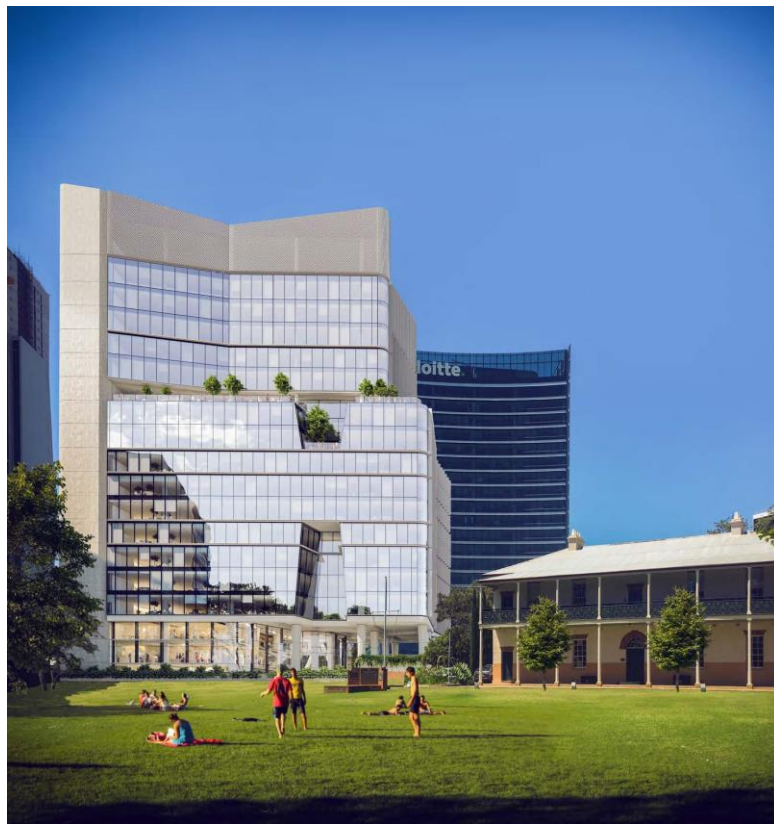




environmental management
pty ltd

OPERATIONAL WASTE MANAGEMENT PLAN

2B-6 HASSALL STREET, PARRAMATTA
MIXED USE DEVELOPMENT
COMMERCIAL, RETAIL



REVISION NUMBER:

VERSION 1

REPORT DATE:

11/04/2019

SUBMITTED TO:

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PRESENTED BY:

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DISCLAIMER

This report is based on information provided by Solutions Consulting.

To that extent this report relies on the accuracy of the information provided to the consultant This report is not a substitute for legal advice on the relevant environmental related legislation, which applies to businesses, contractors or other bodies. Accordingly, EcCell Environmental will not be liable for any loss or damage that may arise out of this project.

DOCUMENT CONTROL

ISSUE NUMBER	DATE	AUTHOR	REVIEW	APPROVED BY
Version 1	26/02/2019	Patrick Nolan	Jo Drummond	Jo Drummond

INTRODUCTION

This Operational Waste Management Plan (OWMP) has been prepared to comply with the City of Parramatta Council Waste Management Guidelines for new Development Applications 2016. The council requirements are to ensure commercial waste generators are responsible for handling and storing waste generated on their premises.

This document provides the requirements for waste handling facilities for the Development Application (DA) submission with reference to the NSW Environment Protection Authority “*Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities*” waste rates and the City of Sydney’s “*Guidelines for Waste Management in New Developments*” 2018.

PROJECT PROFILE

The proposed project consists of the construction of a commercial office tower at 2-6 Hassall Street Parramatta, Sydney. The overall Net Lettable Area (NLA) is 28,070.76 m². This includes 12,402 m² as commercial, 312.3 m² as retail, 16,021 commercial/community and 254.67 m² as loading dock areas.

The project is proposed to incorporate the following:

