Report Prepared for:

Fortis Development Group

21 July 2022

### **Proposed Office Development**

313 - 317 Kings Way, South Melbourne



PORT PHILLIP PLANNING DEPARTMENT Date Received: 21 July 2022

ratio:consultants

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Appendix A	Car Stacker Data Sheet

# Appendix B Swept Path Assessment

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# 1 Introduction:

Ratio Consultants was commissioned by Fortis Development Group to assess the traffic and parking implications of the proposed office development on the site at 313-317 Kings Way, South Melbourne.

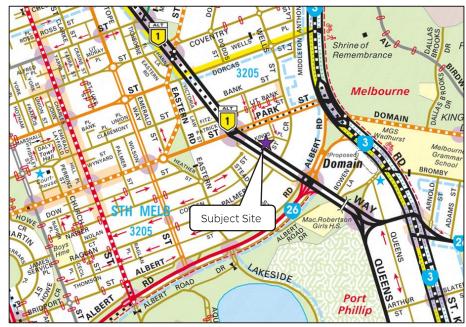
This report has been prepared to address the traffic and parking needs of the proposal and is based on observations in the vicinity of the subject site and on previous studies of similar developments elsewhere in Melbourne.



# 2.1 Site Location and Surroundings

The subject site is located on an island formed by Kings Way, Kings Place and Cobden Street, in South Melbourne. The site's location relative to the surrounding road network is shown in Figure 2.1.

Figure 2.1 Site Location and Surroundings



Source: Melways - https://online.melway.com.au/melway/

The subject site is triangular in shape with a frontage to Kings Way of 15.28 metres, a frontage to Kings Place of 22.12 metres, a frontage to Cobden Street of 17.11 metres, for an overall site area of approximately 336sqm.

The site is currently occupied by a three storey building used as serviced apartment accommodation. Vehicle access to the site is currently provided as follows:

- Via a single-width crossover connecting to/from Cobden Street setback approximately 7.5 metres from Kings Way; and
- Via a single-width crossover connecting to/from Kings Place setback approximately 22.0 metres from Kings Way.

The site is located within a Mixed Use Zone (MUZ) and is subject to the following overlays:

- A Special Building Overlay Schedule 1 (SBO1);
- Design and Development Overlay Schedule 26-2 (DDO26-2); and
- Specific Controls Overlay Schedule 15.

Surrounding land use comprises a mixture of retail, commercial and residential uses with some key land uses detailed below:

- A 19-storey mixed use development ('Oasis') comprising retail and apartments on the eastern side of Cobden Street directly opposite the site.
- South Melbourne Activity Centre, located within 150 metres of the site;
- Anzac Railway Station (currently under construction), located 450 metres east of the site;
- Albert Park Lake, located approximately 500 metres south of the site;



- The Mac.Robertson Girls' High School, located approximately 600 metres south-east of the site;
- Melbourne Grammar School, located approximately 600 metres east of the site:
- Shrine of Remembrance, located approximately 700 metres northeast of the site:
- Royal Botanical Gardens, located 1.0km north-east of the site; and
- Melbourne Sports and Aquatic Centre, located approximately 1.2km south-west of the site.

An aerial view of the site and surrounds is provided below in Figure 2.2.

Figure 2.2 Aerial View of Site and Surrounds



Source: Nearmaps - https://apps.nearmap.com/maps

# **2.2 Road Network**

**Kings Way** is a Primary State Arterial Road and a Transport Zone – Category 2 (TRZ2) which is under the care and management of the Department of Transport (DoT). Kings Way generally has a north-west to south-east alignment and runs between Flinders Street in the CBD and St Kilda Road in South Yarra.

In the vicinity of the site, Kings Way has a dual carriageway road split by a single median segment of approximately 4.3 metres in width. Each carriageway is approximately 13.0 metres in width and caters for four lane traffic flow in each direction. A service road is provided on the southern side of Kings Way which facilities access to the abutting properties. A footpath is provided on the northern side of Kings Way (abutting the site) and on the southern side of the service road. A posted speed limit of 60 km/hr applies near the site.

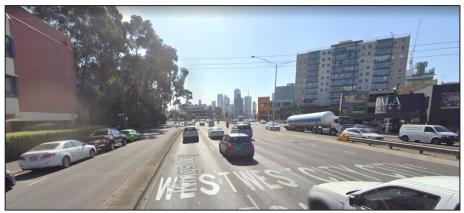
Kerbside parallel parking is not permitted along the northern side of Kings Way with 'Clearway' restrictions enforceable at all times. Kerbside parallel parking is permitted within the service road to the south of Kings Way, subject to short-term restrictions.



Based on the DoT 'Open Data Hub', Kings Way in the vicinity of the site currently carries in the order of 88,000 vehicles per day (two-way traffic volume).

Images of Kings Way within the vicinity of the subject site are shown in Figure 2.3 and Figure 2.4.

Figure 2.3: Street View of Kings Way (Facing North-West)



Source: Google Street View

Figure 2.4: Street View of Kings Way (Facing South-East)



Source: Google Street View

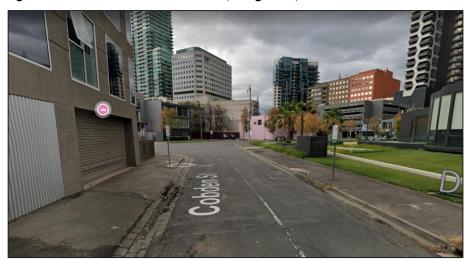
**Cobden Street** is a short Local Road under the care and management of Council that runs in a north-south alignment between Kings Way and Kings Place. In the vicinity of the site, Cobden Street has a carriageway width of approximately 6.5 metres allowing for one lane of traffic in each direction.

Kerbside parallel parking is permitted on both sides of Cobden street, subject to '1P Ticket' restrictions which apply between 8:00am and 6:00pm, Monday to Friday. Cobden Street has a default speed limit applicable to a built-up area of 50 km/hr and footpaths are provided on both sides of the street.

Images of Cobden Street within the vicinity of the subject site are shown in Figure 2.5 and Figure 2.6.



Figure 2.5: Street View of Cobden Street (facing North)



Source: Google Street View

Figure 2.6: Street View of Cobden Street (Facing South)



Source: Google Street View

**Kings Place** is a Local Road under the care and management of Council that generally runs in an east-west alignment between Kings Way and its termination 50 metres east of Palmerston Crescent. In the vicinity of the site, Kings Place has a wide carriageway width of approximately 12.0 metres allowing for two-way vehicle movements. Kerbside parallel parking is permitted on both sides of the road subject to restrictions. Kings Place has a default speed limit applicable to a built-up area of 50 km/hr and footpaths are provided on both sides of the street.

Images of Kings Place within the vicinity of the subject site are shown in Figure 2.7 and Figure 2.8.



Figure 2.7: Street View of Kings Place (facing East)



Source: Google Street View

Figure 2.8: Street View of Kings Place (facing West)



Source: Google Street View

# 2.3 Parking Conditions

#### **On-Street Car Parking**

A site inspection was undertaken by Ratio Consultants to determine the on-street car parking inventory within approximately 150 metres walking distance of the subject site.

The extent of the site inspection area included:

- Kings Place, between Kings Way and Cobden Street;
- The full length of Cobden Street;
- The full length of Palmerston Crescent, between Kings Way and Park Street; and
- Kings Way Service Road (to the south of Kings Way).

The extent of the site inspection area is outlined in Figure 2.9 and the results of the survey are presented in Table 2.1.



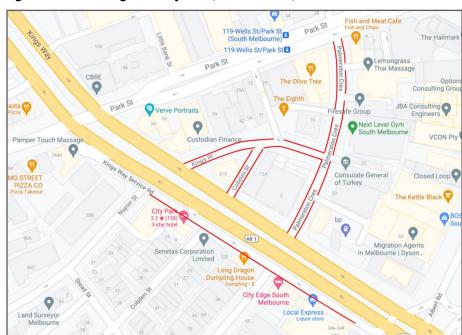


Figure 2.9: Car Parking Inventory Area (outlined in red)

Source: Google Maps

Table 2.1: On-Street Car Parking Inventory

Street / Side	Side	Section	Restrictions
Cobden Street	Eastern Side	Entire length	1P (Ticket) 8:00 am - 6:00 pm, Monday to
Cobden Street	Western Side	Entire length	Friday
Kings Place	Northern Side	Between Kings Way and Millers Lane	1P (Ticket) 8:00 am – 6:00 pm, Monday to Friday
Kings Place	Southern Side	Between Kings Way and Millers Lane	1P (Ticket) 8:00 am – 6:00 pm, Monday to Friday
Kings Place	Northern Side	Between Millers Land and Palmerston Crescent	1P 8:00am – 6:00pm, Monday to Friday
Kings Place	Southern Side	3 Between Millers Land and Palmerston Crescent	1P 8:00am – 6:00pm, Monday to Friday
Palmerston Crescent	Eastern Side	Entire length, except for outside 9 Palmerston Crescent	2P (Ticket) 8:00am – 6:00pm, Monday to Friday
Palmerston Crescent	Eastern Side	Outside 9 Palmerston Crescent	Loading Zone (15 Minute), 8:00 am – 6:00 pm, Monday to Saturday
Palmerston Crescent	Western Side	Entire length	1P (Ticket) 8:00am – 6:00pm, Monday to Friday



Table 2.1 reveals that on-street car parking in the immediate vicinity of the site is subject to short-term and ticketed restrictions. The nature of these restrictions will discourage future employees not provided an on-site car parking space from driving to the site and parking on-street and will instead encourage alternate modes of transport. Conversely, these restrictions will also encourage a high-turn over of parking and create availability for short-term visitors of the development.

#### **Off-Street Car Parking**

The following off-street car parks are available in the nearby area.

**Table 2.2: Off-Street Car Parking** 

Car Park Location	Capacity	Hours of Operation	Cost
13-21 Palmerston	340 public car	6:00am to 10:00pm	\$6/hr
Crescent	spaces	Monday to Friday	\$16 daily max
360 St Kilda Road	80 public car	6:00am to 9:00pm	\$4/hr
	spaces	Monday to Friday	\$18 daily max
21 Bank Street	400 public car spaces	5:30am to 9:30pm Monday to Friday	\$15 Flat Rate

# 2.4 Sustainable Transport

#### **Public Transport**

The subject site is located within the Principal Public Transport Network (PPTN) Area as shown on the PPTN Maps of the State Government of Victoria (July 2018). The location of the subject site relative to the PPTN area is shown in Figure 2.10.



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Figure 2.10 City of Port Phillip Principal Public Transport Network (PPTN) Area

Source: VicPlan - https://apps.nearmap.com/maps

The subject site currently has very good access to public transport, with several tram services operating within close proximity to the site. The public transport services operating within the vicinity of the site are detailed in Table 2.3 and illustrated in Figure 2.11.

**Table 2.3: Summary of Public Transport Services** 

Mode	Route #	Route	Nearest Stop	Distance
	58	West Coburg – Toorak	Wells St/Park St #119	200 metres (3 minutes)
	1	East Coburg - South Melbourne Beach	Dorcas St\Eastern Road #22	500 metres (6 minutes)
	16	Melbourne University – Kew via St Kilda Beach		
Tram	3-3a	Melbourne University – East Malvern		
	5	Melbourne University – Malvern	Park St/St Kilda Rd	500 metres
	6	Moreland – Glen Iris	#20	(7 minutes)
	64	Melbourne University – East Brighton		
	67	Melbourne University – Carnegie		



	72	Melbourne University - Camberwell		
	12	Victoria Gardens – St Kilda	130a-Raglan St/Clarendon St	1.0 kilometres (13 minutes)
	605	Gardenvale – City (Queen St)	Melbourne Observatory/Birdwood Ave	900 metres (12 minutes)
Bus	236	Garden City – Queen Victoria Market via City	South Melbourne Market/Cecil Street	1.3 kilometres (17 minutes)

Source: Public Transport Victoria - https://www.ptv.vic.gov.au/

Figure 2.11 Public Transport Services



Source: Public Transport Victoria Maps - https://www.ptv.vic.gov.au/more/maps/

#### **Future Public Transport Infrastructure**

The Metro Tunnel project is aimed to increase the capacity of the Melbourne metropolitan railway network by taking the busiest lines, Cranbourne, Pakenham, and Sunbury, through the new metro tunnel under the CBD.

Public transport in the precinct will be further enhanced by 2025 with the creation of the proposed Anzac Railway Station that will be constructed as part of the Metro Tunnel. Anzac Station will be located directly under St Kilda Road near the intersection of Albert Road and Domain Road, within 450 metres of the subject site.

It will be accessed from four entry points, including one directly from the Albert Road Reserve. Other key transport initiatives arising from the new Anzac Station include:

 A new tram interchange, with a direct platform-to-platform connection between the train and tram network providing for extra-



- large tram platforms to accommodate up to four trams at any one time (or two 33 metre long E-class trams in each direction);
- A new pedestrian underpass linking Albert Road Reserve and the Shrine of Remembrance Reserve with the new station and tram stop, allowing people to safely cross underneath busy St Kilda Road;
- New bus stops with shelters on St Kilda Road to enable passengers to easily connect with trains and trams;
- Drop-off zones and taxi zones located near the Albert Road Reserve station entrance;
- Over 120 new bicycle parking spaces, including space for bicycle parking in the station forecourt; and
- A shared use path through the new Albert Road Reserve, opening a new and safe cycling and walking connection.

The location of the future Anzac Railway Station in relation to the subject site is illustrated in Figure 2.12.

