

ratio:

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**Proposed Mixed Use Commercial
Development**

313-317 Kings Way, South Melbourne

20 July 2022

waste:management

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Version	Date	Reason for Issue	Prepared By	Checked By
REP01F01	20/08/2021	Town Planning – Final Issue	L Harris	M Fairlie
REP01F02	22/12/2021	Town Planning – Updated Final Issue	L Harris	M Fairlie
REP01F03	20/07/2022	Town Planning – Updated Final Issue	L Harris	M Fairlie

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Project Address

313-317 Kings Way, South Melbourne

Local Council

Port Phillip City Council – Phone: (03) 9209 6777

Land Use

Land use type: Mixed Use Commercial Development (Retail + Offices)

Number of Levels: Nineteen Storeys + Basement

Waste Generation Estimates

Waste Source	Garbage Generation	Commingled Recycling Generation	Food Organics Generation	Glass Recycling Generation
Takeaway Coffee Tenancy	258 L/week	258 L/week	110 L/week	110 L/week
Offices	1,576 L/week	1,576 L/week	675 L/week	675 L/week
Total	1,834 L/week	1,834 L/week	785 L/week	785 L/week

Proposed Interim Bin Schedule

The following schedule shall be adopted until the private waste contractor offers a glass recycling collection service.

Waste Stream	Bin Quantity	Bin Size	Collection Frequency	Storage Area Required
Garbage	3	660 L	Weekly	2.94 m²
Commingled Recycling	4	660 L	Weekly	3.92 m²
Food Organics	4	120 L	Twice weekly	1.04 m²
Hard Waste and E-Waste	1.50 m² storage area		As required	1.50 m²
Net Storage Area Required (excluding circulation)				9.40 m²

Proposed Ultimate Bin Schedule

The following schedule shall be adopted once the private waste contractor offers a glass recycling collection service.

Waste Stream	Bin Quantity	Bin Size	Collection Frequency	Storage Area Required
Garbage	3	660 L	Weekly	2.94 m²
Commingled Recycling	3	660 L	Weekly	2.94 m²
Food Organics	4	120 L	Twice weekly	1.04 m²
Glass Recycling	2	240 L	Twice Weekly	0.86 m²
Hard Waste and E-Waste	1.50 m² storage area		As required	1.50 m²
Net Storage Area Required (excluding circulation)				9.28 m²

Waste Collection Summary

Waste shall be collected by from the ground level loading bay by a private contractor, using mini rear loaders. Refer to Section 5 of this Waste Management Plan for further details.

1.1 The Proposed Development

The site of the proposed mixed use commercial development is located at 313-317 Kings Way, South Melbourne.

The proposal involves the construction of a eighteen-storey building, comprising:

- Offices across Levels 1-17 with a combined floor area of 4,502 square metres; and
- A roof top terrace with a floor area of 224 square metres.

At the time of preparation of this Waste Management Plan, a communal bin room has been provided on Basement Level 1.

Refer to Appendix A for a copy of the Architectural Plans used in the preparation of this Waste Management Plan.

1.2 Purpose

This Waste Management Plan has been updated to address Condition 26 of Planning Permit 737/2020, which states the following:

26. The Waste Management Plan submitted with the application prepared by Ratio Consultants dated 9 December 2020 will be endorsed to form part of the permit and must be implemented to the satisfaction of the Responsible Authority. The endorsed plan must not be altered without the prior written consent of the Responsible Authority.

1.3 Applicable Standards and References

Relevant guidelines and publications considered as part of the preparation of this Waste Management Plan include:

- Port Phillip City Council – Guidelines for Preparing a Waste Management Plan (2019);
- Sustainability Victoria – Better Practice Guide for Waste Management and Recycling in Multi-Unit Developments (2018); and
- Environment Protection (Residential Noise) Regulations 2008.

1.4 Limitations

At the time of preparation of this waste management plan, the waste generation rates and number of waste streams adopted are reflective of the currently published and available guidelines, in particular, Port Phillip City Council's 'Guidelines for Preparing a Waste Management Plan' and Sustainability Victoria's 'Better Practice Guide for Waste Management and Recycling in Multi-Unit Developments'.

Waste management arrangements during the construction and fit-out stages of the development, and on-going operation and monitoring of the waste management arrangements for the development following the occupation of the development are outside the scope of this Waste Management Plan.

2.1 Garbage and Commingled Recycling Generation

The commercial garbage and commingled recycling generation rates provided within Port Phillip City Council's 'Guidelines for Preparing a Waste Management Plan' have been adopted for the development, as outlined below:

- Garbage generation rates:
 - Office: 10 L/100m² floor area/day
- Commingled recycling generation rates:
 - Office: 10 L/100m² floor area/day

It is assumed that the non-food retail tenancy will operate for five days per week whilst the offices will operate for five days per week.

