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<i>waste management plans for all urban developments</i>	

WASTE MANAGEMENT PLAN

**Proposed Development:
6 Paine Street, Newport, Victoria**

**Prepared for:
Raio Pty Ltd**

<u>Document Control</u>
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Glossary

Operator: refers to the Owners Corporation (including staff and contractors), who shall manage site operations.

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

1. SPACE AND SYSTEM FOR WASTE MANAGEMENT

Development Description and Use

This development shall consist of residential dwellings. The residential breakdown is stated in Table 1 (below).

Estimated Garbage and Recycling Generation

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

Table 1: Waste Estimate

Waste Source	Base Qty (est.)	Garbage	Commingled Recycling
Dwellings	No. of units = 43	3.44	3.44
TOTAL (m³/wk)		3.44	3.44

Note: Waste figures are based on adjusted Sustainability Victoria Guidelines.

Collection Services

Municipal kerbside bins would affect the streetscape and require a substantial onsite store (entailing 86 wheelie bins, based on weekly garbage and fortnightly recycling collections). Therefore, a private contractor shall be engaged 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 services irrespective of the level of collection services provided by council.

Location, Equipment, and System Used for Managing Waste

The waste management system is summarised as follows:

- Dwelling receptacles (under-bench kitchen bins for garbage and recycling).
- Bin Store (located at Semi-Basement Level).
- Collection bins (kept within the Bin Store - refer to Table 2).

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, PET, glass, aluminum, steel, and HDPE containers).

Garden Waste: Based on minor 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. However, the operator shall consider the option of allowing private/small scale composting within private courtyards.

Other Waste Streams: The disposal of hard/electronic/liquid waste, and home detox (paint/chemicals), etc shall be organised with the assistance of the operator and the appropriate contractor.

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	8	240	2	4.0
	Recycling	8	240	2	4.0
Net Bin Storage Area (excludes circulation), m²:					8.0

Notes:

- Bins shall be sourced by the operator (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.

Town Planning Drawings and Management of the Waste System

The plans illustrate that sufficient space has been provided 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.

Collection Bin Information

Plastic (HDPE) bins shall be utilised (include labels and colours), as follows:

Table 3: Bin Details

Capacity (litres)	Height (mm)	Width (across front, mm)	Depth (side on, mm)	Empty Weight (kg)	Average* Gross Weight (kg)
240	1060	585	730	13	45

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.

Table 4: Hobsons Bay Colour Coding

Bin	Garbage / Food Waste	Commingled Recycling	Green Waste
Lid	Green	Yellow	Light-green
Body	Green	Green	Green

2. ACCESS FOR USERS, COLLECTORS, AND COLLECTION VEHICLES

User Access to Waste Facilities

Residents shall dispose garbage and recyclables into collection bins located within the Bin Store (access via the carpark).

Collection Arrangements and Access to Waste Facilities

- A private contractor shall collect waste on Paine Street (site's frontage).
- The collection contractor shall have access to the Bin Store and transfer bins to the truck and back to the store.
- The waste collection shall be carried-out by rear-lift vehicles (nom. 8.8m length and 4m operational height).

Notes:

- For improved safety, waste collections and bin transfers along the driveway shall be carried-out during off-peak traffic periods.
- Bins shall not be left on public areas at any time.

3. AMENITY, LOCAL ENVIRONMENT, AND FACILITY DESIGN

Noise Minimisation Initiatives

- Collection bins shall feature a plastic lid and body, with rubber castors for quiet rolling during transfers.
- Local laws shall be observed for all operations in public areas and roads.
- 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 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.

Arrangements for 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 Bin Store (whilst affording access to users/staff/contractors).
- Preventing overfilled bins, keeping lids closed.
- 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).

Ventilation, Washing, and Vermin-Prevention Arrangements

The Bin Store shall be ventilated in accordance with Australian Standard AS1668.

The store shall include a graded bin wash area with bibcock, hose, and floor-waste with silt trap, 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 the waste areas/equipment and keep the bin lids closed.

Design, Safety, 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 (if any) 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. Childproofing and public/operator safety shall be assessed and ensured.

4. MANAGEMENT AND SUSTAINABILITY

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

Facility Management Provisions For Maintaining/Improving 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 (residents 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.

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 bin storage area.
- Label/number the bins according to property address.
- The private collection contractor shall transfer bins from the store to the truck and back (bins shall not be placed on public land).