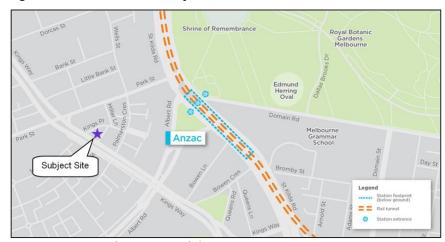


Figure 2.12: Future Anzac Railway Station

Source: Metro Tunnel – metrotunnel.vic.gov.au

#### **Bicycle Network**

The subject site has very good access to Melbourne's bicycle network, with on and off-road bicycle lanes and informal bicycle routes running in close proximity of the subject site. The bicycle facilities in proximity of the site include:

- Off-road shared paths along Albert Road, sections of St Kilda Road and through Albert Park;
- On-road bicycle lanes along sections of Albert Road, St Kilda Road, Ferrars Street, Cecil Street and Moray Street; and
- Informal bicycle routes along Park Street, Sturt Street, Eastern Road, Dorcas Street and Bridport Street.

The bicycle paths within the vicinity of the site are presented in the TravelSmart Map shown in Figure 2.13.



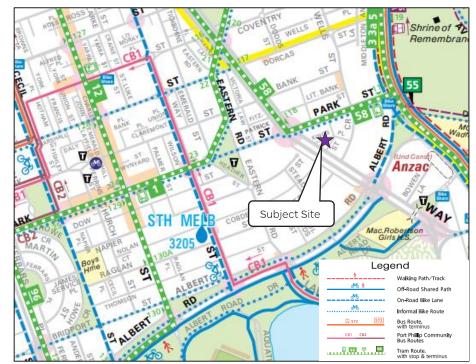


Figure 2.13 City of Port Phillip TravelSmart Map

Source: City of Port Phillip - <a href="https://www.portphillip.vic.gov.au/explore-the-city/getting-around">https://www.portphillip.vic.gov.au/explore-the-city/getting-around</a>

#### **Pedestrian Facilities**

Pedestrian movements are well facilitated with footpaths available on both sides of Kings Way, Cobden Street, Kings Place, and the majority of the roads within the vicinity of the site. These pedestrian facilities provide access between the subject site, the nearby public transport network and local shops and services.

The site also has excellent access to key services within the South Melbourne Activity Centre which is located within 150 metres of the site.

The site achieves a 'Walk Score' of 95 points (out of a possible 100) and is described as a 'Walker's Paradise' on Walkscore.com, indicating that daily errands do not require a car. A site's walk score is calculated based on the walking distance to local amenities, such as supermarkets, schools, parks, public transport, etc. Walkscore.com utilises data sources such as Google and road network data to calculate a 'Walk Score'.

The convenient everyday services are illustrated in Figure 2.14.



Figure 2.14: Walkable Services from the Subject Site



Source: www.walkscore.com

#### **Car Share**

Car share offers a viable mode of travel for those that require the use of a private motor vehicle from time to time.

The subject site has convenient access to a number of care share pods operated by Flexicar, GoGet and Popcar. The nearest pod is operated by GoGet and is located on Bank Street, approximately 280 metres walking distance from the site. A summary of the car share pods within close proximity of the subject site is provided in Table 2.4 and is illustrated in Figure 2.15.

Table 2.4: Nearby Car Share Services

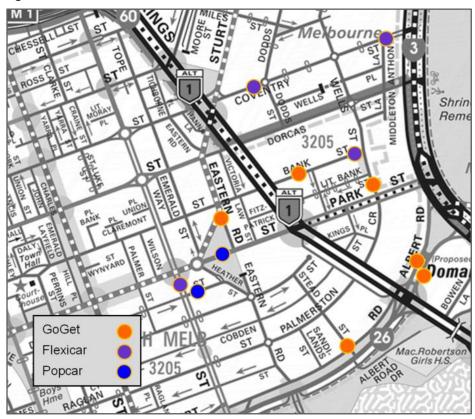
Operator	Location	Number of Cars	Approximate Walking Distance
	Bank Street near Kings Way	1 car	280 metres
	Outside 50 Albert Road	2 cars	300 metres
	Wells Street near Park Street	1 car	300 metres
GoGet	Outside 35 Albert Road	2 cars	300 metres
	Eastern Road near Bank Street	1 car	400 metres
	Stead Street near Albert Road	1 car	450 metres
	GoGet Total	8 cars	
Flexicar	Bank Street near Wells Street	1 car	400 metres
i iexicai	Moray Street near Park Street	1 Cai	450 metres



	Coventry Street near Dodds Street		650 metres
	Coventry Street near St Kilda Road	2 cars	800 metres
	Flexicar Total	5 cars	
	Park Street near Eastern Road (adjacent the Eastern Reserve)	1 car	350 metres
Popcar	Dow Street near Moray Street	1 car	500 metres
	Popcar Total	2 cars	
<u>Total</u>		<u>15 cars</u>	

Source: GoGet and Flexicar websites

Figure 2.15 Location of Car Share Services



Car share schemes offer a viable alternative for employees to attend meetings and site visits during the workday without requiring access to their own vehicles.

#### **Taxis and Rideshare**

Taxis and rideshare services both provide another alternative to the private vehicle. Taxis can be booked online or by phone. Taxis can also be found at taxi ranks or flagged down on the street if required.

Rideshare services are a popular way to commute when travelling and can be booked through their respective applications. Short-term kerbside parallel parking is available along Cobden Street and Kings Place to facilitate the pick-up and drop-off of employees using rideshare services.



Table 2.5 shows some of the popular taxi and ride share services in and around inner-city Melbourne:

Table 2.5: Taxi and Rideshare Services

Service	How to order
Silver Top Taxis	<b>Call 8413 7202</b> Wheelchair accessible taxis (WATs) are also available. Simply request a WAT when making a booking
13 Cabs	Call 13 6294  Wheelchair accessible taxis (WATs) are also available. Simply request a WAT when making a booking
U B E R	Get a reliable ride in minutes with the Mobile App for each service. No reservations are required. (Uber, Sheebah, Ola, Didi).

# 2.5 Crash Analysis

A review has been conducted of the Department of Transport's 'Crashstats' database for the last five years of available data for any reported casualty crashes within the following search area:

- Kings Way, between Kings Place and Cobden Street;
- The full length of Kings Place; and
- The full length of Cobden Street.

The crash search revealed that there has been one 'other' classification casualty crash along Kings Way near the intersection of Cobden Street in March 2015 injury three people.

Noting the classification of the roads within the search area and the associated traffic volumes, it is considered that the road network is operating in a relatively safe manner.

# 2.6 Relevant Local Planning Policies

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

#### Clause 15.02-1S – Energy and Resource Efficiency

Clause 15 of the Port Phillip Planning Scheme is the State Planning Policy on Built Environment and Heritage. Clause 15.02 is in relation to sustainable development, with Clause 15.02-1 in relation to Energy and resource efficiency.

Of particular relevance to this report, Clause 15.02-1 states the following strategy:

"Support low energy forms of transport such as walking and cycling."



#### Clause 18.02-1 - Sustainable Personal Transport

Clause 18 of the Port Phillip Planning Scheme is the State Planning Policy on Transport. Clause 18.02 is in relation to movement networks, with Clause 18.02-1 in relation to Sustainable personal transport.

Of particular relevance to this report, Clause 18.02-1 states the following strategy:

"Ensure development.... provides opportunities to promote walking and cycling."

#### Clause 18.02-4S - Car Parking

Clause 18.02-4S is in relation to car parking.

Of particular relevance to this report, Clause 18.02-4-2 states the following strategy:

"Allocate or require land to be set aside for car parking subject to the existing and potential modes of access including public transport, the demand for off-street car parking, road capacity and the potential for demand management of car parking."

#### Clause 21.03 - Ecologically Sustainable Development

Clause 21.03: Ecologically Sustainable Development of the Port Phillip Planning Scheme outlines the relevant Local Planning Policies that relate to transport and parking.

Broadly, Clause 21.03 outlines Port Phillip's aim to reduce car dependence by promoting sustainable transport (walking, cycling and public transport). It includes a number of strategies that aim to achieve these goals, the following are those relevant to this proposal:

- Facilitate the use of sustainable transport modes in preference to private vehicles use by ensuring the development supports the prioritisation of transport modes in the following order:
  - Walking
  - Cycling
  - Public transport
  - Freight
  - Multiple occupancy vehicles
- To create a walking network that is integrated, safe and accessible and encourages more people to walk more often.
- To create a cycling network that is integrated, safe and accessible and encourages more people to cycle more often by extending the existing network of dedicated cycle routes to improve the connections for on-road and off-road cyclists and ensure that adequate end of trip facilities are provided, as appropriate.
- To facilitate an increase in the use of public transport by:
  - Supporting improvements to the overall convenience, accessibility and safety of the public transport, including public transport stops and interchanges.
  - Ensuring major entertainment, recreation, retail, education and employment uses are accessible by public transport.
  - Direct land use and development which increases housing density, employment and visitation to locations which offer greatest access to public transport.
- To reduce the impact of vehicles on local areas by:



- Facilitating a reduction in travel demand by ensuring that activity centres provide access to a concentrated and diverse mix of goods and services.
- Allow for a reduction in the required number of on-site parking spaces where the provision of sustainable transport facilities / initiatives can reduce the demand for parking through increased use of alternative modes of transport: walking, cycling, and public transport.
- Support shared parking facilities in retail shopping strips.

#### 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 The Proposal:

It is proposed to demolish the existing building and construct a 19-storey office development on the subject site at 313 – 317 Kings Way, in South Melbourne. More specifically, the development will include the following:

- 17 levels of office use with a combined net floor area of 4,502sqm.
- The provision of 23 car parking spaces within a fully automatic car stacker system accessed via a double-width crossover connecting to/from Cobden Street.
- An on-street Loading Zone along Cobden Street abutting the subject site.
- Bicycle parking and end of trip facilities located in Basement 2, including:
  - 32 x bicycle parking spaces; and
  - Changerooms and showers.
- Primary pedestrian access will be provided via an entrance along the northern boundary of the site via Kings Place.
- A waste storage area is located on Basement 1. Waste is proposed to be collected within the on-street Loading Zone along Cobden Street.



# **4.1 Car Parking Requirements - Clause 52.06**

Car parking requirements for new use developments are set out under Clause 52.06 of the Port Phillip Planning Scheme. The purpose of Clause 52.06, amongst other things, is:

- 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 transport alternatives to the motor car.
- To promote the efficient use of car parking spaces through the consolidation of car parking facilities.
- To ensure that car parking does not affect the amenity of the locality.
- 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.

The number of car parking spaces required for the specified uses is listed under Table 1 of Clause 52.06-5. The car parking requirement specified for a use listed in Table 1 does not apply if:

- A car parking requirement for the use is specified under another provision of the Planning Scheme: or
- A schedule to the Parking Overlay specifies the number of car parking spaces required for the use.

Given that the site is not subject to a Parking Overlay and parking rates are not specified under another provision of the Planning Scheme, the rates specified under Table 1 of Clause 52.06-5 are applicable to the proposed development.

Table 1 includes two sets of parking rates, listed as Column A and Column B. Column A rates are to apply unless the Column B rates are applicable. Column B rates are to be used under the following circumstances:

- Any part of the land is identified as being within the Principal Public Transport Network Area as shown on the Principal Public Transport Network Area Maps (State Government of Victoria, August 2018); or
- A Schedule to the Parking Overlay on another provision of the Planning Scheme specifies that Column B applies.

As discussed in Section 2.4, the subject site falls within the Principal Public Transport Network (PPTN) Area, and therefore the Column B rates of Table 1 in Clause 52.06 are applicable for the number of car spaces to be provided, which are outlined in **Error! Reference source not found.** 

Table 4.1: Car Parking Requirements - Clause 52.06-5

Land Use	Column B Rate	Size	Requirement*
Office	3.0 spaces to each 100sqm of net floor area	4,502 sqm	135 spaces

<sup>\*</sup>Rounded down to the nearest whole number in accordance with Clause 52.06-5

On the basis of the above, the proposal has a statutory requirement to provide a total of **135** on-site car spaces in accordance with Table 1 to Clause 52.06 of the Port Phillip Planning Scheme.

The provision of 23 car parking spaces is proposed on-site allocated to employees of the office use. Accordingly, the proposed development



seeks a reduction of 112 spaces against the statutory requirements of Table 1 to Clause 52.06 of the Port Phillip Planning Scheme.

In regard to reducing the car parking requirement, Clause 52.06-7 states that:

"An application to reduce (including reduce to zero) the number of car parking spaces required under Clause 52.06-5 or in a schedule to the Parking Overlay must be accompanied by a Car Parking Demand Assessment.

The Car Parking Demand Assessment must assess the car parking demand likely to be generated by the proposed new use."

# **4.2 Car Parking Demand Assessment**

Clause 52.06-7 states that an application to reduce the number of car parking spaces required under Clause 52.06-5 must be accompanied by a Car Parking Demand Assessment which must address the following matters:

- The likelihood of multi-purpose trips within the locality which are likely to be combined with a trip to the land in connection with the proposed use.
- The variation of car parking demand likely to be generated by the proposed use over time.
- The short-stay and long-stay car parking demand likely to be generated by the proposed use.
- The availability of public transport in the locality of the land.
- The convenience of pedestrian and cyclist access to the land.
- The provision of bicycle parking and end of trip facilities for cyclists in the locality of the land.
- The anticipated car ownership rates of likely or proposed visitors to or occupants (residents or employees) of the land.
- Any empirical assessment or case study.

An assessment of those factors considered relevant to the development is provided below:

#### **Likelihood of Multi-Purpose Trips**

It is expected that the car parking demand generated by the office will be a primary demand, in which case each trip to the development will be unique.