Applying the above garbage and commingled recycling generation rates, the garbage and commingled recycling generation estimates for the development are outlined in

Table 2.1.

Table 2.1: Garbage and Commingled Recycling Generation Estimates

Use	Floor Area	Garbage Generation Rate	Garbage Generation	Commingled Recycling Generation Rate	Commingled Recycling Generation
Offices	4,502m ²	10L/100m ² /day	2,251 L/week	10L/100m ² /day	2,251 L/week
Total Generation			2,251 L/week		2,251 L/week

2.2 Waste Stream Separation

In February 2020, the state government introduced an updated circular economy policy 'Recycling Victoria: A New Economy', which requires the separation of food organics and glass recycling from the general garbage and commingled recycling streams.

It is understood that this policy will become mandatory within the next 10 years and as such, it is strongly recommended that the proposed development allows for the future-proofing of the bin storage area to ensure there is sufficient space available to accommodate these additional waste streams.

Therefore, whilst the percentage of food organics and glass recycling within the general garbage and commingled recycling streams are unknown at this stage, we have conservatively estimated the following percentages:

- General Garbage: 70% of the general garbage estimate.
- Food Organics: 30% of the general garbage estimate.
- Commingled Recycling: 70% of the commingled recycling estimate.
- Glass Recycling: 30% of the commingled recycling estimate.

Based on the waste separation percentages outlined above, the waste generation estimates with waste stream separation are outlined in Table 2.2 below.

Table 2.2: Waste Generation Estimates with Waste Stream Separation

Waste Source	Garbage Generation	Commingled Recycling Generation	Food Organics Generation	Glass Recycling Generation
Offices	1,576 L/week	1,576 L/week	675 L/week	675 L/week
Total	1,576 L/week	1,576 L/week	675 L/week	675 L/week

3 Waste System and Storage Facilities:

3.1 System for Managing Waste

The collection arrangements for the various waste streams are summarised as follows:

- Garbage: for collection purposes, garbage shall be stored within a garbage collection bin;
- Commingled Recycling: for collection purposes, recyclables shall be stored within a commingled recycling collection bin (for paper, flattened cardboard, glass, PET, aluminium, steel and HDPE containers);
- Food Organics: for collection purposes, food organics shall be stored within food organics collection bins;
- Glass Recycling: once the private waste contractor offers a glass recycling collection service, for collection purposes, glass recyclables shall be stored within glass recycling collection bins. In the interim, glass recyclables shall be stored within the commingled recycling collection bin;
- Communal Garden Organics: the Building Manager shall engage a landscaping contractor who will be responsible for maintaining all communal landscaping and removing communal garden organics off-site;
- Hard Waste: hard waste shall be stored within a nominated location within the bin room;
- E-Waste: a portion of the area dedicated to hard waste within the bin room shall be allocated to the storage of e-waste.
- Soft Plastics: soft plastics shall be stored within a nominated location within the bin room;

3.2 Waste Storage Facilities

The proposed waste management system consists of the following components:

- Waste receptacles for garbage, commingled recycling and food organics within the retail tenancy.
- Waste receptacles for garbage, commingled recycling, food organics and glass recycling within each office tenancy; and
- A bin room accommodating the development's shared collection bins and hard waste, e-waste & soft plastics storage area on Basement Level 1.

It is recommended that the following considerations be made for the bin room:

General Requirements

- Comply with Building Code of Australia (BCA) and all relevant Australian Standards;
- Allow storage of all collection bins on site at all times;
- Allow easy access for users of the bins;
- Allow easy, direct and convenient transfer of bins to the collection point;
- Artificial light shall be provided where necessary outside the bin room to enable occupiers of the site to always dispose of waste safely and appropriately; and

- The path for transferring the bins from the bin room to the collection point shall be of adequate width, free of lips, and other obstacles and direct, smooth and without steps.

Space and Facilities Requirements

- The bin room shall be sized to accommodate all waste arising on the premises together with any associated equipment for handling the generated waste. The area designated for bin storage is based on the number of bins and the physical dimensions of the bins. The quantity and size of bins required for the development are outlined in Section 4 of this Waste Management Plan;
- The bin room shall be maintained to ensure that the aesthetics of the development are not compromised;
- Each bin shall be accessible and manoeuvrable in and out of the bin room with minimum handling of other bins; and
- The floor of the bin room shall be constructed of concrete (or similar) and shall be finished to a smooth even surface covered at the intersection of walls and plinths.