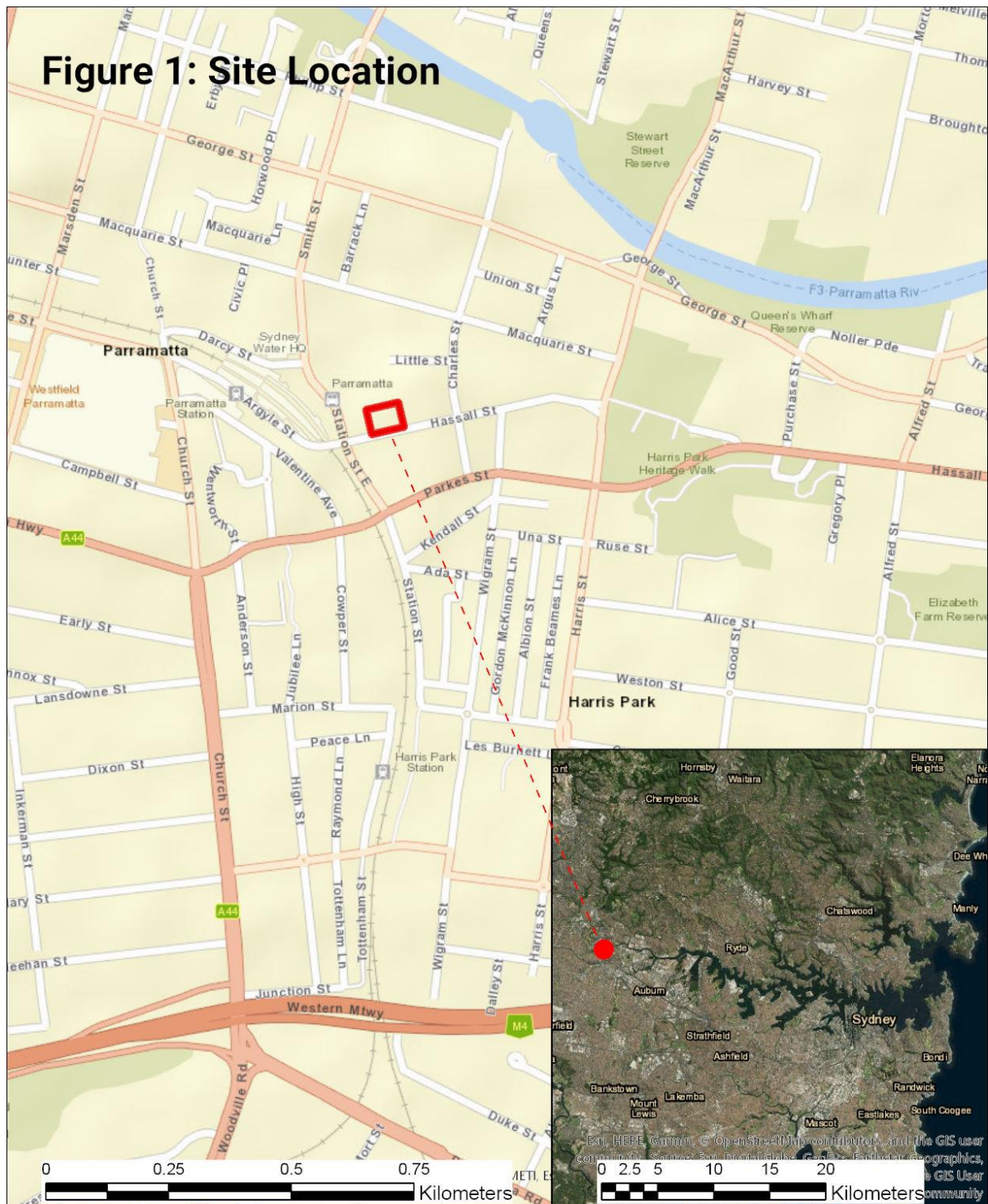
- Basement Carpark;
- Ground – Entry foyer, retail/café tenancies, plantrooms and loading dock;
- Podium Levels 01 & 02 – Commercial tenancy;
- Low Rise Levels 03 to 11– Commercial tenancy;
- Mid-level plant room;
- High Rise Levels 12 to 17 - Commercial tenancy; and
- Roof Level 18 - Plantroom.

Building parameters are as follows:

- Type construction – A;
- Effective height - greater than 50m; and
- Classification 5, 6 & 7b.

In line with the type of development being proposed there will be a waste management system in place. The waste stores will be established in a waste loading zone located in the basement by the loading dock. The waste collection trucks will enter from Hassall Street and proceed down the ramp to the waste loading zone to gain access to the waste stores. Refer to traffic report for swept path diagrams.

Figure 1: Site Location



Legend:
 Site Location

Notes:
 Spatial Reference
 Datum: WGS 1984
 Projection: Mercator Auxiliary Sphere
 Date: 21/02/2019



OBJECTIVES

The OWMP objectives include:

- Complying to City of Parramatta Council's Development Control Plan (DCP) 2011 - Waste Management Guidelines 2016 to divert 70% of waste away from landfill;
- Meet the Planning Secretary's Environmental Assessment Requirements Section 4.12(8) of the Environmental Planning and Assessment Act Schedule 2 of the Environmental Planning and Assessment Regulation 2000;
- Meet all waste management standards while ensuring the health and safety of workers on the project;
- Maximise quantities of materials diverted from landfill by reusing, recycling and reprocessing off-site;
- Safety – to ensure safe practices for storage, handling and collection of waste and recycling;
- Pollution prevention – to prevent stormwater pollution that may occur as a result of poor waste storage and management practices;
- To ensure health and amenity for residents, visitors and workers and minimise noise exposure to residents through the collection of waste and recyclables;
- Encourage design and construction techniques to minimize waste generation; and
- To assist in achieving Federal and State Government waste minimisation targets.

WASTE GENERATION QUANTITIES

The waste volumes have been estimated using the rates outlined in the City of Sydney's "Guidelines for Waste Management in New Developments" 2018.