#### **Variation of the Car Parking Demand**

Demands for car parking associated with office use depends largely on the nature of the businesses operating on the site, including hours of operation. Typical operation of office use will predominantly occur during weekday business hours. Car parking demands outside of these operational hours will be minimal.

#### **Short and Long Stay Parking Demands**

The proposed development will generate demands for short and long stay car parking, with short stay demands related to visitor trips and long stay demands related to employees.

It is expected that the majority of the overall parking demands generated by the development will be long-stay staff parking, noting that the nature of office developments.



The relatively small proportion of short stay parking (visitor parking) will be facilitated off-site within available on-street spaces in the vicinity of the site.

#### **Availability of Public Transport in the Locality**

Reflective of its location within the PPTN, the site has very good access to the public transport network via numerous tram and bus services (as detailed in Section 2.3).

In addition, the future Anzac Railway Station is expected to become a primary means of commuting to and from the site, being conveniently located within 450 metres.

Given the very good access to public transport options, staff and visitors of the development are able to travel to and from the site without relying on the use of a private motor vehicle.

#### **Convenience of Pedestrian and Cyclist Access to the Site**

As outlined in Section 0, the development has achieved a WalkScore of 95 out of 100 and is labelled a "Walker's Paradise". Pedestrian footpaths are provided on both sides of roads in the vicinity of the site, which are generally in excellent conditions. The primary access to the site will provide a clear, safe and direct link to and from the surrounding pedestrian network and nearby public transport services.

In addition, the site has very good access to nearby bicycle facilities, including:

- Off-road shared paths along Albert Road, sections of St Kilda Road and through Albert Park;
- On-road bicycle lanes along sections of Albert Road, St Kilda Road, Ferrars Street, Cecil Street and Moray Street; and
- Informal bicycle routes along Park Street, Sturt Street, Eastern Road, Dorcas Street and Bridport Street.

These facilities provide a viable means of alternative sustainable transport that is expected to reduce future reliance on private motor vehicles.

#### **Access to Car Share Pods**

There are 13 car share pods within 800 metres of the subject site, which can be utilised by staff of the development for work related trips (e.g. attend meetings, site visits etc.). The availability of car share pods within close proximity of the site is expected to encourage alternate modes of transport in accessing the site itself, with the understanding that work related trips can be undertaken by utilising these car share pods, as needed.

#### Provision of Bicycle Parking and End of Trip Facilities for Cyclists

The development proposes a provision of 32 bicycle parking spaces which is in excess of the statutory requirements for bicycle parking. The facilities are designed to support bicycle use for employees by providing end of trip facilities which complement the good access to the available bicycle connections.



#### **Office Car Parking Demand**

#### **STAFF**

Staff car parking demands are often a function of supply and in locations where on-street parking is constrained by parking restrictions, staff typically elect to utilise alternate transport modes where available. Considering the location of the site, its proximity to a wide variety of transport modes and the extensive parking restrictions in the vicinity of the site (time-restricted or ticketed), the office staff car parking demand is expected to be limited to the level of on-site car parking provision, unless staff choose to pay for off-street ticketed parking.

Furthermore, there are numerous car share vehicles within close proximity of the subject site. These facilities are particularly useful for staff that may be required to undertake site visits or other errands in remote locations that may not be easily accessible by public transport.

#### **VISITOR**

The office tenancies are likely to occasionally attract visitors to the subject site. As discussed in Section 2.3, the on-street parking supply is time restricted or ticketed encouraging a high turnover of parking. As such, it is anticipated that visitors to the office will be able to readily park within the surrounding short-term on-street parking.

# 4.3 Allowing Fewer Spaces to be Provided

Before granting a permit to reduce the number of spaces the responsible authority must consider the following, as appropriate:

- The Car Parking Demand Assessment.
- Any relevant local planning policy or incorporated plan.
- The availability of alternative car parking in the locality of the land, including:
  - Efficiencies gained from the consolidation of shared car parking spaces.
  - Public car parks intended to serve the land.
  - On street parking in non-residential zones.
  - Streets in residential zones specifically managed for non-residential parking.
- The practicality of providing car parking on the site, particularly for lots of lessthan 300 square metres.
- Access to or provision of alternative transport modes to and from the land
- Local traffic management in the locality of the land.
- Any other relevant consideration.

The factors above are directly relevant to this assessment are discussed in more detail below:

#### **Relevant Planning Policies**

As detailed in Section 2.6, there is significant 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.

The Sustainable Transport Policy and Parking Rates Strategy document referenced under Clause 21.07 of the Port Phillip Planning Scheme has been used to inform Council's various transport strategies, however, is not an incorporated document of the Planning Scheme. The strategies



within this document aim to ensure that there is adequate parking in the municipality, while also promoting non-car transport options. The application of a reduced parking ratio is considered on a case by case basis.

For office land uses, the sustainable parking rate of the Policy is 2.0 to 3.0 car parking spaces per 100 sqm of net floor area, however this rate can be further reduced if certain criteria are met.

An assessment against the criteria of Council's Sustainable Transport Policy to reduce office rates to 2.0 to 3.0 spaces per 100sqm is undertaken in Table 4.2.

Table 4.2: City of Port Phillip Sustainable Parking Policy Conditions for Office Developments Seeking a Reduced Rate of 2.0 to 3.0 per 100sqm

Mandatory Conditions	Comments
Within an Activity Centre (defined by business zoning)	The site is located within a Mixed-Use-Zone which permits commercial uses. The site is also located within 150 metres of the South Melbourne Activity Centre.
No more than 200 metres to fixed rail public transport.	The subject site is located 200 metres to the closest fixed rail public transport (tram). Specifically, Tram Route 58 is located within 200 metres walking distance on Park Street near Wells Street.
Strict control of on-street parking in surrounding streets	On-street parking in the vicinity of the site is either time restricted or ticketed.
Provision of motor scooter/motorbike parking on site	No provision of motor scooter/motorbike parking is provided on-site.
Provide the full bicycle amenities provision as required under Clause 52.34.	Bicycle parking spaces and end of trip facilities are provided in excess of the requirements of Clause 52.34 as discussed in Section 6.

Based on the above, the proposal meets the conditions required of the Policy to allow a reduced car parking rate for office use of between 2.0 and 3.0 spaces per 100 square metres, with the only exception being the absence of motor scooter and motorcycle parking. Notwithstanding this, bicycle parking has been provided in excess of the rates of Clause 52.34 of the Port Phillip Planning Scheme, which encourages a more sustainable mode of transport than motor scooter or motorcycle travel.

The Sustainable Transport Policy and Parking Rates Strategy also permits a lower provision of office parking than the sustainable rate of 2.0 to 3.0 spaces per 100sqm, subject to some additional requirements.

An assessment against these additional requirements is undertaken in Table 4.3.



Table 4.3: City of Port Phillip Sustainable Parking Policy Conditions for Office Developments Seeking a Reduced Rate of Less than 2.0 per 100sqm

Additional Conditions	Comments		
Total supply of car parking is pooled or shared i.e. mixed use development	Not applicable to a development that comprises only staff car parking (noting that parking needs to be specifically allocated to individual tenancies).		
Subsidised Public Transport	Not currently proposed, however this could be implemented through the preparation of a Green Travel Plan managed by the Owners Corporation.		
Exceed bicycle and amenities provision as required under Clause 52.34	Bicycle parking spaces and end of trip facilities are provided in excess of the requirements of Clause 52.34, as discussed in Section 7.		
Upgrade bus /tram /train stops or other works to facilitate public transport usage directly applicable to the site.			
Participation in car share scheme or other similar initiatives	It is not considered practical or economically viable to provide a dedicated car share vehicle on-site, noting the size of the development and that all car parking is provided with a fully automatic car stacker system that requires each user to go through an induction process.  Notwithstanding this, the development has access to 13 commercially operated car share vehicles within 800 metres of the subject site. These facilities can be used by staff of the development that are not allocated a car parking space on-site.		
Other initiatives to reduce usage of motor vehicles	A Green Travel Plan (GTP) could be prepared to set targets and encourage the use of public transport for staff of the development.		

Overall, the proposal meets the intent of the City of Port Phillip Sustainable Transport Policy by providing numerous sustainable transport alternatives and incentives to encourage a shift from the reliance on the private motor vehicle.

#### **Availability of Car Parking in the Locality**

#### **LONG TERM PARKING**

As outlined in Section 2.3, the availability and nature of on-street parking in the vicinity of the site that could potentially be utilised by employees of the development is constrained given that the majority of surrounding on-street parking is subject to short-term parking restrictions or ticketed during weekday business hours.



This results in a disincentive for future employees without any on-site car parking to travel to work via a private motor vehicle and park on-street and will encourage alternative modes of transport.

There are some off-street car parks within the vicinity of the site that provide opportunity for staff who wish to drive to and from the site and pay for parking. These off-street car parks are outlined within Table 2.2.

#### **SHORT TERM PARKING**

Conversely, the short-term on-street parking restrictions will ensure any short-term visitors to the area are able to find a parking space within close proximity to the subject site even during periods of peak activity.

#### The Practicality of Providing Car Parking on the Site

The subject site comprises a relatively small area of 336sqm and is located in close proximity to Kings Way which carries a high volume of traffic. The number of car parking spaces provided on-site (within the fully automatic car stacker system) needs to be balanced up against the implications associated with queue of vehicles forming back in front of the site and the potential for the extension of any queues back towards Kings Way.

It is considered that the provision of 23 car parking spaces within the fully automatic car stacker system represents a very efficient layout noting the size and geometry of the site and that any further car parking would start to impact traffic on the surrounding road network. Accordingly, it is considered that the size and geometry of the site limits the practicality of providing additional car parking on the site.

#### **Accessibility to Alternate Transport Modes**

As discussed previously, the subject site has very good access to alternate transport modes (such as walking, cycling, public transport, car share, Uber and taxi services) which will allow users of the proposed development (staff and visitors) to conveniently access the site without relying on a private vehicle.

#### Local Traffic Management in the Locality of the Land

The suppressed provision of car parking proposed as part of the proposed development will reduce private car travel to and from the site, resulting in a lessened impact to traffic congestion and pedestrian amenity in the vicinity of the site than what would have otherwise be incurred were more on-site parking proposed.

#### Other Considerations

The applicant has committed to the preparation of a Green Travel Plan (GTP) for the development. The GTP will set objectives for sustainable transport usage and reduce the reliance on private motor vehicles. The GTP could be prepared as a condition of permit.



# 4.4 Adequacy of the Proposed Car Parking Provision

It is proposed to provide 23 car parking spaces on-site to meet the parking demands of office staff (at a rate of 0.51 spaces per 100sqm off office floor area) of the proposed office development. This level of car parking provision is considered acceptable for the following reasons:

- The site is located close to several sustainable transport alternatives such as tram routes, bus routes, bicycle and pedestrian facilities and car share vehicles. This will enable users of the proposed development to travel to and from the site using sustainable modes of transport and reduce the demand for car parking.
- The generous provision of bicycle parking and end of trip facilities will encourage the use of alternative transport modes and reduce the reliance on private vehicle use.
- Staff car parking demands are often a function of supply and in locations where on-street parking is constrained by parking restrictions, staff typically elect to utilise alternate transport modes (noting that the subject site has very good access to alternate transport modes). Accordingly, the staff car parking demand is anticipated to be limited to the level of on-site car parking provision, unless staff choose to pay for the on-street ticketed parking.
- The short-term on-street parking restrictions will ensure any short-term visitors to the area are able to find a parking space within close proximity to the subject site even during periods of peak activity.
- The development helps to achieve the objectives sought by Local Policy by reducing the dependence on private motor vehicles.
- The size and geometry of the site limits the ability to provide any additional car parking on-site.
- The applicant has committed to the preparation of a Green Travel Plan (GTP) for the development.

On the basis of the reasons discussed above it is considered that the proposed level of on-site car parking to be suitable for the nature and scale of the proposed development.



#### **5.1 Public Realm Works**

The City of Port Phillip have prepared the 'Domain Precinct Public Real Master Plan' which identifies future public realm projects in the Domain Precinct. Relevant to this application, the Domain Precinct Public Real Master Plan earmarks a project for Kings Place Plaza, Millers Lane, and part of Cobden Street. The key outcomes of this project are listed within the masterplan and shown below:

- A new safe shared space, public plaza and improved pedestrian connections with the reduction of roadway;
- Prioritise short-term and servicing parking where appropriate;
- A gathering place for pedestrians with landscaping, bike parking, seating and drinking fountains;
- Opportunities for community events such as markets and festivals; and
- Enhanced pedestrian amenity and connectivity between trams and trains.

Figure 5.1 illustrates the Kings Place Plaza and Millers Lane project.

Shared zone
Short-term parking and servicing
Future building
Road closure
IIII Vertical landscaping
Tree
Building access
Existing building

Figure 5.1: Kings Place Plaza / Millers Lane Project

Figure 5.1 illustrates the following key points:

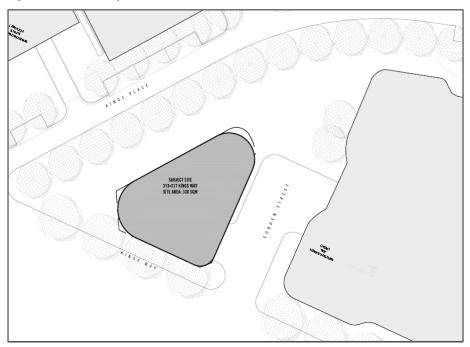
- Kings Place is proposed to become a Shared Zone (with vehicles and pedestrians) and to cater for vehicle movements in one direction only (north-eastbound); and
- Cobden Street is proposed to be closed at its northern termination and will therefore only be accessible via Kings Way.