Ventilation and Bin Washing Requirements

- The bin room shall be ventilated in accordance with the requirements of the Building Code of Australia and AS1668.2;
- Ventilation openings shall be protected against flies and vermin;
- Doors shall be tight fitting; and
- The floor of the bin room shall be graded to a suitable floor-waste and a wall-mounted hosecock shall be provided for washing bins. Alternatively, a private waste contractor may be engaged to clean bins on a regular basis, transporting all waste-water off-site.

3.3 Bin Colour and Signage

Bin Colour Requirements

- It is recommended that all bins provided by a private supplier are provided in the following bin colours, as specified by Australian Standard AS4123.7 2006, however these are recommendations and not mandatory:
 - Garbage bins with a black body and red lid;
 - Commingled recycling bins with a black body and yellow lid;
 - Food organics bins with a black body and lime-green or burgundy lid; and
 - Glass recycling bins with a black body and purple lid.

NOTE: Private collection contractors often supply their own bins for collection.

Signage Requirements

The bin room will be provided with signs showing correct disposal of each waste stream.

The typical Sustainability Victoria signage is shown in Figure 3.1.

Figure 3.1: Sustainability Victoria Signage



Source: Sustainability Victoria

3.4 Internal Waste Transfer Arrangements

Waste associated with the retail tenancy shall be transferred from the tenancy to the bins within the bin room by appointed staff via the lift, as required.

Waste associated with the offices shall be transferred from each office level to the bins within the bin room by an appointed caretaker at the end of each day via the lift, with the assistance of a dedicated waste trolley.

It is noted that the bin room door has been provided with a width of 1300mm, which is sufficient to enable the transfers of 660L waste bins.

4.1 Proposed Bin Sizes

Based on the waste generation estimates calculated in Section 2, it is considered that a mix of 120L, 240L and 660L bins will be appropriate for the development.

The dimensions of the bins that shall be utilised are detailed in Table 4.1

Table 4.1: Bin Dimensions

Bin Size (L)	Width (mm)	Depth (mm)	Area (m ²)
120	480	545	0.26
240	585	730	0.43
660	1260	780	0.98

Based on Sulo dimensions

4.2 Proposed Interim Bin Schedule

Until the private waste contractor offers a glass recycling collection service, the bin schedule outlined below in Figure 4.2 shall be adopted.

Table 4.2: Proposed Interim Bin Schedule

Waste Stream	Bin Quantity	Bin Size	Collection Frequency	Storage Area Required
Garbage	3	660 L	Weekly	2.94 m²
Commingled Recycling	4	660 L	Weekly	3.92 m²
Food Organics	4	120 L	Twice weekly	1.04 m²
Hard Waste and E-Waste	1.50 m² storage area		As required	1.50 m²
Net Storage Area Required (excluding circulation)				9.40 m²

The above schedule will provide capacities of:

- Garbage: 1,980 L/week
- Commingled Recycling: 2,640 L/week
- Food Organics: 960 L/week

These capacities are sufficient to allow for the waste generation estimates calculated in Section 2.

Sufficient space has been provided within the bin room to accommodate the required number of bins outlined within the above schedule.

4.3 Proposed Ultimate Bin Schedule

Once the private waste contractor offers a glass recycling collection service, the bin schedule outlined below in Figure 4.3 shall be adopted.

Table 4.3: Proposed Ultimate Bin Schedule

Waste Stream	Bin Quantity	Bin Size	Collection Frequency	Storage Area Required
Garbage	3	660 L	Weekly	2.94 m²
Commingled Recycling	3	660 L	Weekly	2.94 m²
Food Organics	4	120 L	Twice weekly	1.04 m²
Glass Recycling	2	240 L	Twice Weekly	0.86 m²
Hard Waste and E-Waste	1.50 m² storage area		As required	1.50 m²
Net Storage Area Required (excluding circulation)				9.28 m²

The above schedule will provide capacities of:

- Garbage: 1,980 L/week
- Commingled Recycling: 1,980 L/week
- Food Organics: 960 L/week
- Glass Recycling: 960 L/week

These capacities are sufficient to allow for the waste generation estimates calculated in Section 2.

Sufficient space has been provided within the bin room to accommodate the required number of bins outlined within the above schedule.

5 Waste Collection Arrangements:

5.1 Collection Arrangements – Private Collection

Waste shall be collected from the ground level loading bay by a private contractor, using mini rear loaders.

The mini rear loaders are 6.4 metres in length, 2.1 metres in height, and require an operational height clearance of 2.3 metres at the collection point when collecting 660L bins.

