

Client	Date
WT Corporate Services Pty Ltd ATF Wingspring Trust	29 April 2026

Planning

Transport

Urban Design

Waste

Transport Impact Assessment

Proposed Residential Use

464 St Kilda Road, Melbourne

ratio:

ratio.com.au

Project
464 St Kilda Road, Melbourne

Prepared for
WT Corporate Services Pty Ltd ATF
Wingspring Trust

Our reference
22910T

Directory path

Version	Date	Issue	Prepared by	Checked by
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1. Introduction

1.1. Background

Ratio Consultants has been engaged by the permit applicant to prepare a transport impact assessment for the proposed residential development on land located at 464 St Kilda Road in Melbourne.

The application proposes to construct an 18-storey building on the subject site, comprising the following land uses:

- 325 apartments comprising:
 - 172 x one-bedroom apartments
 - 63 x two-bedroom apartments
 - 66 x three-bedroom apartments
 - 24 x four-bedroom apartments
- Two (2) Food and Drink Tenancies totalling 371 sqm.

This report has been prepared to undertake a transport impact assessment of the proposed development.

1.2. Purpose & Structure of this Report

This report sets out an assessment of the anticipated parking, traffic and transport implications of the development proposal, including consideration of:

- Existing traffic and car parking conditions in the vicinity of the site;
- Proposed pedestrian, bicycle and public transport access arrangements to the site
- Parking demand likely to be generated by the development proposal;
- Suitability of the proposed car parking facilities, in terms of supply and layout;
- Adequacy of the proposed bicycle parking arrangements, in terms of supply and layout;
- Adequacy of the proposed site access arrangements;
- Adequacy of the proposed loading & waste collection arrangements; and
- Traffic generating characteristics of the development proposal and impact on the surrounding road network.

1.3. References

In preparing this report, reference has been made to the following material:

- Architectural plans for the development proposal, prepared by Cox Architecture, dated April 2026;
- Port Phillip Planning Scheme;
- Australian/New Zealand Standard, Parking Facilities Part 1: Off-Street Car Parking (AS2890.1:2004);
- Australian/New Zealand Standard, Parking Facilities Part 2: Off-Street Commercial Vehicle Facilities (AS2890.2:2018);
- Australian/New Zealand Standard, Parking Facilities Part 3: Bicycle Parking (AS2890.3:2015);
- A site inspection of the subject site and its surrounds; and
- Other documents as nominated.

2. Existing Conditions

2.1. Site Location

The subject site is located at 464 St Kilda Road in Melbourne. The subject site is situated on the western side of St Kilda Road and the eastern side of Queens Lane.

The site is rectangular in shape, with an approximate 61.1 metres frontage to both St Kilda Road and Queens Lane and an overall site area in the order of 4,653 sqm.

The site is currently occupied by a multi-storey office building with vehicle access provided along Queens Lane and St Kilda Road.

A summary of the existing development schedule is provided as follows:

Use	Area
Office	13,784 sqm
Car Parking	169 car spaces
Bicycle Parking	-

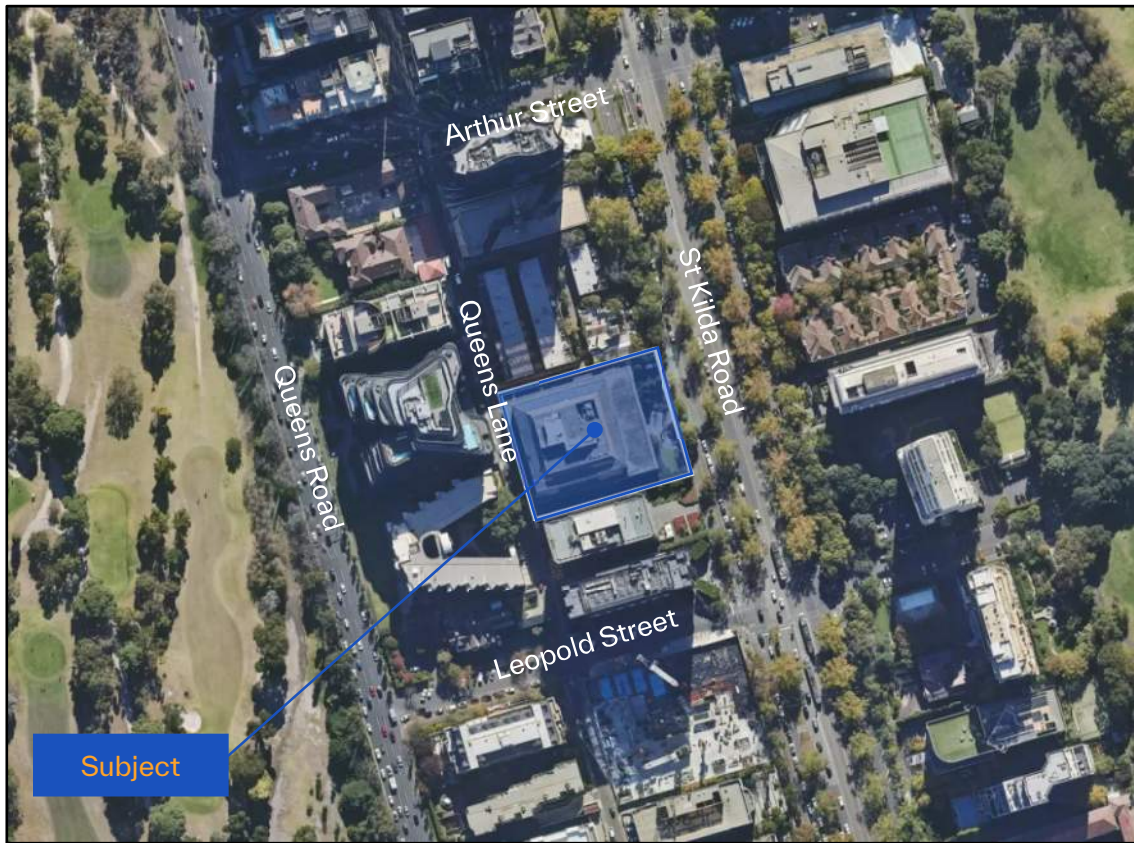
The location of the subject site and its surrounding environs is shown in Figure 2.1, with an aerial context also provided in Figure 2.2.

Figure 2.1: Site Locality



(Source: Melway, Map Ref. 58 A3)

Figure 2.2: Site Location & Its Surrounds



(Source: Landchecker, image dated 10 May 2024)

The subject site is located within the Commercial 1 Zone – Schedule 1 (C1Z) and is subject to the following planning overlays:

- Design and Development Overlay – Schedule 13 & 26-5A (DDO13 & 26-5A);
- Special Building Overlay – Schedule 1 (SBO1); and
- Heritage Overlay

Land uses in the vicinity of the site are predominately commercial and residential in nature.

Some key non-residential land uses in close proximity to the subject site include:

- Faulkner Park, located approximately 480 metres east of the site;
- Albert Cricket Ground, located approximately 520 metres south of the site;
- Heart Centre at The Alfred, located approximately 750 metres southeast of the site; and
- Wesley College, located approximately 1.0 kilometre southeast of the site.

The subject site location and relevant planning zones are shown in Figure 2.3.

Figure 2.3: Site Location & Planning Zones



(Source: VicPlan)

2.2. Road Network

St Kilda Road

St Kilda Road is a primary arterial road located within Transport Zone 2 (TRZ2) and under the care and management of the Department of Transport and Planning (DTP). It runs in a generally north-south alignment between the Melbourne CBD in the north and continues as Brighton Road in the south.

In the vicinity of the subject site, St Kilda Road has an overall carriageway width of approximately 48.6 metres. The road cross-section comprises dual carriageways in each direction, separated by a central landscaped median. Each individual carriageway includes kerbside parking and separated bicycle lanes are provided along both sides of the roadway. A tram corridor is centrally aligned within the median. The posted speed limit along this section of St Kilda Road is 60 km/h. Formal pedestrian footpaths are constructed along both sides of the roadway.

Queens Lane

Queens Lane is a Council managed local road which runs in a north-south alignment between Roy Street to the north and St Kilda Road to the south.

In the vicinity of the site, Queens Lane has an approximate road width of 6.0 metres, configured with one (1) traffic lane in the northbound direction.

Along the site frontage, "Loading Zones" during typical weekday work hours are provided on the western side of the road and the eastern side of the road is subject to "No Stopping" restrictions apply.

Queens Lane has a posted speed limit of 40km/h. Constructed footpaths are provided on both sides of the road.

Leopold Street

Leopold Street is a Council managed local road which runs in an east-west alignment between Princes Highway to the west and St Kilda Road to the east.

In the vicinity of the site, Lorne Street has an approximate road width of 13 metres, which accommodates for traffic in both directions and time restricted ticketed parking along both sides of the carriageway.

Leopold Street has a default speed limit of 50km/h. Constructed footpaths are provided on both sides of the road.

Union Street

Arthur Street is a Council managed local road, which runs in an east-west alignment between Princes Highway to the west and St Kilda Road to the east.

In the vicinity of the site, Arthur Street has an approximate road width of 13.2 metres, which accommodates for traffic in both directions and a mixture of time restricted ticketed parking and permit parking along both sides of the carriageway.

Arthur Street has a posted speed limit of 40km/h. Constructed footpaths are provided on both sides of the road.

2.3. Sustainable Transport

Public Transport

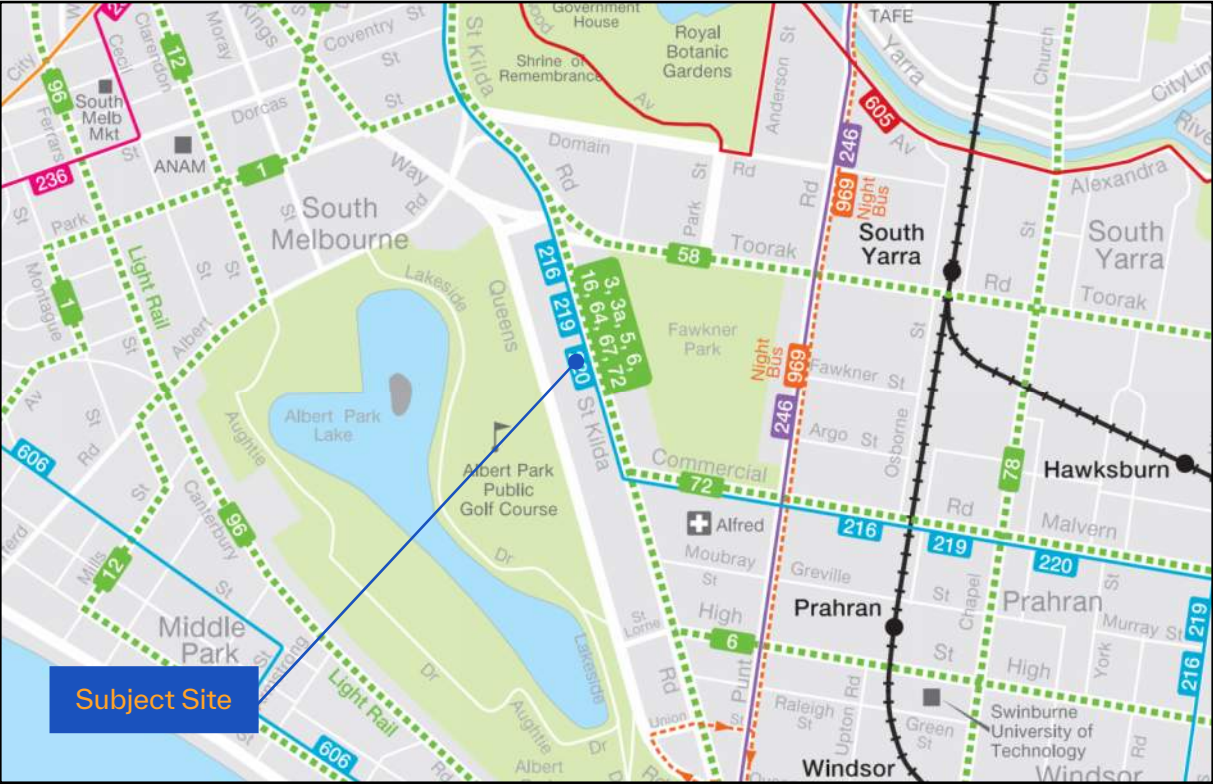
The site has access to high quality public transport services, as described in Table 2.1 and shown in Figure 2.4.

As a result of the available public transport services, the site achieves a transit score of '93 out of 100' (on walkscore.com), inferring that the site has access to '*world class public transportation*'. Moreover, based on the available public transport services, an isochrone drawing of the area accessible from the subject site location in a 30-minute public transport journey is presented in Figure 2.5.

Table 2.1: Public Transport Services in the Vicinity of the Site

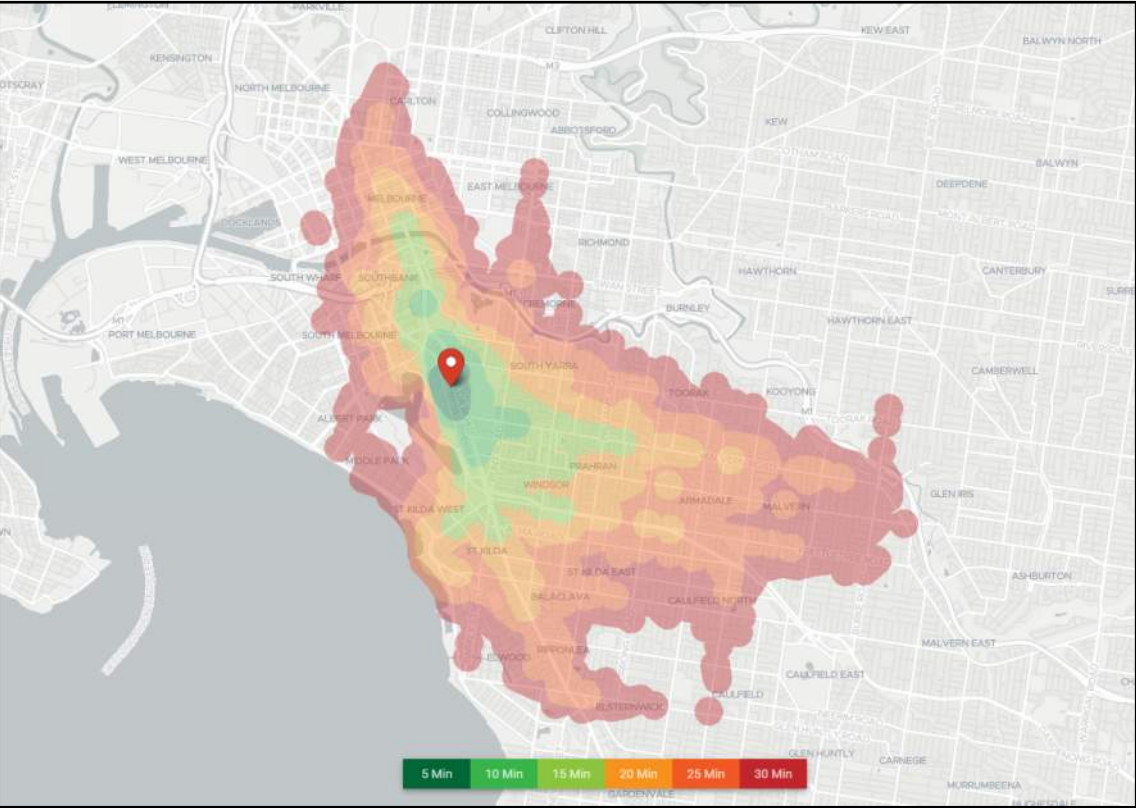
Service	Route	Route Description	Nearest Stop	Walking Distance and Time
Tram	3 / 3a	Melbourne University – East Malvern	Leopold Street / St Kilda Road	120 metres 2 mins
	5	Melbourne University – Malvern		
	6	Moreland – Glen Iris		
	16	Melbourne University – Kew via St Kilda Beach		
	64	Melbourne University – East Brighton		
	67	Melbourne University – Carnegie		
	72	Melbourne University – Camberwell		
	58	West Coburg – Toorak	Faulkner Park / Toorak Road	800 metres 12 minutes
Bus	603	Brighton Beach – Alfred Hospital	Alfred Hospital / Commercial Road	750 metres 11 minutes
	604	Greenvale – Alfred Hospital		
Train	Cranbourne, Pakenham, and Sunbury lines		*Anzac Station	950 metres 13 minutes

Figure 2.4: Public Transport Services in the Vicinity of the Site



(Source: Public Transport Victoria)

Figure 2.5: Public Transport Catchment Area (from subject site)



(Source: Targomo)

Figure 2.5 indicates that all adjoining suburbs can be accessed in a 30-minute public transport journey, including the Melbourne CBD.

