Leigh Design

waste management plans for all urban developments

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Waste Management Plan

Proposed Development:

108 Jeffcott Street, West Melbourne, Victoria

Prepared for:

BEG Projects Pty Ltd

Document Control

Report Date: 12 January 2021

Prepared By: Leonardo Russi, BEng (Mech), MEng (Env)

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- Ground / Site plan
- Upper level plan
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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 deposit sorted waste into the chutes and/or into designated collection bins.
- Waste shall be collected within the subject site. The collection contractor shall transfer bins between the waste areas and the truck.
- A private contractor shall provide waste collection services.

GLOSSARY

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

User: refers to residents, site staff and commercial tenants, who shall utilise the waste system.

1 SPACE AND SYSTEM FOR WASTE MANAGEMENT

1.1 Development Description and Use

This 19-storey development shall consist of residential apartments and commercial tenancies (refer to Table 1).

1.2 Estimated Garbage and Recycling Generation

The following table summarises the waste estimate (m^3/week):

Table 1: Waste Estimate

Waste Source	Base Qty (est.)	Garbage	Recycling
Apartments (1 bed)	No. of units = 65	5.20	5.20
Apartments (2 bed)	No. of units = 48	4.80	4.80
Offices	area (m^2) = 120	0.08	0.08
Food and drink	area (m^2) = 48	1.01	0.67
TOTAL (m^3/wk)		**11.09**	**10.76**

Note: Waste generation rates are based on Council's volumetric waste allocations.

1.3 Collection Services

It is understood that the proposed site access is limited to max. 6.4m long trucks and that the municipal waste service does not feature this type of vehicle. Therefore, a private contractor shall be required to collect waste using suitable small trucks. As such, the Operator shall choose a waste collection provider, negotiate a service agreement, and pay for these services (truck details in Sect. 2.2).

Notes:

- Every rateable tenement is liable to pay for municipal charges irrespective of the level of collection services provided by Council.
- Municipal waste services could be considered for residential apartments should Council adopt suitable waste trucks.

1.4 Location, Equipment, and System Used for Managing Waste

The waste management system is summarised as follows:

- Apartment receptacles for garbage, recycling and organics.
- Tenancy receptacles at internal areas.
- One Garbage Chute and one Recycling Chute, each with residential level intakes and Bin Store discharge.

- Bin Store located at Ground Level.
- Collection bins (kept within the above Bin Store - 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). However, if glass separation is required in future, some recycling storage capacity shall be repurposed for glass-only disposal.

Green Waste: Based on negligible landscaping, minimal garden waste generation is anticipated (however, the Operator shall engage a contractor, if required).

Organics: Users shall place organic waste into Organics bins. Only certified compostable liners may be considered for bins and caddies, to home standard AS5810-2010 (alternatively, the industrial standard AS4736-2006 could be considered if approved by the waste collector).

Hard Waste and Charity Bin: An area shall be designated for hard waste. The Operator shall book hard waste collections. Also, the Operator shall organise a charity bin (supplied by a charitable organisation). Charities may also collect unwanted items that are in good condition.

Other Waste Streams: The disposal of 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 development until the Operator arranges a private collection from the subject land in accordance with requirements from the relevant authority. In particular e-waste must not be disposed in landfill.

The food and drink tenant shall arrange the storage of used cooking oil and its collection by a recycler. The Operator shall organise Grease Interceptor Trap servicing.

Also, office managers shall arrange for the appropriate disposal of secured paper and toner/printer cartridges.

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
Apartments (shared bins)	Garbage	5	1,100	2	8.0
	Recycling	5	1,100	2	8.0
	Organics	5	240	2	2.5
	Charity Bin	1	240	At Call	0.5
	Hard/E-Waste	-	-	At Call	2.5
Commercial (dedicated bins)	Garbage	1	660	2	1.2
	Recycling	2	240	2	1.0
	Organics	1	120	2	0.5
	Hard/E-Waste/Other	-	-	At Call	1.5
Net Waste Storage Area (excludes circulation), m^2:					**25.7**

Notes:

- The Operator shall organise hard/e-waste/other waste collections (as required).
- Bins shall be provided by the applicant. The charity bin shall be supplied by a charitable organisation.
- 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 enclosed drawings 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
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.
- Bins that receive waste under the chute shall be reinforced to withstand loads from waste falling at high speed.

