Traffix Group

Traffic Engineering Assessment

Proposed Mixed Use Development

427 Albert Street, Brunswick

Prepared for
HIP V. HYPE

October 2024

G33113R-03A

Level 28, 459 Collins St
MELBOURNE VIC 3000

Office 38, L4/60 Moorabool St
GEELONG VIC 3220

Traffix Group Pty Ltd
ABN: 32 100 481 570

T: 03 9822 2888
traffixgroup.com.au

Document Control

Our Reference: G33113R-03A

Issue No.	Type	Date	Prepared By	Approved By
A	DFP Preliminary Submission	03/10/2024	J. Mitropoulos	M. O'Shea

AS/NZS ISO 45001-2018 Occupational Health & Safety Management Systems
AS/NZS ISO 14001 Environmental Management Systems
AS/NZS ISO 9001-2016 Quality Management Systems

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1. Introduction

Traffix Group has been engaged by HIP V. HYPE to undertake a traffic engineering assessment for a proposed mixed use development at 427 Albert Street, Brunswick.

2. Proposal

The proposal is for a mixed use development on the site as set out in the following table. A copy of the development plans prepared by Austin Maynard Architects are attached at Appendix A.

Table 1: Development Summary

Characteristics	Description		
Uses	**Size/No.**	**Car Parking**	**Notes**
Dwellings: One-bedroom Apt. Two-bedroom Apt. Three-bedroom Apt.	 16 37 8	40	Parking rates: 0.66/dwelling
Shop	95m^2	None	N/A
Office (2 tenancies)	455m^2	None	N/A
Car Parking Provision		40 car spaces	Located within stacker system at basement level
Bicycle Parking Provision		147 bicycle spaces	127 residential spaces 20 commercial spaces

	The development provides bicycle parking as follows:
	• Residents: 106 spaces
	  ○ Distributed over upper levels within communal corridor areas
	• Residential Visitors: 21 spaces
	  ○ 5 at ground near easter core also distributed over upper levels within communal corridor areas
	• Commercial Staff: 20 spaces
	  ○ Secure room at Basement 1 including 10 horizontal spaces, 8 vertical spaces and 2 cargo bicycle spaces.
	Bicycle parking is provided via a combination of two-level stacker units, floor mounted rails and wall mounted vertical rails.
	End of Trip facilities are provided for staff at Basement 1 and include showers and changeroom facilities.		

Characteristics	Description
Other	**Notes**
Vehicle Access	5.5m wide crossover to Albert Street
Changes to on-street parking	Net loss of 1 on-street car space as a result of street trees
Car Parking	Car Parking is provided via a mechanical car stacker system. A total of 40 car parking spaces are provide via a Klaus Trendvario 6300 Semi-Automatic System. All car parking spaces are independently accessed and will be allocated to dwellings.
Electric Vehicle (EV) Facilities	An EV charging bay is provided at basement level.
Loading Provision	Loading is proposed on-street.
Waste Collection	On-site within basement via private contractor using 6.4m Hino mini-waste truck. Adequate turn around space for the nominate vehicle is available.

3. Existing Conditions

3.1. Subject Site

The subject site is 427 Albert Street, Brunswick. The table below summarises the key characteristics of the subject site.

Table 2: Subject Site Description

Characteristic	Description
Address	427 Albert Street, Brunswick
Area	1,190m^2 (approx.)
Frontages	60m (approx.) to Albert Street 80m (approx.) to Clifton Park West
Zoning	Mixed Use Zone – Schedule 1 (MUZ1)
Activity Centre	Core Industrial and Employment Precinct, and Brunswick Central Parklands

Characteristic	Description
Current use of site	Single storey building tenanted by: Trimark – Clothing Store Creative Kitchen Workshop – Kitchen Remodelling The existing land uses are typically, industry and warehouse. The existing building includes an overall floor area of approximately 940m^2.
Car parking and loading provision	No on-site car parking is provided in association with the existing building and land uses. Vehicle access to the site is provided through various crossovers and roller doors to Albert Street.
Vehicle access	Double width crossover to Albert Street at the western boundary of the site Single width crossover to Albert Street near the western boundary of the site Single width crossover to Albert Street at the eastern boundary of the site
On-street parking along site frontage	6 x Unrestricted car spaces along the site's frontage to Albert Street

A locality plan, aerial photograph and land use zoning map is provided at Figure 1 to Figure 3.

Significant nearby land uses include:

- **Clifton Park** located immediately north of the site.
- **Gilpin Park** located opposite the site on Albert Street.
- **Sydney Road Activity Centre** located approximately 1km east of the site.

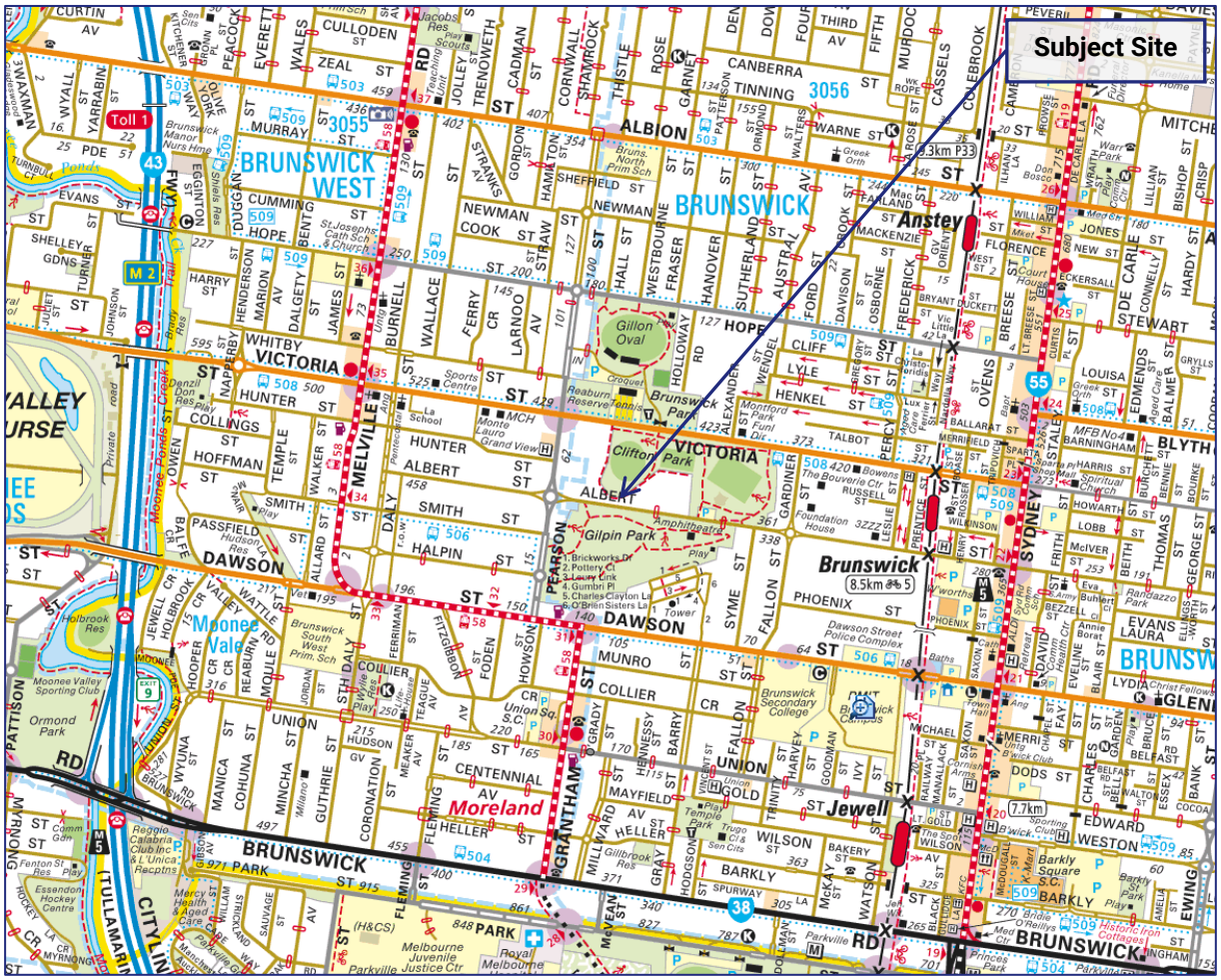


Figure 1: Locality Plan (Source: Melway)

Figure 2: Aerial Photograph (Source: MetroMap)

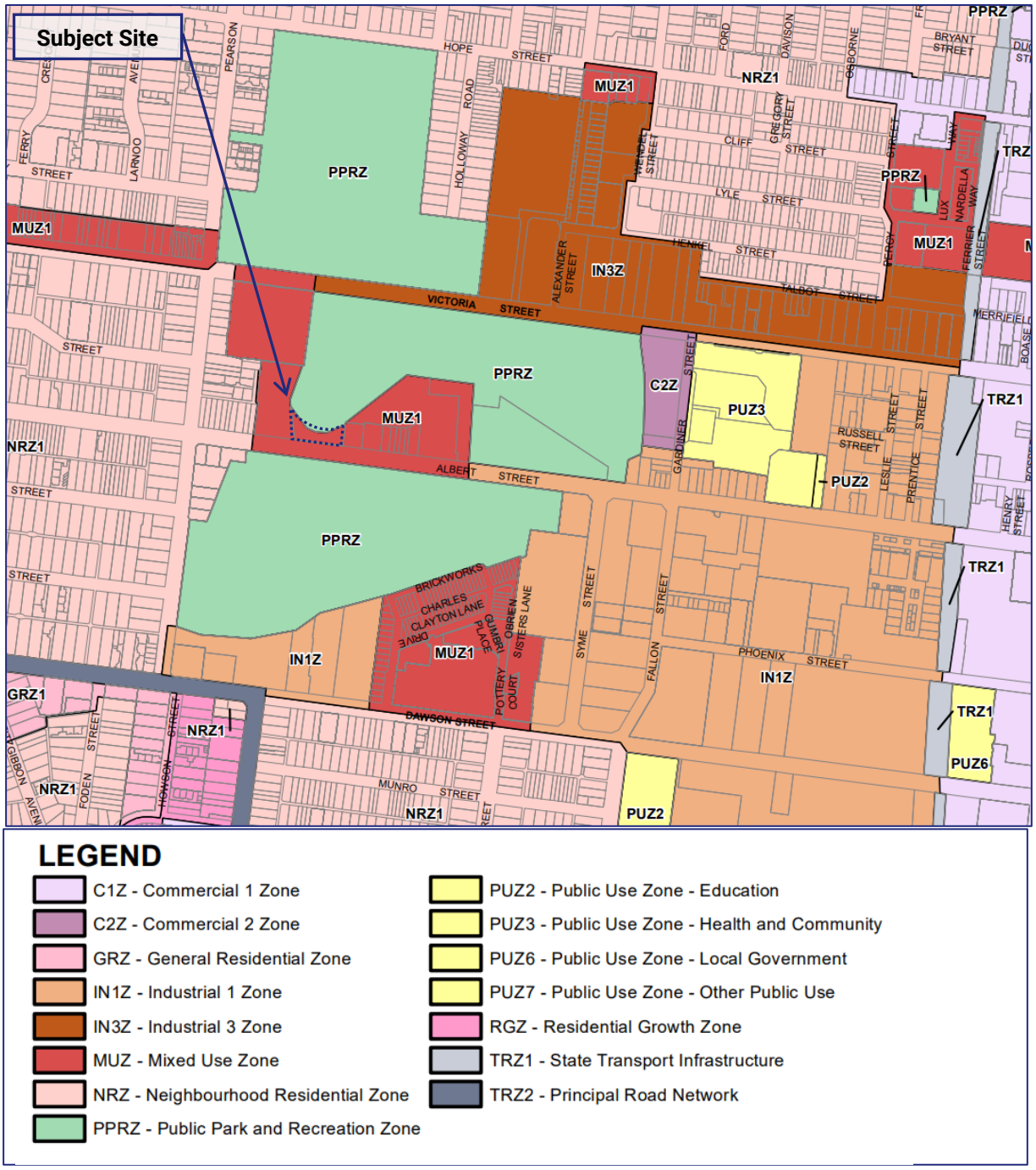


Figure 3: Land Use Zoning Map (Source: Planning Schemes Online)

3.2. Transport Network

3.2.1. Road Network

Albert Street is a 'Collector'[1] road managed by Merri-bek City Council. Albert Street is generally aligned in an east-west direction between King Street in the east and Daisy Street in the west.

