



Leigh Design

waste management plans for all urban developments

Leigh Design Pty Ltd

ABN 37 139 522 437

PO Box 115

Carnegie VIC 3163

P +61 3 9958 0800

E leo@leighdesign.com.au

I www.leighdesign.com.au

Waste Management Plan



Proposed Development:

718-724 Sydney Road, Coburg North, Victoria

Prepared for:

Coburg Gardens

Document Control

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Prepared By: Leonardo Russi, BEng (Mech), MEng (Env)

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WASTE MANAGEMENT SUMMARY

- The operator, as defined below, shall be responsible for managing the waste system and for developing and implementing adequate safe operating procedures.
- Waste shall be stored within the development (hidden from external view).
- Users shall deposit sorted waste into the chutes and/or into designated collection bins.
- Waste shall be collected within the development. The collection contractor shall transfer bins between the store and the waste truck.
- A private contractor shall provide waste collection services.

GLOSSARY

Operator: refers to the Owners Corporation, who shall manage site operations (via cleaners, staff and contractors, if required).

User: refers to residents and commercial tenants, who shall utilise the waste system.

1 SPACE AND SYSTEM FOR WASTE MANAGEMENT

1.1 Development Description and Use

This development shall consist of residential dwellings and commercial tenancies (refer to Table 1).

1.2 Estimated Garbage and Recycling Generation

The following table summarises the waste estimate (m³/week):

Table 1: Waste Estimate

Waste Source	Base Qty (est.)	Garbage	Recycling
Dwellings (1 bed)	No. of units = 111	6.66	6.66
Dwellings (2 bed)	No. of units = 30	2.40	2.40
Dwellings (3 bed)	No. of units = 6	0.48	0.48
Retail	area (m ²) = 147	1.54	0.82
Office	area (m ²) = 173	0.12	0.12
TOTAL (m³/wk)		11.20	10.48

Note: Residential waste figures are based on Council's volumetric requirements and commercial waste figures are based on Sustainability Victoria Guidelines.

1.3 Collection Services

Based on the anticipated waste volume, a private contractor shall be required to collect waste. The operator shall choose a waste collection provider, negotiate a service agreement, and pay for these services.

Note: Every rateable tenement is liable to pay for municipal charges irrespective of the level of collection services provided by Council.

1.4 Location, Equipment, and System Used for Managing Waste

The waste management system is summarised as follows:

- Apartment receptacles for garbage, recycling, glass, and organics (with option for the latter as a benchtop caddy).
- Tenancy receptacles at internal areas.
- One Garbage Chute and one Recycling Chute, each with residential level intakes and Residential Bin Store discharge.
- Residential Bin Store located at Basement Level 1.
- Commercial Bin Store located at Ground Level.
- Collection bins (kept within the above Bin Stores - refer to Table 2).

The various collection waste-streams are summarised as follows:

Garbage: General waste shall be placed in tied plastic bags and stored within bins.

Recycling: Two types of bins shall be provided. One type of bin for glass and a second type for all other recyclables (paper, cardboard, aluminium, steel, and plastics). All recyclables shall be commingled in all of the available recycling bins until a glass-only service becomes available.

Organics: Users shall place organic waste into Organics bins (a small caddy shall be employed at each tenement). Certified compostable liners shall be adopted for bins and/or caddies, to home standard AS5810-2010 (alternatively, the industrial standard AS4736-2006 could be considered if approved by the waste collector). Excess garden waste from communal areas shall be collected and disposed by the landscape maintenance contractor.

Other Waste Streams: The disposal of hard/electronic/liquid and other wastes (polystyrene, batteries, paint, chemicals and detox items, etc) shall be organised with the assistance of the operator.

These items shall remain within the development until the Operator arranges a private collection from the subject land in accordance with requirements from the relevant authority. In particular e-waste must not be disposed in landfill. Information regarding the waste system as a whole (and in particular the disposal of these wastes) shall be provided to occupants by the operator, as stated in Section 4.4 of the WMP.

The following table summarises bin quantity/capacity, collection frequency, and area requirements (based on Table 1):

Table 2: Bin Schedule and Collection Frequency

Waste Source	Waste Stream	Bin Qty	Bin Litres	Collections per Week	Net Area m ²
Residential (shared bins)	Garbage	4	660	3	4.8
	Organics	5	240	3	2.5
	Recycling	4	660	3	4.8
	Recycling - future glass	5	240	3	2.5
	Hard/E-Waste	-	-	At Call	3.0
Commercial (shared bins)	Garbage	1	660	3	1.2
	Organics	1	240	3	0.5
	Recycling	1	240	3	0.5
	Recycling - future glass	1	120	3	0.5
	Hard/E-Waste/Other	-	-	At Call	1.5
Net Waste Storage Area (excludes circulation), m²:					22.8

Notes:

- Private bins shall be sourced by the operator (either purchased from a supplier or leased from the collection contractor).
- Subject to stakeholders' preference/capability (and as built constraints), bin sizes and quantities can be changed.