Table 1 - Minimum estimated waste generation rates (liters per 100m² per day) – Food Retailing

WASTE	RECYCLING	ORGANICS
100	500	100

Table 2 - Minimum estimated waste generation rates for the facility – Restaurant/eating

***Waste collection 7-day week**

Retail Food and Beverage	NLA (m ²)	Average (L/day)	Average (L/week)
Waste	312.3	312	2,192
Recycling	312.3	1,562	10,961
Organics	312.3	312	2,192
Total Waste Generated		2,186	15,345

Table 3 - Minimum estimated waste generation rates (litres per 100m² per day) – Commercial Offices

WASTE	RECYCLING	ORGANICS
15	25	5

Table 4 - Minimum estimated waste generation rates for the project – Commercial Offices

***Waste collection 7-day week**

Commercial	NLA (m ²)	Average (L/day)	Average L/week)
Waste	12,402	1,860	13,020
Recycling	12,402	3,100	21,700
Organics	12,402	620	4,340
Total Waste Generated			39,060

Table 5 Minimum estimated waste generation rates (litres per 100m² per day) – General Community

WASTE	RECYCLING	FOOD WASTE
20	50	5

Table 6 - Minimum estimated waste generation rates for the project – General Community

***Waste collection 7-day week**

Commercial	NLA (m ²)	Average (L/day)	Average (L/week)
Waste	16,021	3,200	19,600
Recycling	16,021	8,021	56,147
Organics	16,021	800	5,600
Total Waste Generated			81,347




Table 7- Total Waste

Area	General Waste	Co Mingled Recycling	Organics	Total
Retail	2,192	10,961	2,192	15,345
Commercaill	13,020	21,700	4,340	39,060
Community /Commercial	19,600	56,147	5,600	81,347
Total Waste Generated	34,812	88,808	12,132	135,752

MONITORING AND MEASUREMENT PROCEDURES

Table 8 below details the recommended systems and collection frequency to manage the estimated waste profile including the total capacity is a function of the bin size, bin number and collection frequency.

Table 8- Recommended equipment and collection frequency

Stream	Bin Type	# Bins Daily	Weekly Clearance Frequency	Weekly Capacity (L)	Estimated volume / week (L)	Footprint per bin (m ²)	Total Foot print (m ²)
General Waste	MGB - 660L	9	7	34,812	36,420	1.16	10.44
Red bin for general							
Mixed Recycling	MGB - 660L	21	7	88,808	95,790	1.16	24.36
Yellow for co mingled. Blue for Cardboard and paper							
Organics	MGB - 120L	13	7	12,132	12,340	0.27	3.52
120 litre for organics							
Total bin footprint							38.32
Recommended Room Size – including circulation space							48.00

KEY LEGISLATION

Relevant key legislation and guidelines applicable to the project include:

- City of Parramatta Council's DCP 2011 - Waste Management Guidelines 2016
- City of Sydney Waste Management Guidelines 2018
- Guidelines for Waste Management Guidelines for new Development Applications 2016;
- Protection of the Environment Operations Act 1997;
- Protection of the Environment (General) Operations Act 1998;
- Waste Avoidance and Resource Recovery Act 2001;
- Protection of the Environment Operations (Waste) Regulation 2014;
- NSW Environment Protection Authority (EPA) Waste Classification Guidelines 2014;
- NSW EPA's Waste Avoidance and Resource Recovery (WARR) Strategy 2014-21;
- NSW EPA's Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities 2012;
- Environmental Planning and Assessment Regulation 2000;
- Environmental Planning and Assessment Act, 1979;
- Division 8.2 of the Environmental Planning and Assessment Act, 1979;
- The CWMP is required by the Secretary's Environmental Assessment Requirements (SEARs) for SSD 18_9354.

RESPONSE TO SEARS

The OWMP is required by the Secretary's Environmental Assessment Requirements (SEARs) for SSD 18_9354.

Table identifies the SEARs and relevant reference within this report.

Table 9 - SEARs and relevant report reference

SEARs Item	Report Reference
Classification of the waste;	Page 7,8
Estimates / details of the quantity of each classification of waste to be generated during the operation of the project;	Page 15
Handling of waste including measures to facilitate segregation and prevent cross contamination.	Page 15
Identify appropriate servicing arrangements (including but not limited to, waste management loading zones, mechanical plant) for the site for any for retail, commercial facilities.	Page 13
Waste minimisation and reuse.	Page 9
Lawful disposal or recycling locations for each type of waste;	Page 13
Contingencies for the above, including managing unexpected waste volumes.	Page 13

RISK MANAGEMENT

Current legislation describes the waste generator as the owner of that waste until it has crossed a weighbridge and is accepted by a licensed disposal facility. Waste contractors including commercial and industrial waste contractors are the primary transporters of waste off-site. Prior to an Occupation Certificate being issued and/or commencement of the use, whichever is earlier, the building owner must ensure that there is a contract with a licensed contractor for the removal of all waste. No garbage is to be placed on the public way, e.g. footpaths, roadways, plazas, reserves, at any time.

Accordingly, waste contractors will be required to provide monthly reports on waste reused, reprocessed or recycled. From these reports the waste diverted from, or sent to, landfill can be determined. These reports have a direct bearing on the generator's regulations. This OWMP should be implemented and maintained and a "Waste Data File" kept by management.

The Waste Data File must include:

- Time and date of material removed from the facility;
- Description and size of waste removed;
- The waste / recycling facility used to dispose or recycle waste; and
- Vehicle registration and waste contractor's company name and address.

WASTE STREAMS & CLASSIFICATION

EPA WASTE CLASSIFICATION

The NSW EPA Waste Classification Guidelines (NSW EPA, 2014) provide for the classification of wastes into groups that pose similar risks to the environment and human health, these are defined in the Protection of the Environment Operations Act 1997.