Near the site, Albert Street provides an undivided carriage width of 13.5m. Unrestricted kerbside parking lanes and on-road bicycle lanes are available along both sides of Albert Street in the vicinity of the site.

The default urban speed limit of 50km/h applies to Albert Street in the vicinity of the site.

Photos of the surrounding road network are presented following the table.

[1] As per Moreland City Council (currently Merri Bek City Council) Register of Public Roads, dated 1st April 2018

Figure 4: Albert Street – view east

Figure 5: Albert Street – view west

3.2.2. Car Parking Conditions

Traffix Group has completed parking surveys of on and off-street parking in the vicinity of the subject site. The purpose of the surveys was to assess the supply, management and demand for on-street car parking resources in the nearby area. The surveys were completed at the following times:

- 12pm, 1pm, 7pm and 8pm on Thursday 15th February, 2024, and
- 12pm, 1pm, 7pm and 8pm on Saturday 17th February, 2024.

These times correspond to the peak demand times for the proposed uses on the site and the nearby area (i.e. weekday evening and weekend daytime and evening).

The detailed parking survey is presented at Appendix B.

The survey area is presented in the figure below, which comprises an area of approximately 200m around the subject site.

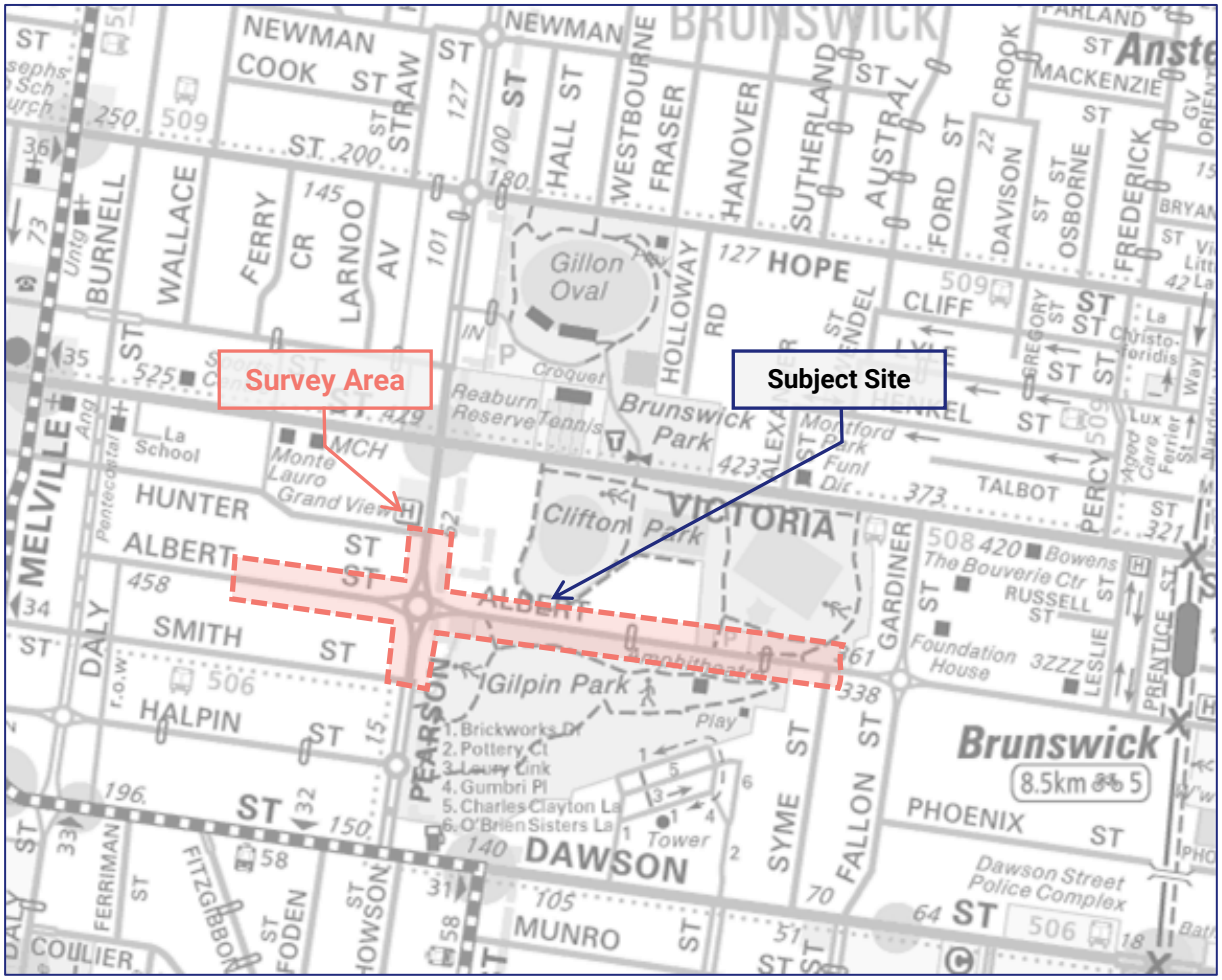


Figure 6: Parking Survey Inventory (Source: Melway)

The car parking surveys identified 193 on-street car spaces available for use by the general public in the nearby area[2]. On-street car parking was generally unrestricted with parking restrictions only applying to 6 x 1P spaces on Pearson Street and 1 x DDA space on Albert Street.

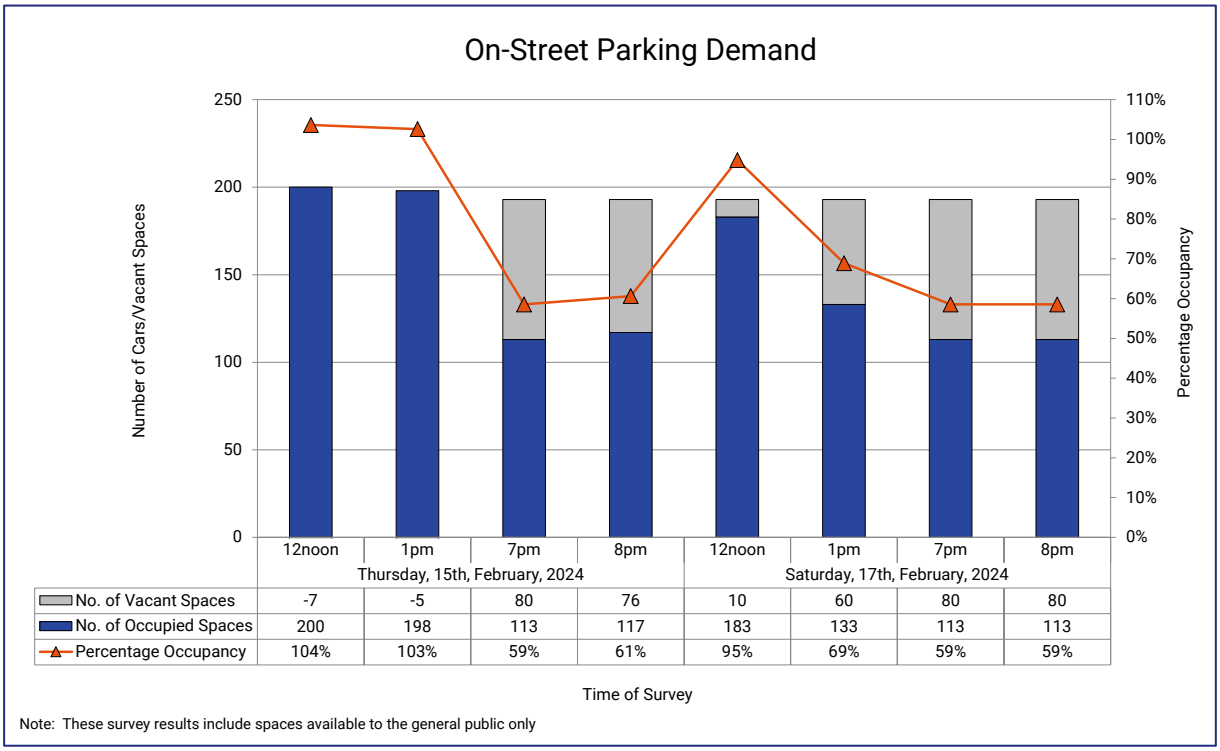


Figure 7: Profile of On-Street Parking Demand

Overall demand for on-street parking was moderate to high over the surveyed period.

During the car parking surveys there were extensive construction works associated with construction of a neighbouring development east of the subject site. Accordingly, the high parking demands recorded on Thursday 15th February at 12pm and 1pm are primarily associated with construction workers. By 7pm construction works have ceased, and accordingly the corresponding parking demands are indicative of typical weekday evening demands.

Excluding the times where construction works occurred, a minimum of 10 vacant spaces were recorded over the survey period (95% occupancy), which occurred at 12pm on Saturday 17th, February 2023.

[2] Includes all car spaces available to the general public, excluding those subject to 'No Stopping' restrictions during the relevant enforcement period.

3.3. Alternative Transport Modes

3.3.1. Public Transport

The site is well served by public transport services, with train, tram and bus services available.

The site is located within the Principal Public Transport Network area (PPTN).

The diagram below illustrates the location of the nearest public transport service and the walking distance/time to these stops.

A summary is provided at Table 3 and map of the broader services provided at Figure 9

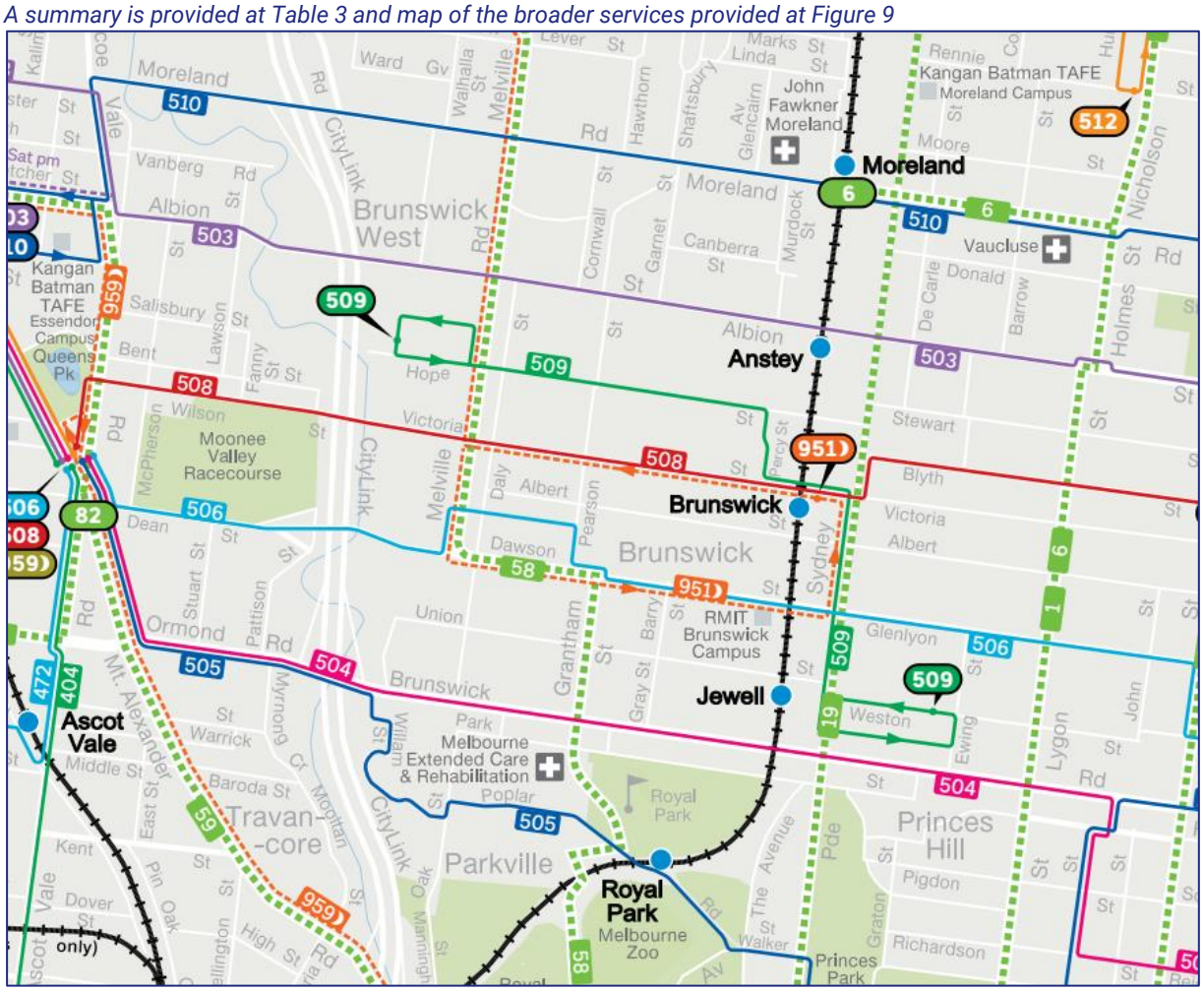


Figure 9. The PPTN network map is provided at Figure 10.