1.5 Planning Drawings, Waste Areas, and Management of the Waste System

The plans illustrate sufficient space for onsite bin storage, as required by the above schedule.

Notwithstanding the above, collection days shall be staged appropriately and the operator shall stipulate procedures for effective management of the available space.

1.6 Collection Bin Information

The following bins shall be utilised (see Sect. 4.4 for signage requirements):

Table 3: Bin Details

Capacity (litres)	Height (mm)	Width (across front, mm)	Depth (side on, mm)	Empty Weight (kg)	Average* Gross Weight (kg)
120	930	480	545	10	26
240	1060	585	730	13	45
660	1250	1240	780	43	130

Notes:

- * = Average Gross Weight is based on domestic waste studies (which vary subject to locality and waste-type). Expect greater weight for wet or compacted waste.
- Use the above details as a guide only – variations will occur. The above is based on Sulo plastic (HDPE) bins.
- Bins that receive waste under chutes shall be reinforced to withstand loads from waste falling at high speed.

Table 4: Moreland Colour Coding

Bin	Garbage	Commingled Recycling	Green Waste
Lid	Green	Yellow	Lime
Body	Green	Green	Green

Note: For private bins, AS4123.7 bin colours can be adopted. Private bins shall be labeled to identify the waste generator and site address. For glass, Victorian publications illustrate bins with purple lids. For Food Waste / organics bins, AS 4123.7 bins have a Burgundy lid and a Dark Green or Black body.

2 ACCESS FOR USERS, COLLECTORS, AND COLLECTION VEHICLES

2.1 User Access to Waste Facilities

Residents shall dispose sorted garbage and recyclables via dedicated chutes (available at each apartment level), in accordance with instructions from the chute supplier. For wastes unsuitable for chute disposal (i.e. large cardboard pieces, organics, bulky waste, future-glass, etc), residents shall transfer sorted waste directly to the Bin Store (access via lift/stairs if required). The Operator shall train these residents so that they may safely access to the Bin Store in an unaccompanied manner.

Commercial tenants shall dispose sorted waste into collection bins located within their designated Bin Store (if required, using a suitable trolley).

Note: The operator shall have access to the Bin Stores to rotate the bins, ensuring that empty bins are available along the circulation area so that users are able to reach them. Also, the operator shall monitor the filling of the bins under the chutes and change these when full.

2.2 Collection Arrangements and Access to Waste Facilities

- A private contractor shall collect residential waste within the onsite carpark at Upper Basement Level and shall collect commercial waste within the internal Loading Bay.
- Collection staff (driver and assistant) shall have access to the Bin Stores and transfer bins to the truck and back to the stores.
- The waste collection shall be carried-out by rear-lift vehicles (nom. 6.4m long, 2.1m high, and 6.4 tonnes gross vehicle mass, needing a 2.5m height clearance when collecting 1100L bins).

3 AMENITY, LOCAL ENVIRONMENT, AND FACILITY DESIGN

3.1 Noise Minimisation Initiatives

- Collection bins shall feature rubber castors for quiet rolling during transfers.
- Chutes and waste areas shall meet BCA and AS2107 acoustic requirements.
- Local laws shall be observed for all operations in public and private areas.
- For private services, the hours of waste collections shall be as specified in council's local laws. Also, Section 5 of the Victorian EPA Noise Control Guideline Publication 1254 (see below) shall be observed to protect the acoustic amenity of the development and surroundings.

Victorian EPA Noise Control Guideline Publication 1254.2 May 2021 (excerpt)

[Section] 5. Domestic [and Commercial] Refuse Collection

The main annoyance produced by domestic refuse collections occurs in the early morning (i.e. before 7:00am). Therefore, if possible, routes should be selected to provide the least impact on residential areas during that time.

Collection of refuse should be restricted to the following criteria:

- Collection occurring once a week should be restricted to the hours: 6am to 6pm Monday to Saturday.
- Collections occurring more than once a week should be restricted to the hours: 7am to 6pm Monday to Saturday.
- Compaction should only be carried out while on the move.
- Bottles should not be broken up at the point of collection.
- Routes which service entirely residential areas should be altered regularly to reduce early morning disturbance.
- Noisy verbal communication between operators should be avoided where possible.

3.2 Litter Reduction and Prevention of Stormwater Pollution

The operator shall be responsible for:

- Promoting adequate waste disposal into the bins (to avoid waste-dumping).
- Securing the waste areas (whilst affording access to users/staff/contractors).
- Preventing overfilled bins, keeping lids closed and bungs leak-free.
- Abating any site litter and taking action to prevent dumping and/or unauthorised use of waste areas.
- Requiring the collection contractor to clean-up any spillage that might occur when clearing bins.