Classes of waste described in the guideline are:

- Special waste
- Liquid waste
- Pre-classified waste, or wastes classified by chemical assessment as:
 - Hazardous waste
 - Restricted solid waste
 - General solid waste (putrescible)
 - General solid waste (non-putrescible).

SITE-SPECIFIC WASTE STREAM

Potential waste types and corresponding EPA classifications for the operation of 6 Head are included in 10.

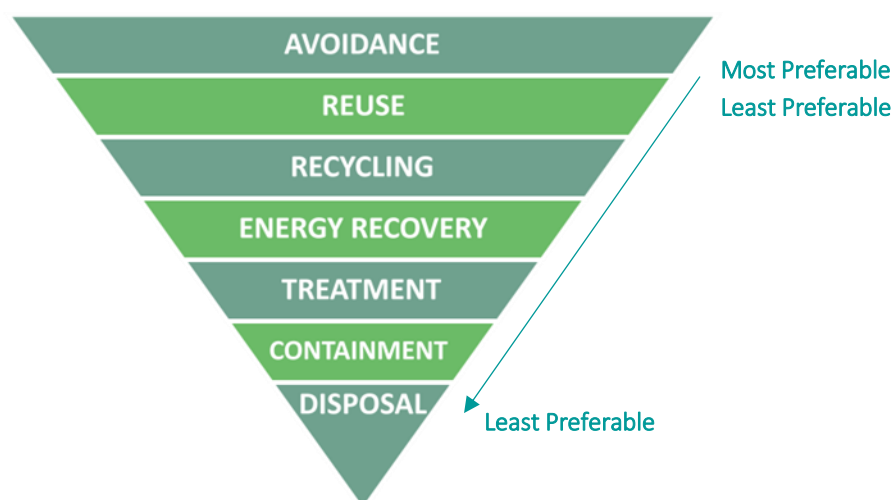
Table 10 - Potential Waste Types and Classifications

Waste Type	EPA Classification	Waste Management
Kitchen food scraps	General solid waste (putrescible)	Pulp Master
Cardboard, excluding waxed Cardboard	General solid waste (non-putrescible)	Cardboard recycling
Plastics Recyclable	General solid waste (non-putrescible)	Co-mingled recycling
Glass including bottles and containers	General solid waste (non-putrescible)	Glass Crusher
Non -recyclable plastic	General solid waste (non-putrescible)	General Waste
Paper including all types of recyclable paper but excluding paper towels, toilet paper & tissues	General solid waste (non-putrescible)	Paper recycling

ASSUMPTIONS

- “Retail” week assumed to be 7 days
- “Commercial” week assumed 5 days
- If there more than 50 litres of waste meat/ seafood/ poultry is generated, daily collection will be required or it is to be held under refrigeration
- Similarly, “food retail” was based on the “Better Practice Guidelines”
- Some areas such as plant rooms, corridors and outdoor areas, produce little waste and as such are excluded from the calculations
- This report is part of the development application process. The final sizing of waste stores and frequency of waste collection will be made once final tenancy agreements are in place and tenancy types are determined.
- Council does not provide collection for non-residential uses

WASTE MANAGEMENT



WASTE HIERARCHY

Figure 1 - Order of the Waste Hierarchy

Table 2 indicates waste management practices that should be adopted in accordance with the Waste Avoidance and Resource Recovery Act 2001 (NSW EPA, 2014).

Table 2 - Implementing the Waste Hierarchy

Implementing the Waste Hierarchy
Avoid / Reduce
Reduce general waste at the source, determine changes in returnable delivery systems including packaging and purchasing.
Require suppliers to use stackable/ returnable/reusable boxes instead of disposable cardboard boxes.
Focus on minimising waste (i.e. excess packaging, take-back, post use collection).
Reuse
Set up a reuse area for excess materials and promote the contribution and reuse of excess food.
Donate old (useable) computer/electrical equipment, furniture and fittings to staff, charities, or sell at auction.
Implement the Enviro Bank program for bottles and cans.
Recycle
Introduce recycling systems for major waste streams generated onsite including: <ul style="list-style-type: none"> Paper and cardboard Bottles and cans Packaging and plastics
Modify or refresh signage on recycling bins or in recycling areas to promote correct recycling practice.
Provide regular information and education to staff on appropriate usage and recycling bins.
Monitoring and assessment
Request waste contractor to provide monthly data and reporting on recycled and materials sent to landfill.

WASTE STORAGE AREA

The bins will be placed on a designated loading dock pad in the basement of the building.

Private waste collection contractors, working with the management, will be responsible for providing the waste removal service

The management will be responsible for cleaning all floors, public and shared areas.

The waste storage area will be designed as per government guidelines.