It is understood that it is Council's intention to close Cobden Street to Kings Place, in accordance with the Domain Precinct Public Real Master Plan.



The layout of Cobden Street is proposed to be constructed as shown in Figure 5.2.

Figure 5.2: Future Layout of Cobden Street



As part of the current configuration for Cobden Street, or as part of any future road works to close Cobden Street, a dedicated on-street Loading Zone could be created on the western side of Cobden Street abutting the subject site. The on-street Loading Zone option is shown in Figure 5.3. This Loading Zone would provide opportunity for loading and unloading activities, including private waste collection, associated with the proposed development as well as the mixed-use development to the east.



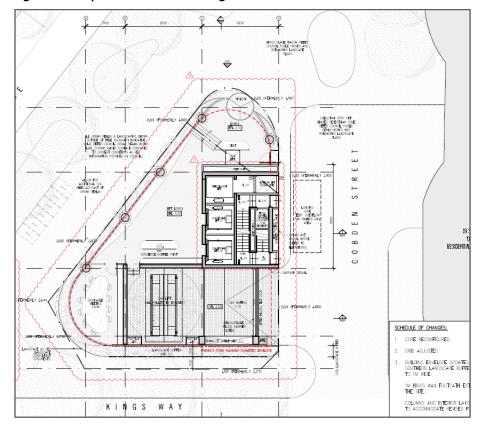


Figure 5.3: Proposed On-Street Loading Zone

# 5.2 Clause 52.06-9 Design Standard Assessment

The proposed car park and access arrangements have been designed in general accordance with the objectives and design requirements of Clause 52.06-9 of the Port Phillip Planning Scheme and/or the relevant sections of AS/NZS 2890.1:2004.

An assessment against the relevant design standards of Clause 52.06-9 of the Planning Scheme is provided below:

#### **Design Standard 1 - Accessways**

Vehicular access to the development is proposed via a crossover connecting to/from Cobden Street located approximately 5.0 metres to the north of Kings Way.

It is acknowledged that the proposed crossover is located in reasonably close proximity to Kings Way, however following a review of the access options available to the site, this is considered to represent an appropriate outcome for the following key reasons:

The width of the site is greatest along the southern boundary (i.e. along the Kings Way boundary). Therefore, the portion of the site along the southern boundary provides the greatest opportunity to accommodate an on-site accessway (suitable to accommodate a waiting bay as well as the passing of opposing vehicles) and a transfer cabin for the fully automated car stacker system. A crossover further to the north would pose significant challenges with accommodating an on-site accessway and car stacker system. Accordingly, the geometry of the site dictates the most ideal location for a crossover.



- The proposed car stacker system comprises a relatively modest level of car parking (23 spaces) which will generate a relatively modest level of traffic. Accordingly, it is considered that this level of traffic can be managed by a crossover in this location, particularly noting the low level of traffic carried by Cobden Street (given that it is proposed to be closed to Kings Place and only services one other property).
- The proposed crossover is in a similar location to the existing crossover connecting to/from Cobden Street.

Design Standard 1 of Clause 52.06-9 relates to the design of accessways. The requirements of Design Standard 1 are assessed against the proposal in Table 5.1.

Table 5.1: Design Standard 1 Assessment – Accessways

Requirement	Comments		
Must be at least 3m wide.	Satisfied – Access to the fully automatic car stacker has been proposed via a double-width crossover and accessway which comprises a width of 6.65 metres. This width is sufficient to accommodate the passing of opposing vehicles and complies with this standard and the Australian Standard for Off-Street Car Parking (AS/NZS2890.1).		
Have an internal radius of at least 4m at changes of direction or intersection or be at least 4.2m wide.	N/A – There is no change in direction in the accessway.		
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.	N/A – The proposed car park is not a public car park. Notwithstanding, all vehicles can depart the site in a forward direction due to the inclusion of a turntable within the fully automatic car stacker system.		
Provide at least 2.1m headroom beneath overhead obstructions, calculated for a vehicle with a wheelbase of 2.8m.	Satisfied – A headroom clearance in excess of 2.1 metres has been provided within the car waiting area.		
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.	Satisfied – Vehicles are able to enter and exit Cobden Street in a forward direction. The turntable as a part of the fully automatic car stacker system will rotate exiting vehicles such that they are able to depart the site 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.	N/A – It is noted that the car park serves more than 10 car parking spaces however, the accessway is less than 50 metres in length and does not connect to a road in a Transport Zone. Accordingly, a passing bay is not technically required to be provided.  Notwithstanding this, the double-width crossover and accessway, which comprise a width of 6.65 metres, are sufficient to enable the passing of opposing vehicles at the site access point.		
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	N/A – Corner splays are required to allow drivers exiting the site to see oncoming pedestrians.  Due to the urban realm works surrounding the site, the pedestrian activity along the eastern boundary of the site (adjacent to the vehicle access point) is expected to be		



Requirement	Comments	
an adjacent entry or exit lane where more than one lane is provided, or adjacent landscaped areas, provided the landscaping in those areas is less than 900mm in height.	minimal and accordingly it is not considered that this standard is applicable in this instance.  Pedestrians will instead access the development via Kings Place.	
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 6m from the road carriageway.	N/A – Access to the car parking spaces is not from a road in a Transport Zone 2 or Transport Zone 3.	
If entry to the car space is from a road, the width of the accessway may include the road.	<b>N/A</b> – Entry to the car spaces is not directly from a road.	

#### Design Standard 4 - Mechanical Parking

It is proposed to provide a total 23 car parking spaces located within a fully automatic car stacker system which is provided a single-entry cabin. The entry cabin will incorporate a turntable system that enables inbound and outbound vehicles to enter and exit the system on a different alignment, which will facilitate on-site passing.

The general procedure for using the fully automatic car stacker system is outlined below:

#### **INGRESS**

- Vehicles drive into the site and onto the transfer cabin;
- The user departs the vehicle and removes any items;
- The user activates the car stacker system (typically via a conveniently located control panel);
- The turntable rotates the vehicle into the correct position;
- The car stacker system automatically parks the vehicle within the basement (the software built into the system determines the most appropriate location to park each vehicle to reduce the waiting time of the system); and
- The transfer cabin returns to its default position on ground floor ready to park the next vehicle.

#### **EGRESS**

- The user activates the car stacker system to retrieve their vehicle (again, typically via a conveniently located control panel);
- The transfer cabin automatically retrieves the vehicle from its parked position in the basement.
- The turntable rotates the vehicle into the correct position;
- The user enters the vehicle which is presented on the transfer cabin.
- The user drives out of the site onto Cobden Street in a forward direction.

The car stacker data sheet is attached at Appendix A.

Design Standard 4 of Clause 52.06-9 relates to the design of mechanical parking. The requirements of Design Standard 4 are assessed against the proposal in Table 5.2.



Table 5.2: Design Standard 4 Assessment - Mechanical Parking

Requirement	Comments	
At least 25% of the mechanical car parking spaces can accommodate a vehicle height of at least 1.8 metres.	Satisfied – Of the 23 car parking spaces within the proposed stacker system, all (100%) platforms have been designed to accommodate a minimum vehicle height of 2.0 metres.	
Car parking spaces that require the operation of the system are not allocated to visitors unless used in a valet parking situation.	Satisfied - Car stacker spaces will be allocated to staff only.	

#### **Design Standard 6 - Security**

Access to the car stacker system will be secured by a door. It is proposed that the access door remains open during the entirety of the business day. The access door would only be closed outside of business hours for safety reasons.

All car parking spaces will be allocated to authorised and inducted staff from the individual commercial tenancies and remote controls to access the security door will be allocated accordingly. Controls for access to bicycle parking spaces will be coordinated through Owners Corporation and individual tenancies, which may include a pin-operated lock for doors to the bicycle area or a security fob swipe access.

### **5.3 Swept Path Assessment**

An assessment (refer to Appendix B) of the accessibility to/from the site and the transfer cabin was undertaken using the 'Autodesk Vehicle Tracking' software.

The B99 (99.8<sup>th</sup> percentile car) was used in the assessment which demonstrates the site and transfer cabin could be accessed in a satisfactory manner and that cars are able to enter and exit the site in a forward direction.

The assessment indicates that the access arrangements and car parking layout have been designed appropriately and in accordance with the requirements of the Port Phillip Planning Scheme, and/or AS/NZS 2890.1:2004.



# **6.1 Bicycle Parking Requirements – Clause 52.34**

Clause 52.34 of the Port Phillip Planning Scheme lists the bicycle parking requirements for a number of uses. The relevant rates are applied to the development in Table 6.1.

Table 6.1: Statutory Bicycle Parking Requirements - Clause 52.34-3

Use	Rate	Size	Requirement
Office	1 to each 300sqm of net floor area if the net floor area exceeds 1,000sqm for employees	4,502 sqm	15 employee spaces
	1 to each 1,000sqm of net floor area if the net floor area exceeds 1,000sqm for visitors		5 visitor spaces
Total			20 spaces

Accordingly, the proposal has a requirement to provide 20 bicycle spaces, with 14 spaces required for employees and 5 spaces required for visitors.

A total of 32 secure employee bicycle spaces have been provided on-site as follows:

- 18 x spaces within two tier bicycle parking systems in Basement 2; and
- 14 x spaces within vertically hung rails in Basement 2.

This provision exceeds the statutory requirement of the Port Phillip Planning Scheme.

# **6.2 Bicycle Parking Layout**

Bicycle parking spaces have been designed in accordance with the dimensional requirements of AS2890.3:2015 or the manufacturers specifications. More specifically, the following standards have been met:

- Dynamic two-tier horizontal bicycle spaces are spaced at 0.4 metre intervals in accordance with AS2890.3, with an envelope of 2.0 metres and accessed via an aisle with a width of at least 2.0 metres.
- Wall mounted vertical rails are spaced at 400mm intervals, with a minimum envelope width of 1.2 metres and accessed via a minimum aisle width of 2.0 metres.
- The proposed bicycle parking provides 56% bicycle parking spaces within ground level (horizontal rails), which exceeds the requirement outlined in AS2890.3:2015 that 20% of bicycle parking must be provided via ground level rails.

Accordingly, it is considered that the bicycle parking has been designed appropriately and in accordance with the relevant sections of AS2890.3:2015 or the manufacturers specifications.

The bicycle parking specifications have been provided within Appendix C.

# **6.3 End of Trip Facility Requirements**

In addition to bicycle parking, Clause 52.34 requires that showers and change rooms are provided for employee bicycle parking. The rates are applied in Table 6.2.



Table 6.2: End of Trip Facility Requirements – Clause 52.34-3

Component	Requirement	Required Measure	Requirement
Showers	If 5 or more employee bicycle spaces are required, 1 shower for the first 5 employee bicycle spaces, plus 1 to each 10 employee bicycle spaces thereafter.	15 employee spaces	2 showers
Change Rooms	1 change room or direct access to a communal change room to each shower. The change room may be a combined shower and change room	2 showers	2 change rooms (or direct access to a communal change room)

Based on the foregoing, the proposal has a requirement for two showers and two change rooms (or direct access to a single communal change room).

The development proposes to provide three showers on Basement 2 and includes the provision of changerooms.

Accordingly, the proposal exceeds the minimum requirements for end of trip facilities.



### 7.1 Loading Arrangements

Clause 65.01 of the Port Phillip Planning Scheme requires that:

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

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

Loading and unloading activities associated with the development are expected to be relatively infrequent and undertaken by smaller trucks and vans noting the nature of office use.

As discussed in Section 5, as part of the proposed development it is proposed to incorporate a dedicated on-street Loading Zone to the east of the development along Cobden Street, subject to Council approval. The proposed on-street Loading Zone is illustrated in Figure 7.1 below.

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Figure 7.1: Proposed Loading Zone

The recommended on-street Loading Zone is sufficient to accommodate vehicles up to the 6.4 metre long Small Rigid Vehicle (SRV as defined by AS2890.2). This vehicle is anticipated to represent the vast majority of vehicles that would access the site for loading and unloading activities noting the office use nature of the development.

A swept path assessment has been undertaken with the SRV (refer to Appendix B) which demonstrates that this vehicle is able to access Cobden Street via Kings Way, access the on-street Loading Zone, maneouvre using the northern terminus of Cobden Street and depart onto Kings Way in a forward direction.



It was advised within the pre-application notes that Council would not support the use of an on-street Loading Zone. We note that Council held the same position for the application of a nearby office development proposed on the site at 9-11 Palmerston Crescent in South Melbourne, even though that site had the benefit of an existing Loading Zone directly abutting the site.

The application proceeded to VCAT and was ultimately refused on other grounds, but the Tribunal made the following relevant ruling in relation to Council's desire for an on-site loading bay to service a proposed office tower with an office floor area of 4,663sqm across 18 levels:

"I have not been persuaded that it is necessary for a loading facility to be provided on-site for an office building of this scale. As such, I consider it appropriate for the loading requirements of the review site to be provided via on street loading facilities, of which there is one immediately in front of the review site."

If the proposed on-street Loading Zone is not approved, it is considered that there is still typically spare kerbside parking opportunities for waste and delivery vehicles to prop to service the proposed development. Accordingly, it is considered that loading and unloading associated with the proposal can suitably be undertaken off-site.

Noting the constraints of providing an on-site loading bay on the subject site, it is considered that the most appropriate outcome is for loading to be undertaken on-street particularly noting that an on-street Loading Zone could feasibly be provided along Cobden Street.

### 7.2 Waste Collection

Waste is proposed to be stored within the bin storage room provided on Basement 1 of the proposed development.