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: <http://www.sustainability.vic.gov.au/www/html/2040-images-for-download.asp>; and
- The operator shall publish and distribute "house rules" and educational material to:
 - a) Inform users/staff about the waste management system and the use/location of the associated equipment (include Sect. 5 of this report);
 - b) Improve facility management results (lessen equipment damage, reduce littering, and achieve cleanliness); and
 - c) Advise users/staff to sort and recycle waste with care to reduce contamination of recyclables.

Sustainability and Waste Avoidance/Reuse/Reduction Initiatives

Victoria's Toward Zero Waste Strategy (TZW) promotes waste avoidance and sets targets for increasing the recovery rate of solid waste for reuse and recycling. For developments, the strategy calls to "ensure recycling is supported in the design of new residential buildings and infrastructure".

The operator shall promote the observance of the above legislation and encourage users and staff to participate in minimising the impact of waste on the environment. For improved sustainability, the operator and users shall consider the following:

- Peruse the Sustainability Victoria Website: www.sustainability.vic.gov.au;
- Embrace TZW's Waste Hierarchy (in order of preference): 1) waste avoidance, 2) reuse/recycle, 3) recover/treat/contain, and 4) disposal;
- Participate in council, community, and in-house programs for waste minimisation; and
- Establish waste reduction and recycling targets: Conduct periodic waste audits, keep records, and monitor the amount of recyclables found in landfill-bound bins (sharing results with users/staff).

Waste Management Plan Revisions

For any future council request, or changes in legal requirements (legislation, by-laws, guidelines, codes of practice, etc), or 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):

- Conduct a waste audit and define a new waste strategy.
- Revise the waste system (bin size/quantity/streams/collection frequency).
- Re-educate users/staff.
- Revise the services provided by the waste collector(s).
- Obtain the necessary approval(s) from the responsible authority.

5. ONGOING MANAGEMENT – SUMMARY

This summary is to inform users and staff about the waste management arrangements:

- Residents shall sort their waste and transfer garbage and recyclables to their collection bins (kept within the Bin Store).
- Garbage shall be placed within tied plastic bags prior to transferring into the collection bins. Cardboard shall be flattened and recycling containers uncapped, drained, and rinsed prior to disposal into the appropriate bin. Bagged recycling is not permitted.
- A private contractor shall collect waste on Paine Street (site's frontage). The collection contractor shall have access to the Bin Store and transfer bins to the truck and back to the store.

Note: Dispose garden/green waste, hard/electronic/liquid waste, and home detox (paint/chemicals) with the assistance of the operator and the appropriate contractor.

Regarding the waste management system, the operator shall be responsible for:

- On-going management, cleaning, maintenance, and upgrades.
- Liaising with the private collection contractor.
- Developing and implementing adequate safe operating procedures.
- Providing on-going information to users/staff.
- Implementing sustainability and waste reduction/diversion initiatives.
- Coordinating revisions to the Waste Management Plan (when required).

6. SUPPLEMENTARY INFORMATION

In order to address regulatory requirements pertaining town planning, site operations, waste handling, and collections, the following shall be considered:

- 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. Should ramp gradients, bin weight, and/or distance affect the ease/safety of bin transfers, the operator shall consider the use of a powered tug/vehicle; and
- The operator shall be responsible for all operations, site safety (including visitors, children, residents, staff, and contractors), and shall:
 - a) Abide by all relevant OH&S legislation, regulations, and guidelines;
 - b) Ensure the collector's compliance with Worksafe Victoria's Occupational Health and Safety Guidelines for the Collection, Transport and Unloading of Non-hazardous Waste and Recyclable Materials (June 2003);
 - c) 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); and
 - d) 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
Bin transfers to the truck and emptying	Vehicular strike, run-over	PPE. Develop a hazard control plan and collection procedure. Maintain visibility
Truck access	Vehicular incident, strike, run-over	PPE. Use a trained spotter. Develop a truck-manoeuving 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 7).

7. CONTACT INFORMATION

Hobsons Bay City Council (local council), ph 03 9932 1000

Cleanaway (private waste collector), ph 131339

Speedie Waste (private waste collector), ph 03 9305 2265

Solution for Workplace Health and Safety (OH&S consultant), ph 0425 802 669

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

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

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

Note: The above includes a complimentary listing of collection 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.

8. LIMITATIONS

The purpose of this report is to document a Waste Management Plan, as part of a Town Planning 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 operator'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.