Table 3 - BCA Requirements for storage rooms

General	All waste management facilities will be compliant with the Building Code of Australia (BCA) and all relevant Australian Standards.
Surfaces	<p>The floors, walls and ceilings of waste and recycling storage areas (room or bin bays) and chute room(s) must be finished with a rigid, smooth-faced impermeable material capable of being easily cleaned.</p> <p>The floors of waste and recycling storage areas (room or bin bays) must be graded and drained to drainage fitting approved by the relevant authority located in the room(s). The floor must be provided with a ramp to the doorway where necessary.</p>
Structure	<p>The walls, ceilings and floors of the storage rooms will be finished with a light color.</p> <p>The walls of the waste storage rooms will be constructed of approved solid impervious material and will be cement rendered internally to a smooth even surface coved at all intersections.</p> <p>The storage area will be constructed and finished to prevent absorption of liquids and odors and will be easily cleanable.</p>
Doors	<p>A close-fitting and self-closing door or gate operable from within the room must be fitted to all waste and recycling storage areas (rooms or bin bays).</p> <p>Doors/gates to the waste storage rooms must provide a minimum clearance of 1,200mm. At least one door or gate to the waste and recycling storage area must have sufficient dimensions to allow the entry and exit of waste containers of a capacity nominated for the development.</p> <p>Lightweight roller shutter-type doors or grilles should be considered for access to waste and recycling storage areas, as these do not impact on the available storage space. If these types of doors or grilles are used, the requirement for a close-fitting and self-closing door remains, so that waste collectors can access the waste storage area other than through the roller door or grille.</p> <p>The design shall restrict the entry of trespassers, vermin or other animals into the area.</p>
Wash down are	<p>Typical design includes provision for a water supply</p> <ul style="list-style-type: none"> recessed with ramp access and graded floor, with a 1:10 gradient towards drain flush grate drain water proof epoxy applied to floor and walls to 20cm height water-proof bund/barrier along entry point.

Water	The waste and recycling storage area (room or bin bay) must be provided with an adequate supply of water for cleaning purposes with a hose cock. This does not include within chute rooms (if present).
Lighting	Waste and recycling rooms must be provided with artificial light controlled by switches located both outside and inside the room.
Pest Control	The waste storage rooms, areas and containers will be constructed in a manner as to prevent the entry of vermin.
Ventilation	The waste storage rooms will be supplied with an approved system of mechanical exhaust ventilation.
Safety	<p>Any compactors or mechanical devices, if permitted for the mechanical handling and storage of waste, must be fitted with safety operating and cut-off systems.</p> <p>Smoke detectors will be fitted in accordance with AS1670 Automatic Fire Detection and Alarm Systems and connected to the fire prevention system of the building.</p> <p>The waste compactors will be fully fire proofed and child proofed. Only trained building management and waste contracting staff will have access to compactor equipment. All equipment will be protected from theft and vandalism</p>
Signage	<p>Signs will be provided to demonstrate how to use the waste management system (including segregation of wastes for recycling, use of waste compactor), as well as appropriate safety signage.</p> <p>The different recycling and waste bins will be clearly identified and signed appropriately.</p>



WASTE PATHWAY

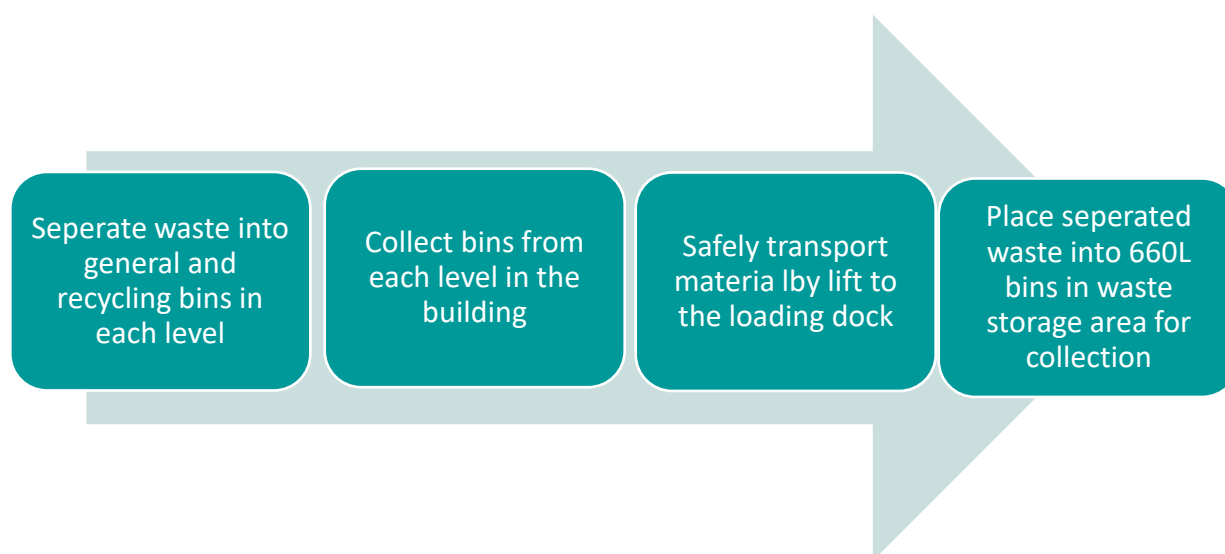


Figure 2 - Waste Pathway Flow Summary

Table 13 - Requirements for bin movement path

Requirements for bin movement path			
Bin Capacity	< 350 L	360 – 1000 L	> 1500 L
Max distance of path to be moved along	75 m		
Grade of path to be moved along	1.14 (7%)	1.30 (3%)	1.30
Narrative: The bin movement path has been in accordance with the City of Sydney Waste Guidelines 2018			

WASTE COLLECTION

WASTE COLLECTION POINT

The Waste Collection Point is located in the Loading Dock in the basement. The height of the loading dock will be 3.6 meters and no vehicles over 3.6 meters in height may enter the loading dock.