The above will minimise the dispersion of site litter and prevent stormwater pollution (thus avoiding impact to the local amenity and environment).

3.3 Ventilation, Washing, and Vermin-Prevention Arrangements

Waste areas shall feature:

- Ventilation in accordance with Australian Standard AS1668. For chute ventilation, a fan with riser to a rooftop exhaust shall be utilised.
- Tight-fitting doors (all other openings shall have vermin-proof mesh or similar).
- Impervious flooring (also, smooth, slip-resistant, and appropriately drained).
- A graded bin wash area, hot and cold mixing hosecocks, hose, and a suitable floor-waste connected in accordance with relevant authority requirements. The bin and wash areas may overlap, as stored bins can be moved so that a bin can be washed.
- A water-flushing nozzle with accessible water cock shall be provided at the head of each chute. Include a floor waste and hosecock near each chute outlet.

The operator shall regularly clean waste areas/equipment. Also, access doors and bin-lids shall be kept closed.

3.4 Design and Aesthetics of Waste Storage Areas and Equipment

Waste shall be placed within collection bins and stored in designated onsite areas (hidden from external view). Following waste collection activities, bins shall be returned to the storage areas as soon as practicable.

Waste facilities shall be constructed of durable materials and finishes, and maintained to ensure that the aesthetics of the development are not compromised. These facilities and associated passages shall be suitably illuminated (this provides comfort, safety, and security to users, staff, and contractors). Access doors shall feature keyless opening from within.

Chutes shall be sized and designed as recommended by a reputable chute manufacturer (chutes are proprietary items). The chute supplier shall fix safe-operating instructions to each intake-door and place a warning sign on each chute outlet. For improved safety, each chute outlet shall be shrouded with a suitable rubber skirt and designed to minimise the effect of falling waste into the associated bin (and to stop dispersion of debris). Also, access to the chute outlets shall be restricted to trained personnel only (this area shall be suitably fenced and kept locked).

The design and construction of waste facilities and equipment shall conform to the Building Code of Australia, Australian Standards, and local laws.

4 MANAGEMENT AND SUSTAINABILITY

4.1 Waste Sorting, Transfer, and Collection Responsibilities

Garbage shall be placed within tied plastic bags prior to transferring into the collection bins or chute. Cardboard shall be flattened and recycling containers un-capped, drained, and rinsed prior to disposal into the appropriate bin/chute. Bagged recycling is not permitted.

Refer to Section 2 for waste transfer requirements and collection arrangements.

4.2 Facility Management Provisions to Maintain & Improve the Waste System

The operator shall manage site operations (refer to the glossary in page 2).

It shall be the responsibility of the operator to maintain all waste areas and components, to the satisfaction of users, staff, and the relevant authority (users shall maintain their internal waste receptacles).

The operator shall ensure that maintenance and upgrades are carried-out on the facility and components of the waste system. When required, the operator shall engage an appropriate contractor to conduct services, replacements, or upgrades.

4.3 Arrangements for Protecting Waste Equipment from Theft and Vandalism

It shall be the responsibility of the operator to protect the equipment from theft and vandalism. This shall include the following initiatives:

- Secure the waste areas.
- Label the bins according to property address.
- Waste shall be collected within the subject site.

4.4 Communication Strategy - Arrangements for System Labelling and Ensuring Users and Staff are Aware of How to Use the System Correctly

- The Operator shall provide appropriate signage for the bins. Signage is available at the following internet address: www.sustainability.vic.gov.au.
- The Operator shall publish/distribute “house rules” and educational material to:
 - Inform users/staff about the waste management system and the use/location of the associated equipment (provide the summary in page 2 of this report).
 - Improve facility management results (lessen equipment damage and chute blockages, reduce littering, and achieve cleanliness).
 - Advise users/staff how to sort waste with care to minimise contamination of various waste streams.
- For user safety when disposing waste, the Operator shall develop and provide safety instructions.

4.5 Sustainability and Waste Avoidance/Reuse/Reduction Initiatives

The *Environment Protection Amendment Act 2018* (and the principal EPA Act of 2017) includes fundamentals of environment protection and guidance for waste management decision making. Also, the *Sustainability Victoria Act 2005* established Sustainability Victoria as the statutory authority for delivering programs on integrated waste management and resource efficiency.

From a design perspective, the development shall support the acts by providing an adequate waste system with ability to sort waste.

