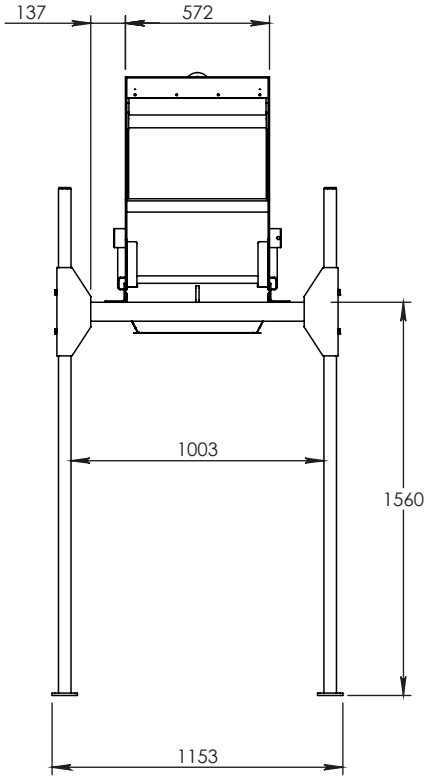
REV. 0

SHEET. 1 OF 1

A4







TOLERANCES UNLESS OTHERWISE SPECIFIED:

UP TO 10	± 0.25
OVER 10 UP TO 100	± 0.5
OVER 100	± 1
ALL ANGLES	± 1°

DRAFTING STANDARD AS1100 - 1992

All Welds to A.S. 1554

WASTECH ENGINEERING
33 Wedgewood Rd, Hallam
Victoria, Aust, 3803
Ph: +61 3 8787 1600
Fax: +61 3 8787 1670

MATERIAL: A.S.
A.S.

FINISH: NATURAL
.

DRAWN: A.H.

CHECKED: S.F.

DATE: 20-12-2011

MASS: 901.64

TITLE: ECOPAC WITH STAND
SUIT 1000LT BINS
WASTECH ENGINEERING

SCALE: 1:50

File: **40.04.52**

REV.

SHEET. 1 OF 1

A4