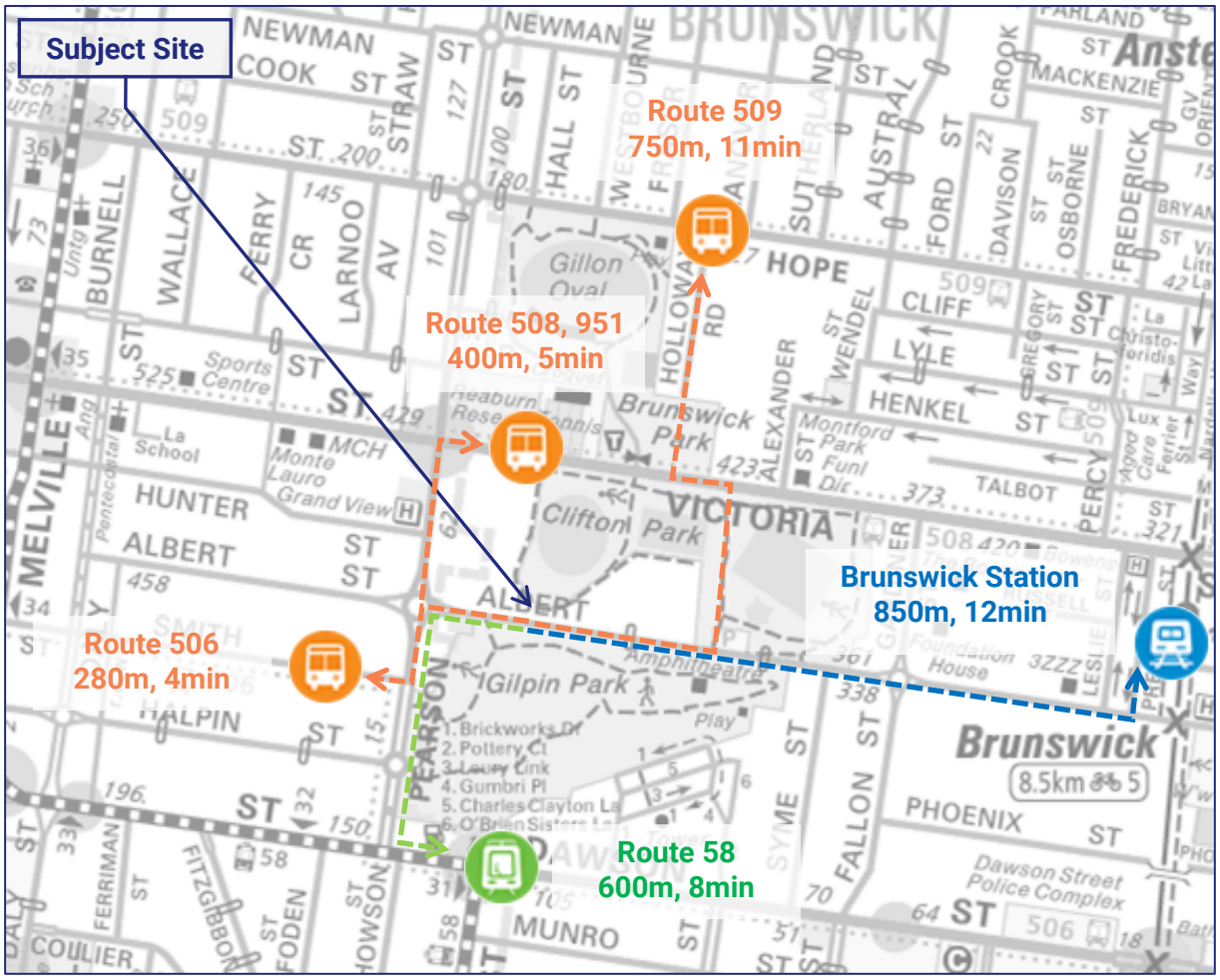


Figure 8: Walking Distance to Nearest Public Transport Stops (Source: Melway Online & PTV)

Table 3: Summary of Public Transport Services

Service	Between	Via
Pearson Street/Smith Street - Located approximately 260m walking distance from the site		
Bus Route 506	Moonee Ponds - Westgarth Station	Brunswick
Clifton Park/Victoria Street - Located approximately 200m walking distance from the site		
Bus Route 508	Alphington - Moonee Ponds	Northcote & Brunswick
Bus Route 951 (Night Rider)	Brunswick Station - Glenroy Station	West Coburg
Dawson Street/Grantham Street - Located approximately 450m walking distance from the site		
Tram Route 58	West Coburg - Toorak	Brunswick
Holloway Road/Hope Road - Located approximately 750m walking distance from the site		
Bus Route 509	Brunswick West - Barkly Square Shopping Centre	Hope Street & Sydney Road
Brunswick Station - Located approximately 850m walking distance from the site		
Brunswick Railway Station	Upfield Line	Fawkner, Coburg, Brunswick, North Melbourne & City

Figure 9: Public Transport Map (Source: PTV)

Figure 10: Principal Public Transport Network Area (Source: Vicplan)

3.3.2. Bicycle Infrastructure

The site is well served by bicycle infrastructure with off-road trails, on-road bicycle lanes, and informal bicycle routes surrounding the site, as shown in the excerpt from the City of Merri-bek as shown in Figure 11.

Albert Street provides on-road bicycle lanes in both directions along the site's frontage. Daly Street, Dawson Street and Victoria Street also provide on-road bicycle lanes, which connect to the nearby off-road trails. These trails include an off-road path within Gilpin Park and Clifton Park.

Figure 11: Sustainable Transport Infrastructure (Source: Merri-bek City Council)

Figure 15 below indicates the areas that are within a 5-20-minute bicycle ride of the site. As shown extensive areas including multiple activity centres are located in close proximity.

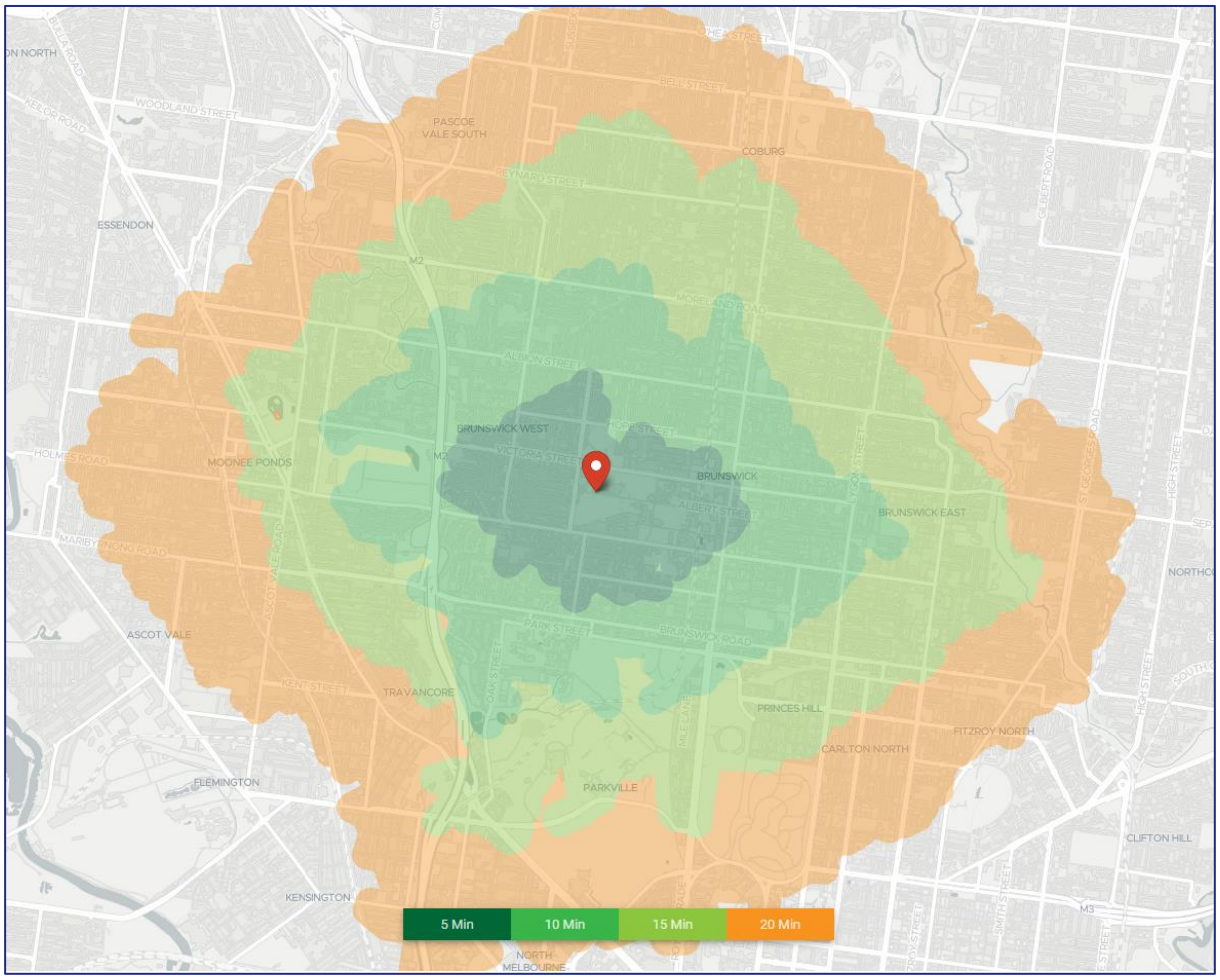


Figure 12: Map of 20-minute bike ride distance (Source: targomo.com)

Victoria's Strategic Cycling Corridors (SCC) are important transport routes for cycling and are a subset of the Principal Bicycle Network (PBN). They are intended to support the needs of commuter trips (to work or education) and other important trips, such as to stations, offices or schools.

As demonstrated at Figure 3, the Strategic Cycling Corridor is less than a two-minute bicycle ride from the subject site.