A swept path assessment has been prepared using Autodesk Vehicle Tracking software, demonstrating that the nominated waste collection vehicle can access the loading bay on Cobden St, undertake waste collection, turn around at the shared truck turning zone and exit the site in a forward direction towards Kings Way (refer to Appendix B for the swept path assessment).

The Building Manager will be responsible for arranging the transfer of bins from the bin room to the collection point via the platform lift in coordination with the waste collection vehicle and returning the bins to the bin room immediately after collection.

The Building Manager and waste collection contractor shall be responsible for the development of Safe Work Method Statements (SWMS) to ensure safety is considered for every aspect of the bin transfer and collection process.

Hard waste and e-waste shall be collected by a private contractor on an as-required basis.

NOTE:

Bins shall not be left in a manner that block access to doorways, service cupboard openings or public roadways at any time.

5.2 Waste Collection Time

Waste collection shall be undertaken outside of peak AM and PM commuter periods, to minimise disruption to traffic entering and exiting the site (i.e., between 10:00am and 3:00pm on weekdays).

6.1 Waste Disposal and Sorting Responsibilities

- Garbage shall be placed within tied bags prior to being placed into the garbage collection bin.
- Cardboard shall be flattened and recycling containers uncapped and rinsed prior to being placed loosely into the commingled recycling collection bin. Bagged commingled recycling is not permitted.
- Food organics shall be within approved compostable bags prior to being placed into the food organics collection bins.
- Once the private waste contractor offers a glass recycling collection service, glass recyclables shall be rinsed prior to being placed loosely into the glass recycling collection bins. In the interim, glass recyclables shall be rinsed prior to being placed loosely into the commingled recycling collection bin. Bagged glass recycling is not permitted.
- Hard waste and e-waste shall be stored within the designated storage area located within the bin room.

6.2 Building Manager Responsibilities

The Building Manager shall be responsible for the following:

- Ongoing management of the waste system including the maintenance of the bin room and associated equipment and components, to the satisfaction of users and the relevant authority, and in accordance with relevant manufacturer specifications. When required, the Building Manager shall engage an appropriate contractor to conduct services, replacements or upgrades;
- Engage and manage the waste collection contractor;
- Arrange the transfer of bins to and from the collection point via the car lift in coordination with the collection vehicle;
- Developing and implementing adequate safe operating procedures (including the preparation of Safe Work Method Statements);
- Securing the bin room to protect the equipment from theft and vandalism;
- Service all communal areas through sweeping and removal of litter on a regular basis;
- Publish and distribute information or 'house rules' to ensure that occupants are familiar about the waste management system, the locations of waste disposal, information of hard waste / e-waste collection services and the storage location on-site for hard waste / e-waste prior to collection;
- Preventing overfilled bins by keeping lids closed and bungs are leak free;
- Inform occupants that bagged recycling (commingled and glass) is not permitted; and
- Ensure that bins provided for use at the designated site are not removed.

6.3 Waste Systems User Education

The Building Manager shall publish / distribute rules / information / educational material to:

- Inform users about the waste management system;
- Improve facility management results, to reduce equipment damage, reduce littering, and to achieve better cleanliness; and
- Advise users to sort and recycle waste with care to reduce contamination of recyclables.

6.4 Waste Management Plan Revisions

From time to time, due to changes in legislative requirements, changes in the development's needs and/or waste patterns (such as waste composition, volume, or distribution), or to address unforeseen operational issues, the Building Manager shall be responsible for coordinating the necessary Waste Management Plan revisions, including (on an as required basis):

- A waste audit and new waste management strategy.
- Revision of the waste system (bin size / quantity / waste streams / collection frequency / update of equipment).
- Re-education of users.
- Any necessary statutory / regulatory requirements / approvals.

