



Leigh Design

waste management plans for all urban developments

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Waste Management Plan



Proposed Development:

29 Gibson Street, Broadmeadows, Victoria (Stage 2)

Prepared for:

Penola Catholic College

Document Control

Report Date: 19 December 2023 (supersedes all prior reports)

Prepared By: Andrew McIntosh, Associate

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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 place sorted waste into shared collection bins.
- Waste shall be collected onsite.
- A private contractor shall collect garbage, and Council shall collect recyclables.

GLOSSARY

Operator: refers to the school's Operation's Manager, who shall manage site operations (via staff and contractors, if required).

User: refers to school staff and students, who shall utilise the waste system.

1 SPACE AND SYSTEM FOR WASTE MANAGEMENT

1.1 Development Description and Use

This development shall consist of new buildings under Stage 2 of the school's development program. Floor-areas are stated in Table 1 (below). The existing school waste collection system shall be expanded to accommodate waste from the new buildings (the existing school collection system has been excluded from this report).

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
Social Heart Canteen Building			
Retail (café w/ food)	area (m ²) = 201	2.95	1.97
Year 10 Building			
Educational / Teaching	area (m ²) = 444	0.11	0.11
Offices / Meeting Rooms	area (m ²) = 66	0.03	0.03
Assembly / Amenities	area (m ²) = 434	0.85	0.85
TOTAL (m³/wk)		3.95	2.96

Note: Waste figures are based on Sustainability Victoria Guidelines and discretionary rates and have been factored to 70% (5 out of 7 days operation).

1.3 Collection Services

As per current arrangements, a private contractor shall collect garbage, and Council shall collect recyclables.

1.4 Location, Equipment and System Used for Managing Waste

The waste management system is summarised as follows:

- Receptacles at internal areas.
- Bin Storage Area located at Ground Level (north of the main carpark).
- Collection bins (kept within the Bin Storage Area - 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 paper, cardboard, glass, aluminium, steel and plastics).

Green Waste: Garden organics shall be collected and disposed by site staff.

Food Waste: It is understood that Council does not currently require this site to organise food waste separation. However, if required in future, the Operator shall consider providing bins for separation of organic waste, for onsite small-scale composting, or disposal at an offsite approved facility (subject to cost and service availability/suitability).

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 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
New Buildings (shared bins)	Garbage	1	1,500	3	2.0
	Recycling	25	240	Fortnightly	12.5
	Hard/E-Waste/Other	-	-	At Call	2.0
Net Waste Storage Area (excludes circulation), m²:					16.5

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).
- 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 drawings shall 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)
240	1060	585	730	13	45
1500 FLB	1280	2050	970	~300	500

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) flat-lid bins.
- The above is based on Sulo plastic (HDPE) bins and Wastech front-lift bins (FLB). For front-lift bins, consider counter-weight lids (for ease of opening) and swivel / lockable / rubber-lined castors (for ease of transfers to/from the truck).

Table 4: Hume Colour Coding

Bin	Garbage	Commingled Recycling	Green Waste
Lid	Green	Dark Green	Maroon
Body	Green	Dark Green	Maroon

Note: For private bins, AS4123.7 bin colours can be adopted. Private bins shall be labelled 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

Users shall transfer waste from the internal receptacles to the bins located within the Bin Store (if required, using a suitable trolley and the lift).

Note: The Operator shall have access to the Bin Storage Area to rotate the bins, ensuring that empty bins are available along the circulation area so that users are able to reach the bins.

2.2 Collection Arrangements and Access to Waste Facilities

- The private contractor, and Council, shall collect waste onsite.
- Private front-lift bins (1500FLB) shall be collected by front-lift trucks (nom. 11.5m long, 6.5m operational height and 30 tonnes gross vehicle mass).
- Council plastic wheelie bins (240L) shall be collected by side-lift vehicles (nom. 9.6m long, 4m operational height and 24 tonnes gross vehicle mass). The Operator shall line the bins up in a row at the onsite bin collection location, and return them to the Bin Storage Area once emptied.

Notes:

- For improved safety, waste collections and bin transfers shall be carried-out during off-peak traffic periods.
- Due to their weight, front-lift bins need to be stored in a position that minimises the task of shifting these to the truck (collection vehicles need to be able to drive-up to the bins).

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.
- 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 6 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] 6. Industrial Refuse Collection [for commercial waste]

Annoyance created by industrial waste collection tends to intensify in the early morning period. To this end, early morning collections should be restricted to non-residential areas to minimize early morning disturbances. Where a residential area is impacted by noise from the collection of refuse then collections should be restricted to the times contained within the schedule.

- Refuse bins should be located at sites that provide minimal annoyance to residential premises.
- Compaction should be carried out while the vehicle is moving.
- Bottles should not be broken up at collection site.
- Routes which service predominantly residential areas should be altered regularly to reduce early morning disturbances.
- Noisy verbal communication between operators should be avoided where possible.

SCHEDULE

One collection per week

6:30am to 8:00pm Monday to Saturday

9:00am to 8:00pm Sunday & Public Holidays

Two or more collections per week

7:00am to 8:00pm Monday to Saturday

9:00am to 8:00pm Sunday & Public Holidays

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 to Council any spillage resulting from the collection of municipal 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.
- Impervious flooring (also, smooth, slip-resistant and appropriately drained).
- The Operator shall regularly clean waste areas/equipment. Also, any 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.

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 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 bins shall be collected within the subject land (bins shall remain within the development at all times).

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 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 observe local laws and ensure that bins aren't 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 the waste system	Bodily puncture. Biological & electrical hazards	Personal protective equipment (PPE). Develop a waste-sorting procedure
Bin manual handling	Sprain, strain, crush	PPE, staff training. 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 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-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

Hume City Council (local Council), ph 03 9205 2200

Cleanaway (private waste collector), ph 131339

SUEZ (private waste collector), ph 131335

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

Electrodrive (tug & trailer supplier – for bin transfers), ph 1800 333 002

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

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.