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waste management plans for all urban developments	

WASTE MANAGEMENT PLAN

Proposed Development:

291 Swan Street, Richmond, Victoria

Prepared for:

Mangomero

Document Control
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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 sort waste and dispose garbage and recyclables into shared collection bins (serviced apartment housekeepers shall transfer waste on behalf of the guests).
- Waste shall be collected at the onsite Loading Bay. The collector shall transfer waste bins between the Bin Store and the truck.
- A private contractor shall provide waste collection services.

GLOSSARY

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

User: refers to serviced apartment guests, housekeepers, 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 serviced apartments and commercial tenancies. The number of apartments and commercial floor-areas are stated in Table 1 (below).

1.2 Estimated Garbage and Recycling Generation

The following table summarises the waste estimate (m^3/week):

Table 1: Waste Estimate

Waste Source	Base Qty (est.)	Garbage	Commingled Recycling
Serviced Apartments	No. of units = 59	2.07	2.07
Bar - rooftop	area (m^2) = 128	0.58	0.55
Amenities - rooftop	area (m^2) = 37	0.04	0.01
Restaurant - ground	area (m^2) = 176	5.16	1.41
Retail T1 & T2 - ground	area (m^2) = 145	0.51	0.51
TOTAL (m^3/wk)		**8.35**	**4.54**

Note: Waste figures are based on adjusted 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:

- Serviced Apartment receptacles at work/amenity areas.
- Tenancy receptacles at internal areas.
- Bin Store and Loading Bay at Ground Floor.
- Collection bins (kept within the Bin Store - refer to Table 2).

Note: An optional chute system for garbage and recycling shall be considered (either twin or diverter arrangement).

The various collection waste-streams are summarised as follows:

Garbage: For collection purposes, garbage shall be stored within collection bins.

Recycling: All recyclables shall be commingled into a single type of collection bin (for paper, cardboard, glass, aluminum, steel, and plastics).

Garden Waste: Based on negligible landscaping, minimal garden waste generation is anticipated (however, the operator shall engage a contractor, if required).

Compost: At this development, composting is considered impractical, as there would be minimal onsite demand for compost.

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.

Food and beverage staff shall arrange the storage of used cooking oil and its collection by a recycler. The operator shall organise Grease Interceptor servicing.

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	Bin Area m^2
Whole Development (shared private bins)	Garbage	7	660	2	8.4
	Recycling	4	660	2	4.8
	Hard/Other Waste	-	-	TBA	2.0
Net Bin Storage Area (excludes circulation), m^2:					**15.2**

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. Also, recyclables can be either commingled or split into bins for separate recycling streams.

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

The plans illustrate that sufficient space has been allocated for onsite bin storage, as required by the above schedule. The average Bin Store dimensions are 5.5x3.5m.

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 (include labels and colours):

Table 3: Bin Details

Capacity (litres)	Height (mm)	Width (across front, mm)	Depth (side on, mm)	Empty Weight (kg)	Average* Gross Weight (kg)
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. Also, steel 660-lt bins could be adopted, STCA.

Table 4: Yarra Colour Coding

Bin	Garbage	Commingled Recycling
Lid	Green	Yellow
Body	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.

2 ACCESS FOR USERS, COLLECTORS, AND COLLECTION VEHICLES

2.1 User Access to Waste Facilities

Users shall dispose garbage and recyclables into shared collection bins located within the Bin Store (if required, using a suitable trolley and the lift). Serviced apartment housekeepers shall transfer waste on behalf of the guests.

Note: The operator shall ensure the orderly-filling of bins to avoid a higher number of partially-filled ones, rotating the bins so that users are able to reach them. Also, the operator shall ensure that bins are not overloaded.

2.2 Collection Arrangements and Access to Waste Facilities

- A private contractor shall collect waste at the onsite Loading Bay.
- Collection staff shall transfer bins between the Bin Store and the truck.
- 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 2.3m high clearance when collecting 660L bins).

Note: The enclosed swept path drawing illustrates waste truck access.

3 AMENITY, LOCAL ENVIRONMENT, AND FACILITY DESIGN

3.1 Noise Minimisation Initiatives

- Collection bins shall feature rubber wheels for quiet rolling during transfers.
- Waste areas shall meet BCA and AS2107 acoustic requirements.
- Local laws shall be observed for all operations in public and private areas. In particular, note the requirements of Yarra's Environmental Local Law Part B, Sect. 10, and Part C, Sect. 17-29, which can be found at: www.yarracity.vic.gov.au/
- 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 October 2008 (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.
- 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 the relevant authority requirements. The bin and wash areas may overlap, as stored bins can be moved-out so that a bin can be washed.

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 the 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.

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. Cardboard shall be flattened and recycling containers un-capped, drained, and rinsed prior to disposal into the appropriate bin. 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

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 private bins according to property address.
- Waste bins shall be collected within the onsite Loading Bay.

4.4 Arrangements for Bins/Equipment Labelling and Ensuring Users and Staff are Aware of How to Use the Waste 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, reduce littering, and achieve cleanliness).
  - Advise users/staff to sort and recycle waste with care to reduce contamination of recyclables.