Rubbish will be removed from each floor via the lift to the loading dock

- rubbish bins will be cleaned on a regular basis;
- rubbish will only be removed through the common areas outside of trading hours;
- Head Lessor will be promptly notifying the cleaner if any spillages occur in the Common Areas.

VEHICLE MOVEMENTS

The waste collection truck will enter through Hassell Street to the Loading Dock waste will be collected from the designated Waste Collection Point. The truck will enter the loading dock in a forward direction, turn and exit in a forward direction. The truck will collect the 660L Mobile Garbage Bins and will then move forward and exit onto Hassell Street.

- The vehicle access for collection and loading has a maximum grade of 1:20 for the first 6 metres from the street, then a maximum of 1:8 with a transition of 1:12 for 3.8 metres at the lower point
- A minimum width of driveway of 3.6 metres
- A minimum radius turning circle of 10.5 metres or provision for changing the facing direction

The vehicle type will be a rear loading vehicle type that can operate within a 3.8 m clearance height

COLLECTION VEHICLE

Type of Collection Vehicles Used

Vehicle type fit for purpose: Semi-ridged vehicle.

Access: Collection vehicles will enter the loading dock from Hassell Street, Parramatta.

Appendix B: Waste Disposal & Storage Area shows typical waste activity in the dock.

A bin tip collection (General and recyclables in bins)

It is expected that on average 5 waste vehicles will arrive daily for a waste collection. The vehicles that can access the dock are semi-ridged vehicles.

Vehicle Dimensions: width 2.5mt x height 2.4mt x length 5.9mt. takes 25 cubic meters

Dimensions required for access: width 2.8 mt x height 3.5 mt x turning diameter 13 mts.

COLLECTION HOURS

The waste collection truck will schedule work during the hours the Loading Dock is available. This is from 7am to 3pm Monday to Saturday and 8am to 3pm on Sundays.

WASTE CONTRACTOR

A contract with a licensed waste contractor for the collection and removal of all waste to a licensed facility, will be arranged and concluded prior to commencement of waste removal. The contract will also include specific provisions for the times and manner of collections and the verification of recycling and/or disposal of all of the facility's aforementioned waste streams and potential intermittent streams including but not exclusively: batteries, electronics, light bulbs, smoke detectors and any other fixtures or fittings that are generated as recyclable waste.

Upon engagement, a precondition is written evidence of a valid and current contract with a licensed collector for waste and recycling collection and will be provided to the client of the facility. The contract will, as stated above, include specific details on the method, timing and location of both the licensed recycling facilities used and/or licensed landfill(s) used for the disposal of non-recyclable waste. The generator of the waste is the owner of the waste until it crosses a weighbridge into a licensed landfill or licensed recycling facility.

ONGOING WASTE MANAGEMENT PLAN APPLICATION

PROJECT:
Commercial Development
ADDRESS:
6 Hassall Street, Parramatta
OWNERS:
Charter Hall Level 20, No.1 Martin Place, Sydney, NSW, 2000 GPO Box 2704 Sydney NSW 2001
Details of Applicant
Thomas Lay SOLUTIONS CONSULTING L14, 5 MARTIN PLACE, SYDNEY NSW 2000 Thomas.lay@solutionsconsulting.com.au
Description of buildings and other structures currently on the site:
Three level block of residential units
Brief description of proposal:
Basement Carpark; Ground – Entry foyer, retail/café tenancies, plantrooms and loading dock; Podium Levels 01 & 02 – Commercial tenancy; Low Rise Levels 03 to 11– Commercial tenancy; Mid-level plant room; High Rise Levels 12 to 17 - Commercial tenancy; and Roof Level 18 - Plantroom.