Bicycle Network

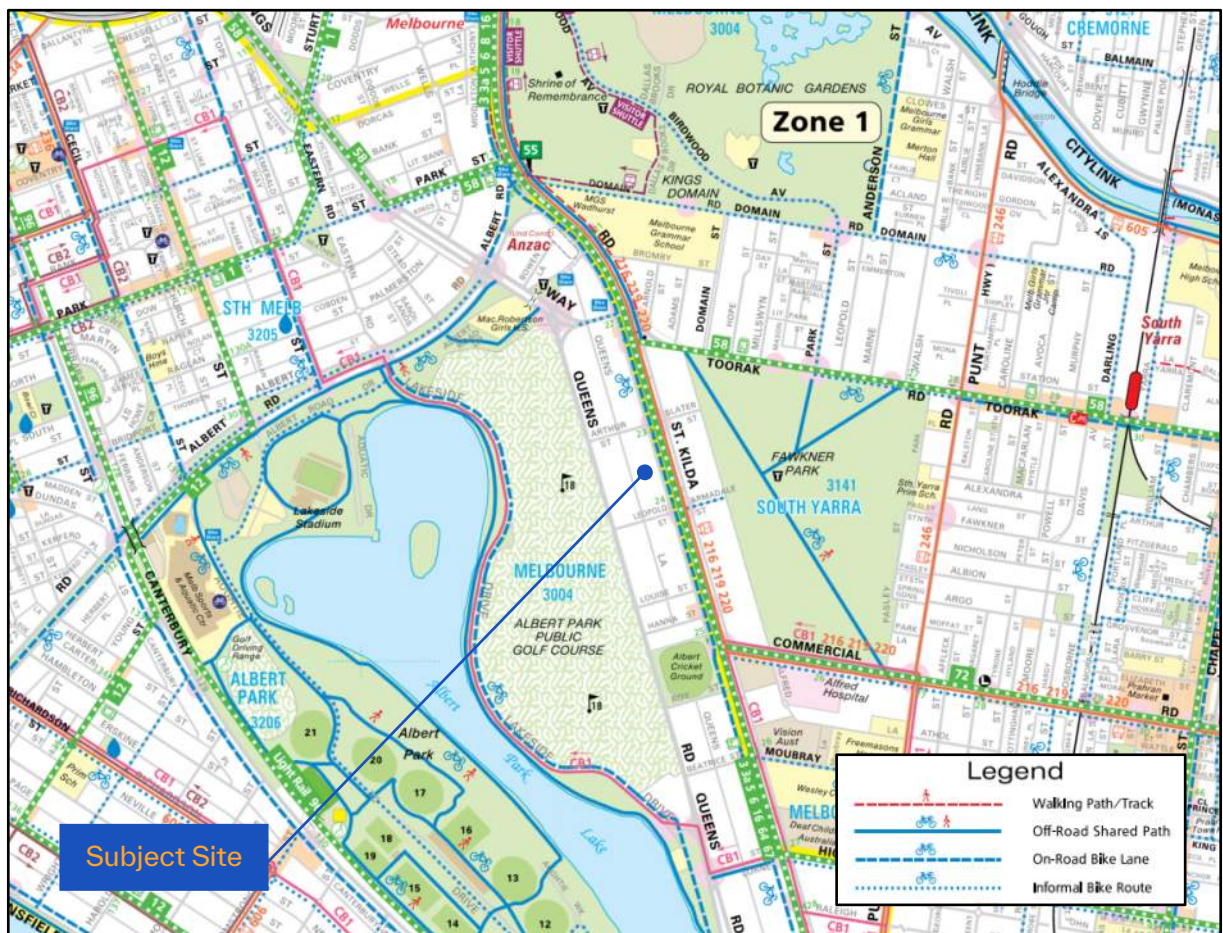
The site has excellent access to the surrounding bicycle network, with the following bicycle routes located in close proximity of the subject site location:

- Off-road shared paths within Albert Park, Fawcner Park;
- On-road bicycle lanes on St Kilda Road, Lakeside Drive, Commercial Road, Moubray Street, High Street; and
- Multiple other informal linking bicycle routes in close proximity to the site.

The above cycling infrastructure provides the connection to the wider bicycle network, thereby providing further connections across Melbourne.

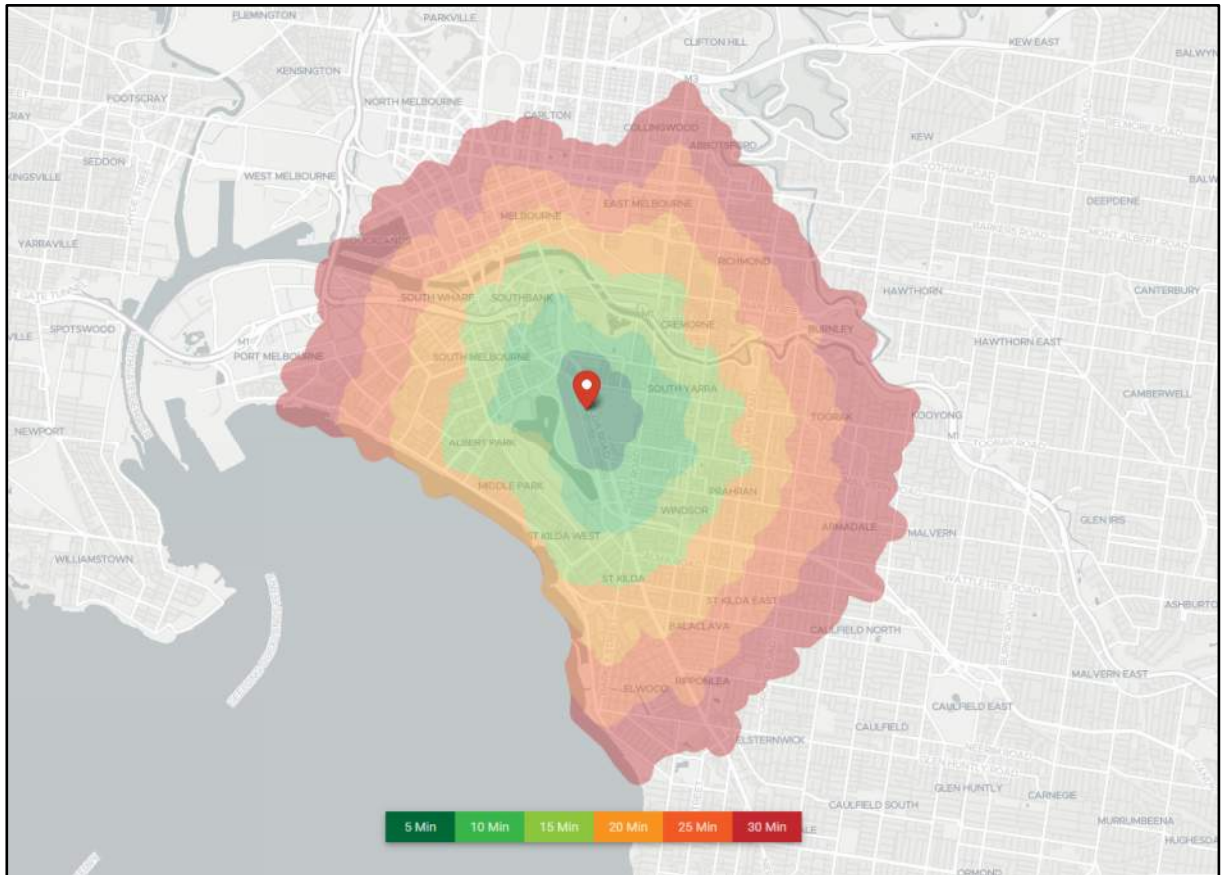
The bicycle infrastructure in the vicinity of the site is shown in Figure 2.6 and the 30-minute cycling catchment area from the subject site is shown in Figure 2.7.

Figure 2.6: Bicycle Infrastructure in the Vicinity of the Site



(Source: City of Port Phillip Travelsmart Map)

Figure 2.7: Cycling Catchment Area (from subject site)



(Source: Targomo)

Walking

Constructed footpaths are provided along both sides of the majority of streets in the nearby vicinity of the site.

The site location achieves a walk score of '88 out of 100' (on [walkscore.com](https://www.walkscore.com)), indicating that the surrounding area is 'very walkable' and that 'most errands can be accomplished on foot'.

As such, the site location is considered to exhibit the characteristics to support walking as a primary mode of travel for those residing within or visiting the site.

Taxi / Rideshare

In addition, a number of ride-hailing services operate in the vicinity of the subject site. Ride-hailing services offer opportunities for door-to-door travel from any origin and destination specified by the passenger.

The following operators, as described in Table 2.2, provide taxi and/or rideshare services in metropolitan Melbourne.

Table 2.2: Taxi / Rideshare Alternatives

Service	How to order
 Silver Top Taxis	Call 8413 7202 Wheelchair accessible taxis (WATs) are also available. Simply request a WAT when making a booking
 Yellow Cabs	Call 13 6294 Wheelchair accessible taxis (WATs) are also available. Simply request a WAT when making a booking
 Uber	Get a reliable ride in minutes with the Mobile App for each service. No reservations are required
 DiDi	
 Bolt (Taxify)	
 Ola	

Car Share

Car share schemes offer a viable alternative to owning your own vehicle, with members able to book vehicles on an as needs basis, either online or by phone. Car share vehicles offer a more cost effective and environmentally friendly option to the private motor vehicle and are ideal to meet a 'mobility gap' for trips that cannot be conveniently via alternative transport modes.

There are nine (9) car share vehicles available within a 500 metre walk of the site location. A summary of the car share pods in the vicinity of the subject site is provided in Table 2.3.

Table 2.3: Car Share Pod Locations

Operator	Location	Available Vehicles	Approximate Walking Distance
GoGet	12 Queens Road (Queens Domain Apartments)	1 x car	230 metres
	St Kilda Road near Slater Street	2 x cars	280 metres
	Louise Street near St Kilda Road	1 x car	400 metres

	Toorak Road West near Domain Street	1 x car	500 metres
	St Kilda Road near Commercial Road	2 x cars	500 metres
Flexicar	St Kilda Road, near Armadale Street	1 x car	160 metres
	St Kilda Road, near Arthur Street	1 x car	200 metres
	Louise Street near Princes Highway	1 x car	450 metres
	St Kilda Road near Commercial Road	1 x car	500 metres
	Toorak Road West near Domain Street	1 x car	500 metres
Total		12 cars	Within 500 metres

2.4. Local Council Policy

General

There is considerable support within the Port Phillip Planning Scheme and various Council strategies for developments which encourage the use of sustainable transport alternatives from the private motor vehicle, including those listed and discussed below.

Clause 18 – Transport

Clause 18 of the Port Phillip Planning Scheme is the State Planning Policy on Transport.

Clause 18.01-1L-01 – Land use and transport integration

Clause 18.01-1L-01 is in relation to supporting development that promotes alternate modes of transport and reduces reliance on private vehicles.

Clause 18.01-1L-01 states the following:

“Ensure new use and development supports the prioritisation of the following transport modes in the following order:

- Walking.*
- Bicycle riding.*
- Public transport.*
- Subscription based vehicles (for example, car share) and electric vehicles.*
- Private motor vehicles.*

Support the provision of active transport infrastructure in developments (such as high levels of bicycle parking and end-of-trip facilities)."

Clause 18.01-3S – Sustainable and safe transport

Clause 18.01-3S is in relation to facilitating an environmentally sustainable and safe transport system that supports health and wellbeing.

Clause 18.01-3S states the following:

"Supports forms of transport and energy use that have the greatest benefit for, and least negative impact on, health and wellbeing."

"Design development to promote walking, cycling and the use of public transport, in that order, and minimise car dependency."

Clause 18.02-1S – Walking

The objective of this policy is to:

"Facilitate an efficient and safe walking network and increase the proportion of trips made by walking."

The strategy to meet this objective includes:

- Provide pedestrian routes that are safe, direct and comfortable to use.
- Enable walking as a part of everyday life.
- Enable people to meet more of their needs locally and rely less on their cars.
- Be accessible to vehicles that use footpaths, including wheelchairs, prams and scooters.
- Accommodate emerging forms of low-emission, low-speed personal transport.

Clause 18.02-2S – Cycling

The objective of this policy is to:

"Facilitate an efficient and safe bicycle network and increase the proportion of trips made by cycling."

The strategy to meet this objective includes:

- Provide routes that are safe, comfortable, low-stress and well connected.
- Enable cycling as a part of everyday life.
- Enable people to meet more of their needs locally by cycling and to rely less on their cars.
- Accommodate emerging forms of low emission, low and moderate speed personal transport.

Protect and develop the Principal Bicycle Network to provide high-quality cycling routes that are direct and connected, to and between key destinations including activity centres, public transport interchanges, employment areas, urban renewal precincts and major attractions.

Clause 18.02-3S – Public Transport

The objective of this policy is to:

"Facilitate an efficient and safe public transport network and increase the proportion of trips." (made by public transport).

The strategy to meet this objective includes planning and developing public transport to:

- Connect activity centres, job-rich areas and outer suburban areas.
- Enable people to not have to rely on cars for personal transport.