4.5 Sustainability and Waste Avoidance/Reuse/Reduction Initiatives

The *Environment Protection Act 1970* includes principles 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 waste hierarchy in the *Environment Protection Act 1970* (in order of preference): a) waste avoidance, b) reuse, c) recycle, d) recovery of energy, e) treatment, f) containment, and g) 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 their 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 the waste system	Bodily puncture. Biological & electrical hazards	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 suitable curtain/skirt and a locked mesh fence around the discharge zone of each chute
Bin transfers and emptying into truck	Vehicular strike, run-over	PPE. Develop a Hazard Control Plan for transfers and collections. Maintain visibility. Use a mechanical bin-tipper
Truck access (reversing & manoeuvring)	Vehicular incident, strike, run-over	PPE. Use a trained spotter. Develop a truck-manoeuvring 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

City of Yarra (local council), ph 03 9205 5555

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

Kartaway (private waste collector), ph 1300 362 362

iDump (private waste collector), ph 1300 443 867

Eco-Safe Technologies (odour control equipment supplier), ph 03 9706 4149

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

Electrodrive Pty Ltd (tug & trailer supplier – for bin transfers), ph 03 9357 7699

Sabco Commercial (supplier of cleaner's trolleys), ph 1800 066 522

Sulo MGB Australia (bin supplier), ph 03 9357 7320

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

Wastedrive Equipment (steel bin supplier), ph 02 9630 9333

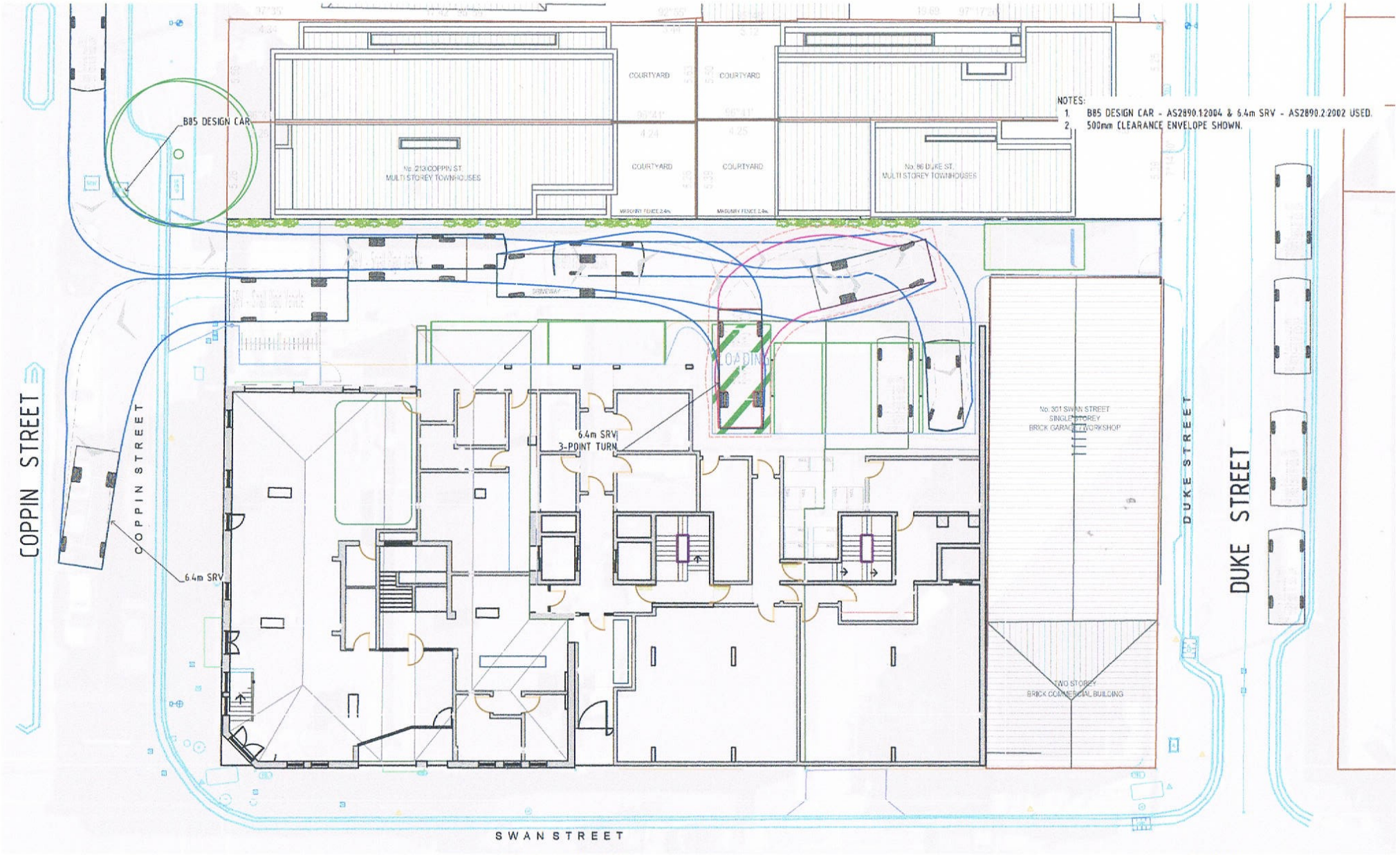
Note: The above includes a complimentary listing of contractors and equipment suppliers. The stakeholders shall not be obligated to procure goods/services from these companies. Leigh Design does not warrant (or make representations for) the goods/services provided by these suppliers.

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).
- This report shall not be used to determine/forecast operational costs, or to prepare feasibility studies, or to document operational/safety procedures.



CENTRAL CLUB HOTEL
ACCESS REVIEW

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