Table 4: Melbourne Colour Coding

Bin	Garbage	Commingled Recycling
Lid	Red	Yellow
Body	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. For 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

Residents shall dispose sorted garbage and recyclables via dedicated chutes (available at each apartment level), in accordance with instructions from the chute supplier. The Operator shall assist residents to dispose large cardboard items and any other wastes unsuitable for chute disposal.

Ground Level residents and Commercial users shall dispose sorted waste directly into designated collection bins located within the Bin Store.

Note: The Operator shall have access to the Bin Store to rotate the bins, ensuring that empty bins are available along the circulation area so that users are able to reach the bins. Also, the Operator shall monitor the filling of the bins under the chutes and change these when full.

2.2 Collection Arrangements and Access to Waste Facilities

- A private contractor shall collect waste within the onsite Loading Bay.
- Collection staff (driver and assistant) 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. 6.4m long, 2.1m high, and 6.4 tonnes gross vehicle mass, needing a 2.3m height clearance when lifting 660L bins and needing a 2.5m height clearance when lifting 1100L bins).

The enclosed plans illustrate the waste system. Also, the enclosed Swept Paths illustrate truck access. The operator shall coordinate hard waste collections with collectors (as well as charity and other minor waste streams), placing these wastes at the Loading Bay in coordination with each collection.

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.
- Waste collection times shall be as per Council's local laws. Also, the collector shall protect the acoustic amenity by minimising noise during the collection.

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). Also, impervious walls shall be providing near the each chute discharge.
- 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.

Chutes, associated shafts, and discharge areas/bin-indexes shall be sized and designed as recommended by a reputable chute manufacturer (chutes and associated equipment 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). The Operator shall train staff and waste collectors concerning hazards associated with the chute discharge area.

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 or chute. Cardboard shall be flattened and recycling containers un-capped, 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 subject site.

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.
- 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
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-manoeuvring 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

City of Melbourne (local Council), ph 03 9658 9658

Waste Wise Environmental (private waste collector), ph 1300 550 408

Kartaway (private waste collector), ph 1300 362 362

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

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

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

Elephant's Foot (chute supplier), ph 02 9780 3500

Wastech Engineering (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.

UNIT DESCRIPTION

- 1 BED & 1 BATH LOFT
- 2 BED & 2 BATH
- AMENITY
- CARPARK
- CIRCULATION
- COMMUNAL
- CORE
- PUBLIC ZONE
- RETAIL
- SERVICES

TOWN PLANNING

CHT ARCHITECTS
CHT Architects Pty Ltd
49 Islington Street
Collingwood VIC 3066
Post Office Box 1352
Collingwood VIC 3066
Telephone 03 9417 1944
Facsimile 03 9415 1847
info@chtArchitects.com.au
chtArchitects.com.au
CHT Architects Pty Ltd ABN 72 102 808 519
Architecture Interior Design Urban Design

Project: 102-108 JEFFCOTT STREET, WEST MELBOURNE
102-108 JEFFCOTT STREET, WEST MELBOURNE.

Client: BLUE EARTH GROUP

Amendments

No.	Date	Notes
P1	28.10.2020	CONSULTANT ISSUE
P2	30.11.2020	CONSULTANT ISSUE II

Title: OVERALL PLAN - GROUND

Sheet: PRELIMINARY
NOT FOR CONSTRUCTION

Sheet No.: TP1.104 | Revision: P2

Scale: 1 : 100 at A1

Date: 30.11.2020

20020

Drawn by: Author Checked by: Checker

UNIT DESCRIPTION

- 1 BED & 1 BATH
- 1 BED & 1 BATH + STUDY
- 2 BED & 2 BATH
- BALCONY
- CIRCULATION
- CORE
- SERVICES

TOWN PLANNING

CHT Architects Pty Ltd
49 Islington Street
Collingwood VIC 3066
Post Office Box 1352
Collingwood VIC 3066

Telephone 03 9417 1944
Facsimile 03 9415 1847

info@chtArchitects.com.au
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CHT ARCHITECTS
Architecture
Interior Design
Urban Design

Project
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P1	28.10.2020	CONSULTANT ISSUE
P2	30.11.2020	CONSULTANT ISSUE II

