WASTE MANAGEMENT PLAN

Proposed Development:
95 Beach Road, Mentone, Victoria

Prepared for:
Mentone Bayside Corporation Pty Ltd

Document Control

Report Date: 24 May 2016 (supersedes report dated 21-07-15)
Prepared By: Andrew McIntosh, Waste Management Consultant

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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 via the chute and/or directly into collection bins.
- Waste shall be collected onsite and on Beach Road. Residents shall transfer Council bins between the building and kerbside. Private bins shall be collected in the Basement Level 1 carpark.
- Council shall provide waste collection services for townhouses and selected apartments.
- A private contractor shall provide waste collection services for commercial waste and remaining residential apartments.

GLOSSARY

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

User: refers to residents and the commercial tenant, 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 apartments, townhouses and a commercial tenancy. The number of residences 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>
<thead>
<tr>
<th>Waste Source</th>
<th>Base Qty (est.)</th>
<th>Garbage</th>
<th>Commingled Recycling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apartments (1 bed)</td>
<td>No. of units = 10</td>
<td>0.60</td>
<td>0.60</td>
</tr>
<tr>
<td>Apartments (2 bed)</td>
<td>No. of units = 36</td>
<td>2.88</td>
<td>2.88</td>
</tr>
<tr>
<td>Apartments (3 bed)</td>
<td>No. of units = 10</td>
<td>1.20</td>
<td>1.20</td>
</tr>
<tr>
<td>Townhouses</td>
<td>No. of units = 12</td>
<td>1.44</td>
<td>1.44</td>
</tr>
<tr>
<td>Retail (café/restaurant)</td>
<td>area (m(^2)) = 259</td>
<td>5.12</td>
<td>1.75</td>
</tr>
<tr>
<td><strong>TOTAL (m(^3)/wk)</strong></td>
<td></td>
<td><strong>11.24</strong></td>
<td><strong>7.87</strong></td>
</tr>
</tbody>
</table>

Notes:
- Residential waste figures are based on Council’s volumetric requirements.
- Commercial waste figures are based on adjusted Sustainability Victoria Guidelines.

1.3 Collection Services

**Residential:** Council shall provide waste services for townhouses and apartment Nos. 03, 15 & 17 (selected apartments). For remaining apartments, a private contractor shall be engaged to collect waste.

**Commercial:** It is understood Council does not provide a rates-based service for the collection of commercial waste. Therefore, a private contractor shall be engaged to collect waste.

For privately collected waste, the operator shall choose a waste collection provider, negotiate a service agreement and pay for these services.

**Note:** It is understood Council deducts the waste charge where private services are employed.
1.4 Location, Equipment and System Used for Managing Waste

The waste management system is summarised as follows:

- Apartment and townhouse receptacles, for garbage and recycling.
- Tenancy receptacles at work/amenity areas.
- One diverter chute for garbage and recycling, with residential level intakes and Bin Store discharge, including intake controls and split discharge for two bins.
- Residential Bin Store located at Basement Level 1.
- Commercial Bin Store, located at Basement Level 1.
- Loading Bay, located at Basement Level 1.
- Collection bins (kept within the Bin Stores, or within apartment and townhouse screened areas).

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, glass, aluminum, steel and plastics).

**Green Waste:** Garden organics shall be collected and disposed by the future landscape maintenance contractor (if required, the operator shall arrange with Council the collection of communal fortnightly garden waste bins).

**Compost:** At this development, composting is considered impractical, as there would be minimal onsite demand for compost. However, residents shall consider composting within private courtyards at Ground Level.

**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.

The café/restaurant tenant shall arrange the storage of used cooking oil and its collection by a recycler. The operator shall organise Grease Interceptor Trap servicing.
The following table summarises bin quantity/capacity, collection frequency and area requirements (based on Table 1):

**Table 2: Bin Schedule and Collection Frequency**

<table>
<thead>
<tr>
<th>Waste Source</th>
<th>Waste Stream</th>
<th>Bin Qty</th>
<th>Bin Litres</th>
<th>Collections per Week</th>
<th>Net Area m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apartments (communal private bins)</td>
<td>Garbage</td>
<td>4</td>
<td>660</td>
<td>2</td>
<td>4.8</td>
</tr>
<tr>
<td></td>
<td>Recycling</td>
<td>4</td>
<td>660</td>
<td>2</td>
<td>4.8</td>
</tr>
<tr>
<td></td>
<td>Hard Waste</td>
<td>-</td>
<td>-</td>
<td>TBA*</td>
<td>2.0</td>
</tr>
<tr>
<td>Apartments 03, 16 &amp; 17 (dedicated Council bins)</td>
<td>Garbage</td>
<td>3</td>
<td>80</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>Recycling</td>
<td>3</td>
<td>240</td>
<td>Fortnightly</td>
<td>1.5</td>
</tr>
<tr>
<td>Commercial (dedicated private bins)</td>
<td>Garbage</td>
<td>3</td>
<td>660</td>
<td>3</td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td>Recycling</td>
<td>1</td>
<td>660</td>
<td>3</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>Hard/Other Waste</td>
<td>-</td>
<td>-</td>
<td>TBA*</td>
<td>2.0</td>
</tr>
</tbody>
</table>

**Net Waste Storage Area** (excludes circulation), m²: **21.4**

Notes:
- * = the operator shall organise hard/other waste collections (as required).
- 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).
- 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 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

<table>
<thead>
<tr>
<th>Capacity (litres)</th>
<th>Height (mm)</th>
<th>Width (across front, mm)</th>
<th>Depth (side on, mm)</th>
<th>Empty Weight (kg)</th>
<th>Average* Gross Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>860</td>
<td>450</td>
<td>530</td>
<td>9</td>
<td>19</td>
</tr>
<tr>
<td>240</td>
<td>1060</td>
<td>585</td>
<td>730</td>
<td>13</td>
<td>45</td>
</tr>
<tr>
<td>660</td>
<td>1250</td>
<td>1240</td>
<td>780</td>
<td>43</td>
<td>130</td>
</tr>
</tbody>
</table>

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.
- Also, bins that receive waste under the chutes shall be reinforced to withstand loads from waste falling at high speed.

