

**LEIGH DESIGN**

*waste management plans for  
all urban developments*

Leigh Design Pty Ltd  
ABN 37 139 522 437  
PO Box 115  
Carnegie VIC 3163  
P +61 3 8516 5399  
E [info@leighdesign.com.au](mailto:info@leighdesign.com.au)  
I [www.leighdesign.com.au](http://www.leighdesign.com.au)

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**ADVERTISED  
PLANS**

## **WASTE MANAGEMENT PLAN**

**Proposed Development: MVRC Redevelopment  
Stage B, Buildings 1 & 2  
Moonee Ponds, Victoria**

**Prepared for:  
Hamton HostPlus JMV Pty Ltd**

**HAMTON™**

### **Document Control**

**Report Date:** 30 August 2019 (supersedes all prior reports)

**Prepared By:** Carlos Leigh, GradIEAust

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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 chutes and/or directly into collection bins.
- Waste shall be collected at the onsite Loading Bay. The collection contractor shall transfer bins between the Bin Store and the waste truck.

### GLOSSARY

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

**User:** refers to residents 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 residential dwellings and commercial tenancies (refer to Table 1).

This report is based on Moonee Valley City Council's 2018 waste guidelines.

In terms for Council queries (RFI), we offer the following response:

- 1) Major Development: As part of the design of this development, various options have been explored. This report outlines the outcomes of the design process.
- 2) Waste Compactors Under Waste Chutes: Since large bulk bins have been adopted, compactors are not needed (also, this avoids OH&S issues associated with heavy bins from compacted waste).
- 3) Bin Carousel: Given that a Building Manager shall be available to regularly change the bins as these fill-up beneath each chute, carousels won't be required.
- 4) Portable Eco-weighing Compactor: This is not recommended since the nominated rear-lift trucks have a compactor on-board (also, a rear-lift system is well-suited for this type of building).
- 5) Cardboard Balers & Glass Bottle Crushers: This equipment is not required since a commingled recycling system shall be adopted.
- 6) Insinkarators in Residences: This type of equipment won't be adopted since it would load-up sewerage plants and slow down their throughput.

## **1.2 Estimated Garbage and Recycling Generation**

The following table summarises the waste estimate (m<sup>3</sup>/week):

Table 1: Waste Estimate

<b>Waste Source</b>	<b>Base Qty (est.)</b>	<b>Garbage</b>	<b>Commingled Recycling</b>
B1 Apartments (1 bed)	No. of units = 44	3.52	3.52
B1 Apartments (2 bed)	No. of units = 91	9.10	9.10
B1 Apartments (3 bed)	No. of units = 10	1.20	1.20
B1 Duplex	No. of units = 5	0.60	0.60
B2 Apartments (1 bed)	No. of units = 46	3.68	3.68
B2 Apartments (2 bed)	No. of units = 94	9.40	9.40
B2 Apartments (3 bed)	No. of units = 22	2.64	2.64
B2 Apartments (4 bed)	No. of units = 2	0.24	0.24

Waste Source	Base Qty (est.)	Garbage	Commingled Recycling
B1 Offices	area (m <sup>2</sup> ) = 778	0.54	0.54
B2 Retail (cafe)	area (m <sup>2</sup> ) = 137	2.88	1.92
B2 Offices	area (m <sup>2</sup> ) = 447	0.31	0.31
<b>TOTAL (m<sup>3</sup>/wk)</b>		<b>34.11</b>	<b>33.16</b>

Note: Waste figures are based on Council guidelines. Residential amenity areas such as Wellness and Private Dining are included in the above apartment figures

### 1.3 Collection Services

In order to avoid a high number of kerbside bins, waste shall be collected at the onsite Loading Bay (refer to truck specifications in Section 2.2 and to contractors that operate these trucks in Section 6).

Ideally, Council shall provide waste services as described above. However, should Council be unable to collect waste, then the operator must organise private waste services.

Note: For private collections, the operator shall choose a waste collection provider, negotiate a service agreement, and pay for these services.

### 1.4 Location, Equipment, and System Used for Managing Waste

The waste management system is summarised as follows:

- Dwelling receptacles for garbage and recycling.
- Tenancy receptacles at internal areas.
- Waste receptacles located residential amenity areas.
- Two Garbage Chute and two Recycling Chutes (in pairs at each building), each with residential level intakes and Chute Rooms discharge.
- Two Chute Rooms and one Central Bin Store at Basement 1.
- Collection bins (kept within the above waste areas - 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, glass, aluminium, steel, and plastics).

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

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. These items shall remain within the building until the operator arranges collections from the subject land.

Also, the operator shall organise charity waste collections of unwanted items that are in good condition.