Title
OVERALL PLAN - LEVEL 03

Sheet
PRELIMINARY
NOT FOR CONSTRUCTION

Sheet No. TP1.107 Revision P2

Scale 1 : 100 at A1

Date 30.11.2020

20020

Drawn by:Author Checked by:Checker

UNIT DESCRIPTION
1 BED & 1 BATH LOFT
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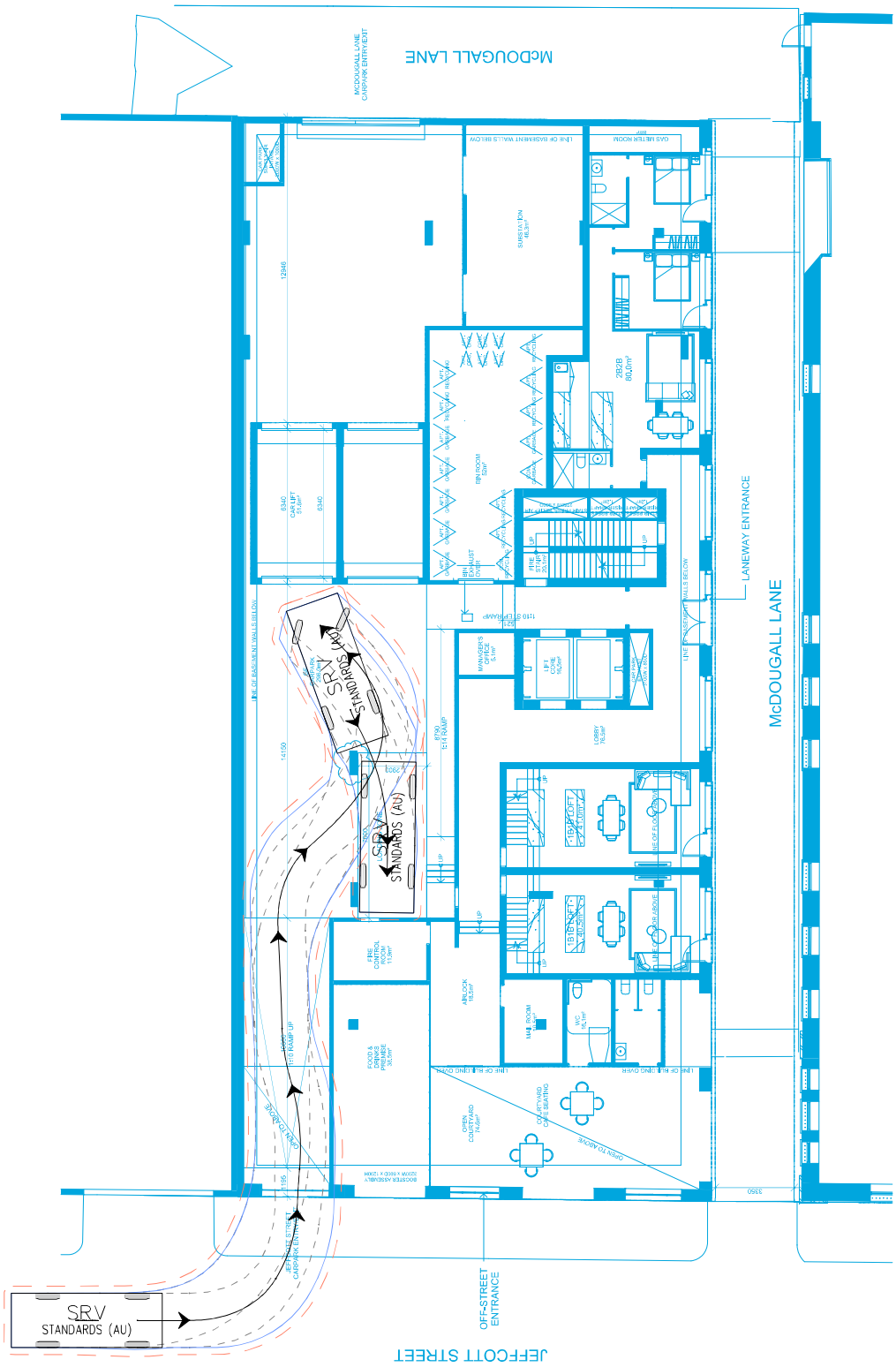

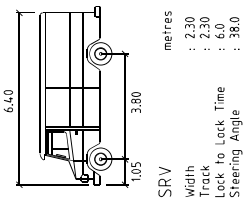

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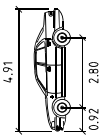

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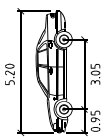