Table 4: Kingston Colour Coding

<table>
<thead>
<tr>
<th>Bin</th>
<th>Garbage</th>
<th>Commingled Recycling</th>
<th>Green Waste</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lid</td>
<td>Red</td>
<td>Yellow</td>
<td>Lime</td>
</tr>
<tr>
<td>Body</td>
<td>Black</td>
<td>Black</td>
<td>Black</td>
</tr>
</tbody>
</table>

Note: For private bins, AS4123.7 bin colours can be adopted. Private bins shall be labelled to identify the waste generator and site address.
2 ACCESS FOR USERS, COLLECTORS AND COLLECTION VEHICLES

2.1 User Access to Waste Facilities

Residential:
Apartment residents shall dispose sorted garbage and recyclables via the chute (available at each apartment level), in accordance with instructions from the chute supplier. For wastes unsuitable for chute disposal, residents shall transfer sorted waste directly to the Residential Bin Store (access via lift/stairs).

For townhouses and selected apartments, residents shall dispose sorted garbage and recyclables into collection bins, screened within each tenement.

Commercial:
The commercial tenant shall dispose sorted waste into collection bins located within the Commercial Bin Store (using a suitable trolley and the lift).

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 them when full.

2.2 Collection Arrangements and Access to Waste Facilities

Townhouses and Selected Apartments:
• Council shall collect waste on Beach Road (kerbside - site’s frontage).
• Prior to the collection, residents shall transfer Council bins from their dwellings to kerbside (returning the bins once the collection has taken place). Council’s instructions for kerbside bin-placement must be followed.
• The waste collection shall be carried-out by side-lift vehicles (nom. 7.6m long and 4m operational height).

Commercial and Remaining Apartments:
• A private contractor shall collect waste onsite, in the Basement Level 1 carpark, from the Loading Bay.
• Collection staff 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 2.3m high clearance when collecting 660-lt bins).

Notes:
• For improved safety, private waste collections and bin transfers shall be carried-out during off-peak traffic periods.
• Refer to the project’s traffic engineer report (showing that the collection vehicle is able to enter/exit the development whilst driving in a forward direction).
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.
- 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 [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 private collection contractor to clean-up any spillage that might occur when clearing bins.
- Reporting any spillage, resulting from the collection of municipal bins, direct to Council.

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

Townhouses and Selected Apartments:

Bin areas shall be ventilated naturally.

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).

Commercial and Remaining Apartments:

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, hosecock, hose and a suitable floor-waste connected in accordance with relevant authority requirements (alternatively, the operator shall engage a contractor to conduct off-site bin washing). Provide a hot/cold mixing hosecock in the Commercial Bin Store. 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 the 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.

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

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 each chute outlet shall be restricted to trained personnel only (this area shall be suitably fenced and kept locked).
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 or 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.
- Council bins shall be placed on the kerbside no-sooner than the night before the collection (and promptly returned to the storage areas after the collection).
- The private collection contractor shall collect bins within the onsite Loading Bay (bins shall not be placed on the street).

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 and chute blockages, 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.
- 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/quantitystreams/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:
  - 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:

<table>
<thead>
<tr>
<th>Task (to be confirmed)</th>
<th>Hazard (TBC)</th>
<th>Control Measures (TBC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sorting waste and cleaning the waste system</td>
<td>Bodily puncture, Biological &amp; electrical hazards</td>
<td>Personal protective equipment (PPE). Develop a waste-sorting procedure</td>
</tr>
<tr>
<td>Bin manual handling</td>
<td>Sprain, strain, crush</td>
<td>PPE. Maintain bin wheel-hubs. Limit bin weight. Provide mechanical assistance to transfer bins.</td>
</tr>
<tr>
<td>Chute discharge</td>
<td>Strike &amp; debris from falling waste</td>
<td>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.</td>
</tr>
<tr>
<td>Bin transfers and emptying into truck</td>
<td>Vehicular strike, run-over</td>
<td>PPE. Develop a Hazard Control Plan for transfers and collections. Maintain visibility. Use a mechanical bin-tipper</td>
</tr>
<tr>
<td>Truck access (reversing &amp; manoeuvring)</td>
<td>Vehicular incident, strike, run-over</td>
<td>PPE. Use a trained spotter. Develop a truck-manoeuvring and traffic-control procedure</td>
</tr>
</tbody>
</table>

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 Kingston (local Council), ph 1300 653 356
iDump (private waste collector), ph 1300 443 867
Kartaway (private waste collector), ph 1300 362 362
Waste Wise Environmental (private waste collector), ph 03 9359 1555
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 1800 033 002
Warequip (tug supplier – for bin transfers), ph 1800 337 711
Sabco Commercial (supplier of cleaner’s trolleys), ph 1800 066 522
Sulo MGB Australia (bin supplier), ph 1300 364 388
One Stop Garbage Shop (bin supplier), ph 03 9338 1411
Wastedrive Equipment (steel bin supplier), ph 02 9630 9333
Elephant’s Foot (chute supplier), ph 02 9780 3500
Wastech Engineering Pty Ltd (chute supplier), ph 1800 465 465

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.