	Name	Signed	Contact Number	Date
Prepared by :	Jo Drummond		0412214233	13/02/2019

ONGOING WASTE MANAGEMENT PLAN

NLA

Component	m ²
Commercial	27,758
Retail	312.3
Total	28,070.76

Number of levels: 22

Location of pick up: Basement Loading Dock

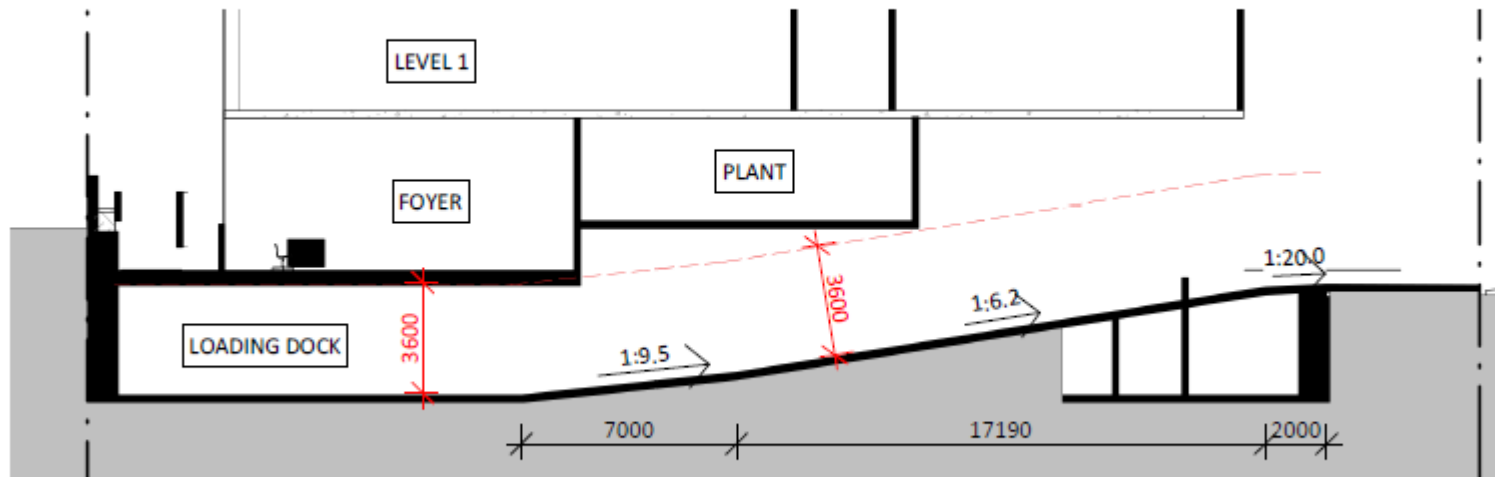
Time of pick-up: TBA

Waste Contractor: TBA

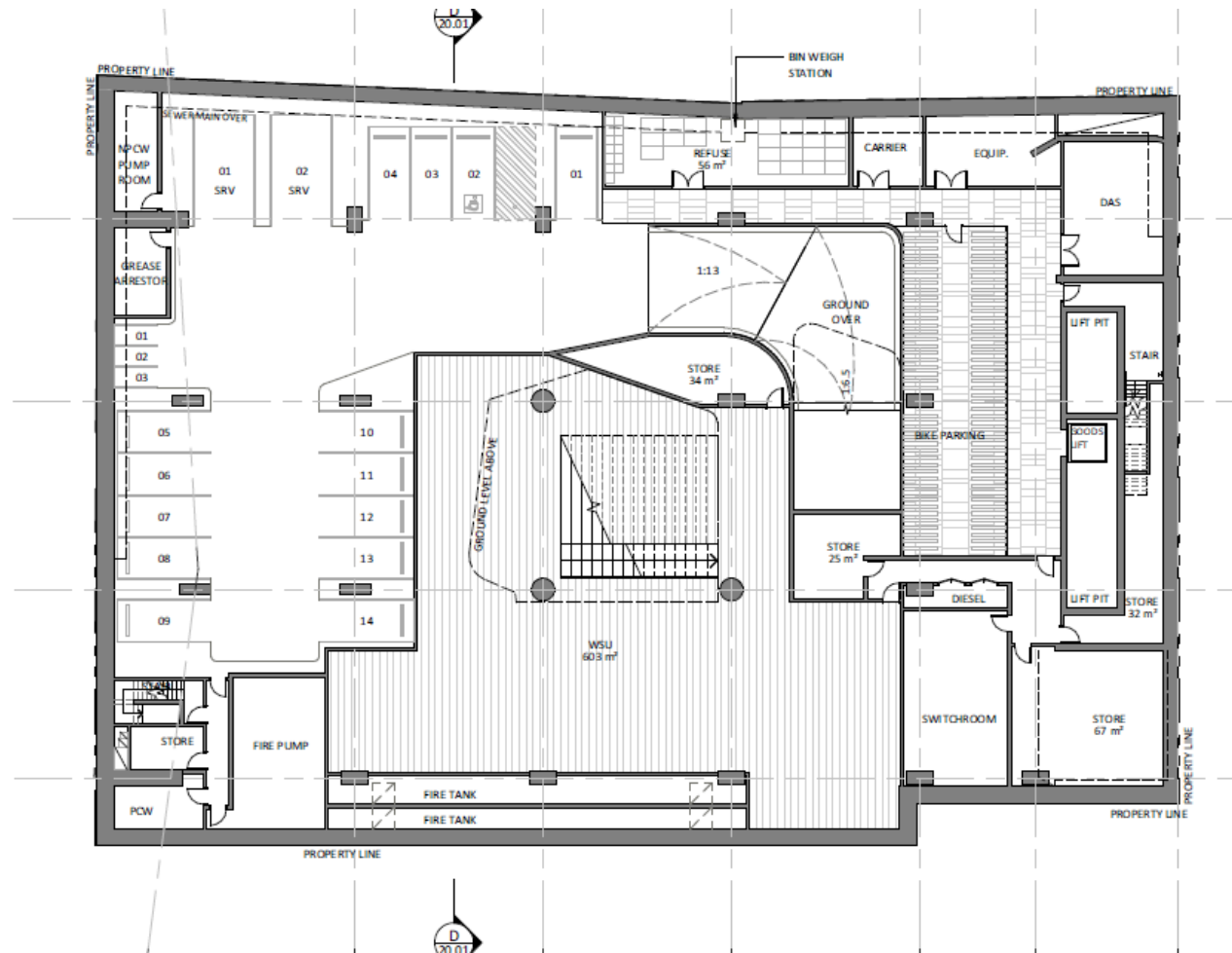
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Community /Commercial	19,600	56,147	5,600	81,347
Total Waste Generated	34,812	88,808	12,132	135,752