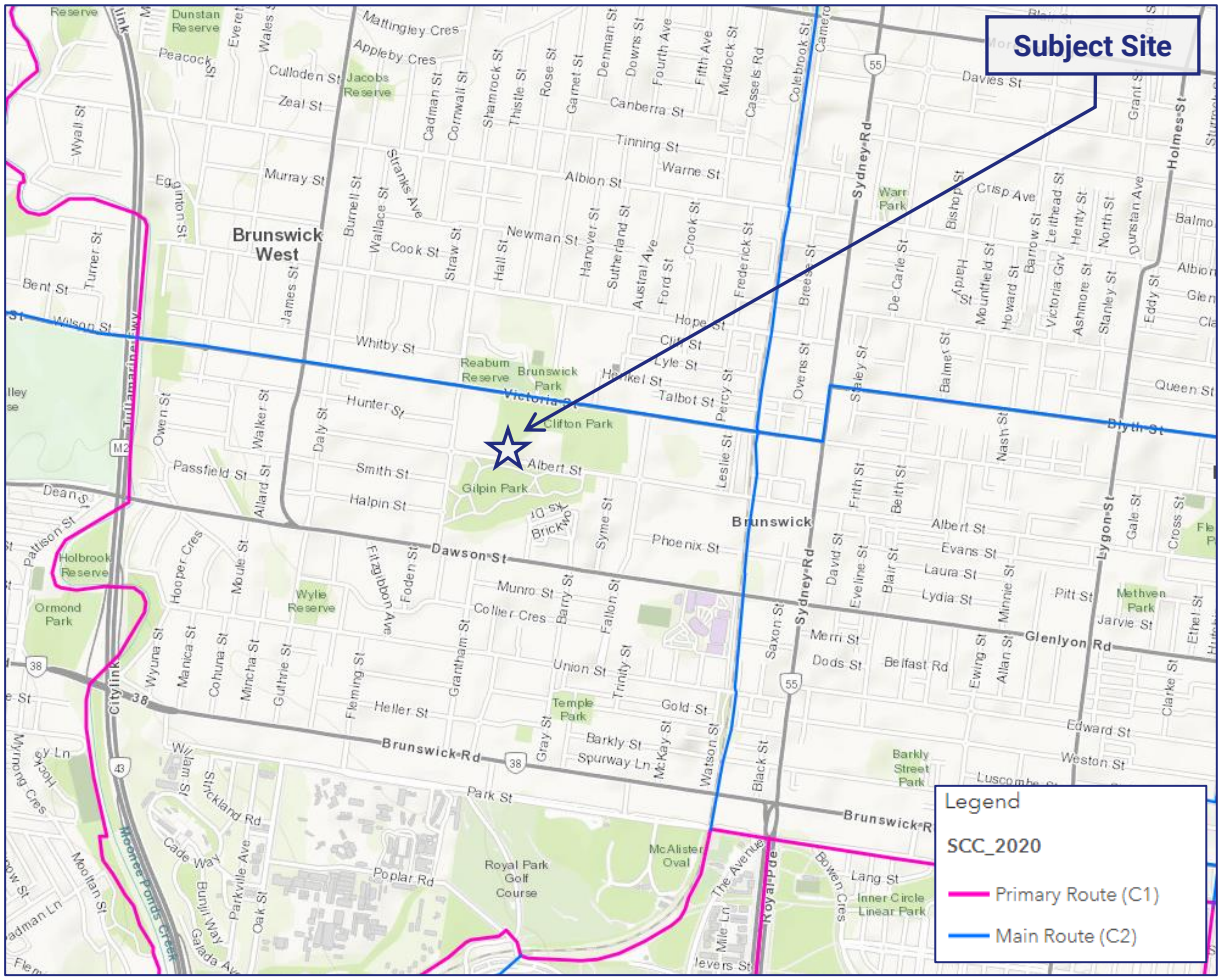


Figure 13: Strategic Cycling Corridor (Source: DTP)

3.3.3. Car Share Vehicles

Merri-bek City Council supports 'car sharing' schemes by allocating on-street spaces throughout the municipality for the purposes of accommodating 'car share' cars.

Flexicar and GoGet, two Council supported schemes, currently have 6 on-street car share pods within 500m of the site. The nearest car share pod are located at Victoria Street, approximately 250m north-west of the site, as detailed in Figure 14.

Car sharing schemes provide an alternative to driving to work for staff and actively encourage the use of alternate transport modes. If required, a car can be available by joining the local 'car share' schemes, which allows for work based business trips by car. The use of a non-private car for these trips allows staff to avoid driving their own car to work during the commuter peak hours, because they do not need it for business trips during the day.

Car sharing schemes also offer an alternative to private vehicle ownership for residents.

The existing 'car share' schemes in this area provide a safety net (and fill a mobility gap) by providing convenient access to a car to cater for the limited number of times that staff and residents may require a car. This car access is both convenient and cost-effective as they can hire the car on an hourly or daily basis.

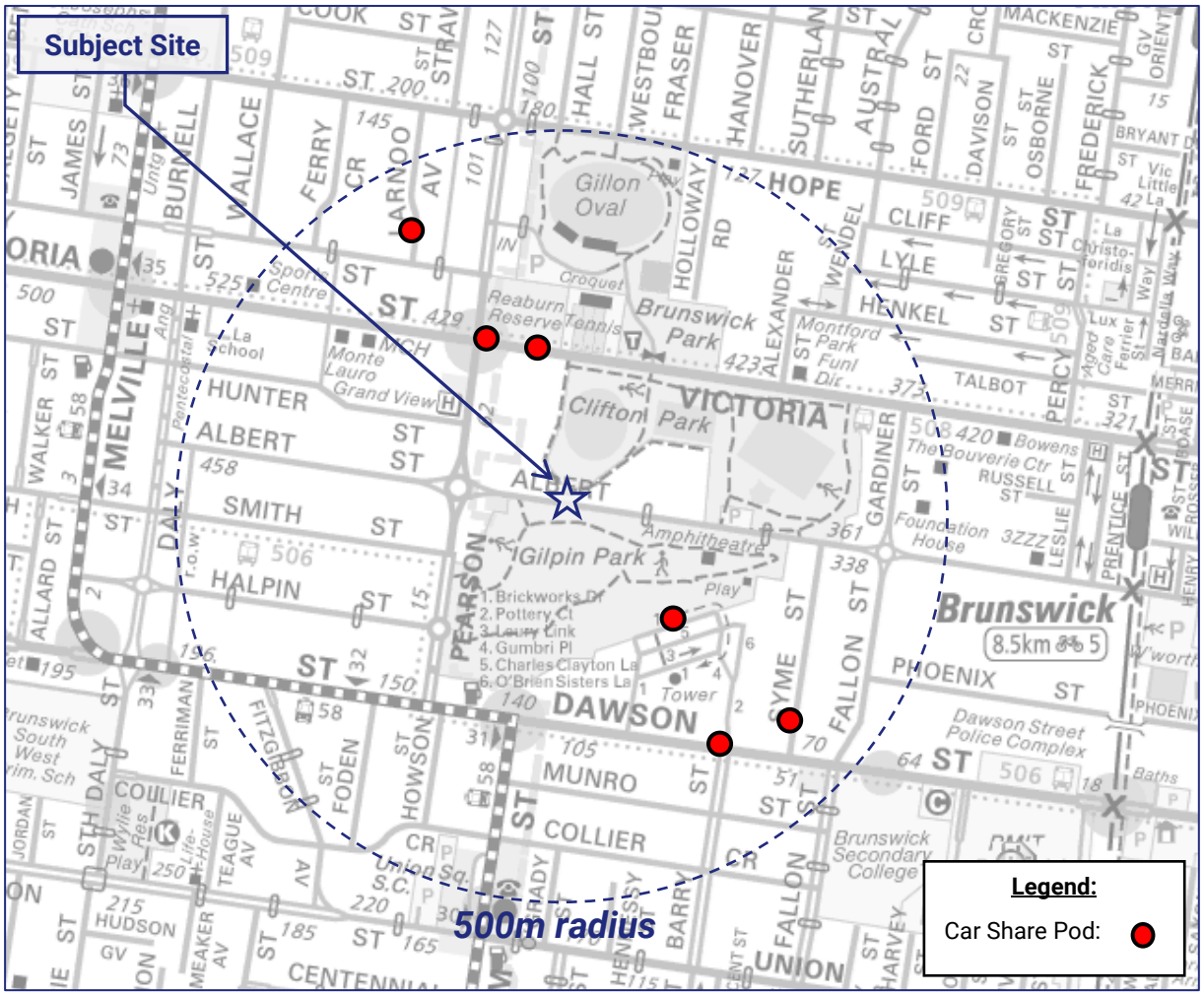


Figure 14: Car Share Pod Locations

3.3.4. Walking

The site is highly walkable, with many everyday services located within walking distance of the site. Figure 15 below indicates the area that is within a 20-minute walk of the site.

The following significant uses are within this 20-minute walk:

- Gillon Oval, Reaburn Reserve, Brunswick Park, Clifton Park West and Gilpin Park
- Commonwealth Bank Brunswick Branch
- Brunswick Medical Group
- Brunswick Townhall
- Brunswick Library
- Woolworths Brunswick
- Brunswick Baths
- RMIT University Brunswick Campus

The land uses detailed above demonstrate a high level of everyday land uses in close proximity to the site, which would reduce the dependence on vehicular travel within this area.

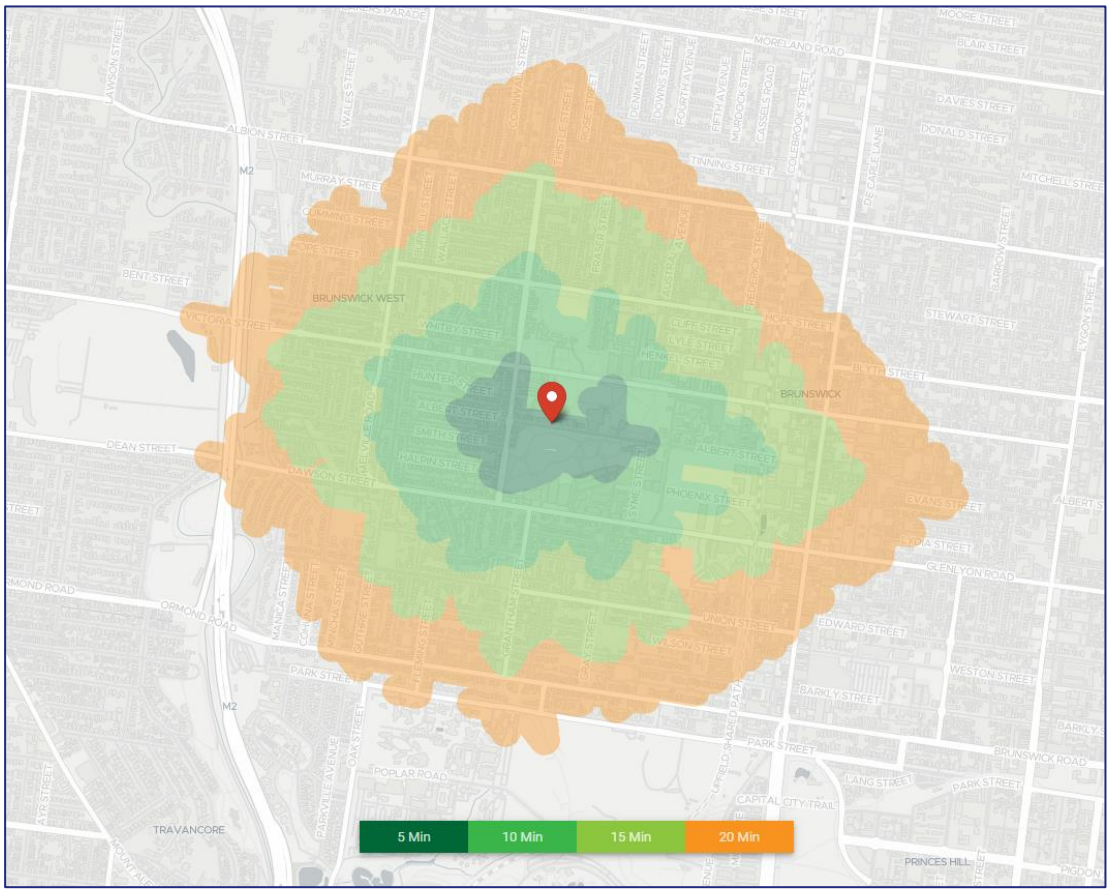


Figure 15: Map of 20-minute walking distance (Source: Targomo)

3.3.5. Travel Characteristics

The following graphs reviews the mode of travel for existing residents within Brunswick (State Suburb) and Greater Melbourne. This data is derived from the Australian Bureau of Statistics 2016 Census.