Waste will be collected from within the proposed on-street Loading Zone by a private waste contractor using the mini-rear loader waste collection vehicle which is 6.4 metres long and 2.08 metres high. The swept path assessment undertaken shows that the nominated waste collection vehicle can access Cobden Street via Kings way, access the on-street Loading Zone to collect waste, maneouvre using the northern terminus of Cobden Street and depart onto Kings Way in a forward direction.

In order to limit conflicts with other vehicles using Cobden Street, it is recommended that waste collection be limited to outside of peak AM and PM commuter traffic periods.

This is considered to be an appropriate arrangement from a traffic engineering perspective.

Refer to the Waste Management Plan prepared by Ratio: Waste for further details.



### **8.1 Traffic Generation**

### Office Traffic Generation

Empirical evidence collected by Ratio Consultants demonstrates that commercial office developments located in inner city locations with good access to public transport services generate parking at a rate given below:

- 2 vehicle trips per parking space per day; and
- 0.38 vehicle trips per parking space in the AM peak hour and 0.43 vehicle trips per parking space in the PM peak hour.

It is expected that the office trips would be mainly arriving in the morning peak and departing in the afternoon peak.

Accordingly, the peak hour traffic generation of the development is shown in Table 8.1.

Table 8.1: Traffic Generation

	AM Peak	PM Peak
Arriving trips:	9	1
Departing trips:	$O^1$	9
Total trips:	9	10

### 8.2 Traffic Distribution & Impact

The traffic generated by the proposed commercial development will flow directly onto Cobden Street followed by Kings Way and then the surrounding road network. The projected peak hour movements of 9 to 10 vehicle trips per hour is equivalent to one vehicle movement every 6 to 6 minutes on average.

This relatively modest level of additional traffic would be imperceivable in the context of the current level of traffic carried by Kings Way. Given that Kings Way is limited to left-in / left-out vehicle movements, it is considered that this level of traffic can be accommodated by Kings Way and the surrounding road network in a safe and suitable manner.

### 8.3 Queueing Assessment

### **Queueing Arrangement**

The development has been designed with one dedicated waiting bay for inbound vehicles at all times throughout the day, and with one additional on-site waiting bay during the critical AM peak period (i.e. two waiting bays during the critical AM peak period).

This additional waiting bay has been achieved by using the space that is used for departing vehicles throughout the remainder of the day (i.e. outside of the critical AM peak period). The system will be configured to ensure that employees are physically unable to depart the system during the critical AM peak period (e.g. 7:00am to 9:30am). Confirmation has been sought from the intended car stacker manufacturer (Wohr) that this arrangement is feasible. The car stacker will include an electronic LED



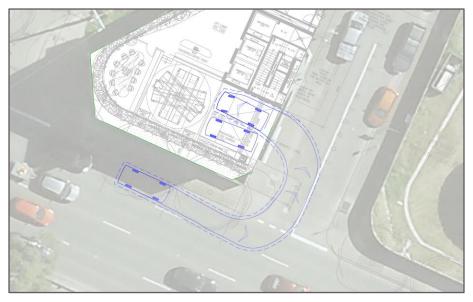
<sup>&</sup>lt;sup>1</sup> As discussed in Section 8.3, the system is proposed to restrict the ability for vehicles to depart the system during the critical AM peak period.

sign system and detector loop system which directs vehicles to the correct position during the critical AM peak period.

It is recommended that a Car Parking Management Plan (CPMP) be prepared for the development which details the operation of the fully automatic car stacker system.

The waiting bay arrangement is illustrated in Figure 8.1, with a full swept path assessment demonstrating the functionality of this system attached in Appendix B.

Figure 8.1: Revised Car Parking Arrangement



### **AS/NZS2890.1 Queuing Assessment**

Clause 3.5 of AS/NZS2890.1:2004 requires that mechanical parking installations, such as fully automatic car stackers, be designed so that sufficient vehicle storage is provided to ensure that queues of vehicles waiting for the system do not extend beyond the property boundary.

It requires that the storage area be designed to accommodate the 98th percentile queue during normal peak conditions with mean service rates. The queue length analysis method outlined in the AustRoads Guide to Traffic Management Part 2: Traffic Theory was used to determine the 98th percentile queues that would be expected to be associated with the traffic using the car stacker systems.

The key inputs to this analysis are the 'service rate', which relates to the time it takes the system to process a vehicle during a given cycle and the 'arrival rate', which relates to the rate of vehicles entering or departing the system.

These inputs are discussed in more detail below.

### **Arrival Rate**

The critical period in terms of the potential queuing impacts on the surrounding road network is the morning peak period when the development will receive the highest levels of inbound traffic. This is due to most employees arriving at work during this time.

The arrival rate to the car lift during the critical morning peak hour period is nine vehicles per hour (23 car spaces multiplied by an AM peak hour



traffic generation rate of 0.38 vehicle movements per car space, as noted earlier in this report).

### **Service Rate**

During the peak hour periods, the service rate represents the time it takes for: a vehicle to drive into the transfer cabin, the user to depart the car and remove anything from the vehicle (luggage, help passengers depart the vehicle, etc), the user to activate the car stacker system, the car to be placed within its shelf position and the time taken for the transfer cabin to return to its original position at ground level.

Based on information provided by the intended car stacker manufacturer, it is understood that the fully automatic car stacker system has the capacity to process 24 vehicles per hour in, equating to a service time of 150 seconds per cycle.

During the critical morning peak hour period, it is estimated that there will be nine inbound vehicles. As discussed, the system will restrict any outbound movements during the critical morning peak.

### **Queuing Analysis Results**

On the basis of the service and arrival rates discussed above, a queueing analysis has been undertaken using the queue length analysis method outlined in the AustRoads Guide to Traffic Management Part 2: Traffic, to determine the 98th percentile queues that would be expected to be associated with the fully automatic car stacker system.

A total of three vehicles can be queued within the boundaries of site, including one vehicle within the transfer cabin itself and two vehicles within the dedicated waiting bays on ground floor.

The results of the queuing analysis are presented in Table 8.2.

Table 8.2: Queuing Analysis Results

Output	Result
Average number of vehicles queued	0.21 vehicles
98 <sup>th</sup> percentile queue	3 vehicles

Based on the results in Table 8.2, it can be seen that the 98<sup>th</sup> percentile queue test required by AS/NZS2890.1:2004 is three vehicles. Given that three vehicles are able to be queued within the boundaries of the site (one vehicle within the system and two vehicles within the dedicated waiting bays), the car parking arrangement is in <u>strict accordance</u> with the queuing requirements of AS/NZS2890.1:2004.

### **Additional Queueing**

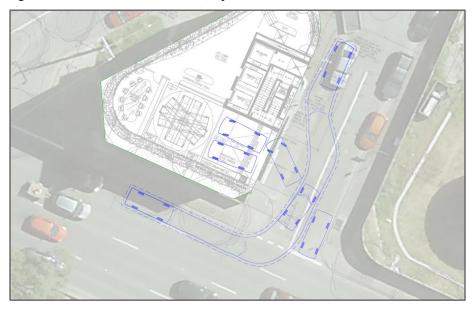
It is also noted that one additional vehicle could queue in front of the entrance to the site (primarily over the proposed crossover and only partially within the carriageway of Cobden Street) and this level of queueing would not adversely impact traffic associated with the proposed development on the opposite side of Cobden Street or moving traffic along Kings Way.



This scenario represents approximately the top 99.5% of all vehicle queues that would form and there would only be a very small proportion of queues (approximately 0.5%) that would extend beyond this.

This additional queue is shown in Figure 8.2.

Figure 8.2: Additional Vehicle Queue (Beyond the 98th Percentile)



Given the relatively modest level of traffic expected to be generated by the proposed development (9 inbound vehicles in the AM peak hour) and the ability to cater for the 98<sup>th</sup> percentile queue on-site during AM and PM peak times (and even the rare 99.5%ile queue within the crossover and minor overhang back into Cobden Street) it is considered that the traffic activity generated by the proposed development can be accommodated by the current 'open' configuration of Cobden Street as well as the future 'closed' configuration of Cobden Street.

In addition, the level of traffic generated by the proposed development will not adversely impact traffic conditions at the Cobden Street/Kings Way intersection for existing and future traffic conditions irrespective of whether Cobden Street remains open or is closed in the future as part of Council's proposed 'Domain Precinct Public Real Master Plan' works.



It is proposed to construct a 19-storey commercial development on the subject site located at 313-317 Kings Way, South Melbourne. The development will comprise of 17 levels of office use comprising 4,502sqm. A total of 23 car parking spaces are proposed within a fully automatic car stacker system accessed via Cobden Street. A total of 32 bicycle parking spaces are proposed on-site.

Based on the assessment undertaken above, the following conclusions have been reached:

### **Car Parking Provision**

The provision of 23 car parking spaces for the proposed development is considered to be satisfactory for the following reasons:

- The site is located close to several sustainable transport alternatives such as tram routes, bus routes, bicycle and pedestrian facilities and car share vehicles. This will enable users of the proposed development to travel to and from the site using sustainable modes of transport and reduce the demand for car parking.
- The generous provision of bicycle parking and end of trip facilities will encourage the use of alternative transport modes and reduce the reliance on private vehicle use.
- Staff car parking demands are often a function of supply and in locations where on-street parking is constrained by parking restrictions, staff typically elect to utilise alternate transport modes (noting that the subject site has very good access to alternate transport modes). Accordingly, the staff car parking demand is anticipated to be limited to the level of on-site car parking provision, unless staff choose to pay for the on-street ticketed parking.
- The short-term on-street parking restrictions will ensure any shortterm visitors to the area are able to find a parking space within close proximity to the subject site even during periods of peak activity.
- The development helps to achieve the objectives sought by Local Policy by reducing the dependence on private motor vehicles.
- The size and geometry of the site limits the ability to provide any additional car parking on-site.
- The applicant has committed to the preparation of a Green Travel Plan (GTP) for the development.

### **Vehicular Access and Car Parking Layout**

- Vehicular access is to/from the site is proposed via a crossover located 5.0 metres to the north of Kings Way.
- The proposed 23 car parking spaces within the car stacker system have been designed in accordance with the requirements of the Port Phillip Planning Scheme.
- Swept path assessments demonstrates that the site and transfer cabin of the car stacker system can be accessed in a satisfactory manner.

### **Bicycle Parking Provision & Layout and End of Trip Facilities**

The development proposes a provision of 32 bicycle parking spaces on-site to cater for the needs of the future users of the proposed development. This provision of bicycle parking spaces exceeds the statutory requirements of Clause 52.34 of the Port Phillip Planning Scheme and will encourage cycling as a mode of transport to and from the site.



- The bicycle parking layout has been designed in accordance with the Australian Standard AS2890.3:2015 or manufacturers specifications and is considered satisfactory.
- The provision of three showers and change rooms within Basement 2 is considered satisfactory.

### **Loading and Waste Collection Arrangements**

- Loading and unloading activities associated with the proposed uses on site will predominantly be undertaken by vans and smaller trucks.
   It is considered that loading activities can suitably be undertaken onstreet and the preference would be within the proposed on-street Loading Zone along Cobden Street.
- Waste is proposed to be collected by a private waste contractor from within the proposed on-street Loading Zone along Cobden Street.

### **Traffic Generation and Impact**

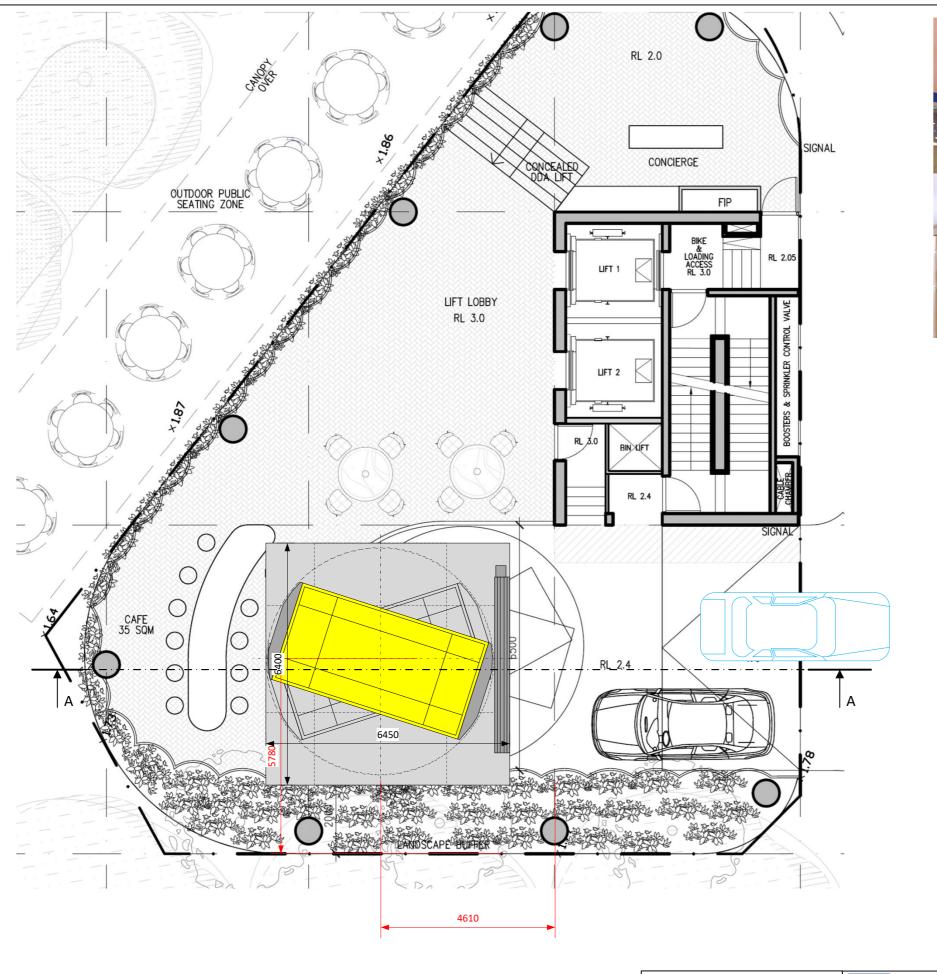
- The development is expected to generate in the order of 9-10 vehicle movements (one vehicle every six to seven minutes) on Cobden Street and subsequently Kings Way.
- Queuing associated with the fully automatic car stacker system is considered to be appropriate and is in strict accordance with the queuing requirements of AS/NZS2890.1:2004.
- The modest level of traffic generated by the proposed development will not adversely impact traffic conditions at the Cobden Street/Kings Way intersection for existing and future traffic conditions irrespective of whether Cobden Street remains open or is closed in the future as part of Council's proposed 'Domain Precinct Public Real Master Plan' works.