7 Related Waste Management Arrangements:

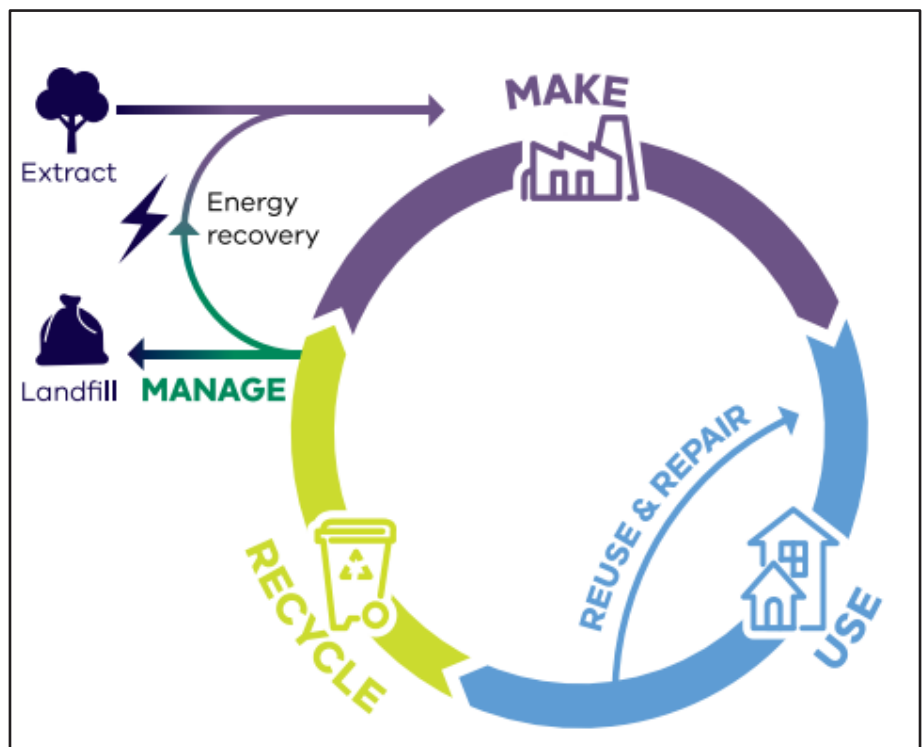
7.1 Recycling Victoria: A new economy

The Victorian Government's Recycling Victoria: A New Economy was released in 2020 and sets out strategies to reduce the amount of waste generated in Victoria and increase the amount of materials for recycling and reprocessing to reduce damage to the environment caused by waste.

Ongoing education and dedicated ongoing management services are critical factors in encouraging users to continue to use the services and systems as intended. The future Occupiers of the development shall promote the above strategy where practicable and encourage users to participate in minimising the impact of waste on the environment. In particular, consideration should be made to the circular economy as shown in Figure 7.1 below.

A circular economy continually seeks to reduce the environmental impacts of production and consumption, while enabling economic growth through more productive use of natural resources.

Figure 7.1: The Circular Economy



Source: *Recycling Victoria: A new economy*

Establishment of waste reduction and recycling targets, including conducting periodic waste audits, keeping records of waste streams, and monitoring of the quantity of recyclables found in landfill-bound bins. The results of such audits shall be shared with users to encourage further reductions in waste where possible.

8 Supplementary Information:

8.1 Contact Information

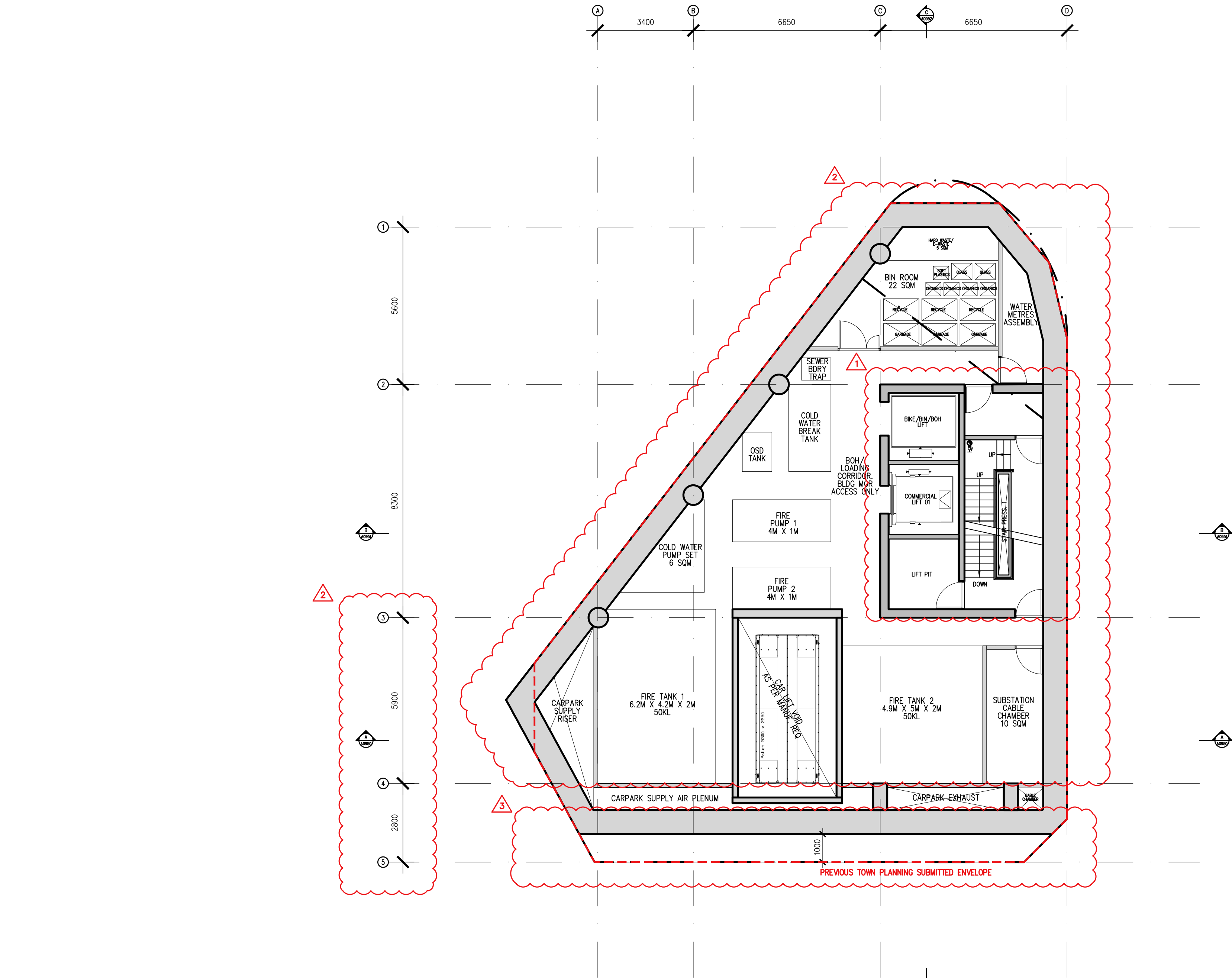
Table 8.1 below includes a complimentary list of contractors and equipment suppliers. The Project Principal shall not be obligated to procure goods / services from these companies.