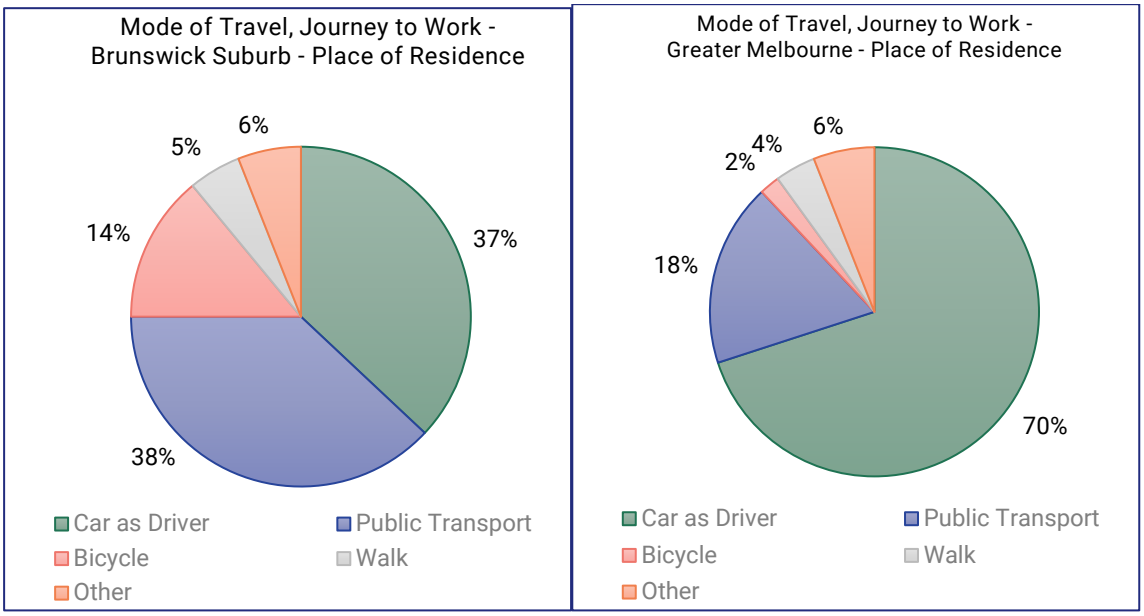


Figure 16: Review of Mode of Travel based on Place of Residence (2016 Census)

The above demonstrates a lower reliance on car travel within Brunswick compared to the greater Melbourne area.

The following graphs reviews the mode of travel of persons working within Brunswick (SA2) and Greater Melbourne. This data is derived from the Australian Bureau of Statistics 2016 Census.

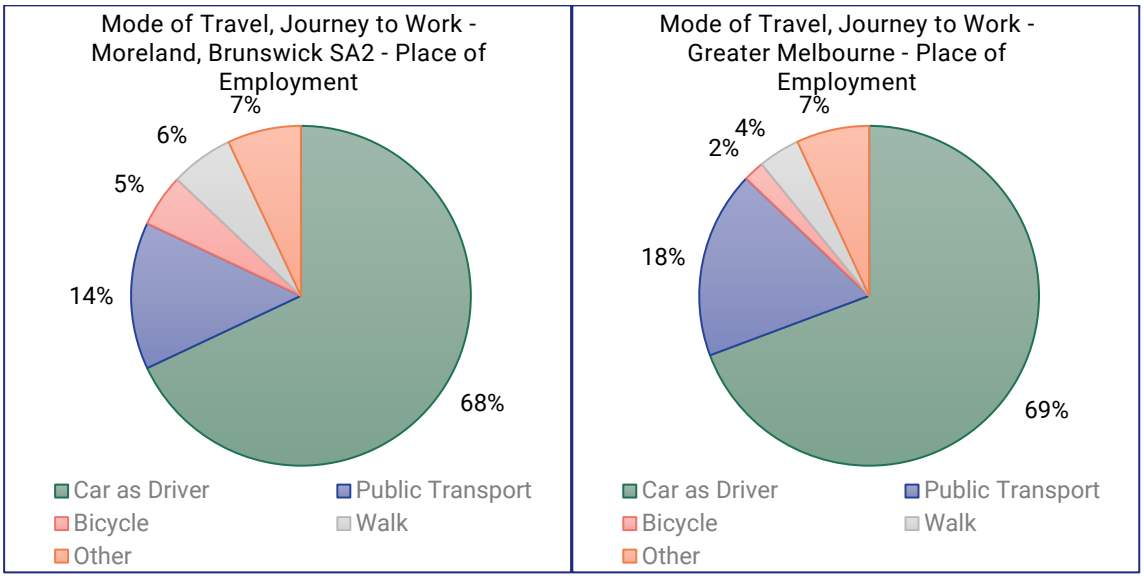


Figure 17: Review of Mode of Travel based on Place of Employment (2016 Census)

The above demonstrates the mode of travel for persons working in Brunswick is approximately the same as those working in the Greater Melbourne area.

4. Traffic Engineering Assessment

Clause 18 of the Victorian Planning Provisions sets the state planning objectives and strategies in relation to the transport system. The key objectives of Clause 18 set out in the following table.

Table 4: Transport Objectives of the Victorian Planning Provisions

Clause	Objective
18.01-1S Land use and transport integration	*To facilitate access to social, cultural and economic opportunities by effectively integrating land use and transport.*
18.01-2S Transport system	*To facilitate the efficient, coordinated and reliable movement of people and goods by developing an integrated and efficient transport system*
18.01-3S Sustainable and safe transport	*To facilitate an environmentally sustainable transport system that is safe and supports health and wellbeing.*
18.02-1S Walking	*To facilitate an efficient and safe walking network and increase the proportion of trips made by walking.*
18.02-2S Cycling	*To facilitate an efficient and safe bicycle network and increase the proportion of trips made by cycling.*
18.02-3S Public transport	*To facilitate an efficient and safe public transport network and increase the proportion of trips made by public transport.*
18.02-4S Roads	*To facilitate an efficient and safe road network that integrates all movement networks and makes best use of existing infrastructure.*
18.02-5S Freight	*To facilitate an efficient, coordinated, safe and sustainable freight and logistics system that enhances Victoria's economic prosperity and liveability.*

The proposal supports the strategic transport objectives at a state planning level as outlined at Clause 18 by providing reduced car parking rates in an area that has access to (and facilitates use) of alternative forms of transport.

4.1. Local Planning Policies

Council Planning Scheme Policies

Merri-bek City Council supports sustainable transport and design in new and existing developments through several policies and initiatives.

Excerpts from some of the relevant Clauses within the Merri-bek Planning Scheme are provided as follows:

Clause 02.03-4 Environmentally Sustainable Design

Merri-bek is committed to creating an environmentally sustainable and liveable city; where development meets the needs of the present without compromising the ability of future generations to meet their own needs.

Incorporating sustainability principles in the design of buildings provides ongoing benefits by:

- *Reducing living costs associated with housing, such as energy costs.*
- *Improved amenity and liveability.*
- *Reduced greenhouse gas emissions.*
- *Greater resilience to the impacts of climate change.*

Environmentally sustainable design elements should be incorporated at the time of planning approval to improve outcomes that may otherwise be compromised if left to be considered at the building approval stage and to reduce difficulties or costs associated with retro-fitting the development.

To achieve an environmentally sustainable and liveable city, Council supports:

- *Encouraging development to incorporate environmentally sustainable design at the time of planning approval in the following areas: energy efficiency, water resources, indoor environment quality, stormwater management, transport, waste management and urban ecology.*

Clause 02.03-7 Transport

Merri-bek is to be a connected city through a transport system that is diverse, progressive and sustainable that achieves a shift towards sustainable modes of travel, including zero emissions transport modes.

Car parking plays an active role in supporting broader transport and land use strategies. The availability of car parking where people live, and their destinations, will strongly influence the ways they travel. Getting the type, location and amount of car parking right can contribute to better transport, land use, economic and community outcomes. This includes increasing the shift towards sustainable transport modes while ensuring that those who walk, cycle, wheel or drive can do so safely.

Council seeks to create a transport system that is diverse, progressive and sustainable by:

- *Planning for a transport network that:*
  - *Caters for all ages, is accessible and equitable for all road users.*

  - *Reduces local vehicle traffic and safeguards the wellbeing of the community.*
  - *Achieves a shift towards sustainable modes of travel, including a transition to active transport or zero-emissions transport.*
  - *Focuses on transport safety, improving personal security and safety.*
  - *Connects people to local jobs and services.*
  - *Caters for population and employment growth.*
- *Prioritising our transport network according to the following 'road user hierarchy', while ensuring access for those who walk, cycle, wheel or drive:*
  - *People who are walking.*
  - *People who are cycling.*
  - *People who are using public transport.*
  - *People who are driving.*

Clause 15.01 Built Environment

15.01-1L Vehicle access design in Merri-bek

Objective

To ensure provision of vehicle access contributes to an improved urban environment for pedestrians and cyclists.

Merri-bek Integrated Transport Strategy

Merri-bek City Council's Integrated Transport Strategy 2019 (MITS), dated March 2019, (reference document listed under Clause 72.08) establishes Council's strategic direction for integrated transport planning for the next decade and beyond. It aims to achieve a reduction in car use.

The principal aim of the MITS is to:

> *Facilitate a demonstrable mode shift to more sustainable modes of transport that also targets a long-term reduction in car use.*

Five key objectives have been developed. They are:

- *A liveable Moreland where the transport network caters for all ages and where we consciously reduce local vehicle traffic and safeguard the wellbeing of our community.*
- *A sustainable Moreland which achieves a city-leading shift toward sustainable modes of travel, supporting the transition to active and zero-emissions transport by 2040 and addressing the climate emergency.*
- *A Moreland that is safe and healthy where transport safety is a key focus, we improve personal security and safety and promote a healthy community with cleaner air.*
- *A Moreland that is accessible and equitable for all where we reduce barriers to community movement and strongly commit to making Moreland accessible to all.*
- *A prosperous Moreland which connects people to local jobs and services, encourages people to visit officeping strips and activity centres, focuses on the reliability of the*

transport system for people and goods and caters for population and employment growth.

Key directions of the strategy include:

- ***Smarter parking management***
  - *Permitting less parking in new developments to allow people to choose a lower level of parking to suit their needs*
  - *Expanding parking restrictions to protect local streets from changes to parking requirements in new development*
  - *Using paid parking in some areas for all-day parking*
  - *Expanding the number of accessible (disabled) parking bays*
- ***Reallocating road space***
  - *Reallocating space from cars and car parking to walking, cycling and public transport*
  - *Reallocating space for greener, more pleasant streets*
- ***Advocating for better public transport***
  - *Advocate for more frequent buses and trains*
  - *Advocate for more reliable buses, trams and trains*
  - *Advocate for public transport that is accessible for people of all abilities*
- ***Creating safer, quieter streets***
  - *Creating more pedestrian crossings*
  - *Continue to roll out 40km/h limits on all local roads*
  - *Reduce speed limits on arterial roads near places like schools, hospitals and activity centres*
  - *Conduct a 12-month trial of 30km/h limits in selected areas*
  - *Close some local roads to through traffic*
  - *Support mode shift through design, and travel demand measures*
- ***Fostering partnerships for sustainable transport***
  - *Work with schools to support walking and cycling*
  - *Work with communities to support behaviour change*
  - *Work with traders and businesses to improve loading and deliveries*

Zero Carbon 2040 Framework

The Zero Carbon 2040 Framework sets out City of Merri-bek's plan to reduce carbon emissions across the Merri-bek community to be carbon zero by 2040 (reference document as listed at Clause 72.08). The policy details that 26% of the Merri-bek Community emissions are currently associated with transport.