B99 6.3mR

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SWEPT PATH KEY

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h

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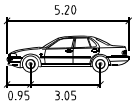

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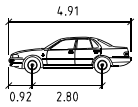

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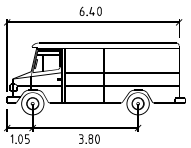

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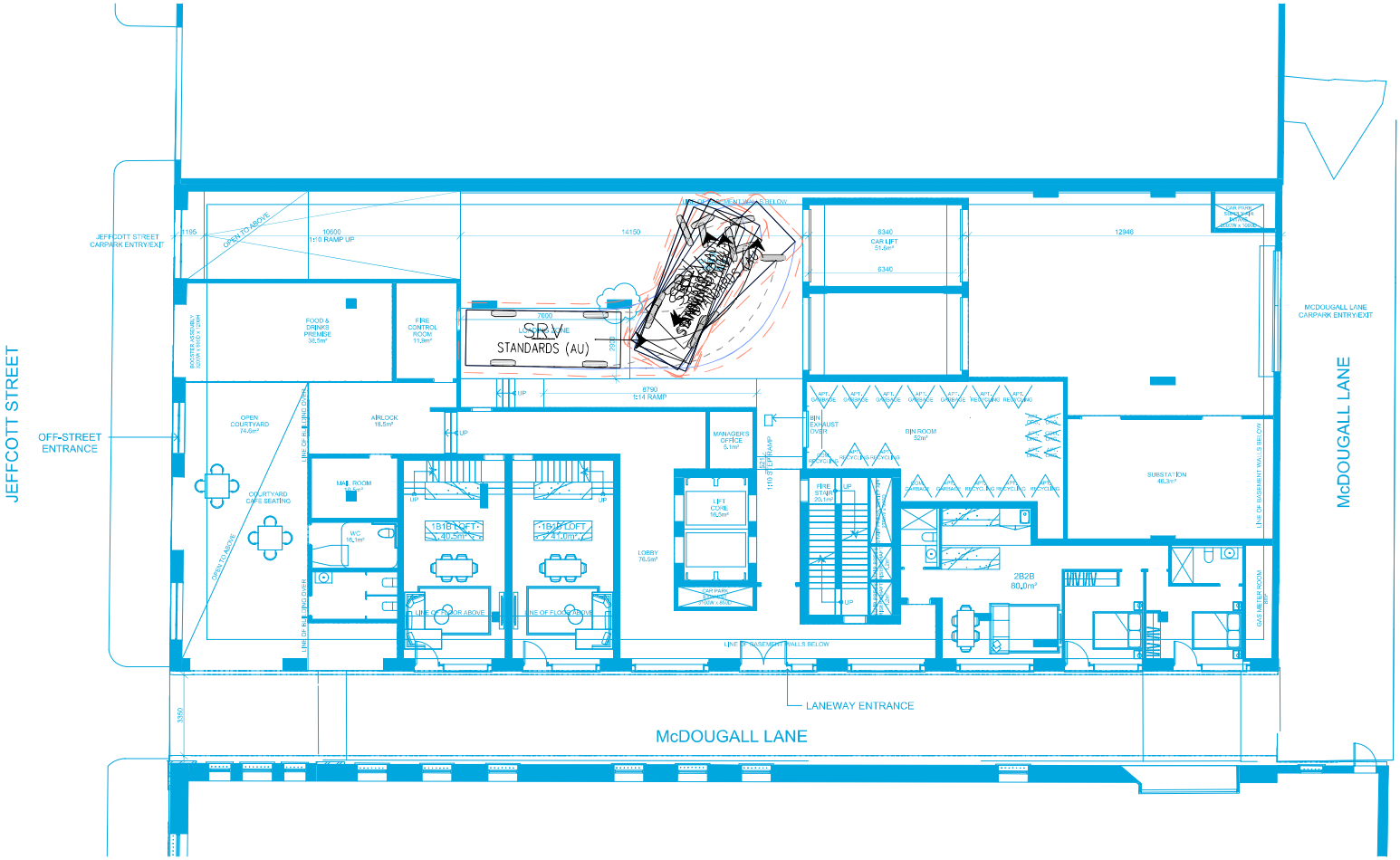

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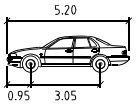

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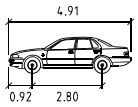

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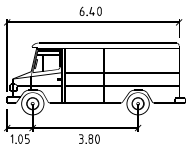