Ratio Consultants does not warrant or make representations for the goods / services provided by these contractors and suppliers.

Table 8.1: Contractor and Supplier Details

Service	Contractor / Supplier	Phone	Website
Private Waste Collection and/or Bin supplier	Cleanaway	13 13 39	www.cleanaway.com.au
	CSC Waste & Recycling	1300 499 927	www.cscwaste.com.au
	iDump	1300 443 867	www.idump.com.au
	JJ Richards	03 9794 5722	www.jjrichards.com.au
	Kartaway	1300 362 362	www.kartaway.com.au
	Premier Waste	1300 219 001	www.premierwaste.com.au
	SUEZ	13 13 35	www.suez.com.au/en-AU
	Sulo Australia	1300 364 388	www.sulo.com.au
	Veolia	132 955	www.veolia.com/anz
	Wastewise Environmental	1300 550 408	www.wastewise.com.au
Bin Washing	The Bin Butlers	1300 788 123	www.thebinbutlers.com.au
	Calcorp Services	1800 225 267	www.calcorpservices.com.au
	Kerbside Clean-A-Bin	03 9830 7381	www.kerbsidecleanabin-srp.com.au
	WBCM Environmental Australia	1300 800 621	www.wbcm-aust.com.au
Odour Control	Eco-Safe Technologies	1300 135 039	www.eco-safe.com.au
	WBCM Environmental Australia	1300 800 621	www.wbcm-aust.com.au
E-Waste Collection	Tech Collect	1300 229 837	www.techcollect.com.au

Appendix A : Plans Assessed



SCHEDULE OF CHANGES:

1. CORE RECONFIGURE TO ALLOW FURTHER SERVICES.
2. GRID ADJUSTED TO SUIT REVISED STRUCTURES.
3. SERVICES AND CAR STACKER LAYOUT UPDATED TO SHOW 23 CAR PALLETS.
4. SOUTHERN RETENTION WALL SETBACK 1M FROM BOUNDARY.

Rev No.	Date	Reason for issue
REV A	20.08.2021	ISSUED FOR TOWN PLANNING
REV B	05.11.2021	ISSUED FOR TOWN PLANNING RFI
REV C	13.07.2022	ISSUED FOR VCAT HEARING