Merri-bek's Zero Carbon goals are:

1. *Energy transition to efficient and 100% renewably powered energy.*
2. *Sustainable transport that is active or has zero emissions.*
3. *A circular economy with zero waste.*

The relevant transport strategy is:

2020 to 2025

- *Transitioning Council's vehicle fleet to low or 'zero emissions' (e.g. renewable electric and hydrogen)*
- *Strategic investment in transport infrastructure and streetscape renewal to create walking- and cycling-friendly neighbourhoods and activity centres, which also foster public transport use*
- *Collaborate with others (e.g. health organisations, Bicycle Network, bicycle retailers, schools) to deliver effective behaviour change and advocacy campaigns*
- *Amend the Moreland Planning Scheme to reduce requirements for car parking, and investigate (and implement if feasible) a new mechanism for developers to financially contribute to sustainable transport initiatives*
- *Support access to electric vehicle (EV) charging stations (powered by renewable energy) to keep pace with rates of EV adoption*

Long term

- *Implement fair measures to progressively disincentivise use of private (petrol/diesel) cars while continuing to enhance walking, cycling and public transport options*
- *Progressively reallocate space used for private vehicle travel and parking to support sustainable transport use and other liveability benefits (e.g. new open space)*
- *Advocate for and act (together with others) to achieve policy and regulatory frameworks that ensure emerging 'disruptive' mobility technologies (e.g. digital platforms, autonomous vehicles) deliver public and environmental benefits*
- *Explore opportunities for Council service delivery using virtual solutions, reducing the need for customer or Council travel.*

The proposal supports the transport strategies and objectives of Merri-bek Council by providing reduced car parking rates.

4.2. Statutory Car Parking Assessment

The proposed development falls under the land-use category of 'dwelling', 'shop' and 'office' under Clause 73.03 of the Planning Scheme. The Planning Scheme sets out the parking requirements for new developments under Clause 52.06. The purpose of Clause 52.06 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 adversely 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 statutory parking requirements are set out at Clause 52.06-5 of the Planning Scheme. Clause 52.06-5 states:

Column A applies unless Column B applies.

Column B applies if:

- *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, 2018); or*
- *a schedule to the Parking Overlay or another provision of the planning scheme specifies that Column B applies.*

Given the site is located with the PPTN, the Column B rates apply.

The statutory car parking assessment of the development is set out in Table 5 below.

Table 5: Statutory Car Parking Assessment – Column B of Clause 52.06-5

Use	Size / No.	Statutory Parking Rate (Column B)	Parking Requirement(1)	Parking Provision	Shortfall / Surplus
One-bed dwelling	16	1 space per one/two-bedroom dwelling	16	40	-29
Two-bed dwelling	37		37		
Three-bed dwelling	8	2 spaces per three or more bedroom dwelling	16		
Residential visitors	61	None required	N/A	0	0
Shop	95m^2	3.5 car spaces per 100m^2 LFA	3	0	-3
Office	455m^2	3 car spaces per 100m^2 NFA	13	0	-13
TOTAL			**85**	**40**	**-45**

Notes:

1. Clause 52.06-5 specifies that where a car parking calculation results in a requirement that is not a whole number, then number of spaces should be rounded down to the nearest whole number.

We note the provision of an EV charging bay at basement level. This bay is intended for shared use between both residents and staff. This bay will be managed to ensure it is not used as a long-term parking space. We have conservatively omitted the EV charging bay from the parking provision and statutory assessment.

Based on the table above, a total of 85 car spaces are required under Clause 52.06-5 of the Planning Scheme. The provision of 40 car spaces on-site (allocated entirely to residents) results in a statutory shortfall of 45 car spaces, comprising 29 resident, 3 shop and 13 office spaces.

Accordingly, a Car Parking Reduction is required under Clause 52.06-7.

Disabled Parking

Clause 52.06-9 states that:

> *The car parking requirement specified in Table 1 includes disabled car parking spaces. The proportion of spaces to be allocated as disabled spaces must be in accordance with Australian Standard AS2890.6-2009 (disabled) and the Building Code of Australia.*

Given that no on-site car parking is allocated to the commercial component, there is no requirement to provide DDA parking under the NCC. Accordingly, the non-provision of DDA car parking is acceptable for this development.

4.2.1. Reducing the Requirement for Car Parking

Clause 52.06-7 allows for the statutory car parking requirement to be reduced (including to zero). An application to reduce (including reduce to zero) the number of car spaces required under Clause 52.06-5 or in a schedule to the Parking Overlay must be accompanied by a Car Parking Demand Assessment.

Clause 52.06-7 sets out that a Car Parking Demand Assessment must have regard to the following key factors:

- *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 proposed occupants (residents or employees) of the land.*
- *Any empirical assessment or case study.*

Planning Practice Note 22 (June, 2015) specifies that the provisions for reducing the car parking requirement draw a distinction between the assessment of likely demand for car parking spaces (the Car Parking Demand Assessment), and whether it is appropriate to allow the supply of fewer spaces than assessed by the Car Parking Demand Assessment. These are two separate considerations, one technical while the other is more strategic. Different factors are taken into account in each consideration.

Accordingly, the applicant must satisfy the responsible authority that the provision of car parking is appropriate on the basis of a two-step process, which has regard to:

- *The car parking demand likely to be generated by the use.*
- *Whether it is appropriate to allow fewer spaces to be provided than the number likely to be generated by the site.*

An assessment of the appropriateness of reducing the car parking provision below the statutory requirement is set out below.

4.2.2. Car Parking Demand Assessment

Resident Demands

The development provides an overall parking rate 0.66 spaces per dwelling. The allocation of car parking shall be determined at the time of subdivision however, allowing for a single car space per dwelling would result in 21 dwellings without any resident car parking.

It is recognised that car ownership is influenced by several factors and that in inner city areas many households do not own a car for a range of reasons. While the reasons may vary from household to household, they are likely to include one or more of the following:

- affordability issues – some residents may not be able to afford to own, insure, register, and maintain a car, or may not travel sufficient distances over the year to make car ownership worthwhile,
- public transport and service access – residents may live within close proximity to daily services such as offices, banks, activity centre etc, and can conveniently access these by public transport or via non car-based modes (walking, cycling, etc),
- public transport and employment/study access – residents may have convenient access (via public transport, bicycle, or walking) to their place of work, study, recreation, etc,
- disability or unlicensed – some residents may be unable to drive due to disability, age or being unlicensed, and therefore are more reliant on alternative transport modes, and
- environmental concerns – some residents may actively minimise their car usage for environmental reasons, preferring to use more sustainable transport modes to meet their daily travel needs.

The second, third, and fifth dot points are particularly pertinent to this site, which is highly walkable, has access to public transport services, and near the Brunswick, Sydney Road Activity Centre.

A review of car ownership statistics for ‘flats units and apartments’ within the suburb of Brunswick (SSC) as recorded by the Australian Bureau of Statistics (ABS) in the 2021 Census is presented in the below.

Table 6: ABS Car Ownerhsip Data (Source: 2021 Census)

Type of Dwelling	Number of Cars	
1 bedroom Flat/Unit/Apartment in one or more storey block	Average no. of cars per dwelling	0.6
	0 cars	**43%**
	1 car	52%
	2 or more cars	5%
2 bedroom Flat/Unit/Apartment in one or more storey block	Average no. of cars per dwelling	0.9
	0 cars	**25%**
	1 car	61%
	2 or more cars	15%
3 bedroom Flat/Unit/Apartment in one or more storey block	Average no. of cars per dwelling	1.0
	0 cars	18%
	1 car	**61%**
	2 cars	19%
	3 or more cars	2%

The above information highlights that there is a considerable demand for dwellings in this locality with reduced car parking rates in apartment-style developments.

Significantly, the statistics indicate that in Brunswick:

- 47% of residents living in one-bedroom apartments do not own a vehicle,
- 25% of residents living in two-bedroom apartments do not own a vehicle, and
- 61% of residents living in three-bedroom apartments only own one vehicle.

The reduced parking provision is consistent with car ownership rates of other apartment style dwelling in Brunswick.

Accordingly, we are satisfied that adequate parking is provided for these dwellings and a reduction in resident car parking is supported by the existing ABS statistics.

Office

The statutory car parking requirement of 3 spaces per 100m^2 is generally representative of the parking demands for an office use in an unconstrained parking scenario (i.e. ample on-site parking or off-site parking being readily available). Application of the statutory rate results in a demand for 13 car parking spaces.

We are satisfied that there is strong Council Policy to support a reduction of the statutory office parking rate in this development in favour of alternative, sustainable transport modes for the following reasons:

- the availability of convenient and efficient public transport in this area, which allows staff to travel to work without relying on a private car,
- support of sustainable transport initiatives, which include bicycle parking facilities being provided for staff within this development, and
- encouragement of 'local living' in this area (i.e. people working and living in the area by co-locating higher density employment and residential uses).

'Office' is a land-use that is important to target in achieving a mode shift away from private cars to public transport, cycling, walking, etc. This is particularly the case as journey to work trips for office uses are typically made during the commuter peak hours and predominantly involve single occupant vehicles. The timing of these trips has the greatest impact on traffic congestion on the road network and occurs when public transport services operate at high frequencies (and offer express services in some cases).

This is in contrast to an industrial use, for example, where staff may work shifts, travel outside of peak periods and have more limited access to public transport, making it more difficult to achieve a mode shift.

The majority of car parking demands associated with the office use will be long-term staff demands. The peak time for the office demands will be during the day, with negligible demands expected after-hours on weekdays and weekends.

Reduced Car Parking Rates for Offices

It is important to take a forward-looking approach to decreasing reliance on car-based travel and to encourage alternate transport modes for office land uses. This is particularly relevant in areas where public transport accessibility and access to other services is well provided for and will continue to improve in line with government initiatives.

By example, if a forward-looking approach was not adopted and reliance was taken solely of the historical car ownership rates and journey to work data in isolation, the car parking limitation policies which apply to many areas within the metropolitan area would not have been supportable.

It is clear from Plan Melbourne that we must change the way that we view developments given issues facing Melbourne around traffic and congestion.

Plan Melbourne is a long-term vision to ensure that Melbourne grows more sustainable, productive, and liveable as its population approaches 8 million. It is a long-term plan designed to respond to the state-wide, regional, and local challenges and opportunities Victoria faces between now and 2050.

Direction 5.1 states that a 20-minute neighbourhood must:

- *be safe, accessible and well connected for pedestrians and cyclists to optimise active transport.*
- *offer high-quality public realm and open space.*
- *provide services and destinations that support local living.*
- *facilitate access to quality public transport that connects people to jobs and higher-order services.*
- *deliver housing/population at densities that make local services and transport viable.*
- *facilitate thriving local economies.*

The integral factors of creating a 20-minute neighbourhood are detailed in the figure below. The creation of new office space near an existing Activity Centre which is well connected via quality public transport and bicycle facilities accords with the vision of Plan Melbourne 2017-2050 in terms of creating a '20-minute neighbourhood'. The provision of a low level of car parking aims to reduce traffic congestion impacts from the development by promoting alternative sustainable modes of transport to and from the site.

Figure 18: The 20-Minute Neighbourhood (Source: Plan Melbourne – DELWP)

The site is located near an Activity Centre with good access to public transport services and a growing residential population in the nearby area.

VCAT Decisions

Recent VCAT decisions have approved office developments in areas with access to high capacity public transport services.

The matter for 319 Burwood Road, Hawthorn, provided 1,830m^2 of office and 25 car spaces (rate of 1.37 spaces per 100m^2). The VCAT member made the following relevant commentary regarding the provision of car parking:

24 In this context, I find Ms Dunstan's opinion that employees without on-site car spaces will use alternate transport modes is persuasive. I am persuaded that this part of Hawthorn is as easily accessible as Box Hill or Footscray and that it is reasonable to justify lower rates here by reference to those metropolitan activity centres.