On the basis of the assessment above, the proposed development is considered to be acceptable from a traffic engineering perspective and will not create any adverse traffic or parking impacts in the area.

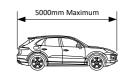


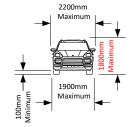
# Appendix A Car Stacker Data Sheet











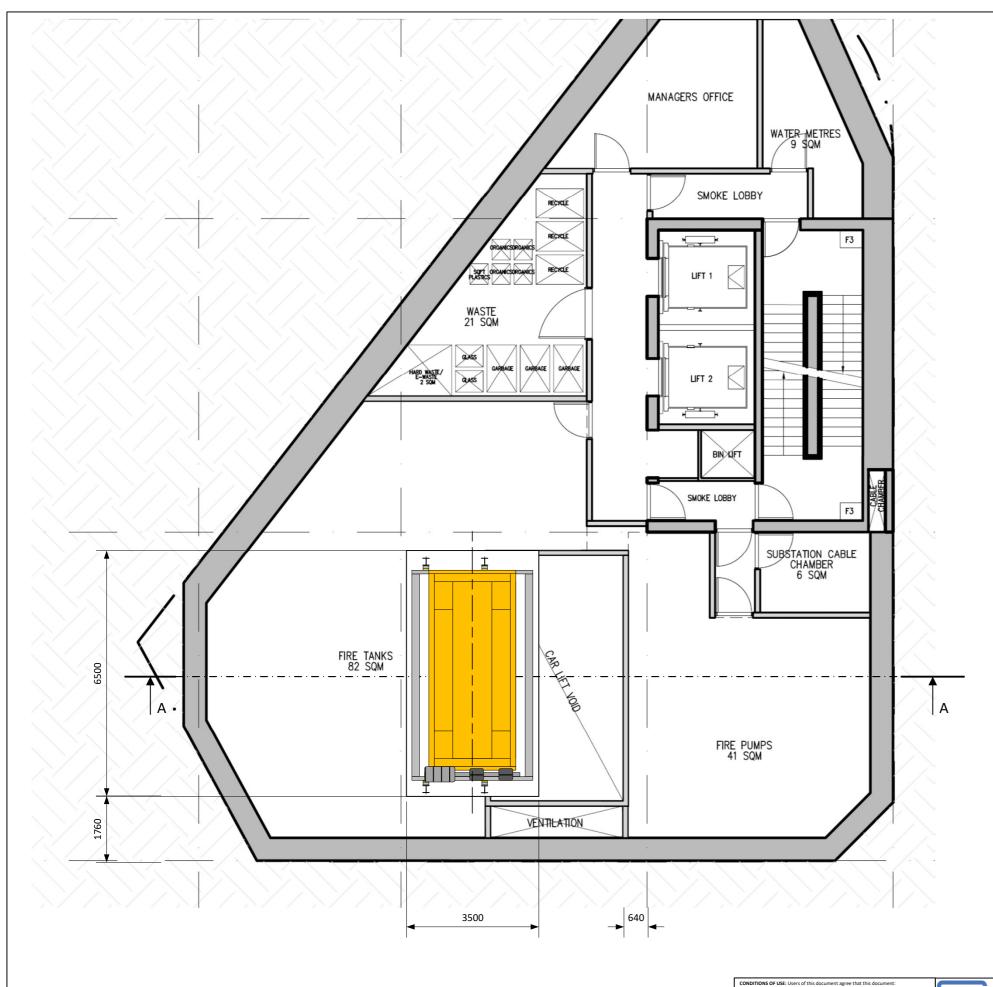
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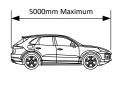
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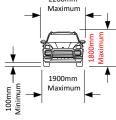
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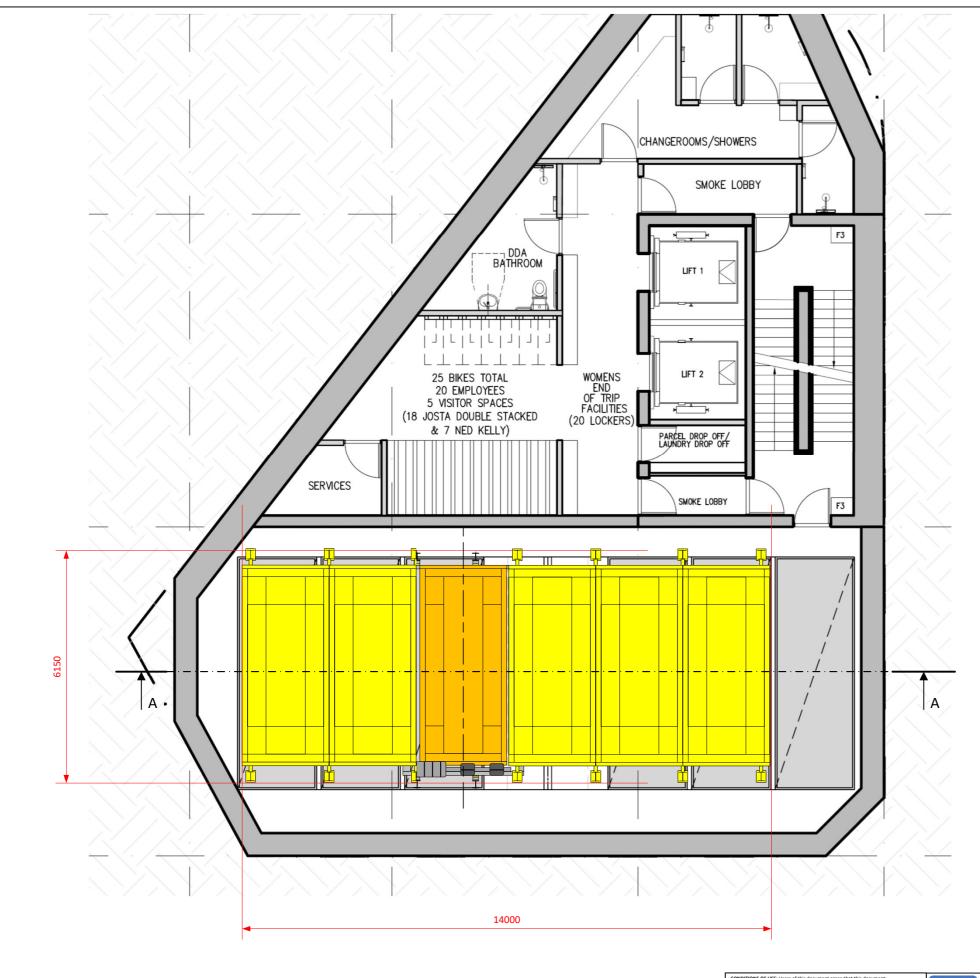


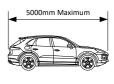
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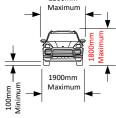
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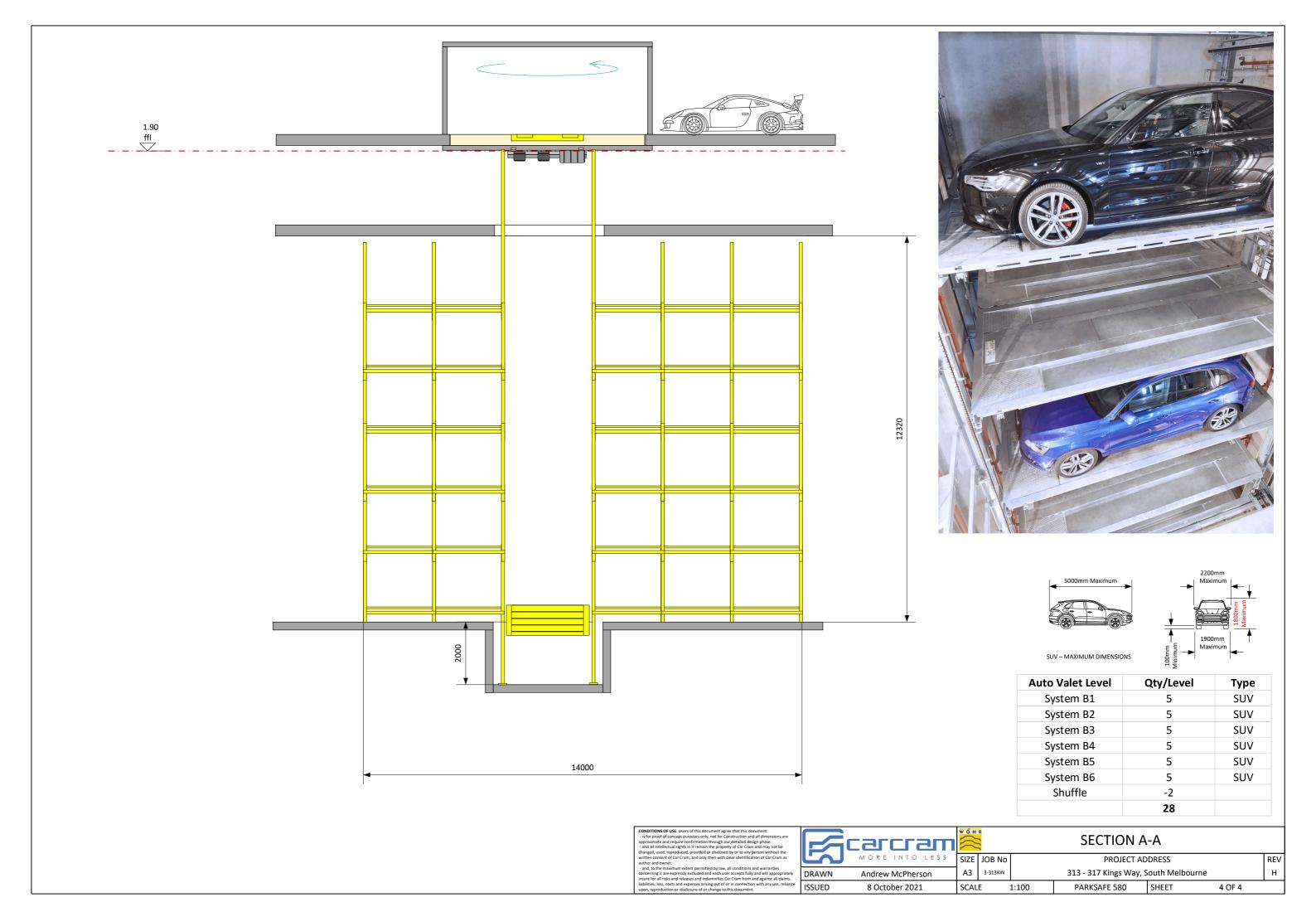
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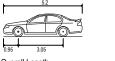


# Appendix B Swept Path Assessment





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



**Swept Path Assessment** 

NOTE: 1) Base Plan Suppli
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 Maximum Design Speed 10km/h