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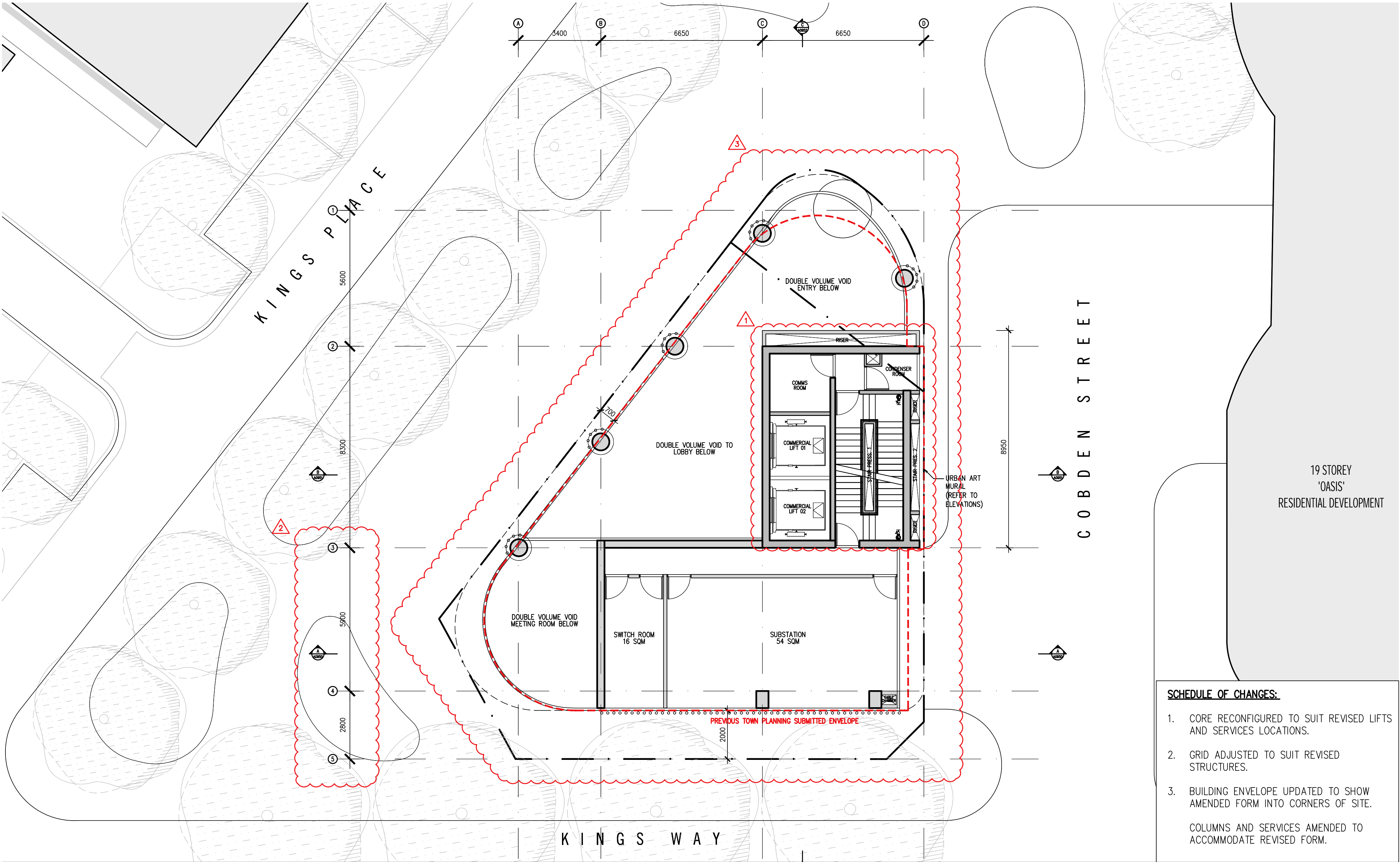
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Project Title
**313-317 KINGS WAY,
SOUTH MELBOURNE**
Client
FORTIS PTY LTD

Drawing Title
**GENERAL ARRANGEMENT PLAN
BASEMENT 1**

Project Number
21035
Drawing Status
TP

Drawing Number
A0099
Revision
C



SCHEDULE OF CHANGES:

1. CORE RECONFIGURED TO SUIT REVISED LIFTS AND SERVICES LOCATIONS.
 2. GRID ADJUSTED TO SUIT REVISED STRUCTURES.
 3. BUILDING ENVELOPE UPDATED TO SHOW AMENDED FORM INTO CORNERS OF SITE.
- COLUMNS AND SERVICES AMENDED TO ACCOMMODATE REVISED FORM.