29 In this context of a change from the 'business as usual' approach, I agree with Ms Dunstan that office workers are prime candidates for a mode change given their commuting patterns of travel to and from work during peak times. This is the time when public transport services run at highest frequencies and when Melbourne's roads are most congested. The combination of 'carrot' and 'stick' makes it viable for many office workers commuting to a site such as this to change from private vehicle to public transport.

30 I am not persuaded that the council's option of reducing the amount of office space so that it better aligns with on-site parking supply is consistent with planning policy. Plan Melbourne which promotes '20 minute neighbourhoods' where most of a person's everyday needs can be met locally within a 20 minute journey from home by walking, cycling or local public transport. The everyday needs referred to include local employment opportunities along with shopping, education and community facilities.

31 Local employment opportunities in this context are not limited to retail or community services. There is a benefit in encouraging office uses in the '20 minute neighbourhood mix', as it provides opportunities for business owners and their staff to work locally. I find this line of argument is far more persuasive than the council's position of limiting the amount of office floor space so that more cars can be brought into this part of Hawthorn.

Our reading of the above commentary is that as a result of a large increase expected in Melbourne's population in the nearby future, development cannot simply continue to provide car parking at the statutory rate for all uses, especially in areas which are well served by alternative modes of transport to private car usage. The alternative to this will be congested roadways, amongst other related issues. This proposal provides a lower car parking rate for the proposed office tenancies than that required by Clause 52.06 of the Planning Scheme. We are of the view that providing a significantly lower than statutory level of car parking in this development will aim to satisfy the objectives of Plan Melbourne 2017-2050 by reducing traffic impacts and better utilising a site located nearby to alternative modes of transport.

This site is comparatively well served by public transport as these locations and includes a high level of residential catchment in close proximity to the site.

Based on the above, we are satisfied that the reduction of office car parking is appropriate in this location. Application of the default statutory rate results in off-site impacts

Shop/Retail

The development includes a retail tenancy with total floor area of 95m^2. This use has a statutory car parking requirement of 3 car spaces based on a rate of 3.5 car spaces per 100m² (statutory car parking rate for shop use).

Staff parking demands typically equate to approximately 30% of retail parking demands, or 1 space per 100m². Customers represent the balance of parking demands. Accordingly, the parking demands of the retail tenancy are considered to comprise 1 staff space and 2 customer car spaces.

On the basis of the above, we are satisfied that the reduced allocation of car parking for the retail tenancy is acceptable.

Summary

Based on the car parking demand assessment we are satisfied that:

- An overall provision of 0.66 car paces per dwelling is acceptable and a reduction in resident car parking is supported on the basis of the site's access to alternate transport modes and existing ABS car ownership statistics.
- Office car parking demands will be a maximum of 13 car parking spaces, with these demands accommodated off-site and occurring during business hours only.
- Shop car parking demands of 3 car spaces, with these demands accommodated off-site and occurring during business hours only.

Overall, peak off-site impacts of 16 car parking spaces may occur.

4.2.3. Appropriateness of Providing Fewer Car Spaces than the Demand Assessment

If the number of car spaces is not met on-site under the Car Parking Demand Assessment, the second step is to consider whether it is appropriate to allow fewer spaces to be provided than the number likely to be generated by the site as assessed by the Car Parking Demand Assessment.

Clause 52.06-7 sets out a series of car parking provision factors that should be considered when assessing the appropriateness of providing fewer car spaces on the site than are likely to be generated by the use. The relevant car parking provision factors are as follows:

- ***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.***
- *On street parking in residential zones in the locality of the land that is intended to be for residential use.*
- *The practicality of providing car parking on the site, particularly for lots of less than 300 square metres.*
- ***Any adverse economic impact a shortfall of parking may have on the economic viability of any nearby activity centre.***
- ***The future growth and development of any nearby activity centre.***
- ***Any car parking deficiency associated with the existing use of the land.***
- *Any credit that should be allowed for car parking spaces provided on common land or by a Special Charge Scheme or cash-in-lieu payment.*
- ***Local traffic management in the locality of the land.***
- *The impact of fewer car parking spaces on local amenity, including pedestrian amenity and the amenity of nearby residential areas.*
- *The need to create safe, functional and attractive parking areas.*
- ***Access to or provision of alternative transport modes to and from the land.***
- *The equity of reducing the car parking requirement having regard to any historic contributions by existing businesses.*
- *The character of the surrounding area and whether reducing the car parking provision would result in a quality/positive urban design outcome.*
- *Any other matter specified in a schedule to the Parking Overlay.*
- *Any other relevant consideration.*

These factors are considered below.

4.2.4. Existing Car Parking Deficiency

Under existing conditions the site accommodates a single storey warehouse/industry building that includes an overall floor area of approximately 940m^2. No on-site car parking is provided for the existing land uses.

Application of the statutory car parking requirements for either warehouse or industry land uses results in existing car parking requirements and associated shortfalls as follows:

- Warehouse (2 spaces plus 1.0 car space per 100m^2) – 11 car spaces
- Industry (1.0 car space per 100m^2) – 9 car spaces

Based on the above, the existing commercial land uses can be considered to generate a total demand of between 9-11 car parking spaces that historically would have been accommodated on-street

4.2.5. Local Policies

There are numerous local and state-wide policies that support lower car parking provisions in developments with access to alternative transport modes, as extracted at Section 4.1, and within the Merri-bek Integrated Transport Study.

The proposal supports the strategies and objectives of Merri-bek Council by providing reduced car parking for residents and commercial tenancies in proximity to sustainable modes of transport and nearby amenities.

As per Section 4.1, the development targets the following Local Policies:

- *Permitting less parking in new developments to allow people to choose a lower level of parking to suit their needs*
- *Reallocating space from cars and car parking to walking, cycling and public transport*
- *Support mode shift through design, and travel demand measures*
- *Work with communities to support behaviour change*

4.2.6. Availability of Car Parking

As per Section 3.2.2, Traffix Group undertook car parking surveys approximately 200m from the site. We note that there were extensive construction works in the nearby area during the surveyed times resulting in an oversaturation of on-street parking. Accordingly, for the purpose of this assessment we will only consider times outside of construction works, as follows:

- 7pm and 8pm on Thursday 15th February, 2024, and
- 12pm, 1pm, 7pm and 8pm on Saturday 17th February, 2024.

The car parking surveys identified a supply of 193 on-street car spaces for use by the general public in the nearby area. The overall demand for car parking was moderate to very high over the survey period.

While the demands for parking are moderate to high at times, we are satisfied that short-term parking is available for customers and visitors of the commercial tenancies.

Staff and residents of this development will be ineligible for car parking permits to exempt them from on-street parking restrictions. Whilst on-street car parking is currently generally unrestricted, restriction may be introduced by Council in the future if demand for car parking required this to occur.

4.2.7. Availability of Alternative Transport Modes

As detailed in Section 3.3.1, the site is well served by efficient public transport services that are within an appropriate walking distance of the development site. These services include Brunswick Railway Station and Tram Route 58.

There are several car share pods in the vicinity of the site that provide residents and staff with the opportunity to use a car if required.

Bicycle parking is provided in accordance with the statutory requirements set out at Clause 52.34 of the Planning Scheme, as detailed in Section 4.3. The site is also well served by bicycle infrastructure and there are many local destinations that are readily accessible by bicycle.

Alternatively, there are many local destinations that are also readily accessible via a short walk.

Given the above, the development site represents an excellent location to support the reduced rate of car parking.

4.2.8. Local Traffic Management

As discussed previously, an 'office' use is one land-use that is particularly conducive (and important to target) in achieving a mode shift away from private cars to public transport, cycling, walking, etc. This also applies to staff parking for most commercial businesses.

This is particularly the case as journey to work trips for office uses are typically made during the commuter peak hours and predominantly involve single occupant vehicles. The timing of these trips has the greatest impact on traffic congestion on the road network and occurs when public transport services operate at high frequencies (and offer express services in some cases).

The provision of reduced on-site car parking for the office tenancy assists in reducing the traffic impacts of the development on the local and broader road network and encourages sustainable transport choices. If provided with the full statutory office requirement, traffic generation by the development would be significantly higher than what is proposed.

4.2.9. Impacts on the Activity Centre

The site is located within the Core Industrial and Employment Precinct and near the Sydney Road Activity Centre.

Planning Practice Note 22 (June, 2015) states that:

> *In an Activity Centre, car parking issues have a part to play, but should not dominate when assessing an application for a use or development.*
>
> *Where a change of use or relatively small extension is consistent with the strategic plan for the centre and car parking cannot easily be provided, it will often be more sensible to reduce the car parking requirement, rather than prevent the use or development. Some activity centres will have excellent public transport access, amply car parking or mainly serve local customers who arrive on foot. In such circumstances, an increase in business and activity would increase the overall viability of the centre, and the reduced number of car trips would have a positive impact.*

In this instance, the parking impacts of the development are relatively small in practice, particularly given the existing demands that are experienced in the area. In this context, a centre-based approach to parking is appropriate and the reliance on off-site car parking for short-term demands (i.e. customers and visitors) is appropriate.

4.2.10. Summary

Based on the decision factors of Clause 52.06-7, we are satisfied that the proposed level of car parking for this development is acceptable and that providing fewer car spaces on the site than required under Clause 52.06-7 is supported for the following reasons:

- consideration of Merri-Bek Council's local policies and State Planning Policy,
- empirical assessment of car parking demands demonstrates adequate parking is provided to accommodate long-term parking demands by residents, with overflow parking relating to short-term parking by commercial customers only,
- the availability of extensive alternative transport modes ensures no level of transport disadvantage for future residents. The available options include public transport services, car share schemes and bicycle facilities,
- the site's location within Core Industrial and Employment Precinct and near the Sydney Road Activity Centre,
- the reduced traffic impacts on the local and broader road network due to the lower car parking provision, and
- the provision of bicycle in accordance with the requirements of Clause 52.34 of the Planning Scheme ensure that bicycles are encouraged as a mode of non-car based transport by residents.

4.3. Bicycle Parking Provision

Clause 52.34 of the Planning Scheme specifies bicycle parking requirements for new developments. The purpose of Clause 52.34 is to:

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

The development provides bicycle parking as follows:

- Residents: 106 spaces
  - Distributed over upper levels within communal corridor areas
- Residential Visitors: 21 spaces
  - 5 at ground near easter core also distributed over upper levels within communal corridor areas
- Commercial Staff: 20 spaces
  - Secure room at Basement 1 including 10 horizontal spaces, 8 vertical spaces and 2 cargo bicycle spaces.

Bicycle parking is provided via a combination of two-level stacker units, floor mounted rails and wall mounted vertical rails.

End of Trip facilities are provided for staff at Basement 1 and include showers and changeroom facilities.

The statutory bicycle parking requirement of the development under Clause 52.34 is set out in the table below.

Table 7: Statutory Bicycle Parking Assessment - Clause 52.34

Use	Size/No.	Statutory Bicycle Parking Requirement		No. Bicycle spaces required
		Residents or Employees	Visitors or Customers	
Dwelling	61	1 space to each 5 dwellings	1 space to each 10 dwellings	12 resident 6 visitor
Shop	95m^2	1 space to each 600m^2 LFA if the LFA exceeds 1000m^2	1 space to each 500m^2 LFA if the LFA exceeds 1000m^2	None
Office	455m^2	1 to each 300m^2 of NFA if the NFA exceeds 1000m^2	1 to each 1000m^2 of NFA if the NFA exceeds 1000m^2	None
TOTAL				**12 resident 6 visitor**

Based on the above, provision of bicycle spaces exceeds the bicycle parking requirements of Clause 52.34.

Given that there is no requirement to provide commercial bicycle parking, there is no corresponding requirement to provide End-of-Trip facilities.

Notwithstanding a space has been allocated for EoT facilities at the basement mezzanine. The facilities include:

- Two showers/changerooms,
- One toilet, and
- 20 lockers and seating areas.