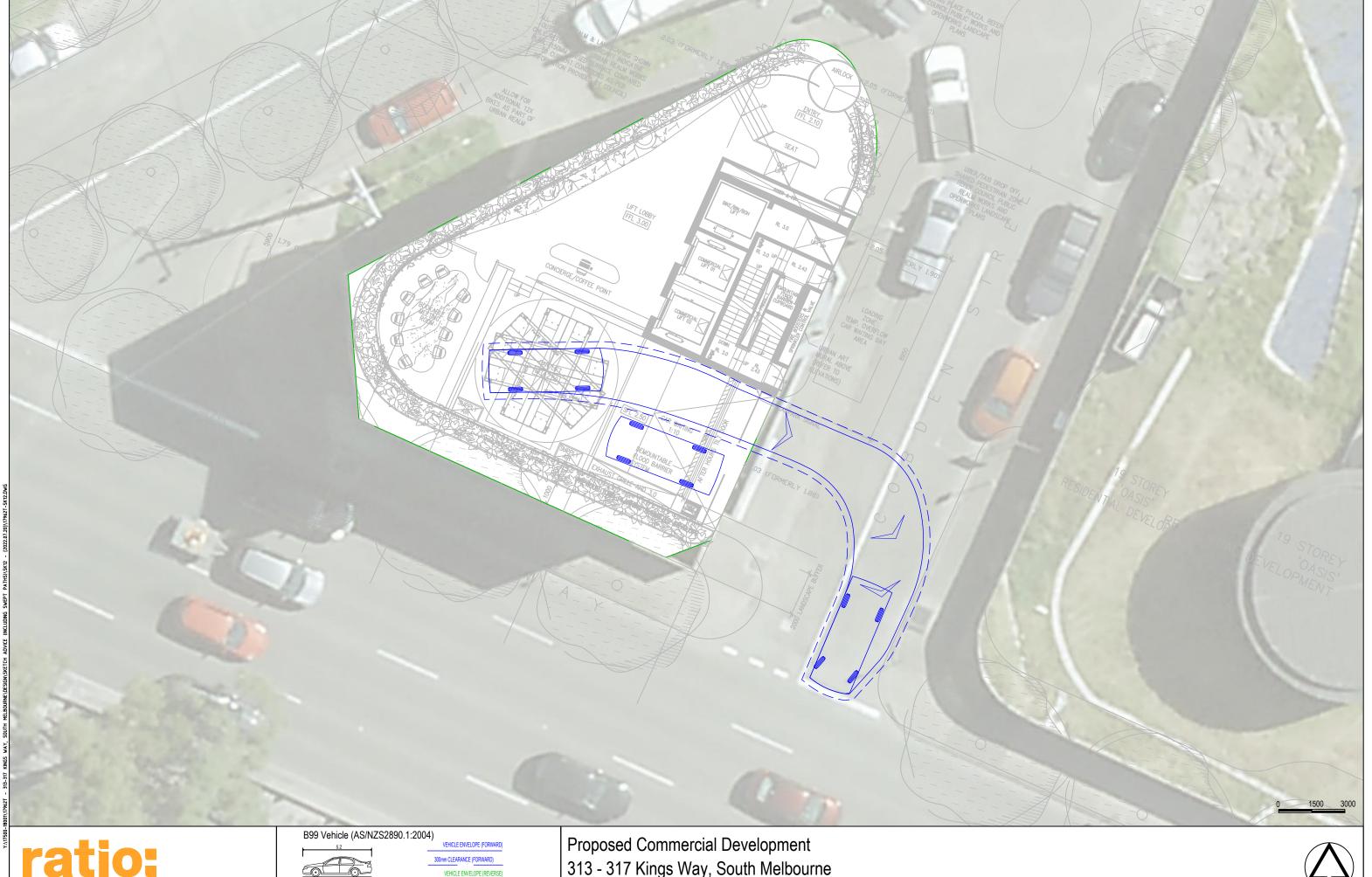
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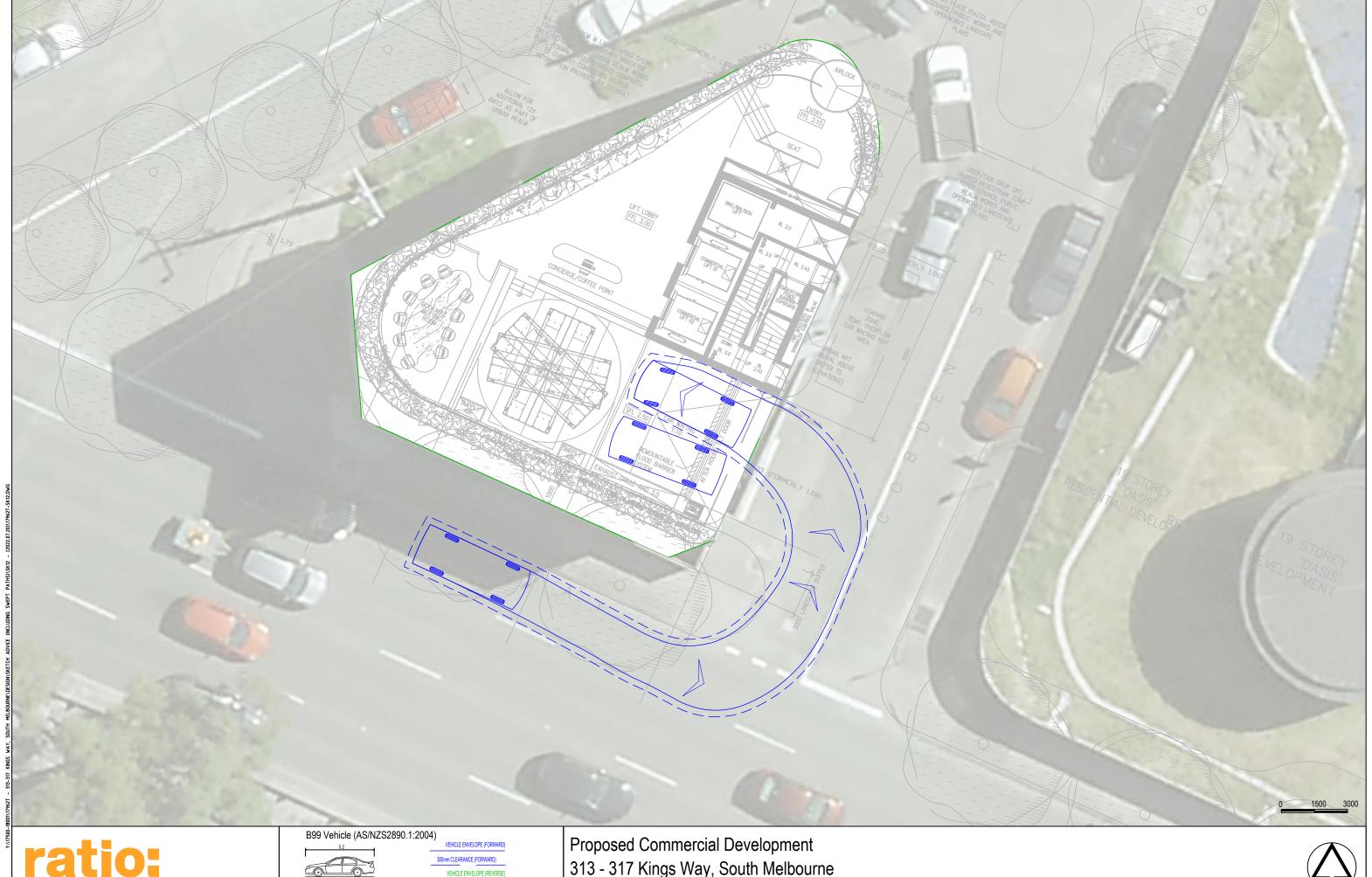
313 - 317 Kings Way, South Melbourne Swept Path Assessment

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2) Maximum Design Speed 10km/h

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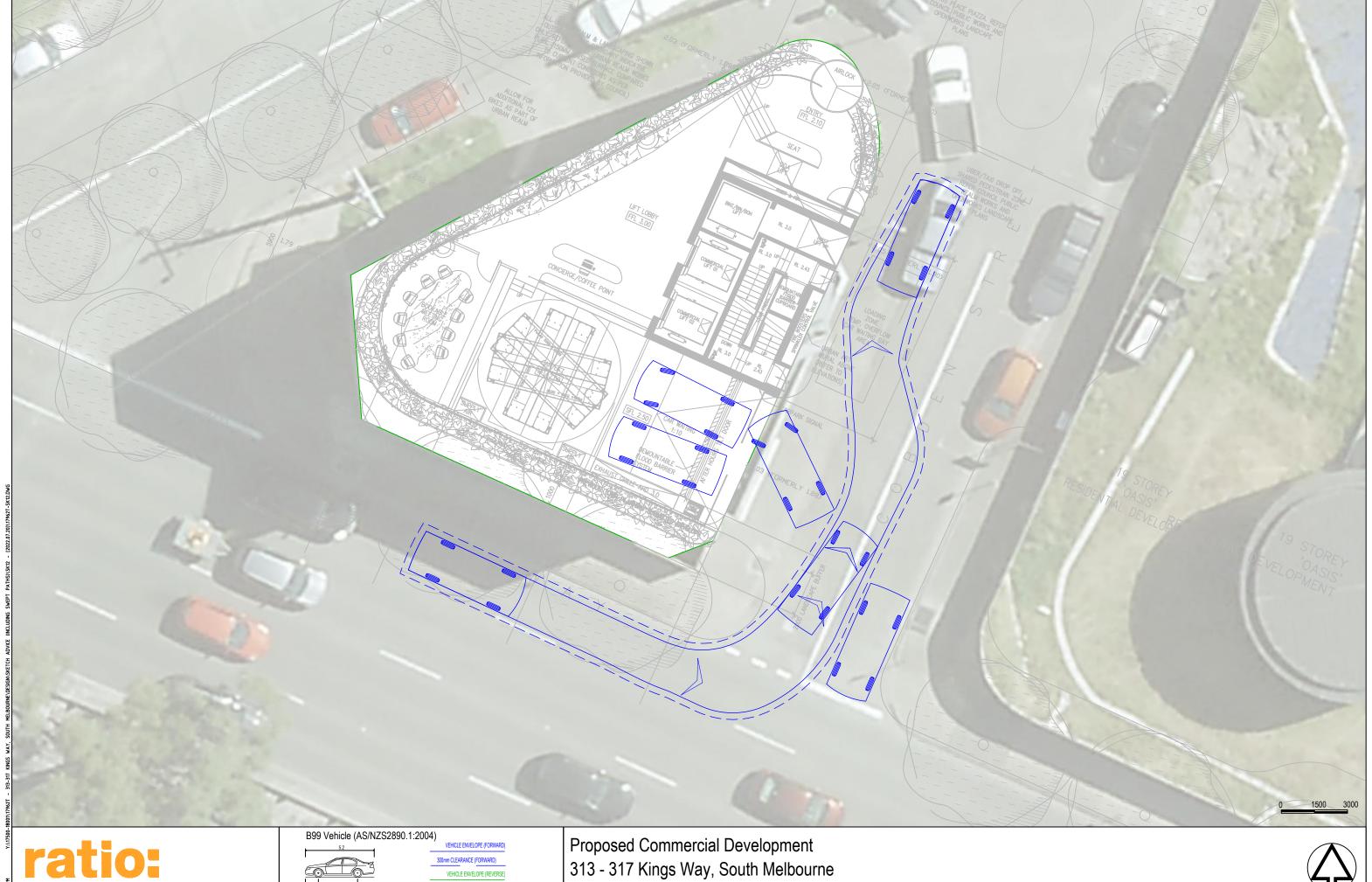
313 - 317 Kings Way, South Melbourne Swept Path Assessment

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2) Maximum Design Speed 10km/h

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Swept Path Assessment

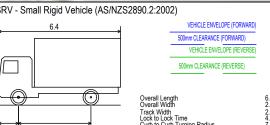
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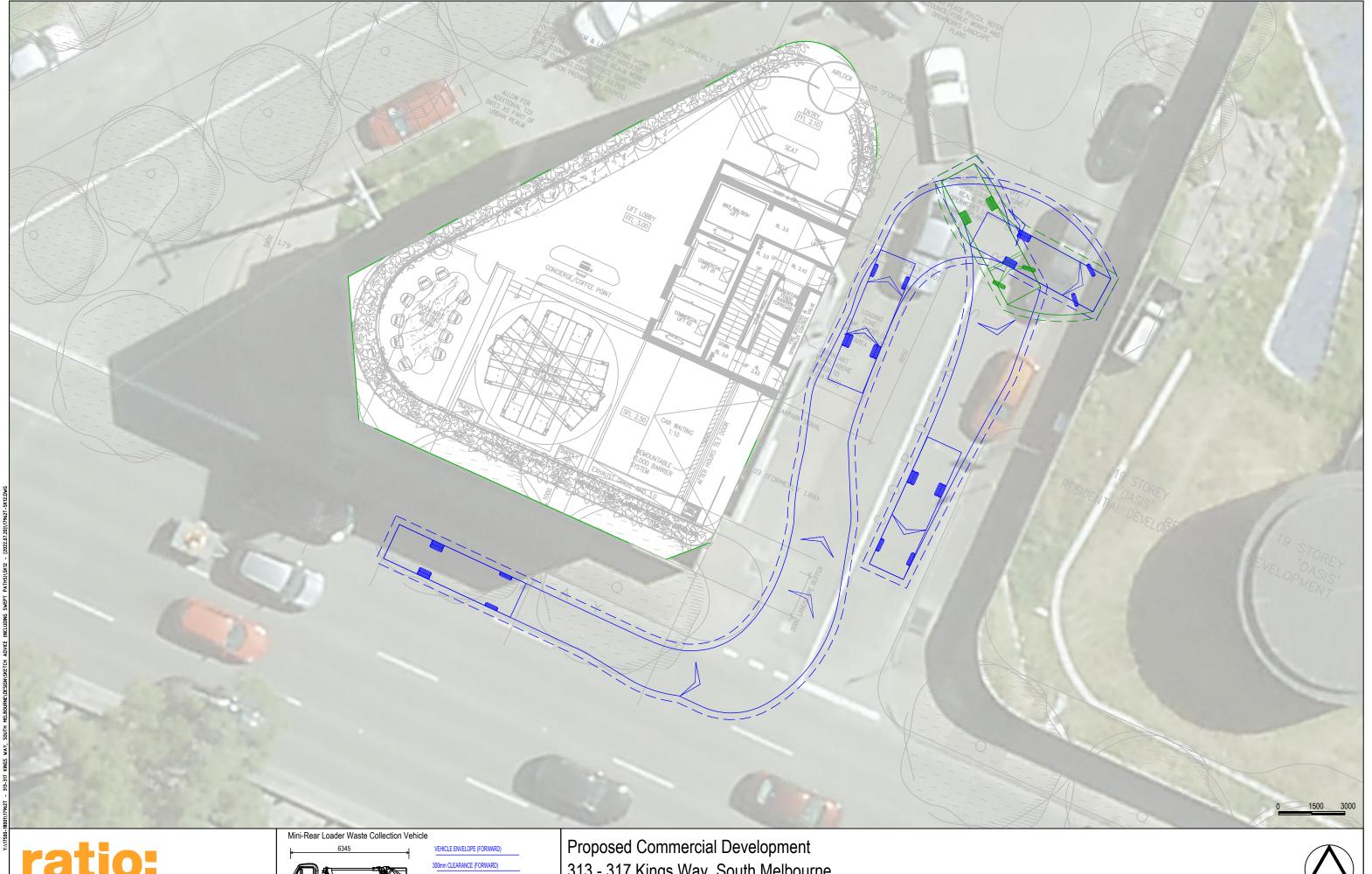
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RATIO REFERENCE 17962T-SK12

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313 - 317 Kings Way, South Melbourne Swept Path Assessment

NOTE:
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2) Maximum Design Speed 10km/h

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# Appendix C Bicycle Parking data Sheet





The Cycle Storage Specialists

# Product Guide & Case Studies

# Josta 2-tier





The Cycle Storage Specialists

# Josta® 2-tier High Capacity Racks





### The market leaders in high capacity bicycle racks, offering space efficient and cost-effective cycle storage.

- Double the capacity of bicycle storage spaces
- Easy and safe to use with a proven track record in the UK, Europe, Australia and the USA
- Space efficient
- Flexible and adaptable
- Neat and organised
- Individual racking one bike per space

- Low maintenance
- Patented gripping system holds bike securely
- Maximises cycle parking spaces, and allows more car parking (if required) or creates space for other uses
- The racks can be used to help demonstrate compliance with BREEAM and achieve a high BREEAM rating.
- Framework can be coloured in any standard RAL colour

There are many unique features of the Josta® racks, including the low, easy to use handles, the clever, patented way the bikes are held on the racks, and the general ease of use.