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Project Title

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SOUTH MELBOURNE**

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Drawing Title

**GENERAL ARRANGEMENT PLAN
LEVEL 00 MEZZANINE**

Project Number

21035

Drawing Status

TP

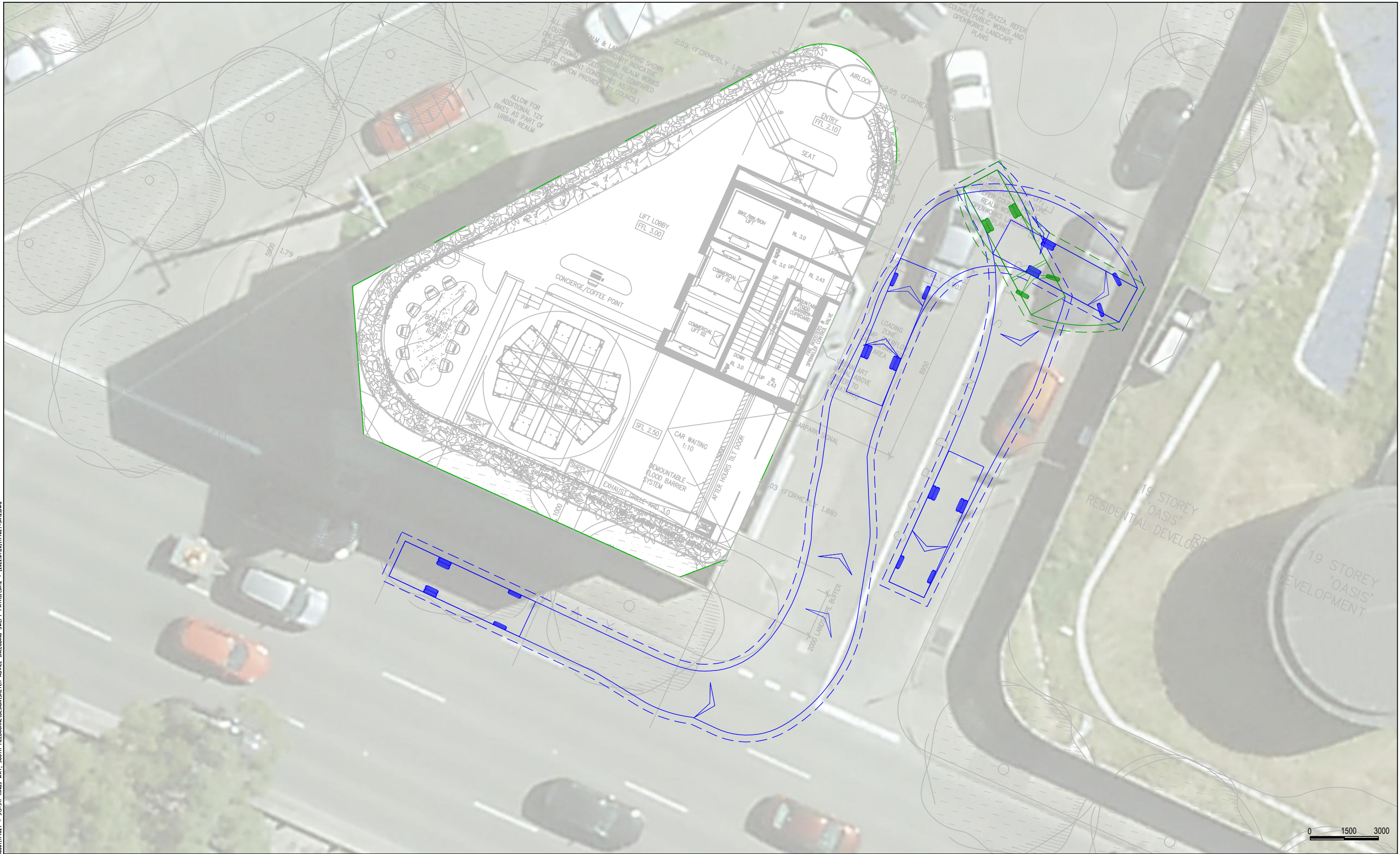
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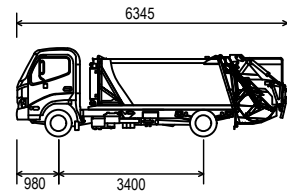
Revision

C

Appendix B: Waste Truck Swept Path Assessment



Mini-Rear Loader Waste Collection Vehicle



VEHICLE ENVELOPE (FORWARD)
300mm CLEARANCE (FORWARD)
VEHICLE ENVELOPE (REVERSE)
300mm CLEARANCE (REVERSE)

Overall Length 6.345m
Body Width 1.700m
Overall Body Height 2.080m
Min Body Ground Clearance 0.205m
Track Width 1.670m
Lock to Lock Time 4.00 sec
Curb to Curb Turning Radius 6.450m

Proposed Commercial Development 313 - 317 Kings Way, South Melbourne Swept Path Assessment

NOTE:
1) Base Plan Supplied By Elenberg Fraser on 2022.07.20
2) Maximum Design Speed 10km/h

RATIO REFERENCE
17962T-SK12

SHEET No.
6 of 6

PREPARED BY
SN

SCALE
1:150@A3

DATE
21/07/2022