Stream	Bin Type	# Bins Daily	Weekly Clearance Frequency	Weekly Capacity (L)	Estimated volume / week (L)	SRV pck up
General Waste	MGB - 660L	9	7	34,812	36,420	1.5 per week
Mixed Recycling	MGB - 660L	21	7	88,808	95,790	4 per week
Organics	MGB - 120L	13	7	12,132	12,340	Organic collection

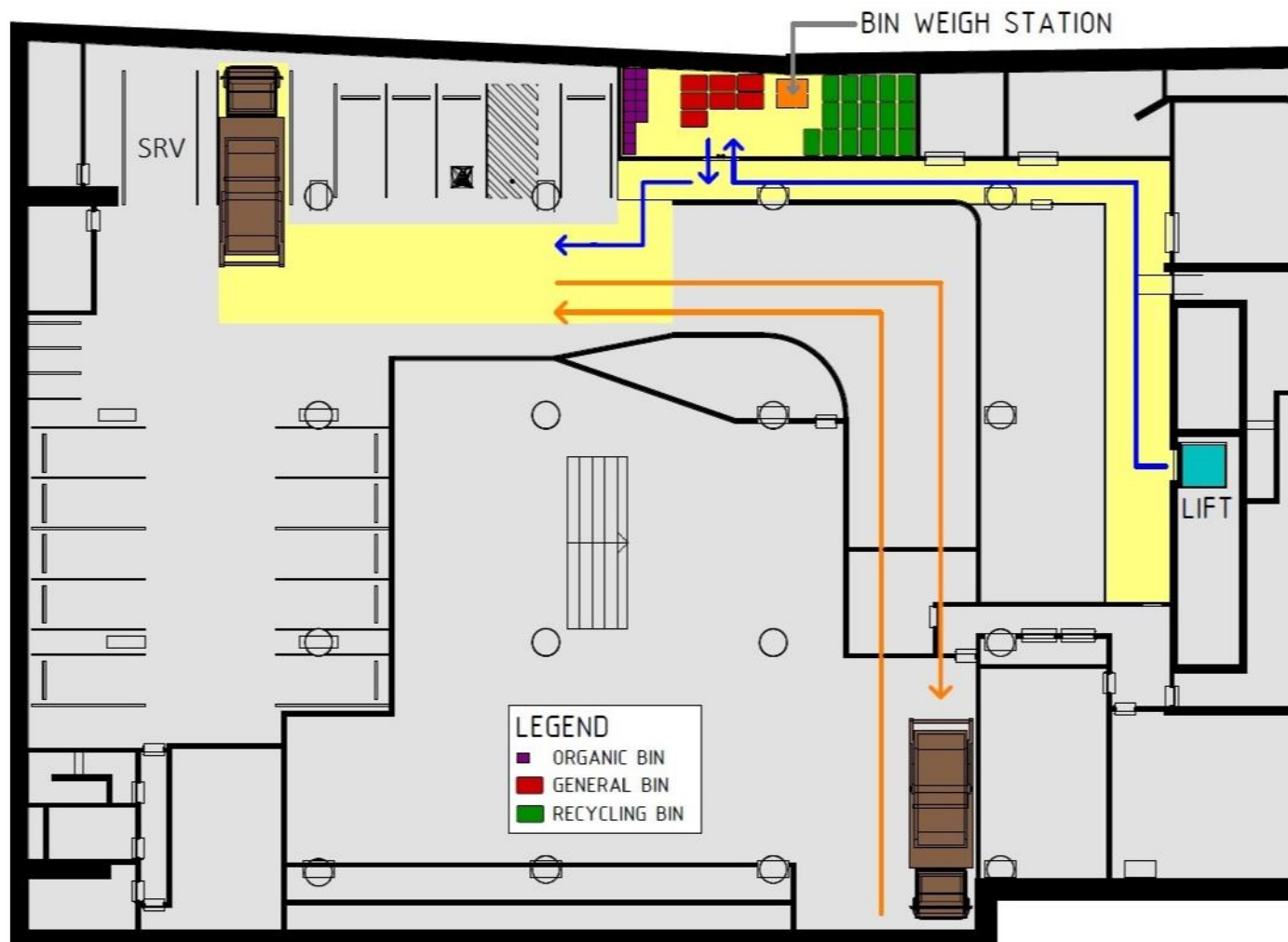
APPENDIX A – WASTE COLLECTION ZONE



APPENDIX B BASEMENT DRAWING



APPENDIX C WASTE FLOW



APPENDIX D AUSTRALIAN BIN SIZES

Australian standard sizes for mobile garbage bins (MGBs)

Standard measurements

Bin type	120L MGB	240L MGB	660L MGB	1100L MGB
Height	940 mm	1080 mm	1250 mm	1470 mm
Length	560 mm	735 mm	850 mm	1245 mm
Width	485 mm	580 mm	1370 mm	1370 mm



120 litre MGB



240 litre MGB



660 litre MGB