They are also designed for a long, tough life of constant heavy use, with low maintenance. However, the most important factor is always safety, and the Josta® racks are very safe to use. This is a particularly important feature for heavy bikes.





### Liverpool Street Station, London

London Liverpool Street station more than doubled its awkward bike parking in a limited space, from 80 too 189, with the Josta® 2-tier racks.

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The Cycle Storage Specialists

# Josta® 2-tier High Capacity Racks

### Innovative unique features



### Wheel Gripping Mechanism

A special, patented gripping mechanism ensures that the bike cannot roll back and injure the user. As the bike is pushed into the rack the mechanism gently clamps around the front wheel. As as you push the bike up the channel the front wheel is released and then back wheel is clamped securely into place.

The mechanism is very well designed and fabricated, so that if an extended rack containing a bike should be accidentally dropped the bike will be securely held in place, causing no harm to user or bike. The Josta® 2-tier rack is the only 2-tier system to offer this type of safety feature.



### Movable Security Bar

The Josta® 2-tier rack comes with a movable high security galvanised mild steel security bar as standard. The bar is positioned at the rear of the rack in the optimum location to securely lock the rear wheel and bike frame.

When the rack is not is use the security bar is lowered down, lying parallel to the rack. It is the feature that allows the bike to be easily pushed up the channel without any obstructions for the pedals.



### Pivoting Channel

The central channel that holds the bike is built around an extending, pivoting channel. It is this feature that utilises a 'sweet spot' for pivoting, allowing a full rack to be very easily lifted up and pushed back into pace.

The strong box section, galvanised mild steel construction and precision engineering all ensure that this product has an extremely long and low maintenance life.

### Code for Sustainable Homes

All our lockers, shelters and racks they can be used to help contribute towards gaining your 2 ENE8 Cycle Storage Credits when used in an appropriate situation, under the Code for Sustainable Homes.

### Gas Assisted

Josta® have developed a new 'gas cylinder' model that makes lifting and lowering the racks even easier. The strong gas strut is built into the middle of the top rack, in a unique design, This means there are no moving parts to catch fingers, etc, and the whole structure is modern and stylish. 2700mm headroom needed for G.A. racks.



### **BREEAM**

All our lockers, shelters and racks they can be used to help demonstrate compliance with BREEAM and achieve a high BREEAM rating when used in an appropriate situation.

more info





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The Cycle Storage Specialists

# Josta® 2-tier High Capacity Racks

## The Josta® 2-tier rack is a high capacity double decker bicycle rack.

Josta® is the market leader for high capacity racking systems. The racks are popular across Europe, the USA and Australia. Many bike stations in Germany, Holland and the US specify the Josta® rack as standard. Cycle-Works are the UK's exclusive distributor of the Josta® 2-tier rack system and have extensive experience of cycle parking including shelters, compounds, racks and bike lockers.

The Josta® 2-tier sites range from small open access installations of less than 80 bike spaces (e.g. Surbiton station) to large manned cycle parks of 7000 (e.g. Leiden, NL). They are also increasingly used in the basements of new office blocks and apartments (e.g. The prestigious Foster's Albion Riverside development in Battersea).

## Why the Josta® rack is the market leader in high capacity bike parking

This space efficient racking system stores one bike directly above the other. It therefore increases the amount of bicycles parked (or reduces the size of the site) by up to 50%.

The rack is custom made for specific sites to maximize the cycle parking capacity, and can be used in conjunction with other systems.

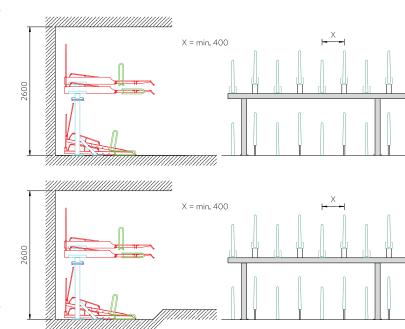
A special, patented gripping mechanism ensures that the bike cannot roll back and injure the user. We find the top racks are usually filled first as users like to store their bike 'out of harm's way'. It is also easier to lock the bike when on the top rack. This usually leaves enough space in the bottom row for users who do not wish to use the top row.

### **Layout and Space Requirements**

This racking system can be designed to fit your exact space. It can be used in conjunction with our other cycle parking systems to give the maximum capacity for your site.

### Mounting/Installation

A level concrete base is usually required. This racking system is then installed by our team of experienced installers. Special supports for non-concrete sites with strong level surfaces can be supplied for a small additional charge.



### Site Planning

We are happy to give advice or assist you with your site planning. For this, please let us have a site plan (DWG or PDF format), clearly marked with all relevant dimensions, obstacles and access ways. Please see the next page for a guide on designing a site yourself.

Please contact us to obtain DWG files of the product layout.

### Locking mechanisms and options

A security bar allows the cyclist to lock the bike frame and wheels with their own chain or D-lock. The front wheel and frame can also be locked easily.

### Delivery

The current lead time is 4-8 weeks, but larger projects can require more than this. It is really beneficial if Cycle-Works are involved in the site planning as soon as possible.

### Material options

These racks are usually galvanised with a red handle on the top racks, the framework can be powder coated in any standard RAL colour.

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w cycle-works.com











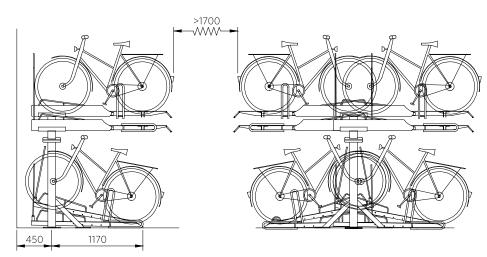


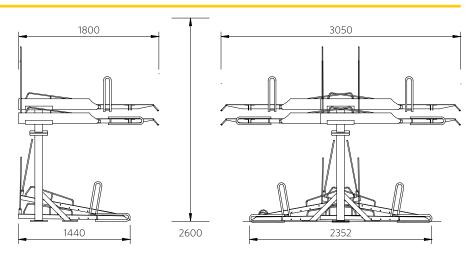
The Cycle Storage Specialists

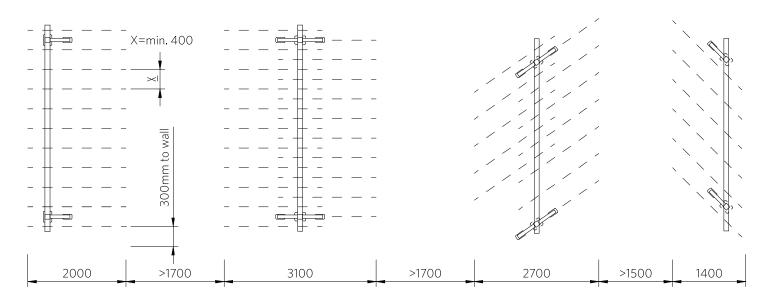
# Josta® 2-tier High Capacity Racks

### Site Requirements

- The headroom is the most important factor for this racking system.
   A minimum of 2600mm is required for maximum capacity.
- Leave 300 to any adjoining side wall to give space for the handlebars.
- The racks are then spaced at a minimum of 400mm apart.
   We have found 450mm to be a good planning spacing, giving capacity as well as ensuring ease of use.
- Please allow 2000mm for the rack itself, plus a minimum of 1700mm in front for access. This access space can be used by the next row as well.
- The racks can also be installed from a central spine. For this option, please leave 2000mm for access on both sides. The 2-sided unit is then 3100m wide.
- Racks can also be installed at a 45 or 55 degree angle to minimise space.







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The Cycle Storage Specialists

# Josta® 2-tier High Capacity Racks

### Store and retrieve your bike in four easy steps

### Loading your bike on to the upper racks



1. Pull down the upper rack.



2. Lift the front wheel onto the lowered rack and push forwards.

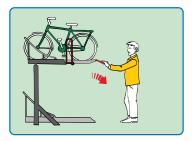


3. Raise the locking bar and lock the bike to it.



4. Lift the rack back into the horizontal position

### Unloading your bike from the upper racks



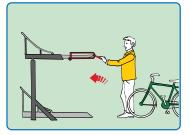
Pull down the upper rack, the bike will lower slowly towards you



2. Unlock the bike and lower the locking bar



3. Hold the bike and guide backwards towards you



4. Return the upper rack to its original position

### **Shelters**

Cycle-Works can also provide a range of quality shelters and compounds to complement the Josta® 2-tier rack. These can be customised as required.

### Shelter height

2700mm recommended 2600mm minimum



Higher Kennet, East Croydon train station



Higher Solent, Euston train station



Medway Shelter, St George's Hospital



Medway Compound, St George's Hospital



Berlin Lockable Compound

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- w cycle-works.com









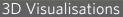


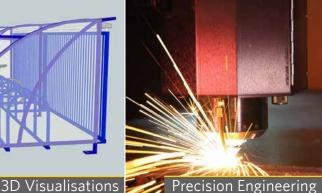


The Cycle Storage Specialists

# cycle-works







Powder Coating



Professional Installation



Commercial / Residential



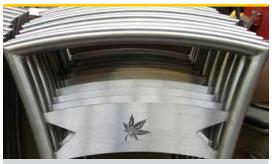




### **About Cycle-Works**

Cycling is our passion. We believe that cycling is good for people, good for society and good for the environment. This belief underpins everything we do. We believe that the provision of quality facilities will increase the use and acceptance of the bicycle.

All our employees and associates cycle regularly in diverse disciplines such as commuting, touring and long distance audax rides. We are active in both local and national cycle campaigning.



### **Our Products**

- Individual bicycle lockers
- High capacity 2-tier racks
- Open access and lockable shelters
- Wide range of individual racks
- Vertical and horizontal racks



### **Our Services**

- Initial site visits
- Advice on product selection
- Consultation on your plans
- Full delivery and installation
- Aftercare and maintenance















## cycle-works The Cycle Storage Specialists

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# **Ned Kelly**™





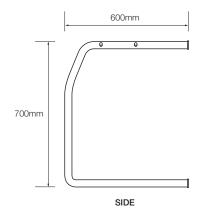
Black powder coat finish

### **Features**



- Each rail provides storage for a sinale 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

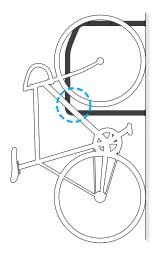
### Recommended fasteners - framing

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

### **Dimensions**

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

### **Locking Points**



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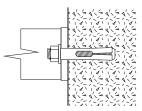


### DESIGN. SUPPLY. INSTALL.

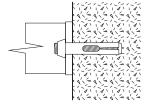
TAS 210 Collins Street, Hobart TAS 7000 NT Suite 5, 18-20 Cavenagh Street, Darwin 0800

### **Fixing options**

### Fix to a wall using 4x fasteners or Shear Nuts

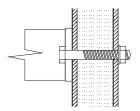




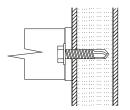


Shown with M8 x 40mm Shear Nuts

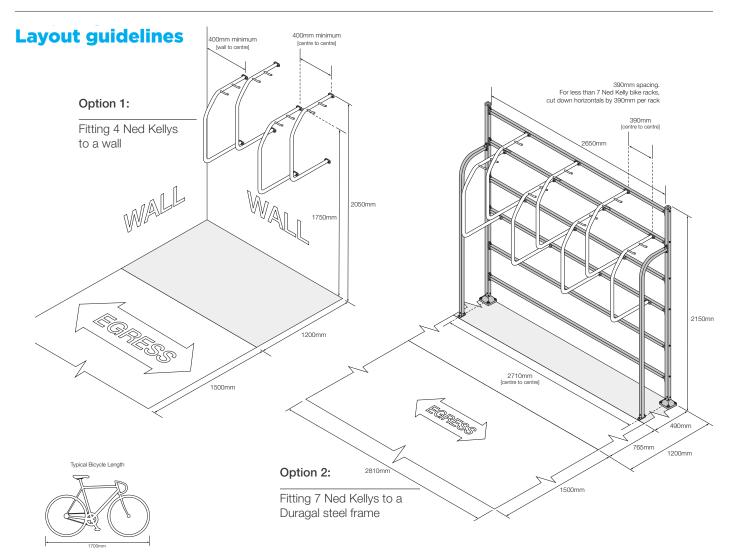
### Fix to a frame using 4x bolts or Tek Screws



Shown with M10 x 60mm Bolt, Washer & Nut



Shown with Tek Screw



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