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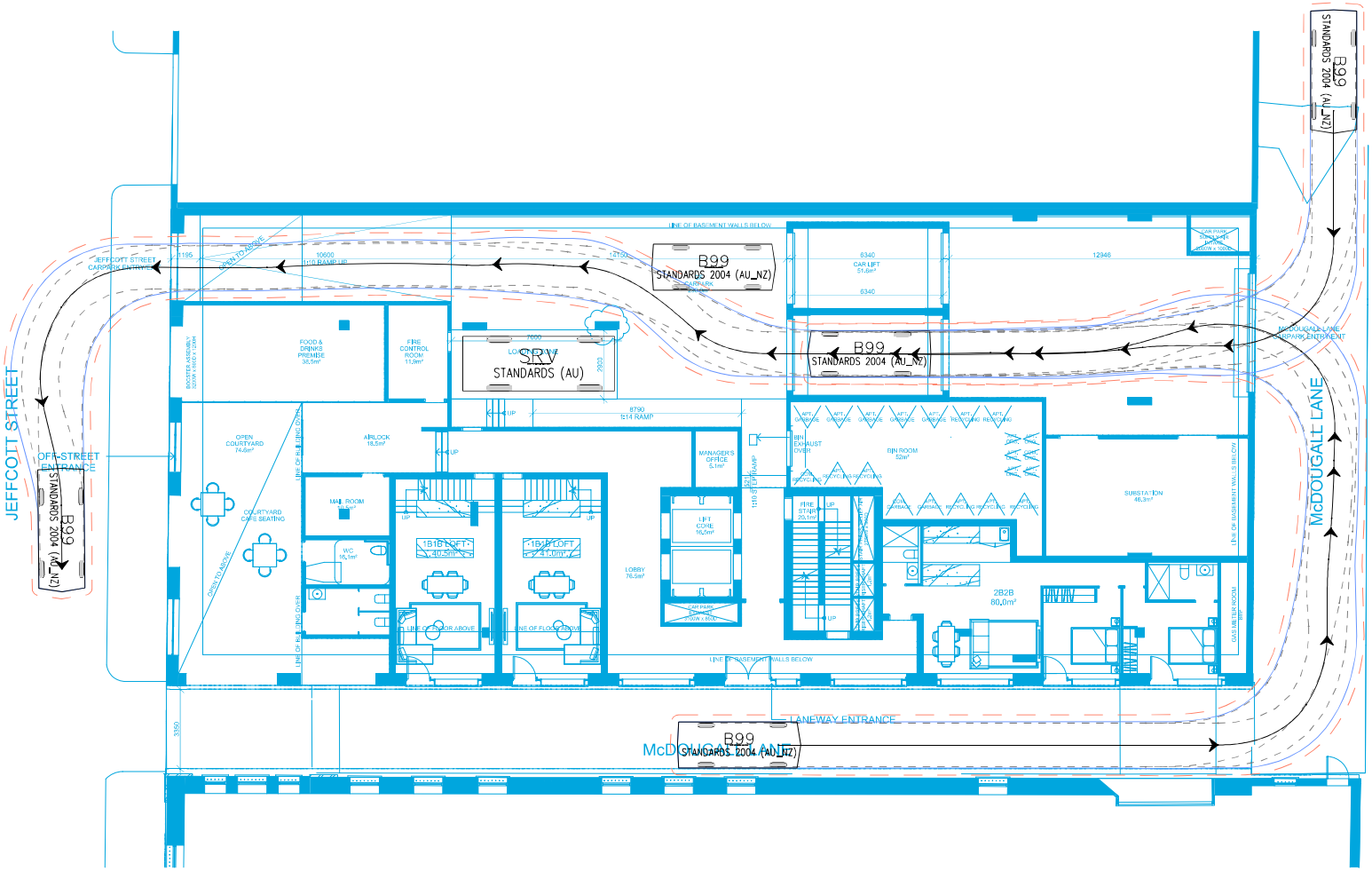
Lock to Lock Time	: 6.0
Steering Angle	: 38.0



UNIT DESCRIPTION

- 1 BED & 1 BATH LOFT
- 2 BED & 2 BATH
- AMENITY
- CARPARK
- CIRCULATION
- COMMUNAL
- CORE
- PUBLIC ZONE
- RETAIL
- SERVICES

ADVERTISED PLAN