Clause 18.02-3R – Principal Public Transport Network

The site is within the Principal Public Transport Network (PPTN) Area. This policy, amongst other things seeks to:

“Maximise the use of existing infrastructure and increase the diversity and density of development along the Principal Public Transport Network, particularly at interchanges, activity centres and where principal public transport routes intersect.”

Move, Connect, Live – Integrated Transport Strategy 2018-2028

Port Phillip Council adopted Move, Connect, Live in September 2018. The 10-year strategy aims to deliver on Port Phillip Council’s commitment to supporting a well-connected transportation future for the City, to make it easy for people to move around and connect with places in a way that suits them as the City grows.

The ITS identifies a “long-term plan to ensuring that as a community we can adapt to the increasing number of trips and the challenges associated with increased congestion, while creating travel choices, prioritising effective and equitable access to transport options, and ensuring the liveability and safety of our streets”.

The ITS identifies seven key priorities, including the following four which are considered of particular relevance to this assessment:

- *“Creating 10-minute walkable neighbourhoods”*
- *“Boosting bike riding”*
- *“Partnering to deliver reliable, accessible and more frequent public transport”*
- *“Improving parking management”*

The ITS acknowledges that “with a road network that is at capacity and cannot be increased, requires a rethink of how more sustainable modes of transport can be used.”

3. Development Overview

3.1. Proposed Development Summary

The application seeks to develop the land addressed as 464 St Kilda Road for the purpose of a 18-storey residential building with ground floor retail and two levels of basement car park.

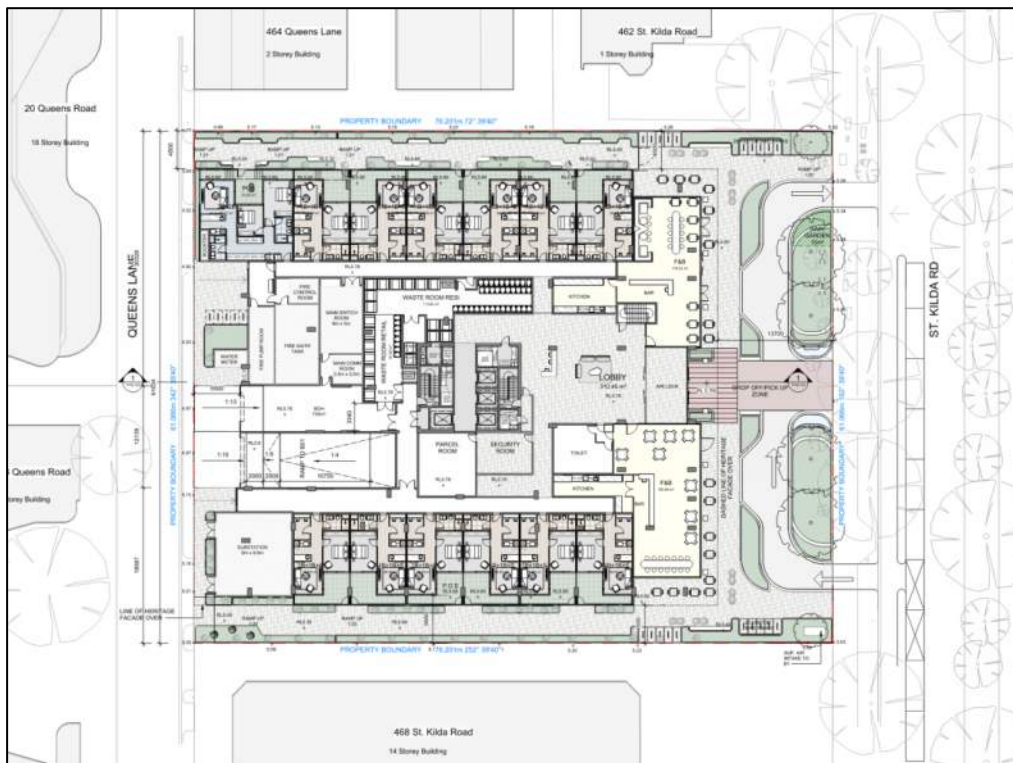
Specifically, the proposed development consists of a total of 325 apartments, comprising:

- 172 x one-bedroom apartments
- 63 x two-bedroom apartments
- 66 x three-bedroom apartments
- 24 x four-bedroom apartments

A retail with a net leasable floor area of 371 sqm.

The proposed ground floor layout is shown in Figure 3.1, with a full set of architectural plans provided in Appendix A of this report.

Figure 3.1: Proposed Ground Floor Layout



(Source: Cox Architecture – Proposed Ground Floor: Drawing TP21-100)

Car Parking Provision

The proposed development consists of a total of 254 car parking spaces on-site, including:

- 126 car spaces located within Basement Level 1;
- 128 car spaces located within Basement Level 2.

A Porte Cochere is proposed to be provided with ingress movements from the southeastern corner of the site from St Kilda Road and egress movements to the northeastern corner of the site to St Kilda Road. The incorporation of the proposed Porte Cochere will include the following design implications:

- Construction of a 3.0-metre-wide, single-width vehicle crossover at the site's southeastern corner, dedicated to ingress movements. This will require the removal of two kerbside spaces along St Kilda Road and the reconfiguration of the bicycle lane and separating kerb to accommodate vehicle access and maintain appropriate sightlines.
- The redundant mid-block vehicle crossover will be reinstated to kerb and channel, while the northeastern crossover will be narrowed to 3.0 metres. The surplus 4.0-metre width will also be reinstated to kerb and channel. The modifications to the existing vehicle crossovers will enable the provision of 3 kerbside car spaces located mid-block.
- Overall, these modifications will result in a net gain of one (1) kerbside parking space along St Kilda Road.
- The Porte Cochere arrangement will provide two (2) pick-up/drop-off spaces, and the use will be limited to pick-up and drop-off arrangements and food delivery services (such as UberEats and MenuLog) by vehicles up to the size of a B99 vehicle.

Bicycle Parking Provision

A total of 109 bicycle parking spaces are proposed on-site, comprising:

- 50 spaces on ground level for all users;
- 29 spaces within Basement Level 1 for residents/staff; and
- 30 spaces within Basement Level 2 for residents.

Vehicle Access

Vehicle access to/from the Porte Cochere is provided for pick-up/drop-off activities:

- Ingress movements provided via a newly proposed single-width crossover from St Kilda Road at the southeastern corner of the site.
- Egress movements provided via the reduced single-width crossover to St Kilda Road at the northwestern corner of the site.
- The northern vehicle crossover will reduce to single-width and the redundant vehicle crossover located mid-way along the St Kilda Road frontage will be reinstated with a kerb and channel to the satisfaction of the responsible authority.

Vehicle access to/from the basement carpark will be provided along the Queens Lane frontage via a double-width vehicle crossover. A gate will be provided at the top of the access ramp to control access.

Loading & Waste Collection

A waste room is located on the ground floor of the building.

A shared loading bay is proposed to be provided along ground floor for loading/unloading and waste collection activities accessed via Queens Lane.

The loading bay will accommodate loading vehicles up to the size of a 6.4 metre long Small Rigid Vehicle (SRV) as well as the 6.4 metre long mini-rear loader waste truck.

Larger loading vehicles such as the 8.8 Medium Rigid Vehicle (MRV) will utilise the loading bays along the western side of Queens Lane.

3.2. Previously Approved Development Summary

The development previously approved under Planning Application No. 909/2020 comprises a mixed-use retail and commercial scheme, including approximately 27,947 square metres of office floor space and a 128 square metre café.

The previously approved development provides for a total of 244 car parking spaces, 12 motorcycle spaces and 238 bicycle parking spaces, all accommodated within a basement car park accessed via Queens Lane. Loading and waste collection was also accessed off Queens Lane via shared loading bay.

4. Car Parking Assessment

4.1. Clause 52.06 Requirements

Car parking requirements for new developments are set out within Clause 52.06 of the Port Phillip Planning Scheme. The purpose of Clause 52.06 is defined in the scheme as follows:

- *To ensure that car parking is provided in accordance with the Municipal Planning Strategy and the Planning Policy Framework;*
- *To ensure the provision of an appropriate number of car parking spaces having regard to the demand likely to be generated, the activities on the land and the nature of the locality;*
- *To support sustainable alternatives to the motor car;*
- *To promote the efficient use of car parking spaces through the consolidation of car parking facilities;*
- *To ensure car parking does not adversely affect the amenity of the locality; and*
- *To ensure that the design and location of car parking is of a high standard, creates a safe environment for users and enables easy and efficient use.*

Table 1 to Clause 52.06 sets out the car parking requirements that apply to various land uses. It is acknowledged that the site is situated within a “Category 3” area within the car parking requirement map as shown below:

Figure 4.1: Car Parking Requirement Map



Source: VicPlan

Accordingly, the statutory car parking requirements for the application are set out in Table 4.1.

Table 4.1: Statutory Car Parking Requirements

Description	Land Use	Size/No.	Category 3 Parking Rate	Car Parking Requirement
One-bedroom apartment	Dwelling	172 x 1-bedroom dwellings	0 to each dwelling - minimum 2 to each dwelling - maximum	Minimum – 0 spaces Maximum 344 spaces
Two-bedroom apartment		63 x 2-bedroom dwellings		Minimum – 0 spaces Maximum – 126 spaces
Three-bedroom apartment		66 x 3-bedroom dwellings		Minimum – 0 spaces Maximum – 132 spaces
Four-bedroom apartment		24 x 4-bedroom dwellings		Minimum – 0 spaces Maximum – 48 spaces
Food and drink premises	Food and drink premises	371 sqm	0 to each 100 sqm of net floor area - minimum 2 to each 100 sqm of net floor area - maximum	Minimum – 0 spaces Maximum – 7 spaces
Total				Minimum – 0 spaces Maximum – 657 spaces

Based on the above assessment, the application has a statutory requirement to provide between 0 and 657 car parking spaces on-site. It is proposed to provide the residential component with 250 car spaces and staff of the food and drink tenancies with 4 car spaces.

The proposed provision of 254 car parking spaces on-site therefore meets the car parking requirements for the site and is therefore considered appropriate.

5. Bicycle Parking Assessment

5.1. Clause 52.34 Requirements

Requirements for bicycle facilities are set out within Clause 52.34 of the Port Phillip Planning Scheme. The purpose of Clause 52.34 is defined in the scheme as follows:

- *To encourage cycling as a mode of transport; and*
- *To provide secure, accessible and convenient bicycle parking spaces and associated shower and change facilities.*

Bicycle Parking Spaces

The statutory bicycle parking requirements for the application are set out in Table 5.1.

Table 5.1: Statutory Bicycle Parking Requirements

Use	Size/No.	User	Bicycle Parking Rate	Parking Requirement
Residential	325 dwellings	Resident	In developments of four or more storeys, 1 space to each 5 dwellings	65 spaces
		Visitor	In developments of four or more storeys, 1 space to each 10 dwellings	33 spaces
Retail Premises	371 sqm	Staff	1 to each 300 sq m of leasable floor area	1 space
		Visitor	1 to each 500 sq m of leasable floor area	1 space
Total				100 spaces

Based on the above assessment, the application has a statutory requirement to provide 100 bicycle spaces with 65 resident spaces, 1 staff space, and 34 visitor spaces.

109 bicycle parking spaces are provided on-site as follows:

- 50 spaces on ground level for all users;
- 29 spaces within Basement Level 1 for residents/staff; and
- 30 spaces within Basement Level 2 for residents.

As such, the provision is in excess of the statutory requirement for each user group.

Shower / Change Room Requirements

In addition to the bicycle parking requirements outlined above, Tables 2 & 3 within Clause 52.34 of the Port Phillip Planning Scheme require that one (1) shower be provided for the first five (5) employee bicycle spaces and one (1) shower for each subsequent ten (10) employee bicycle parking spaces. A change room or direct access to a communal change room must be provided for each shower.

Given the requirement for staff bicycle parking is below five (5), there is no requirement to provide showers or change room facilities.

5.2. Bicycle Parking Layout

Bicycle parking spaces throughout the site are proposed as a mix of at-grade horizontal spaces and wall-mounted vertical spaces. Bicycle parking spaces have been designed as follows:

- Wall-mounted vertical arrangement – Bicycle parking spaces will be provided with a 0.5-metre-wide by 1.2-metre-long parking envelope that is accessible via an access aisle of at least 1.5 metres wide; and
- Floor-mount horizontal arrangement – Bicycle parking spaces will be provided with a 0.5-metre-wide by 1.8-metre-long parking envelope that is accessible via an access aisle of at least 1.5 metres wide.

It is considered that all bicycle parking spaces have been designed appropriately, in accordance with the relevant design requirements set out within AS/NZS 2890.3:2015.

Furthermore, the proposed bicycle parking layout exceeds the requirement outlined within AS/NZS 2890.3:2015 that 20% of bicycle parking spaces must be provided within an at-grade horizontal arrangement.

The bicycle parking specifications are provided in Appendix B of this report.

6. Access Arrangements & Car Park Layout

6.1. Access Arrangements

Porte Cochere Arrangements

As previously mentioned, a Porte Cochere has been provided along the St Kilda frontage to facilitate pick-up and drop-off activities as well as food delivery (i.e. UberEats/MenuLog) with a supply of two (2) pick-up/drop-off spaces.

From a traffic perspective, the Porte Cochere design and access from St Kilda Road is appropriate for the following reasons:

- The proposal effectively retains the existing Porte Cochere that was historically associated with the site.
- The proposal does not lead to any loss of on-street parking along St Kilda Road, with an overall gain of one on-street space instead.
- The existing arrangement includes a double-width vehicle crossing along the northeastern corner of the road, whereas the proposal includes two single-width vehicle crossings at the northeastern and southeastern corner of the road. This will reduce pedestrian crossing distances as well as encourage low-speed entry/exit manoeuvres.
- Replacing a high-volume, double-width crossover (historically serving 169 car parking spaces) with a low-volume drop-off/pick-up facility.