The Operator shall promote the observance of the acts (where relevant and practicable) and encourage users and staff to participate in minimising the impact of waste on the environment. For improved sustainability, the Operator shall consider the following:

- Observe the *Environment Protection Amendment Act 2018* principle of waste management hierarchy, which states that waste should be managed in accordance with the following order of preference, so far as reasonably practicable: a) avoidance, b) reuse, c) recycling, d) recovery of energy, e) containment, and f) waste disposal.
- Peruse the Sustainability Victoria website: www.sustainability.vic.gov.au.
- Participate in Council and in-house programs for waste minimisation.
- Establish waste reduction and recycling targets; including periodic waste audits, keeping records, and monitoring of the quantity of recyclables found in landfill-bound bins (sharing results with users/staff).

4.6 Waste Management Plan Revisions

For any future appropriate council request, changes in legal requirements, changes in the development's needs and/or waste patterns (waste composition, volume, or distribution), or to address unforeseen operational issues, the operator shall be responsible for coordinating the necessary Waste Management Plan revisions, including (if required):

- A waste audit and new waste strategy.
- Revision of the waste system (bin size/quantity/streams/collection frequency).
- Re-education of users/staff.
- Revision of the services provided by the waste collector(s).
- Any necessary statutory approval(s).

5 SUPPLEMENTARY INFORMATION

- The operator shall ensure that bins are not overfilled or overloaded.
- Waste incineration devices are not permitted, and offsite waste treatment and disposal shall be carried-out in accordance with regulatory requirements.
- For bin traffic areas, either level surfaces (smooth and without steps) or gentle ramps are recommended, including a roll-over kerb or ramp. Should ramp gradients, bin weight, and/or distance affect the ease/safety of bin transfers, the operator shall consider the use of a suitable tug.
- The operator and waste collector shall observe all relevant OH&S legislation, regulations, and guidelines. The relevant entity shall define their tasks and:
 - Comply with Worksafe Victoria's Occupational Health and Safety Guidelines for the Collection, Transport and Unloading of Non-hazardous Waste and Recyclable Materials (June 2003).
 - Assess the Manual Handling Risk and prepare a Manual Handling Control Plan for waste and bin transfers (as per regulatory requirements and Victorian COP for Manual Handling).
 - Obtain and provide to staff/contractors equipment manuals, training, health and safety procedures, risk assessments, and adequate personal protective equipment (PPE) to control/minimise risks/hazards associated with all waste management activities. As a starting point, these documents and procedures shall address the following:

Task (to be confirmed)	Hazard (TBC)	Control Measures (TBC)
Sorting waste and cleaning bins	Biological hazard & bodily puncture	Personal protective equipment (PPE). Develop a waste-sorting procedure.
Bin manual handling	Sprain, strain, crush	PPE. Maintain bin wheel-hubs. Limit bin weight. Provide mechanical assistance to transfer bins.
Chute discharge	Strike & debris from falling waste	PPE, staff training, and signage, maintain access restrictions. Include a rubber skirt and a fine-mesh locked fence around the discharge zone of the chute.
Bin transfers and emptying into truck	Vehicular strike, run-over	PPE. Develop a hazard control plan and collection procedure. Maintain visibility. Use a mechanical bin-tipper
Truck access (reversing & manoeuvring)	Vehicular incident, strike, run-over	PPE. Use a trained spotter. Develop a truck-manoevring and traffic-control procedure

Note: The above shall be confirmed by a qualified OH&S professional who shall also prepare site-specific assessments, procedures, and controls (refer to Section 6).

6 CONTACT INFORMATION

Moreland City Council (local council), ph 03 9240 1111

Kartaway (private waste collector), ph 1300 362 362

Waste Wise Environmental (private waste collector), ph 03 9359 1555

FJP Safety Advisors Pty Ltd (OH&S consultant), ph 03 9255 3660

Electrodrive Pty Ltd (tug & trailer supplier – for bin transfers), ph 1800 033 002

Sulo MGB Australia (bin supplier), ph 1300 364 388

One Stop Garbage Shop (bin supplier), ph 03 9338 1411

Wastech Engineering Pty Ltd (diverter chute supplier), ph 1800 465 465

Elephant's Foot (diverter chute supplier), ph 02 9780 3500

Note: The above includes a complimentary listing of contractors and equipment suppliers. The stakeholders shall not be obligated to procure goods/services from these companies. Leigh Design does not warrant (or make representations for) the goods/services provided by these suppliers.

7 LIMITATIONS

The purpose of this report is to document a Waste Management Plan, as part of a Planning Permit Application.

This report is based on the following conditions:

- Operational use of the development (excludes demolition/construction stages).
- Drawings and information supplied by the project architect.
- The figures presented in this report are estimates only. The actual amount of waste will depend on the development's occupancy rate and waste generation intensity, the user's disposition toward waste and recycling, and the operator's approach to waste management. The operator shall make adjustments, as required, based on actual waste volumes (if the actual waste volume is greater than estimated, then the number of bins and/or the number of collections per week shall be increased, STCA).
- This report shall not be used to determine/forecast operational costs, or to prepare feasibility studies, or to document operational/safety procedures.