The following table summarises bin quantity/capacity, collection frequency, and area requirements (based on Table 1):

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

<b>Waste Source</b>	<b>Waste Stream</b>	<b>Bin Qty</b>	<b>Bin Litres</b>	<b>Collections per Week</b>	<b>Net Area m<sup>2</sup></b>
Building 1 Dwellings (shared bins)	Garbage	5	1,100	3	8.0
	Recycling	5	1,100	3	8.0
	Charity	-	-	At Call	1.0
	Hard/ E-Waste	-	-	At Call	4.5
Building 2 Dwellings (shared bins)	Garbage	5	1,100	3	8.0
	Recycling	5	1,100	3	8.0
	Charity	-	-	At Call	1.0
	Hard/ E-Waste	-	-	At Call	4.5
Building 1 Commercial (shared bins)	Garbage	1	660	1	1.2
	Recycling	1	660	1	1.2
	Hard/ E-Waste	-	-	At Call	1.5
Building 2 Commercial (shared bins)	Garbage	1	1,100	3	1.6
	Recycling	1	1,100	3	1.6
	Hard/ E-Waste	-	-	At Call	2.0
<b>Net Waste Storage Area (excludes circulation), m<sup>2</sup>:</b>					<b>52.1</b>

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), private 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 (refer to the enclosed plan).

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)
660	1250	1240	780	43	130
1100	1330	1240	1070	65	210

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. Also, steel 1100L bins could be adopted, STCA.
- For 1100L bins, flat lids are recommended (instead of dome lids). However, the operator shall consult with the waste collection contractor to specify and select the appropriate lid.
- Also, bins that receive waste under the chutes shall be reinforced to withstand loads from waste falling at high speed.

Table 4: Moonee Valley Colour Coding

Bin	Garbage	Commingled Recycling	Garden Waste
Lid	Red	Yellow	Lime
Body	Green	Green	Green

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**

Residents shall dispose sorted garbage and recyclables via dedicated chutes (available at each residential level), in accordance with instructions from the chute supplier. For wastes unsuitable for chute disposal, residents shall transfer sorted waste directly to the Central Bin Store (access via lift/stairs if required).

For residential amenity areas, the operator shall maintain the various waste receptacles (if required, using a suitable trolley and the lift).

Commercial tenants shall dispose sorted waste into designated collection bins located within the Central Bin Store (if required, using a suitable trolley and the lift).

Note: The operator shall have access to the waste areas 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, changing these when full and swapping bins between Chute Rooms and the Central Bin Store as required.

### **2.2 Collection Arrangements and Access to Waste Facilities**

- The operator shall present full bins for collection at the Central Bin Store.
- Waste shall be collected at the onsite Loading Bay.
- Collection staff (driver and assistant) shall have access to the Central 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 long, 4m operational height, and 24 tonnes gross vehicle mass).

Note: The enclosed plan illustrates the waste system.

### **3 AMENITY, LOCAL ENVIRONMENT, AND FACILITY DESIGN**

#### **3.1 Noise Minimisation Initiatives**

- Collection bins shall feature rubber wheels 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 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. 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 suitable contractor to wash bins in a mobile bin-wash vehicle). 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 each 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 (these areas 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 uncapped, drained, and rinsed prior to disposal into the appropriate bin/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.
- Waste bins shall be collected 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](http://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.
- Peruse the Sustainability Victoria website: [www.sustainability.vic.gov.au](http://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:

<b>Task (to be confirmed)</b>	<b>Hazard (TBC)</b>	<b>Control Measures (TBC)</b>
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 the 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-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**