Site Access Arrangements

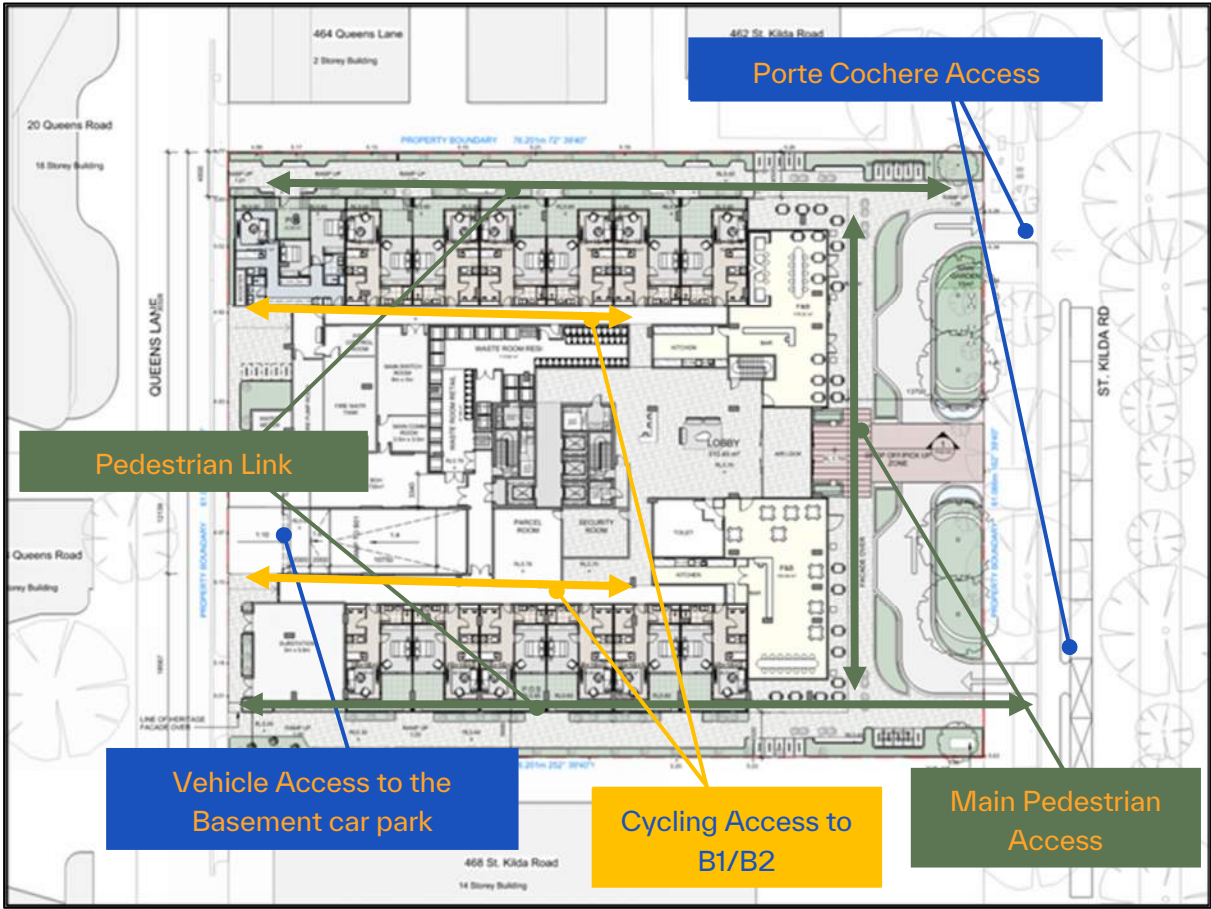
Vehicle access to/from the basement levels is proposed via a double-width crossover located along Queens Lane. All redundant crossovers along St Kilda Road and Queens Lane will be reinstated with a kerb and channel to the satisfaction of the responsible authority.

Pedestrian access to the Ground Floor lobby will be available from St Kilda Road, with a pedestrian link connecting St Kilda Road and Queens Lane along the northern and southern boundary of the site.

Cyclists will have access to the visitor spaces near the Porte Cochere via St Kilda Road, while access to the basement bicycle parking for residents and staff will be provided through the southern pedestrian link, with connection facilitated by the access lift.

The proposed site access arrangements are shown in the excerpt of the ground floor plan in Figure 6.1.

Figure 6.1: Proposed Site Access Arrangements



(Source: Cox Architecture – General Arrangement Ground Floor)

6.2. Car Park Layout

The proposed access arrangements and car park layout have been assessed against the objectives and design requirements of Clause 52.06-9 of the Port Phillip Planning Scheme, and relevant sections of AS/NZS2890.1:2004 and AS/NZS 2890.2:2018.

Design Standard 1 – Accessways

Design Standard 1 within Clause 52.06-9 of the Port Phillip Planning Scheme relates to the design of accessways. The development proposal has been assessed against the requirements of Design Standard 1 in Table 6.1.

Table 6.1: Design Standard 1 - Accessways

Requirement	Comments
Must be at least 3 metres wide.	<u>Satisfied</u> – All accessways are at least 3.0 metres wide.
Have an internal radius of at least 4 metres at changes of direction or intersection or be at least 4.2 metres wide.	<u>Satisfied</u> – The accessways and internal layout have been designed to be at least 4.2 metres wide at all changes of direction.

Allow vehicles parked in the last space of a dead-end accessway in public car parks to exit in a forward direction with one manoeuvre.	<u>Not Applicable</u> – The proposed car park will not be publicly accessible. Notwithstanding, the proposed car park has been designed to enable all vehicles to exit the site in a forward direction.
Provide at least 2.1 metres headroom beneath overhead obstructions, calculated for a vehicle with a wheelbase of 2.8 metres.	<u>Satisfied</u> – A headroom of at least 2.1 metres will be provided within the car park. A 3.5 metre headroom clearance has been provided for the loading bay.
If the accessway serves four or more car spaces or connects to a road in a Transport Zone 2 or Transport Zone 3, the accessway must be designed so that cars can exit the site in a forward direction.	<u>Satisfied</u> – All vehicles are able to depart in a forward direction
Provide a passing area at the entrance at least 6.1m wide and 7m long if the accessway serves ten or more car parking spaces and is either more than 50m long or connects to a road in a Transport Zone 2 or Transport Zone 3.	<u>Satisfied</u> – A passing bay measuring at least 6.1m x 7.0m has been provided at the Queens Lane entrance.
Have a corner splay or area at least 50% clear of visual obstructions extending at least 2m along the frontage road from the edge of an exit lane and 2.5m along the exit lane from the frontage, to provide a clear view of pedestrians on the footpath of the frontage road. The area clear of visual obstructions may include an adjacent entry or exit lane where more than one lane is provided.	<u>Satisfied</u> – The required sight splay has been provided adjacent to the egress lane. Given that the accessways are double-width, sight splays are not required along the ingress lane.
If an accessway to four or more car parking spaces is from land in a Transport Zone 2 or Transport Zone 3, the access to the car spaces must be at least 6 metres from the road carriageway.	<u>Not Applicable</u> – Access to the car spaces is not from a road in a Transport Zone 2 or Transport Zone 3. Notwithstanding this, all car spaces are located at least 6 metres from the road carriageway.
If entry to a car space is from a road, the width of the accessway may include the road.	<u>Not Applicable</u> – Car parking spaces are accessed from internal accessways and not directly to/from an adjacent road.

Design Standard 2 – Car Parking Spaces

Design Standard 2 within Clause 52.06-9 of the Port Phillip Planning Scheme relates to the design of car parking spaces. The development proposal has been assessed against the requirements of Design Standard 2 in Table 6.2.

Table 6.2: Design Standard 2 – Car Parking Spaces

Requirement	Comments
Car parking spaces and accessways must have the minimum dimensions as outlined in Table 2 of Design Standard 2.	<u>Satisfied</u> – All car parking spaces meet the dimensional requirements set out in Table 2 within Design Standard 2. Car parking spaces have been designed as: – 2.6 metres wide by 4.9 metres long, accessed via a minimum 6.4-metre-wide aisle.
A wall, fence, column, tree, tree guard or any other structure that abuts a car space must not encroach into the area marked ‘clearance required’ on Diagram 1 of Design Standard 2, other than: A column, tree or tree guard, which may project into a space if it is within the area marked ‘tree or column permitted’ on Diagram 1. A structure, which may project into the space if it is at least 2.1 metres above the space.	<u>Satisfied</u> – All car parking spaces adjacent to a wall have been provided within a minimum 300mm clearance to that structure. All obstructions are located outside of the area marked ‘clearance required’ within Diagram 1 within Design Standard 2.
Car spaces in garages must be at least 6 metres long and 3.5 metres wide for a single space and 5.5 metres wide for a double space measured inside the garage.	<u>Not Applicable</u> – No garages are proposed.
Where parking spaces are provided in tandem (one space behind the other) an additional 500mm in length must be provided between each space.	<u>Satisfied</u> – Tandem car spaces are provided with a 500mm gap as required.
Where two or more car parking spaces are provided for a dwelling, at least one space must be under cover.	<u>Satisfied</u> – All residents car parking spaces are undercover.

Design Standard 3 – Gradients

Design Standard 3 within Clause 52.06-9 of the Port Phillip Planning Scheme relates to the design of gradients. Based on the advice sought from Melbourne water, a flood bund has been incorporated into the ramp design between Ground Floor and Basement Level 1.

The development proposal has been assessed against the requirements of Design Standard 3 in Table 6.3.

Table 6.3: Design Standard 3 - Gradients

Requirement	Comments
Accessway grades must not be steeper than 1:10 (10%) within 5 metres of the frontage to ensure safety for pedestrians and vehicles. The design must have regard to the wheelbase of the vehicle being designed for; pedestrian and vehicular traffic volumes; the nature of the car park; and the slope and configuration of the vehicle crossover at the site frontage. This does not apply to accessways serving three dwellings or less.	<u>Satisfied</u> – The initial ramp is 1:10 ramp up which satisfies the requirements of Design Standard 3 within Clause 52.06-9 of the Port Phillip Planning Scheme.
Ramps (except within 5 metres of the frontage) must have the maximum grades as outlined in Table 3 of Design Standard 3 and be designed for vehicles travelling in a forward direction.	<u>Satisfied</u> – The proposed maximum gradient along the ramps between basement levels of 1:4 is in accordance with the requirements of Design Standard 3 within Clause 52.06-9 of the Port Phillip Planning Scheme.
Where the difference in grade between two sections of ramp or floor is greater than 1:8 (12.5%) for a summit grade change, or greater than 1:6.7 (15%) for a sag grade change, the ramp must include a transition section of at least 2 metres to prevent vehicles scraping or bottoming. Plans must include an assessment of grade changes of greater than 1:5.6 (18%) or less than 3 metres apart for clearances, to the satisfaction of the responsible authority.	<u>Satisfied</u> – Appropriate transition sections have been provided at the top and bottom of ramps to prevent vehicles from scraping or bottoming out.

6.3. Swept Path Assessment

In addition to the above, an assessment of site access and circulation has been undertaken using the 'Autodesk Vehicle Tracking' software program.

A swept path assessment has been completed which demonstrates that simultaneous turning movements can be achieved between B99 and B85 vehicles (as set out within AS/NZS 2890.1:2004) at both site access points and at the top and base of ramps within the site.

Additionally, a swept path assessment has been undertaken which demonstrates that a B85 vehicle (85th percentile passenger vehicle, as defined within AS/NZS 2890.1:2004) is able to enter & exit critical car parking spaces within the site in a suitable manner.

For reference, each of the abovementioned swept paths is provided in Appendix C of this report.

7. Loading & Waste Collection Arrangements

7.1. Statutory Requirement

Clause 65.01 'Decision Guidelines' of the Port Phillip Planning Scheme outlines the provision of loading requirements and states the following:

'Before deciding on an application or approval of a plan, the responsible authority must consider the following as appropriate:

- *The adequacy of loading and unloading facilities and any associated amenity, traffic flow and road safety impacts.'*

7.2. Loading Arrangements

Loading and unloading activities associated with the development will mainly be associated with residents moving in/out of an apartment which will be conducted with vans / small trucks that will access the loading bay for the loading / unloading of furniture and goods.

The food and drink use on ground level will also generate some loading activity associated with the delivery of goods with vans / small trucks.

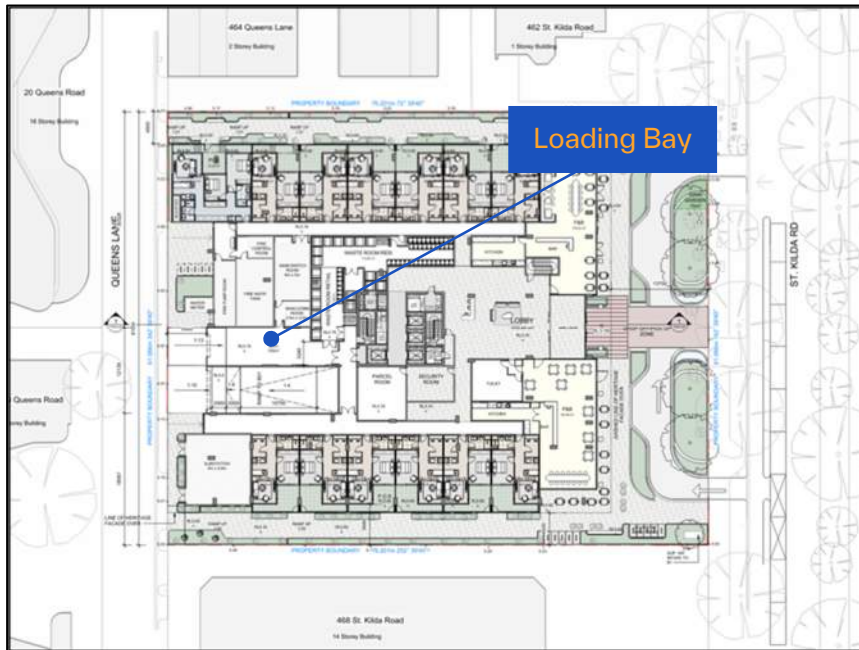
A loading bay has been provided within the ground floor car park, accessed to/from St Kilda Road. The loading bay has a minimum height clearance of 3.5 metres which is sufficient to cater for vehicles up to the size of a Small Rigid Vehicle (SRV).

It is not anticipated that larger trucks would be required given the minor nature of the loading activities associated with each user group. However, should larger vehicles be required, there are loading bay along the Queens Lane frontage which will be able to accommodate for vehicles such as Medium Rigid Vehicles (MRVs).

The site is expected to generate low level activities associated with deliveries to residents (meal delivery services, postal deliveries etc.). Noting the proposed number of dwellings, these could be expected to occur daily. However, they would typically be completed by a standard passenger vehicle, courier vehicle or via scooter/bicycle. It is expected that these types of deliveries will be undertaken via the Porte Cochere along the St Kilda Road frontage

Given that the use of the loading bay caters for all loading and waste activities associated with the development, a booking system will be in place for the usage of the loading bay to coordinate all loading and waste activities. This will ensure that there are no vehicle conflicts along the internal accessway with the doubling up of loading vehicles. The location of the loading bays is shown in Figure 7.1.

Figure 7.1: Proposed Loading Bay Location



(Source: Cox Architecture – General Arrangement Ground Level).

On the basis of the above, the proposed loading and unloading arrangements are considered appropriate and satisfactory

7.3. Waste Collection Arrangements

A Waste Management Plan (WMP) has been prepared for the application by Leigh Design. Based on the details within the WMP, it is understood that waste will be collected on-site from the proposed loading bays within ground level by a private contractor using a 6.4-metre-long mini-rear loader. Waste and recyclables are proposed to be stored within the waste area located on Ground Floor.

The swept path assessment demonstrates the ability of a mini rear loader waste truck to access the loading bay from Queens Lane with a reverse in manoeuvre, collect waste, and depart in a forward's direction back onto Queens Lane. It is recommended that waste be collected outside of the commuter peak hour periods.

Accordingly, the waste collection arrangements consistent with the previously approved development and are considered acceptable from a traffic engineering perspective.

