

LEIGH DESIGN

*waste management plans for
all urban developments*

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WASTE MANAGEMENT PLAN

**Proposed Development:
10 Alvina Street, Oakleigh South, Victoria**

**Prepared for:
Spire Group Pty Ltd**

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 their waste and dispose garbage and recyclables into their collection bins.
- Waste shall be collected on Alvina Street and along the development's internal roads. Residents shall transfer collection bins between their tenements and their designated collection points.

GLOSSARY

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

User: refers to residents, 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 townhouses (the number of residences is stated in 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	Commingled Recycling
Townhouses	No. of units = 108	12.96	12.96
TOTAL (m³/wk)		12.96	12.96

Note: Waste figures are based on Council's household bin allowance.

1.3 Collection Services

STCA, municipal kerbside collections shall be provided.

However, should Council be unable to collect waste, then a private contractor shall be required to collect waste. In this instance, 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:

- Dwelling receptacles for garbage and recycling.
- Collection bins (kept within the garage of each dwelling - 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: All recyclables shall be commingled into a single type of collection bin (for loose paper, cardboard, PET, glass, aluminum, steel, and HDPE containers).

Green Waste: Garden organics shall be collected and disposed by the future landscape maintenance contractor.

Compost: Residents shall consider composting within private courtyards.

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. Hard waste shall be stored within each tenement.

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
Townhouses (dedicated bins)	Garbage	108	80	1	1m ² per dwelling
	Comm. Recyc.	108	240	Fortnightly	
Net Waste Storage Area (excludes circulation), m²:					108.0

Notes:

- For municipal services, council shall provide the bins (supply cost applies).
- Private bins shall be sourced by the operator (either purchased from a supplier or leased from the collection contractor).

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

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

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)
80	860	450	530	9	19
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. The above is based on Sulo plastic (HDPE) bins.

Table 4: Monash Colour Coding

Bin	Garbage	Commingled Recycling	Green Waste
Lid	Red	Yellow	Green
Body	Dark Grey	Dark Grey	Dark Grey

2 ACCESS FOR USERS, COLLECTORS, AND COLLECTION VEHICLES

2.1 User Access to Waste Facilities

Residents shall dispose sorted garbage and recyclables into their collection bins.

2.2 Collection Arrangements and Access to Waste Facilities

- Waste shall be collected Alvina Street and along the development's internal roads.
- Prior to the collection, residents shall place their bins outside their premises (bins shall await collection next to the garage of each dwelling). Once collected, residents shall move the bins back into their premises (bins shall not be left-out more than a 24 hour period).
- Council waste collection shall be carried-out by side-lift vehicles (nom. 9.5m long and 4m operational height).
- Private waste collection shall be carried-out by rear-lift vehicles (nom. 8.8m long and 4m operational height).

3 AMENITY, LOCAL ENVIRONMENT, AND FACILITY DESIGN

3.1 Noise Minimisation Initiatives

- Collection bins shall feature rubber castors for quiet rolling during transfers.
- Local laws shall be observed for all operations in public and private areas.
- Municipal waste collections shall take place as per council's timing/schedule.
- 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.

3.2 Litter Reduction and Prevention of Stormwater Pollution

The operator and residents shall be responsible for:

- Promoting adequate waste disposal into the bins (to avoid waste-dumping).
- Securing the waste areas (garages).
- Preventing overfilled bins and 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).

3.3 Ventilation, Washing, and Vermin-Prevention Arrangements

As bins shall be stored within garages, these areas shall be ventilated to reduce odour.

Residents shall regularly clean their bin areas and keep the bin lids closed.

For hygienic reasons, residents shall wash their bins when required, disposing wash-water on landscaped areas (alternatively, the operator shall engage a suitable contractor to wash bins in a mobile bin-wash vehicle).

3.4 Design and Aesthetics of Waste Storage Areas and Equipment

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

Bin areas (garages) shall be constructed of durable materials and finishes, and maintained to ensure that the aesthetics of the development are not compromised.

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

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

It shall be the responsibility of the operator and residents to maintain all waste areas and components, to the satisfaction of residents 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.

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 bins shall be placed on at the designated collection points no-sooner than the night before the collection (and promptly returned to the storage areas after the collection).

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

Victoria's *Getting Full Value* (2013 waste and resource recovery policy) sets the foundation for Victoria to get the best value it can from waste resources, while protecting the health of its communities and the environment.

The principles outlined in the policy complement the principles of environment management of the *Environment Protection Act 1970* and provide supplementary guidance in the consideration of options for waste management.

From a design perspective, the development shall support the policy by providing an adequate waste system with ability to sort waste. This will enable the operator to implement the policy and consider its various options.

The operator shall promote the observance of the policy (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:

- Peruse the Sustainability Victoria Website: www.sustainability.vic.gov.au.
- Observe the *Environment Protection Act 1970* and its waste hierarchy (in order of preference): a) waste avoidance, b) reuse, c) recycle, d) recovery of energy, e) treatment, f) containment, and g) disposal.
- 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.
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	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 6).

6 CONTACT INFORMATION

Monash City Council (local council), ph 03 9518 3555

JJ Richards & Sons (private waste collector), ph 03 9703 5222

KS Environmental (private waste collector), ph 03 9551 7833

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

Warequip (tug supplier – for bin transfers), ph 1800 337 711

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

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.