**Moonee Valley City Council** (local Council), ph 03 9243 8888

**City Wide Waste** (private waste collector), ph 03 9261 5000

**Cleanaway** (private waste collector), ph 131339

**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

**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

**ASI JD MacDonald Pty Ltd** (chute supplier), ph 03 8558 7200

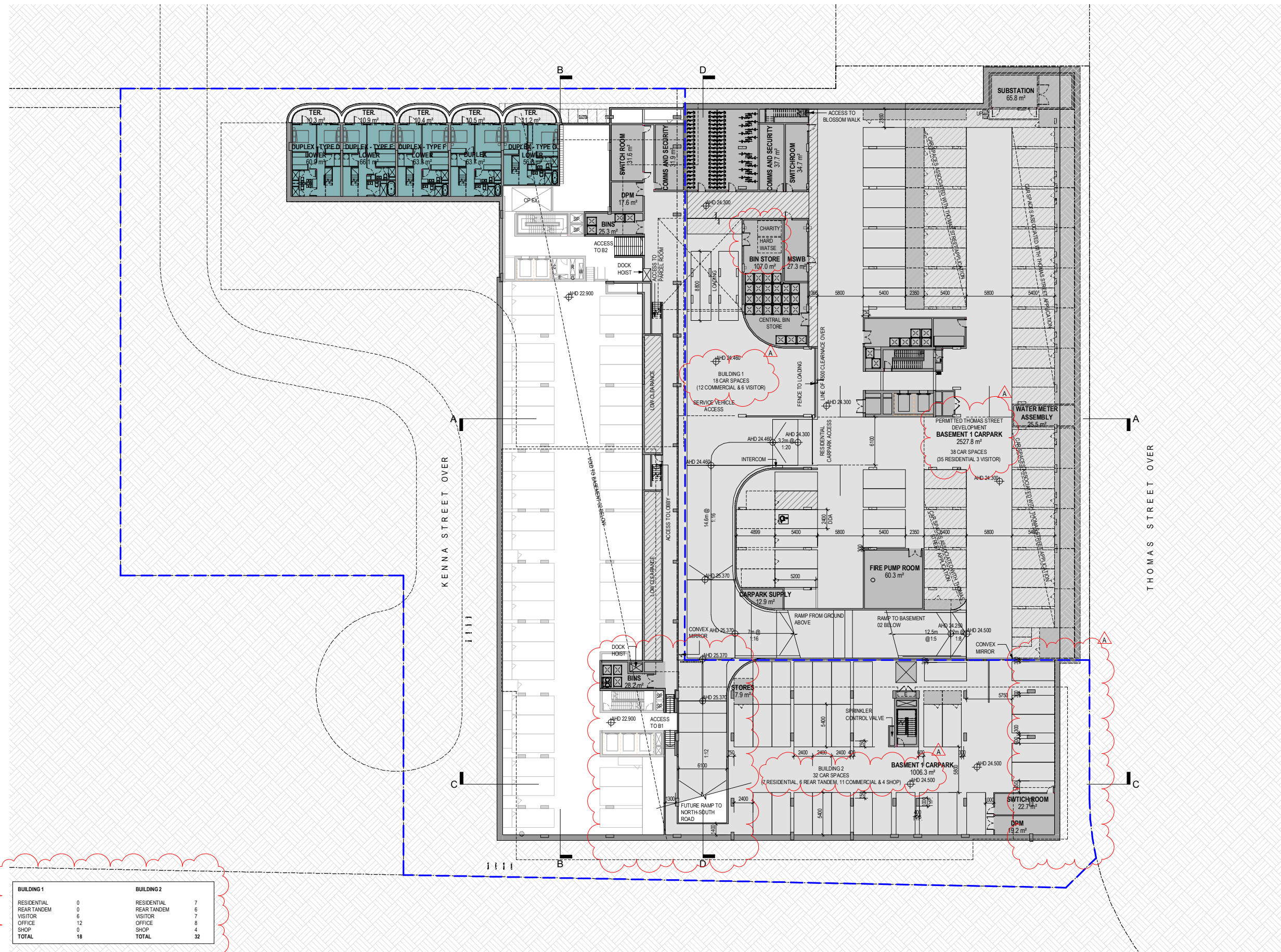
Note: The above includes a complimentary listing of contractors and equipment suppliers. The stakeholders shall not be obligated to procure goods/services from these companies. Leigh Design does not warrant (or make representations for) the goods/services provided by these suppliers.

## **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.



LEGEND	
	STAGING LINE
	INDICATIVE BOUNDARY SETBACK LINE

Revisions / 23.05.19 Town Planning Submission  
 A 20.08.19 RFI Submission

TD  
 TD

Abbreviations /  
 A/C Air Conditioning Condenser  
 C Communications Cupboard  
 CP EX Carpark Exhaust  
 DMP Domestic Pump Room  
 E Electrical Riser  
 EXH Exhaust  
 F Fire Services  
 FE Fire Extinguisher  
 FH Fire Hydrant  
 FHR Fire Hose Reel  
 FIP Fire Indicator Panel

G Gas Riser  
 HW Hot Water Plant  
 LP Light Pole  
 M Mechanical Riser  
 PS 1700mm Privacy Screen  
 R Air Conditioning Refrigerant Riser  
 SP Sign Post  
 SP Stair Press  
 TER Terrace  
 TPZ Tree Protection Zone  
 W Water Meters

Project / **MVRc Redevelopment**  
 Drawing / **Basement 01**

Project No / **217158** Date / **06/07/18**

Author / **SB/TD** Scale: @ A1 / **1 : 250**

Drawing No. / **TP01.03 A**

Stage B (Buildings 1&2)

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