7.4. Adequacy of Loading & Waste Collection Arrangements

Based on the preceding discussion, the proposed loading and waste collection arrangements are considered to be acceptable.

For reference, each of the abovementioned swept paths are provided at Appendix C of this report.

8. Traffic Assessment

8.1. Traffic Generation

Traffic generation rates for residential developments are impacted by a range of factors including housing density, number of car parking spaces provided, availability to proximate alternate transport modes (including public transport services, bicycle network and car share facilities) and proximity to nearby activity centres or other retail facilities and services.

Additionally, the following factors are of particular relevance to the traffic generation rate of the subject site:

- The development proposal seeks to provide a total of 109 bicycle parking spaces, which is excess of the statutory requirement. This provision will assist in encouraging residents to cycle in lieu of private vehicle usage as their preferred mode of transport;
- The development has convenient access to high frequency tram services, providing a direct and efficient public transport connection to the immediate area and the CBD;
- A review of 2021 ABS Census data suggest that car ownership rates within the locality are significantly lower than the statutory car parking requirement for each dwelling typology; and

Based on the above discussion and the high level of transport amenity available to the site, it is assumed an average of up to three (3) vehicle trips per day could be generated by each of the 250 resident car spaces. Typically, 10% of this traffic is expected during the AM and PM peak hour periods.

For the purpose of this assessment, a rate of three (3) vehicle movements per day and 0.3 vehicle movements per hour during the AM and PM peak hour has been adopted for each dwelling.

Typical splits between inbound and outbound movements in the AM and PM peak hour for residential traffic have been assumed as follows:

- AM Peak Hour – 20% inbound / 80% outbound; and
- PM Peak Hour – 60% inbound / 40% outbound.

Application of the preceding assumptions to the proposed 325 dwellings results in the following traffic generation estimates, as presented in Table 8.1.

Table 8.1: Estimated Residential Site Generated Traffic Volumes

Direction	AM Peak Hour	PM Peak Hour	Daily
Inbound	15 vph	45 vph	375 vpd

Outbound	60 vph	30 vph	375 vpd
Total	75 vph	75 vph	750 vpd

Additionally, it is conservatively estimated that each of the staff food and drink car parking spaces will generate one (1) inbound trip during the AM peak period and one (1) outbound trip during the PM peak period for a total of four (4) vehicle trips during peak hour periods.

As such the total traffic generated by the site is summarised as follows:

Table 8.2: Estimated Total Site Generated Traffic Volumes

Direction	AM Peak Hour	PM Peak Hour	Daily
Inbound	19 vph	45 vph	379 vpd
Outbound	60 vph	34 vph	379 vpd
Total	79 vph	79 vph	758 vpd

As presented in Table 8.2, the development proposal is expected to generate up to 79 vehicle movements during the AM and PM peak hour periods and 758 vehicle movements per day.

8.2. Existing and Previously Approved Development Schedule

It is noted that the existing and previously approved development both consist of office developments with a total on-site provision of 169 and 244 car spaces respectively.

Based on the previously approved traffic generation rate of 0.5 vph per car space during peak hours for office developments, the traffic generation is compared below:

Table 8.3: Traffic Generation Comparison

	Peak Hour Traffic Generation	Access
Existing Development	85 vph	Queens Lane and St Kilda Road
Previously Approved Development	122 vph	Queens Lane Only
Proposed Development	79 vph	Queens Lane Only

Notably, the existing development provides access via both Queens Lane and St Kilda Road, whereas the previously approved development restricted access to Queens Lane only.

Nevertheless, the traffic generated by the proposed development is lower than the existing development and much lower than the traffic from the previously approved office development during peak hours, which also had access solely via Queens Lane.

8.3. Traffic Distribution & Impact

The development is expected to generate a total of 79 vehicles per hour during the AM and PM peak hour periods (equating to a vehicle movement every 46 seconds during peak hour periods).

The site generated traffic will enter & exit the site via the proposed double-width vehicle crossover to/from Queens Lane located centrally to the site. Given the one-way northbound arrangement along Queens Lane, all site generated traffic will be right in from the Leopold Street / Queens Lane intersection and right out towards the Arthur Street / Queens Lane intersection.

The proposed traffic generated is expected to have minimal impact on the operation of the abovementioned intersections and therefore can be readily accommodated by the existing surrounding road network in a safe and satisfactory manner without creating detrimental traffic safety or operational impacts.

9. Response to Council and DTP Comments

Further to the pre-application advice request submitted to Council in October 2025, as well as the pre-application enquiry (Department Reference No. ENQ4643/25) submitted to the Department of Transport and Planning (DTP), both parties responded with comments regarding the proposed development.

Ratio have reviewed the traffic-related comments from both parties as reproduced in bolded italics and provide the following subsequent response:

9.1. Response to Council Comments (dated 10 November 2025)

Traffic Engineering

Car parking provision

Consideration should be given to explicitly providing at least two disabled car parking spaces. Council is unable to install disabled parking in association with this development within the public on-street network.

The requirement for disabled parking spaces is limited to the retail component of the development, which is typically triggered as soon as some parking is provided in connection with a commercial use, and 4 employee spaces are proposed. A single space would be required. The amended plans show one accessible space on Basement Level 1 near the central lift core.

A Car Parking Management Plan (CPMP) should be submitted with any formal application detailing proposed car parking allocation, including details of signage, line marking, and any traffic measures such as directional arrows and convex mirrors where required to improve safety and visibility throughout the basement levels.

Noted. It is recommended that the requirement for a Car Parking Management Plan be addressed through a Condition of Permit, to be satisfied prior to occupancy of the development, or alternatively prior to the commencement of construction. Preparing the plan at this stage allows it to be utilised by contractors for the installation of the necessary line marking and signage. Requiring the plan upfront or as part of plan endorsement is likely to result in unnecessary and potentially redundant design work and documentation.

Car parking and accessway design

The level of dimensional detail provided in the submitted plans is insufficient to determine the level of compliance with the relevant design standards of Clause 52.06-9. It is acknowledged that the submitted Transport Impact Assessment (TIA) details a high level of compliance with Clause 52.06-9.

It is Council's expectation that all relevant design standards of Clause 52.05-9 are met by the proposal, and that any formal application contains the level of dimensional detail and sectional diagrams required to facilitate detailed assessment of those requirements. If a variation is proposed to a particular design standard, any submitted TIA should provide justification in support of the variation. This may include swept path assessments for all vehicle types expected to access the car parking areas, sectional diagrams for any built-form encroachments into an accessway of car space, or vehicle scrape assessments.

Where Clause 52.06-9 does not provide for a relevant design standard, it is Council's expectation that the requirements of AS2890.1 and AS2890.2 are met as relevant.

Noted – All relevant Clause 52.06 Design Standard Assessment criteria as well as relevant series from AS2890 will be met, with any variations to any particular design standard to be discussed with justification where required.

The following is noted about the proposal:

- It is unclear why wheel stops are proposed. If they are to be retained as part of the proposal, they must be provided in accordance with AS2890.1.***

Wheel stops are not strictly required given that the walls act as a physical barrier and visual indicator for motor vehicles. Wheel Stops are also generally not included for the inner spaces as they can present as tripping hazards.

The wheel stops have been removed as shown in the amended plans.

- Wheels stops are shown for the proposed tandem spaces.***

The wheel stops have been removed as shown in the amended plans.

- Over-bonnet storage should be provided a minimum clearance of 1.5 metres above finished surface level, with sectional diagrams provided to demonstrate proposed clearance heights.***

Noted and agreed. Over-bonnet storage to be shown with a 1.5m clearance to ground and extending no more than 1m from end of car space where applicable.

- Any access control measures (i.e. roller doors or gates) should be positioned at least 5.5 metres in from the Queens Lane boundary to ensure vehicles can enter the site and stage without impacting the flow of traffic in Queens Lane.***

Noted and agreed, to prevent any potential queuing along Queens Lane.

- Column locations should be shown on any formally submitted plans.***

Columns have been shown as part of the amended plans and are in accordance with Diagram 1 of Design Standard 2.

- It appears adequate sightline clearance is not provided on the northern edge of the accessway.***

A 2.0 x 2.5m sight splay triangle has been provided on relevant sides of both accessways. It is acknowledged that there are sufficient sightlines on the northern edge of the accessway.

Additional comments

Redundant vehicle crossovers

All redundant vehicle crossovers to Queens Lane are to be removed to the satisfaction of the responsible authority.

Noted and agreed.

Indicative swept paths

It is unclear why the swept path for the small rigid vehicle (SRV) shown in the architectural plans differs from that within the TIA. The swept path on the architectural plans indicates that on-street car parking spaces on the west side of Queens Lane would be required to be removed to facilitate access for the SRV, whilst in the TIR these would be able to be retained.

The indicative swept paths previously shown on the architectural plans have been removed, and reliance will instead be placed on the swept path analysis contained within this report. Importantly, any approved access arrangements are to be demonstrated with on-street car parking retained along the western side of Queens Lane.

Council is not supportive of removing of on-street car parking outside of other properties to facilitate access and egress for this proposal. This inconsistency will need to be clarified as part of any formal application.

Agreed, as above.

9.2. Response to DTP Comments (dated 06 November 2025)

Based on the information at hand, the Head TfV anticipate the following requirements being imposed on this development should it proceed to the next stage:

1. An amended plan showing the dimension of the northern and southern vehicular access points along St Kilda Road and notation requiring the removal of the existing central redundant vehicle crossover.

Noted.

2. Prior to the occupation of the development all disused or redundant vehicle crossings along St Kilda Road must be removed, and the area reinstated to kerb and channel the satisfaction of the Responsible Authority and at no cost to the Head, Transport for Victoria.

Noted. All redundant vehicle crossing along St Kilda Road will be removed and reinstated to kerb and channel to the satisfaction of the Responsible Authority.

3. Before the use approved by this permit commences the following must be completed at no cost to and to the satisfaction of the Responsible Authority:

a) The installation of sign/s, line marking, painted arrow and associated road works permitting 'Entry Only' vehicular access from the southern entry point to the Porte Cochere along St Kilda Road.

b) The installation of "No Entry" sign/s prohibiting vehicular access from the northern "Exit Only" point to the Porte Cochere along St Kilda Road.

c) Modification or removal of any existing car parking spaces and associated road works on the west side of St Kilda Road (along the site frontage) to accommodate the new vehicular access arrangement.

Noted. Annotations to be included on the architectural plans to install both signs at respective entry/exits.

10. Conclusion

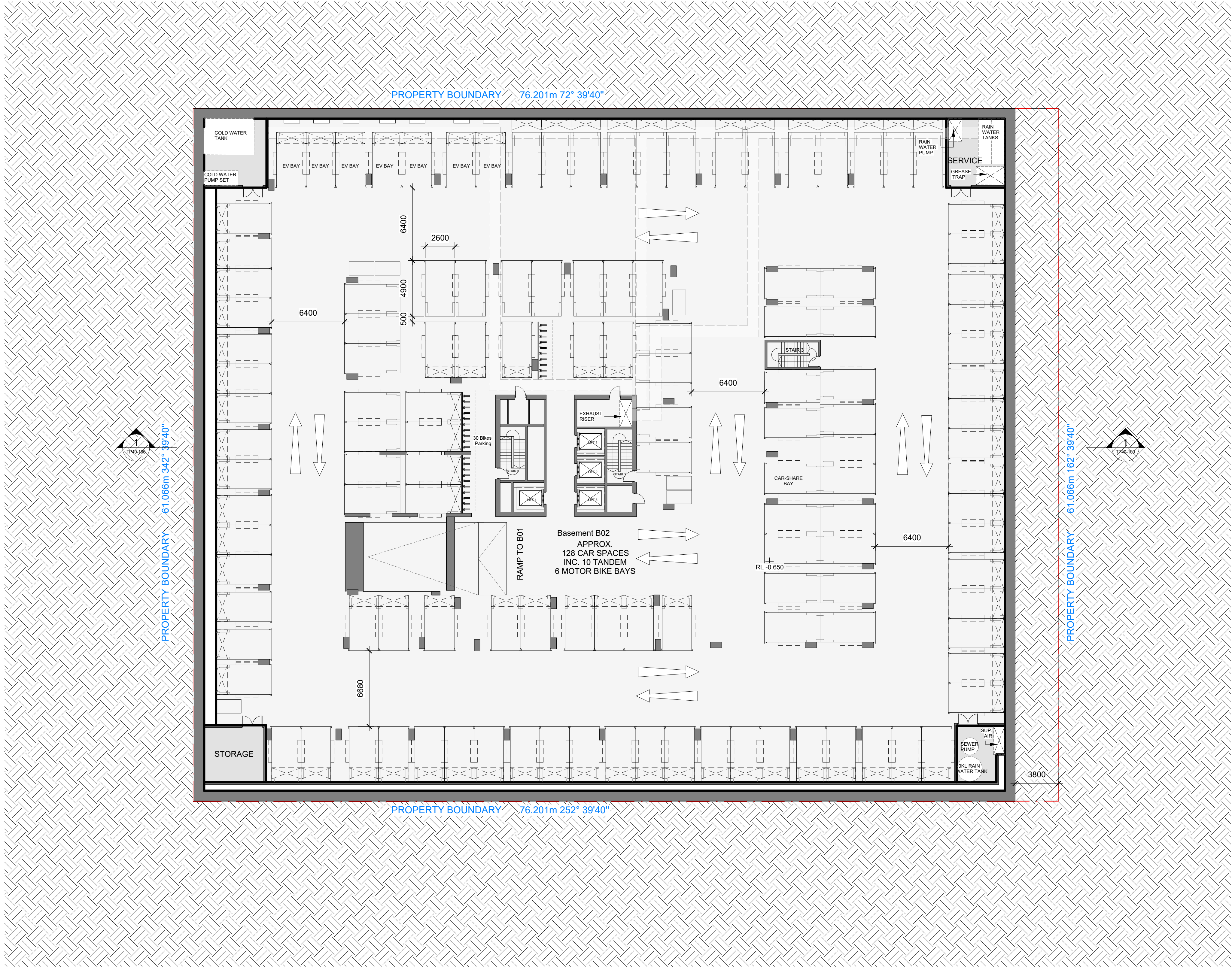
The proposed 18-storey residential development comprises 325 apartments and 495 sqm of retail use on the land of 464 St Kilda Road in Melbourne. The proposed development also includes the provision of 254 car parking spaces on-site within a basement car park.

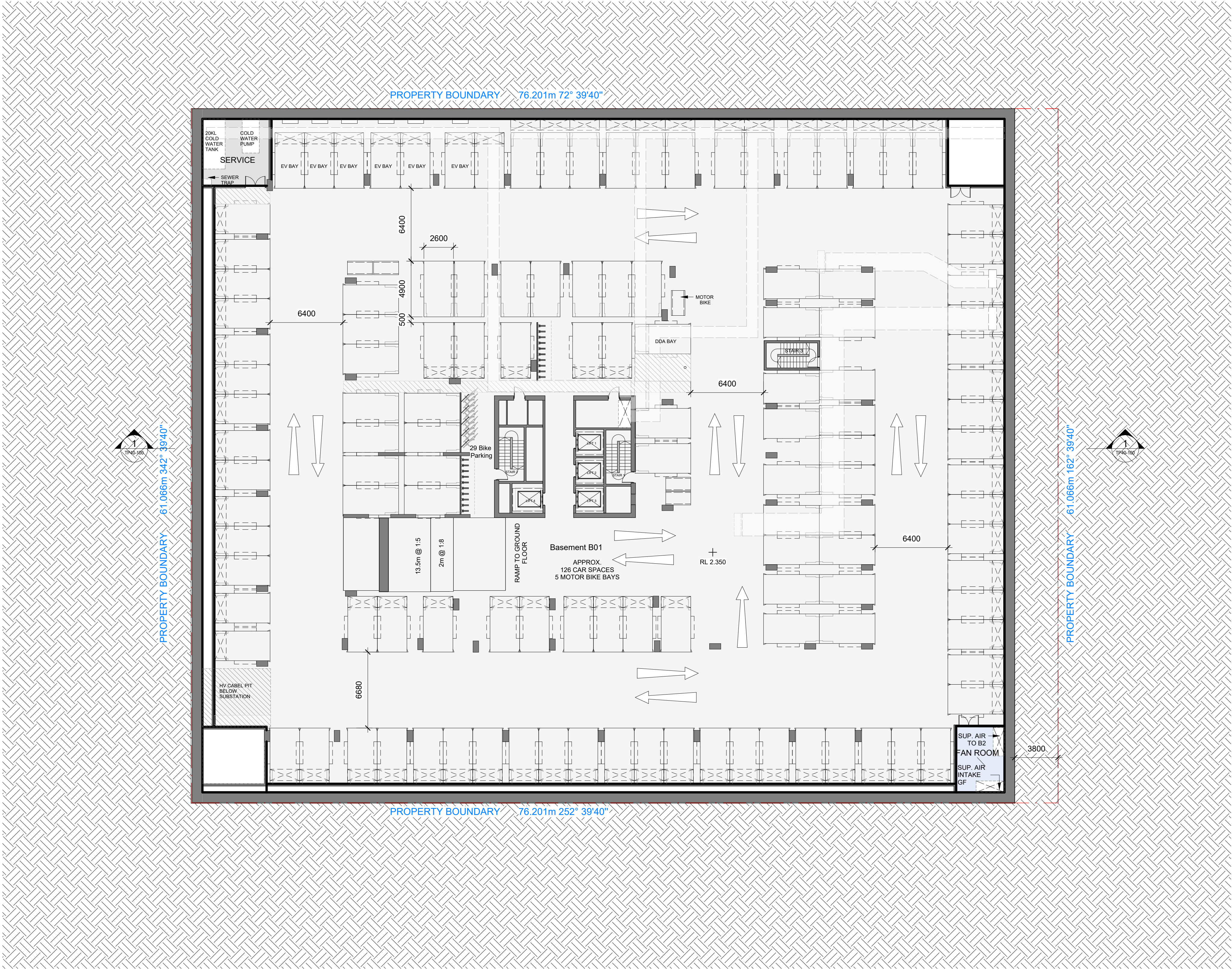
Based on the above assessment, it is considered the development is appropriate for the following reasons:

- It is proposed to provide a total of 254 car parking spaces on-site. This meets the requirements as per Clause 52.06 of the Port Phillip Planning Scheme.
- The proposed car park and access arrangements have been suitably designed and are in general accordance with the requirements of the Port Phillip Planning Scheme and/or AS/NZS 2890.1:2004.
 - The Porte Cochere arrangement has been designed appropriately and will not adversely affect the traffic and safety aspects along St Kilda Road.
 - A swept path assessment has been conducted that demonstrates sufficient site access, circulation within the car park as well as access to/from the critical car parking spaces.
- The provision of 109 bicycle spaces exceeds the statutory requirements of Clause 52.34 of the Port Phillip Planning Scheme. The proposed bicycle parking layout has been designed in accordance with the requirements of AS/NZS 2890.3:2015.
- Loading and waste collection are proposed to be provided via a loading bay accessed to/from Queens Lane, catering for vehicles up to the size of an SRV and mini-rear loader waste collection vehicle. A booking system will be in place to coordinate all loading and waste collection activities associated with the loading bay and is recommended to be conducted outside of peak hour commuter periods.
- The traffic generated by the proposal will be in the order of 79 vehicular trips during peak hours. It is also noted that the estimated traffic generated by the proposal is lower than the traffic generated by the existing office building and is well below the traffic generated by the previously approved office development during peak hours. The surrounding road network has the capacity to accommodate the additional traffic volumes and is not expected to create any adverse impacts on the safety or operation of the Queens Lane/St Kilda Road or the surrounding road network.

On the basis of the assessment above, the development proposal is considered to be acceptable from a transport engineering perspective.

Appendix A Proposed Architectural Plans





WORK IN PROGRESS



Appendix B Bicycle Parking Specifications

Arc de Triomphe™



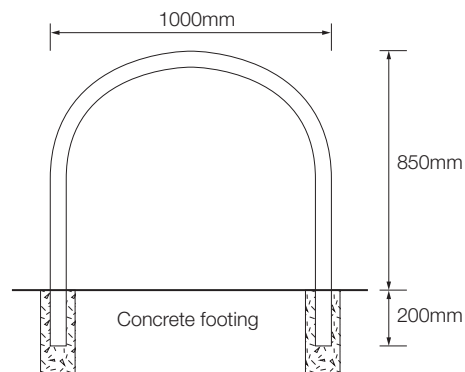
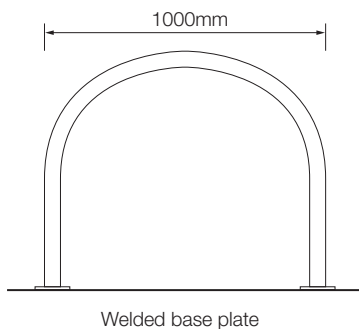
Galvanised finish / Stainless Steel finish

Features



- Each rail supports two adult bikes in an upright position
- Can be either bolted to a concrete slab or concreted in situ
- Available in stainless steel or galvanised steel
- Provides the ability to lock both wheels and frame
- Suitable for foyers and entry areas

Dimensions



Specifications

Material options

- Galvanised (Duragal)
- 316 Marine grade stainless steel

Fixing options

- Welded flange - Bolt on
- In situ

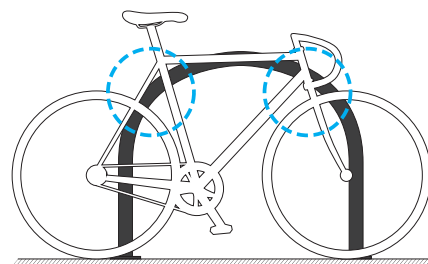
Recommended fasteners

- Galvanised Dynabolts (M10 x 65mm)
- Stainless Dynabolts (M10 x 65mm)
- Shear Nut security fasteners

Dimensions

1000mm [w] x 850mm [h]

Locking Points



V4.1 - 1/05/2017 | Specification may be subject to change without notice. ©Bicycle Network



BIKE PARKING

DESIGN. SUPPLY. INSTALL.

Bicycle Network ABN 41 026 835 903

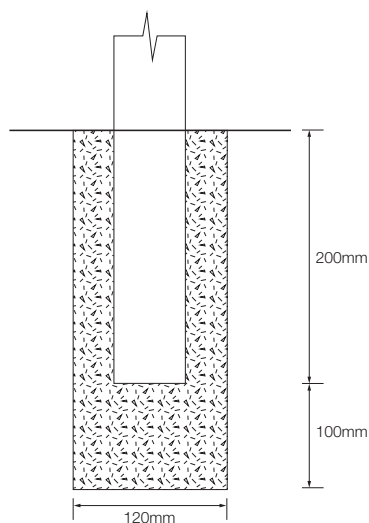
p. 1300 727 563 e. parking@bicyclenetwork.com.au bikeparking.com.au

VIC Level 4, 246 Bourke Street, Melbourne VIC 3000 NSW 234 Crown Street, Darlinghurst NSW 2010

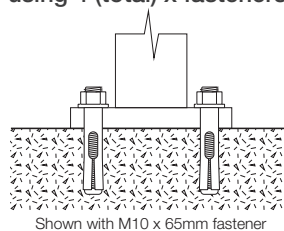
TAS 210 Collins Street, Hobart TAS 7000 NT Suite 5, 18-20 Cavenagh Street, Darwin 0800

Fixing options

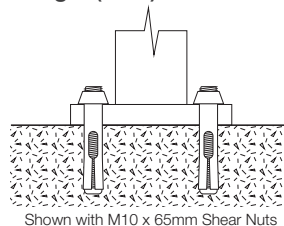
In situ (Concrete footing)



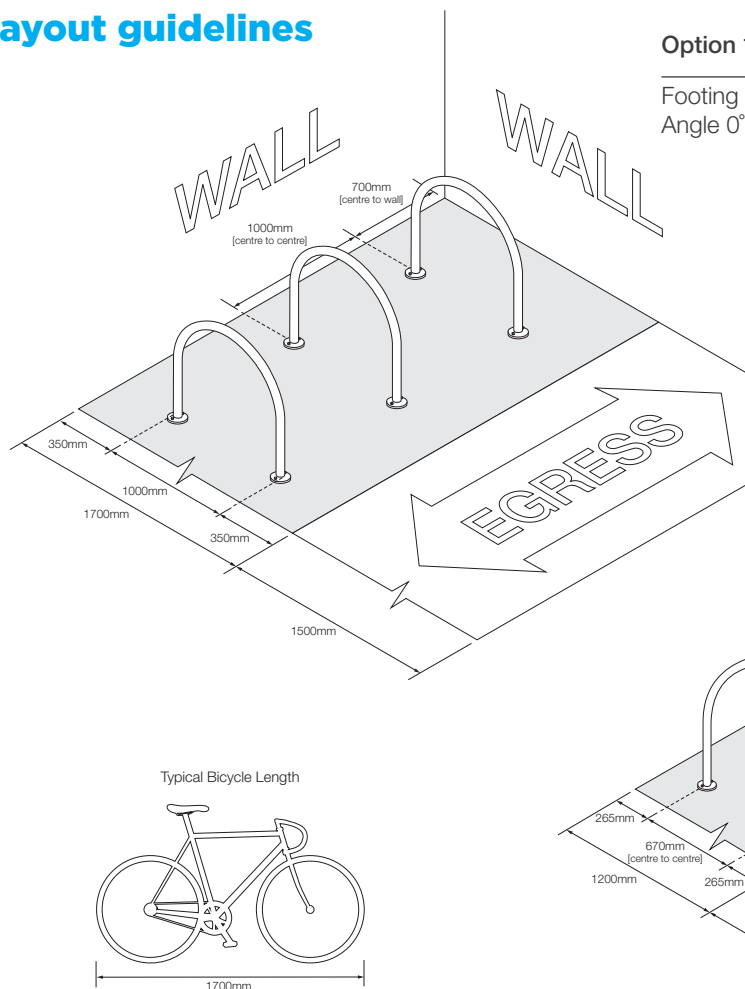
Welded flange (Bolt on)
using 4 (total) x fasteners



Welded flange (Security heads)
using 4 (total) x fasteners

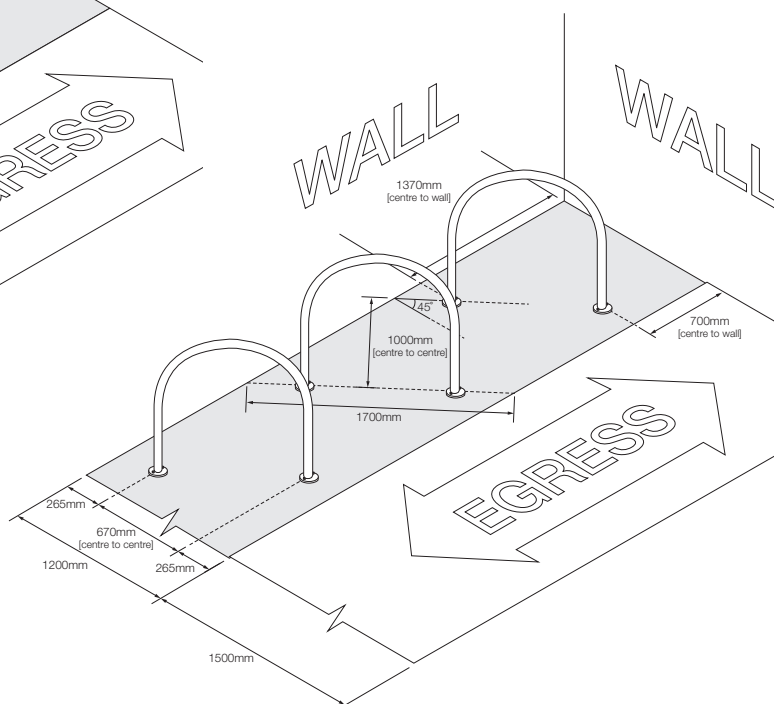


Layout guidelines



Option 2:

Footing Width 1200mm
Angle 45°



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**BIKE
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Ned Kelly™



Zinc finish



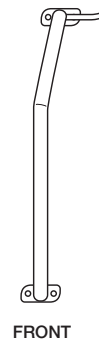
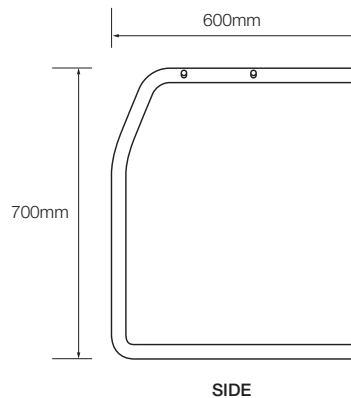
Black powder coat finish

Features



- Each rail provides storage for a single bike
- Suits bikes with full length mud guards
- Available in Zinc finish or Black powder coat over mild steel
- Provides the ability to lock the main frame and one wheel
- Support prongs with protective coating prevent damage to rim
- Can be used with custom framing - no wall needed

Dimensions



Specifications

Material options

- Zinc finish
- Black powder coat over mild steel
- Stainless steel - *Pre-order only*

Fixing options

- Bolt on to wall
- Fixed to support framing

Recommended fasteners - wall

- Dynabolts (M8 x 40mm)
- Shear Nut security fasteners

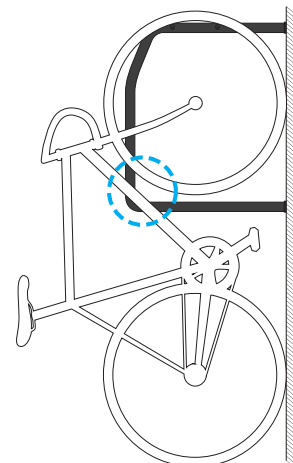
Recommended fasteners - framing

- Bolt and nut (M10 x 60mm)
- Tek screws

Dimensions

125mm [w] x 700mm [h] x 600mm [d]

Locking Points



V4.1 - 1/05/2017 | Specification may be subject to change without notice. ©Bicycle Network



BIKE PARKING

DESIGN. SUPPLY. INSTALL.

Bicycle Network ABN 41 026 835 903

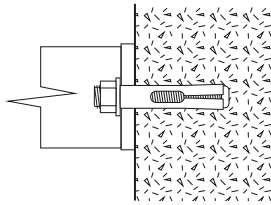
p. 1300 727 563 e. parking@bicyclenetwork.com.au bikeparking.com.au

VIC Level 4, 246 Bourke Street, Melbourne VIC 3000 NSW 234 Crown Street, Darlinghurst NSW 2010

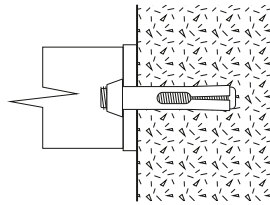
TAS 210 Collins Street, Hobart TAS 7000 NT Suite 5, 18-20 Cavenagh Street, Darwin 0800

Fixing options

Fix to a wall using 4x fasteners or Shear Nuts

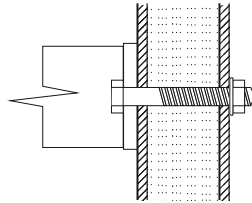


Shown with M8 x 40mm fastener

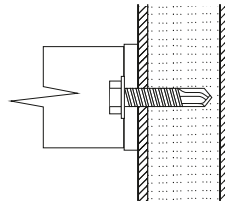


Shown with M8 x 40mm Shear Nuts

Fix to a frame using 4x bolts or Tek Screws



Shown with M10 x 60mm Bolt, Washer & Nut

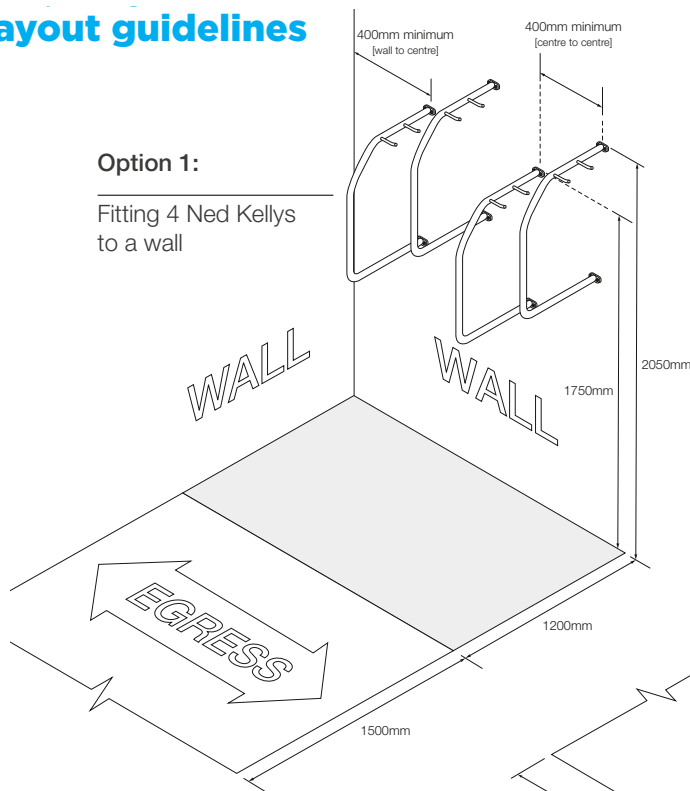


Shown with Tek Screw

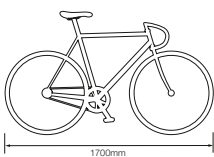
Layout guidelines

Option 1:

Fitting 4 Ned Kellys to a wall



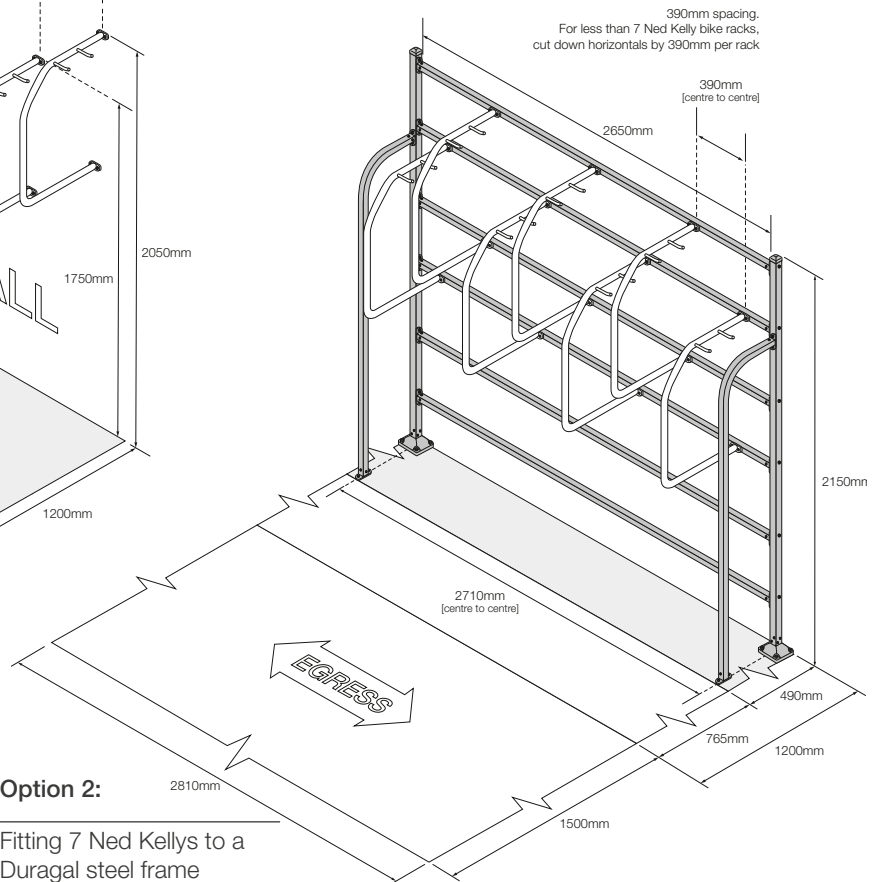
Typical Bicycle Length



1700mm

Option 2:

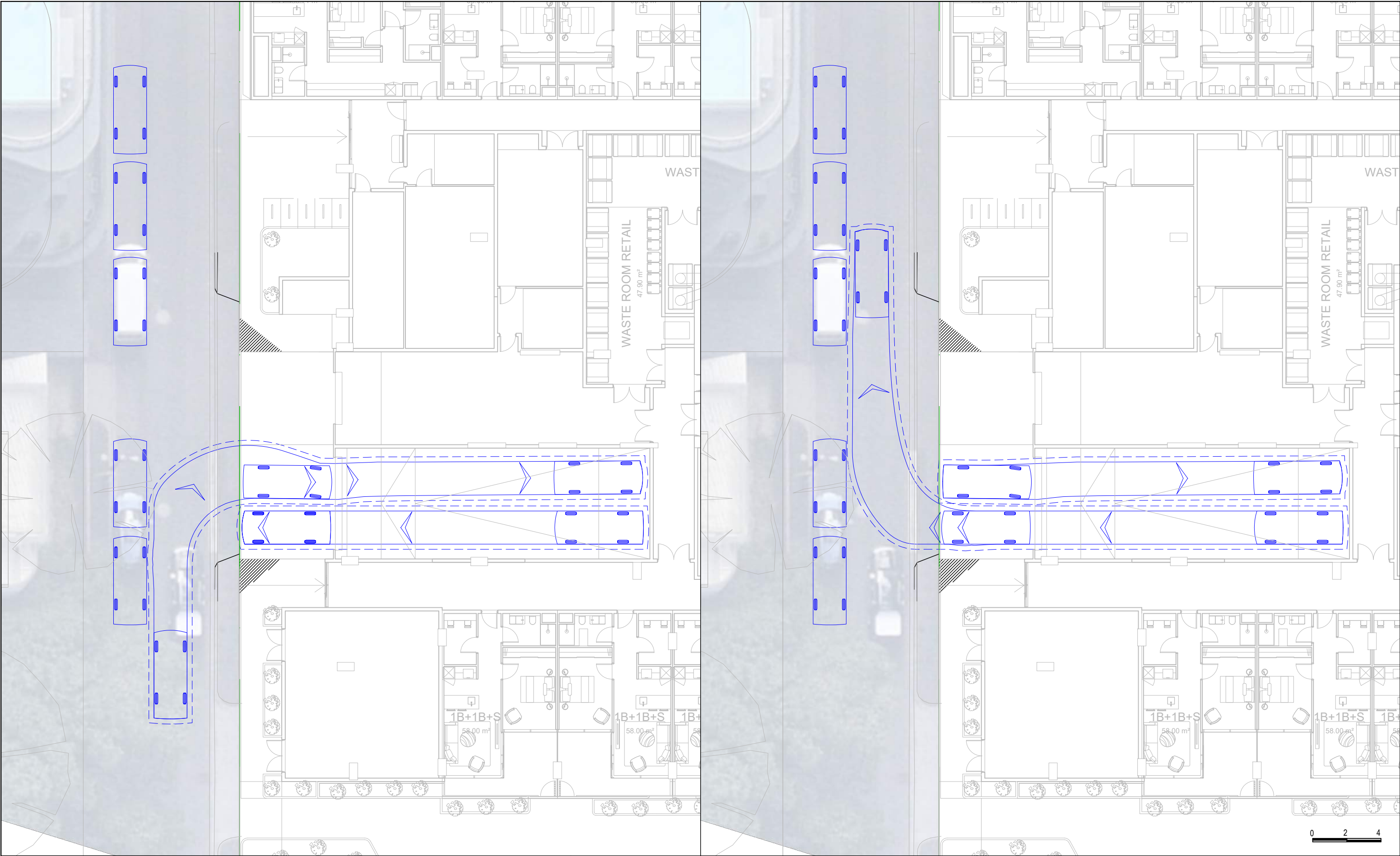
Fitting 7 Ned Kellys to a Duragal steel frame



V4.1 - 1/05/2017 | Specification may be subject to change without notice. ©Bicycle Network

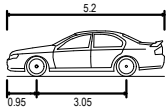
Appendix C Swept Path Assessment

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RATIO CONSULTANTS PTY LTD
ABN 005 422 104
8 GWYNNE STREET
CREMORNE, VICTORIA 3121
TELEPHONE (03)9429 3111
FACSIMILE (03)9429 3011

B99 Vehicle (AS/NZS2890.1:2004)



Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Track Width
Lock to Lock Time
Curb to Curb Turning Radius

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

5.200m
1.940m
2.200m
0.312m
1.840m
4.00 sec
6.30m

Proposed Residential Development 464-466 St Kilda Road, Melbourne Swept Path Assessment

NOTE:
1) Base Plan Supplied By Cox Architecture
2) Maximum Design Speed 10km/h

RATIO REFERENCE
22910T-SK001-F

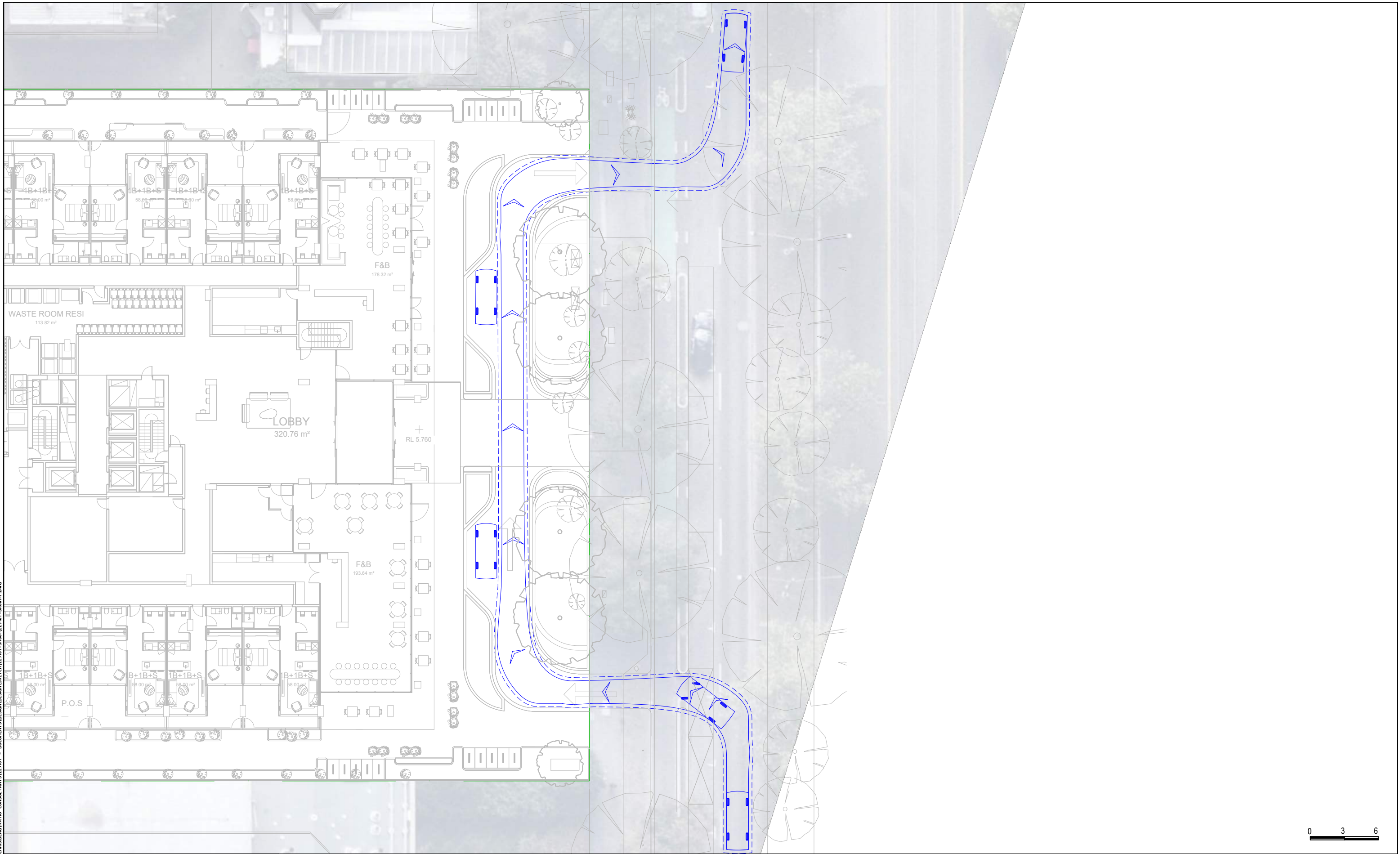
SHEET No.
1 of 6

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C.D.

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DATE
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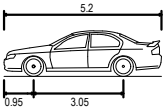


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TELEPHONE (03)9429 3111
FACSIMILE (03)9429 3011

B99 Vehicle (AS/NZS2890.1:2004)



Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Track Width
Lock to Lock Time
Curb to Curb Turning Radius

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

5.200m
1.940m
2.200m
0.312m
1.840m
4.00 sec
6.30m

Proposed Residential Development 464-466 St Kilda Road, Melbourne Swept Path Assessment

NOTE:
1) Base Plan Supplied By Cox Architecture
2) Maximum Design Speed 10km/h

RATIO REFERENCE
22910T-SK001-F

SHEET No.
2 of 6

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C.D.

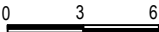
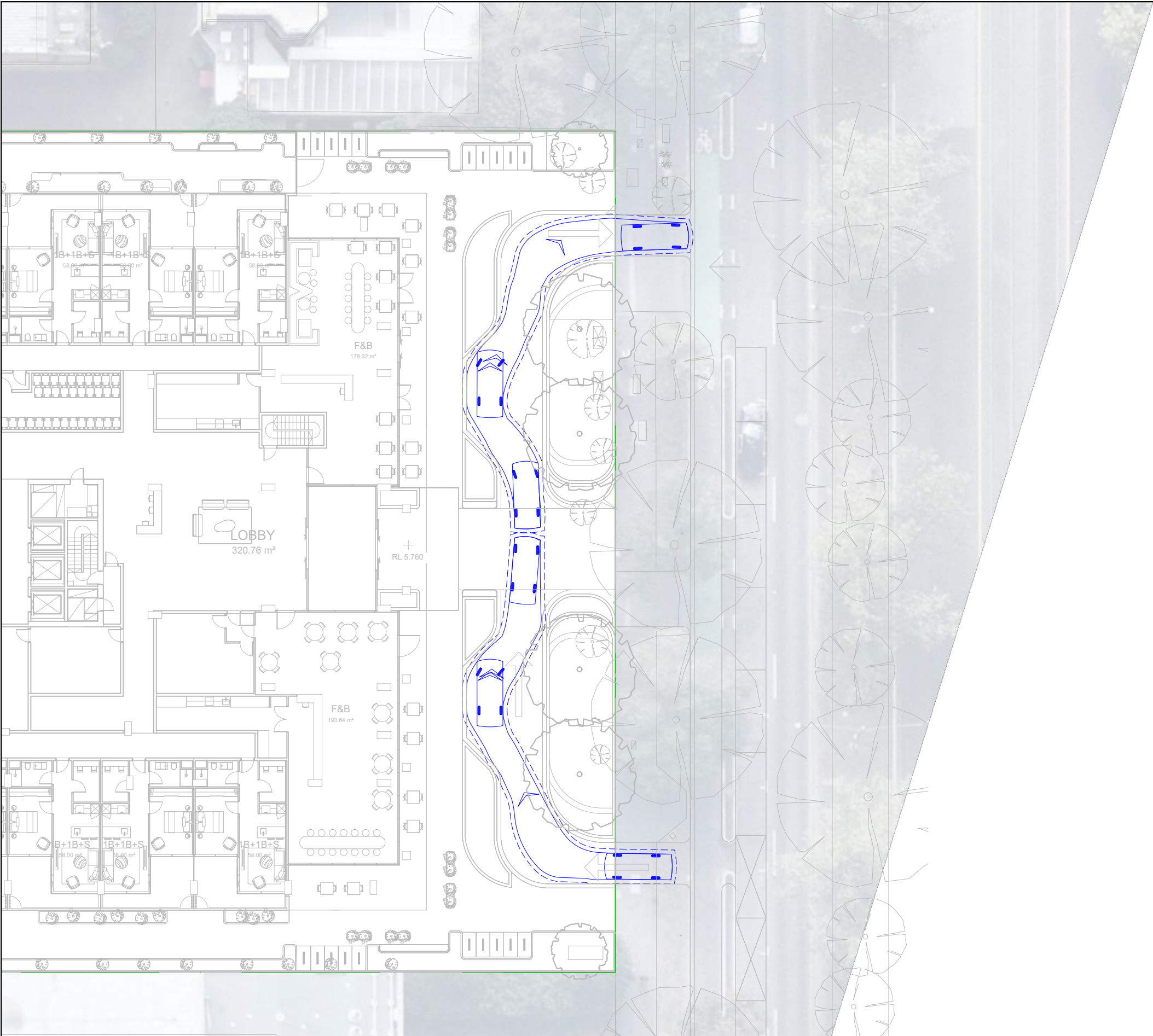
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29/04/2026



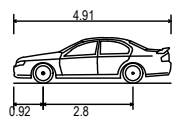
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B85 Vehicle (AS/NZS2890.1:2004)



Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Track Width
Lock to Lock Time
Curb to Curb Turning Radius

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

4.910m
1.870m
1.421m
0.159m
1.770m
4.00 sec
5.80m

Proposed Residential Development 464-466 St Kilda Road, Melbourne Swept Path Assessment

NOTE:
1) Base Plan Supplied By Cox Architecture
2) Maximum Design Speed 10km/h

RATIO REFERENCE
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SHEET No.
3 of 6

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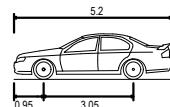
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B99 Vehicle (AS/NZS2890.1:2004)



Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Track Width
Lock to Lock Time
Curb to Curb Turning Radius

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

5.200m
1.940m
2.200m
0.312m
1.840m
4.00 sec
6.30m

Proposed Residential Development 464-466 St Kilda Road, Melbourne Swept Path Assessment

NOTE:
1) Base Plan Supplied By Cox Architecture
2) Maximum Design Speed 10km/h

RATIO REFERENCE
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SHEET No.
4 of 6

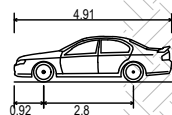
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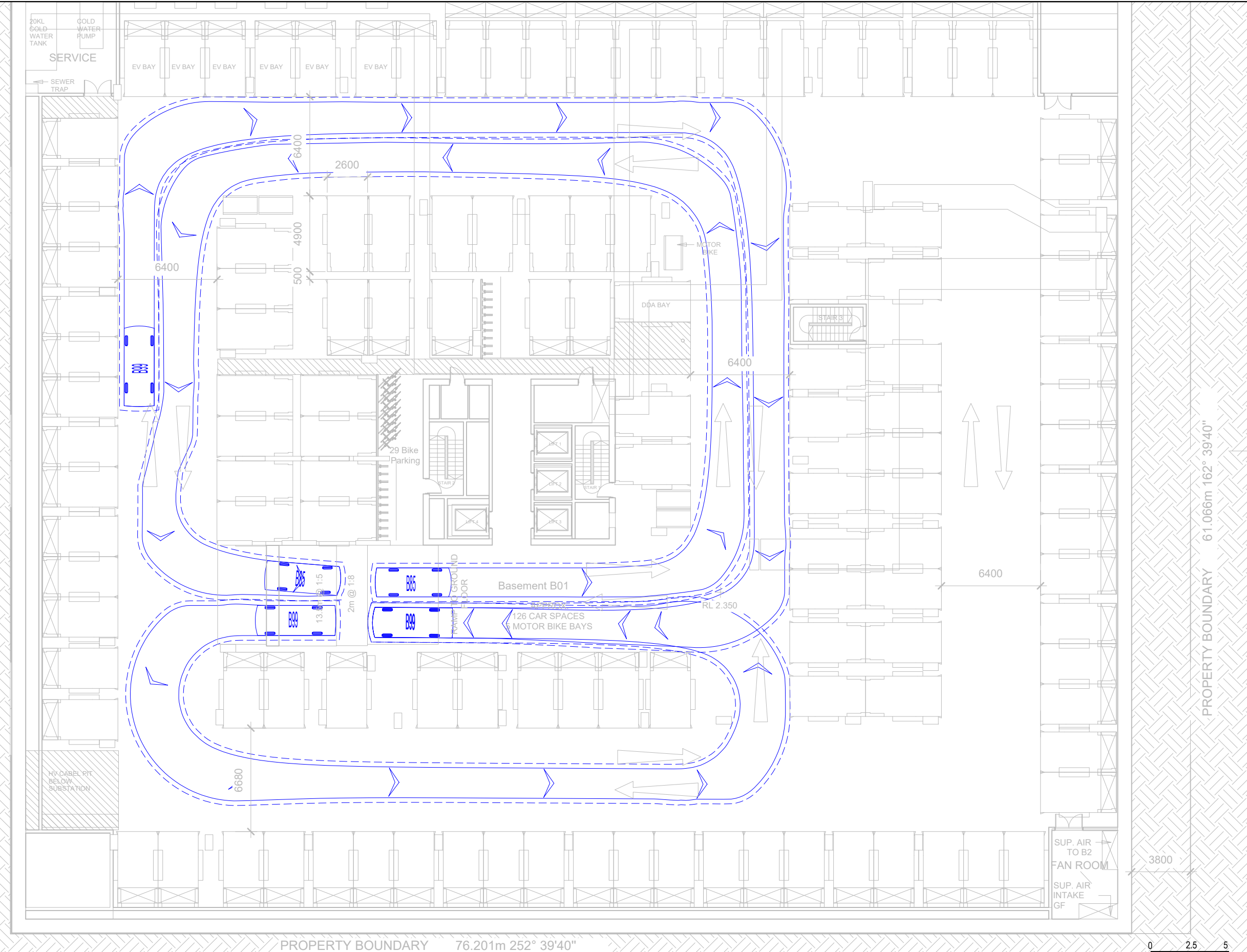
B85 Vehicle (AS/NZS2890.1:2004)



Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Track Width
Lock to Lock Time
Curb to Curb Turning Radius

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

4.910m
1.870m
1.421m
0.159m
1.770m
4.00 sec
5.80m



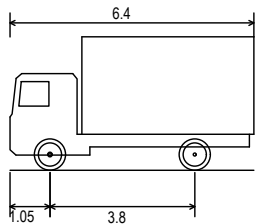
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SRV - Small Rigid Vehicle (AS/NZS2890.2:2002)



VEHICLE ENVELOPE (FORWARD)
500mm CLEARANCE (FORWARD)
VEHICLE ENVELOPE (REVERSE)
500mm CLEARANCE (REVERSE)

Overall Length
Overall Width
Track Width
Lock to Lock Time
Curb to Curb Turning Radius

6.400m
2.330m
2.330m
4.00 sec
7.100m

Proposed Residential Development 464-466 St Kilda Road, Melbourne Swept Path Assessment

NOTE:
1) Base Plan Supplied By Cox Architecture
2) Maximum Design Speed 10km/h

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SHEET No.
5 of 6

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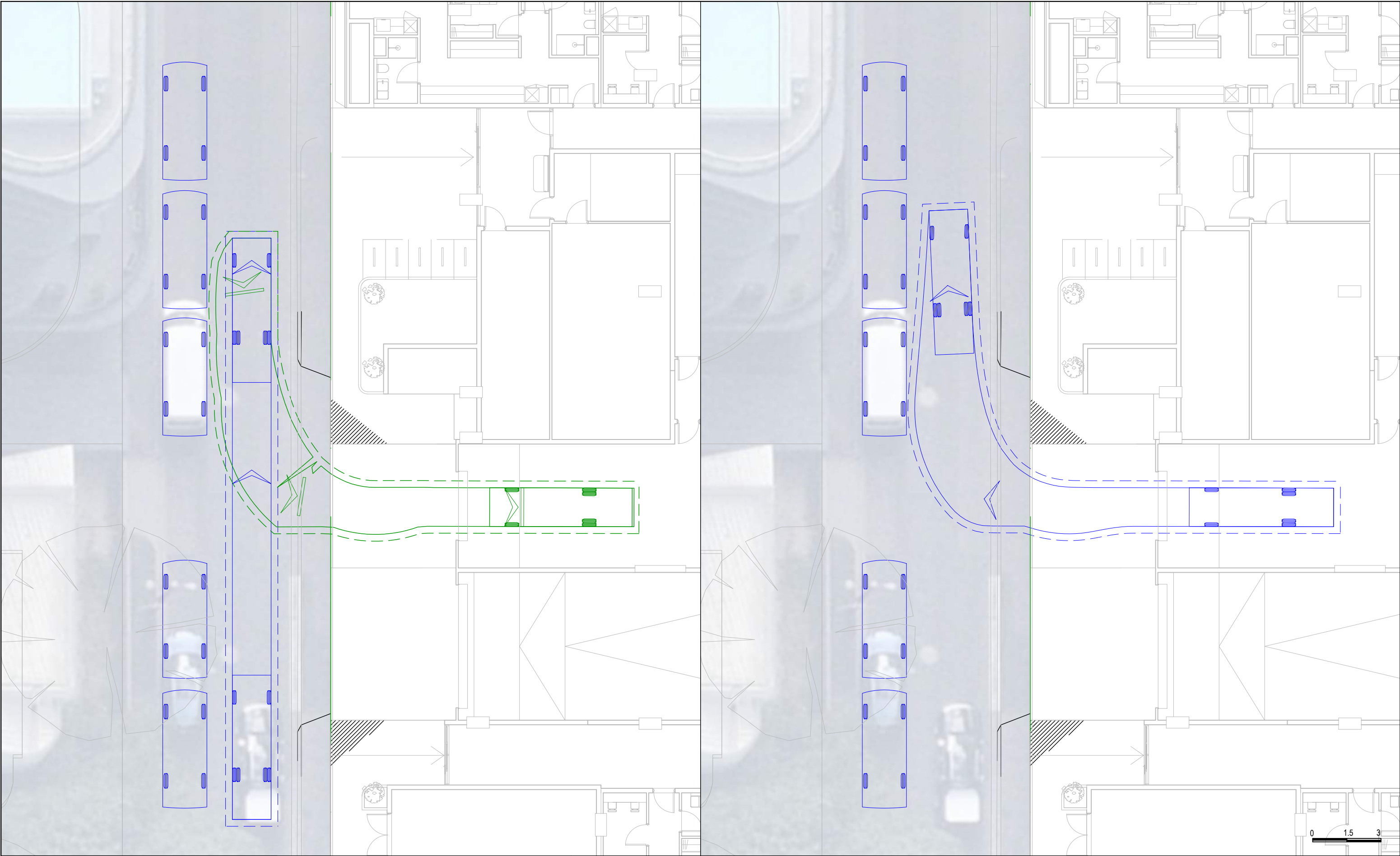
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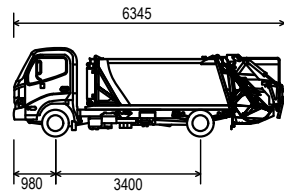
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Mini-Rear Loader Waste Collection Vehicle



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

Overall Length
Body Width
Overall Body Height
Min Body Ground Clearance
Track Width
Lock to Lock Time
Curb to Curb Turning Radius

6.345m
1.700m
2.080m
0.205m
1.670m
4.00 sec
6.450m

Proposed Residential Development 464-466 St Kilda Road, Melbourne Swept Path Assessment

NOTE:
1) Base Plan Supplied By Cox Architecture
2) Maximum Design Speed 10km/h

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