4.4. Review of Carpark Layout and Vehicle Access Arrangements

Traffix Group has provided design advice to the project architect to achieve a satisfactory carpark layout. The proposed parking layout has been assessed under the following guidelines:

- Clause 52.06-9 of the Planning Scheme (Design Standards for car parking),
- AS2890.1-2004 – Part 1: Off-Street Car Parking (where relevant), and

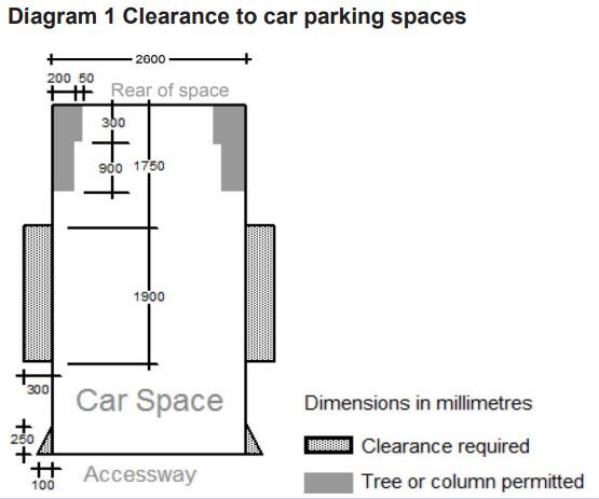
An assessment against the relevant design standards of the Planning Scheme and Australian Standards (where relevant) is provided in the table below.

Table 8: Carpark Layout and Access Assessment

Requirement	Assessment	Design Response
Clause 52.06-9 Design Standard 1 – Accessways		
Must be at least 3m wide	✓	Accessways are greater than 3m in width
Have an internal radius of at least 4m at changes of direction or intersection or be at least 4.2m wide.	o	B99 design car can navigate all bends. Objective achieved.
Allow vehicles parked in the last space of a dead-end accessway in public car parks to exit in a forwards direction with one manoeuvre.	NA	Not a public carpark.
Provide at least 2.1m headroom beneath overhead obstructions, calculated for a vehicle with a wheel base of 2.8m.	✓	Complies.
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.	✓	Complies.
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.	✓	Passing area provided.

<table>
<tr><th>Requirement</th><th>Assessment</th><th>Design Response</th></tr>
<tr><td>Have a corner splay or area at least 50% clear of visual obstructions extending at least 2m along the frontage road from the edge of an exit lane and 2.5m along the exit lane from the frontage, to provide a clear view of pedestrians on the footpath of the frontage road. The area clear of visual obstructions may include an adjacent entry or exit lane where more than one lane is provided, or adjacent landscaped areas, provided the landscaping in those areas is less than 900mm in height.</td><td>o</td><td>Sight triangle is not required on the west side as double width accessway provides adequate clear space. Where sight triangle has not be provided on the east side a convex mirror has been instead. Objective achieved.</td></tr>
<tr><td>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.</td><td>✓</td><td>Complies.</td></tr>
<tr><td>If entry to the car space is from a road, the width of the accessway may include the road.</td><td>N/A</td><td>Not applicable</td></tr>
<tr><td colspan="3">Clause 52.06-9 Design Standard 2 – Car Parking Spaces</td></tr>
<tr><td>Car parking spaces and accessways must have the minimum dimensions as outlined in Table 2 under Clause 52.06-9.
<table>
<tr><th>Angle of car spaces to accessway</th><th>Accessway width</th><th>Car park width</th><th>Car park length</th></tr>
<tr><td>Parallel</td><td>3.6 m</td><td>2.3 m</td><td>6.7 m</td></tr>
<tr><td>45°</td><td>3.5 m</td><td>2.6 m</td><td>4.9 m</td></tr>
<tr><td>60°</td><td>4.9 m</td><td>2.6 m</td><td>4.9 m</td></tr>
<tr><td>90°</td><td>6.4 m</td><td>2.6 m</td><td>4.9 m</td></tr>
<tr><td></td><td>5.8 m</td><td>2.8 m</td><td>4.9 m</td></tr>
<tr><td></td><td>5.2 m</td><td>3.0 m</td><td>4.9 m</td></tr>
<tr><td></td><td>4.8 m</td><td>3.2 m</td><td>4.9 m</td></tr>
</table>
Note to Table 2: Some dimensions in Table 2 vary from those shown in the Australian Standard AS2890.1-2004 (off street). The dimensions shown in Table 2 allocate more space to aisle widths and less to marked spaces to provide improved operation and access. The dimensions in Table 2 are to be used in preference to the Australian Standard AS2890.1-2004 (off street) except for disabled spaces which must achieve Australian Standard AS2890.6-2009 (disabled).</td><td>o</td><td>All stacker spaces provide a clear platform of 2.5m wide x 5.0m long with a minimum 5.8m wide access aisle.

Access to and from the critical car spaces within the basement carpark have been checked for access by the B85 design car (specified at Appendix B of AS2890.1-2004).</td></tr>
</table>

Requirement	Assessment	Design Response
A wall, fence, column, tree, tree guard or any other structure that abuts a car space must not encroach into the area marked 'clearance required' on Diagram 1, other than: • A column, tree or tree guard, which may project into a space if it is within the area marked 'tree or column permitted' on Diagram 1. • A structure, which may project into the space if it is at least 2.1 metres above the space. **Diagram 1 Clearance to car parking spaces**  	N/A	Not applicable.
Car spaces in garages/carports must be at least 6m long and 3.5m wide for a single space and 5.5m wide for a double space measured inside the garage/carport.	N/A	No garages proposed.
Where parking spaces are provided in tandem, an additional 0.5m in length must be provided between each space.	N/A	No tandem car spaces.
Where two or more car parking spaces are provided for a dwelling, at least one space must be under cover.	✓	All spaces are under cover.
Disabled car parking spaces must be designed in accordance with AS2890.6-2009 and the Building Code of Australia. Disabled car parking spaces may encroach into an accessway width specified in Table 2 by 0.5m. A minimum headroom of 2.5m is to be provided above the disabled car space in accordance with AS2890.6-2009.	N/A	No disabled spaces.

<table>
<tr><th>Requirement</th><th>Assessment</th><th>Design Response</th></tr>
<tr><td colspan="3">Clause 52.06-9 Design Standard 3 - Gradients</td></tr>
<tr><td>Accessway grades must not be steeper than 1:10 (10 per cent) within 5 metres of the frontage to ensure safety for pedestrians and vehicles. The design must have regard to the wheelbase of the vehicle being designed for; pedestrian and vehicular traffic volumes; the nature of the car park; and the slope and configuration of the vehicle crossover at the site frontage.
This does not apply to accessways serving three dwellings or less.</td><td>✓</td><td>Complies.</td></tr>
<tr><td>Ramps (except within 5 metres of the frontage) must have the maximum grades as outlined in Table 3 and be designed for vehicles travelling in a forward direction.
<table>
<tr><th>Type of car park</th><th>Length of ramp</th><th>Maximum grade</th></tr>
<tr><td rowspan="2">Public car parks</td><td>20 metres or less</td><td>1:5 (20%)</td></tr>
<tr><td>longer than 20 metres</td><td>1:6 (16.7%)</td></tr>
<tr><td rowspan="2">Private or residential car parks</td><td>20 metres or less</td><td>1:4 (25%)</td></tr>
<tr><td>longer than 20 metres</td><td>1:5 (20%)</td></tr>
</table></td><td>✓</td><td>Complies.</td></tr>
<tr><td>Where the difference in grade between two sections of ramp or floor is greater that 1:8 (12.5 per cent) for a summit grade change, or greater than 1:6.7 (15 per cent) for a sag grade change, the ramp must include a transition section of at least 2 metres to prevent vehicles scraping or bottoming.</td><td>✓</td><td>Complies.</td></tr>
<tr><td>Plans must include an assessment of grade changes of greater than 1:5.6 (18 per cent) or less than 3 metres apart for clearances, to the satisfaction of the responsible authority</td><td>✓</td><td>Complies.</td></tr>
<tr><td colspan="3">Clause 52.06-9 Design Standard 4 – Mechanical Parking</td></tr>
<tr><td>At least 25 per cent of the mechanical car parking spaces can accommodate a vehicle height of at least 1.8 metres.</td><td>✓</td><td>100% of stacker spaces provide 1.8m headroom clearance</td></tr>
<tr><td>Car parking spaces that require the operation of the system are not allocated to visitors unless used in a valet parking situation.</td><td>✓</td><td>All parking allocated to permanent residents.</td></tr>
<tr><td>The design and operation is to the satisfaction of the responsible authority.</td><td>✓</td><td>Details of the stacker operation are provided below.</td></tr>
</table>

Requirement	Assessment	Design Response
Clause 52.06-9 Design Standard 5 – Urban Design		
Ground level car parking, garage doors and accessways must not visually dominate public space.	N/A*	These matters are more related to urban design, rather than specifically traffic engineering.
Car parking within buildings (including visible portions of partly submerged basements) must be screened or obscured where possible, including through the use of occupied tenancies, landscaping, architectural treatments and artworks.		
Design of car parks must take into account their use as entry points to the site.		
Design of new internal streets in developments must maximise on street parking opportunities.	N/A	No internal streets proposed
Clause 52.06-9 Design Standard 6 – Safety		
Car parking must be well lit and clearly signed.	N/A	Car parking is all private for use by residents and we are satisfied that signage is not strictly required. Sensor lights or similar, would be adequate for a development of this scale.
The design of car parks must maximise natural surveillance and pedestrian visibility from adjacent buildings.	✓	We are satisfied that the common accessway naturally provides good sightlines.
Pedestrian access to car parking areas from the street must be convenient.	✓	The central accessways have been designed to act as shared zones for both pedestrians and vehicles. We are satisfied that these pedestrian arrangements are appropriate for a development of this scale.

Requirement	Assessment	Design Response
Pedestrian routes through car parking areas and building entries and other destination points must be clearly marked and separated from traffic in high activity parking areas.	✓	Given that a that the basement carpark only provides 40 car spaces and is only expected to generate 18 movements in any peak hours, we are satisfied that separated pedestrian lanes are not required for this low level of traffic.
Clause 52.06-9 Design Standard 7 - Landscaping		
The layout of car parking areas must provide for water sensitive urban design treatment and landscaping.	N/A*	These requirements are not strictly related to traffic engineering matters.
Landscaping and trees must be planted to provide shade and shelter, soften the appearance of ground level car parking and aid in the clear identification of pedestrian paths.		
Ground level car parking spaces must include trees planted with flush grilles. Spacing of trees must be determined having regard to the expected size of the selected species at maturity.		

4.4.1. Car Stacker Consideration

The on-site car stackers will include 40 car spaces via 2 x Klaus Trendvario 6300 Semi-Automatic Systems.

https://www.multiparking.com.au/trendvario-6300/#specifications

Further details regarding the clear dimensions available for the car stachers is presented in the following table.

Table 9: Assessment of Car Stacker Design

System Characteristic	Specifications	Response
Stacker System	Klaus Trendvario 6300 Semi-Automatic System	Specifications available at - *https://www.multiparking.com.au/trendvario-6300/#specifications*
Type of system	3 level independent stacker (with pit)	All spaces will be independently accessed.
Number of spaces	40 spaces Two 20 space systems each providing a 7 x 3 grid with 1 clear space	All car parking allocated to residents.
Car space grid width	2.7m	
Usable Platform Width	Min. 2.5m wide single platforms	Platform width satisfies AS2890.1-2004 for long-term car parking
Minimum Access Aisle Width Behind Stacker	Min. 5.8m Typically 6.4m	Width satisfies AS2890.1-2004
Platform Length	5.0m	System length of 5.5m Accommodates B85 design car
Pit Depth	2.05m	-
Headroom Clearance	3.85m	-
Car Height All Levels	Upper Level: 1.8m Ground Level: 1.8m Lower Level (Pit): 1.8m	100% of car spaces accommodate 1.8m headroom clearance, satisfying Design Standard 4 of Clause 52.06-9

Access to the car stackers has been reviewed for the B85 design vehicle presented at AS2890.1-2004 and found to be acceptable. Car space access via a reverse entry movement (or alternately a corrective) will be required. Swept paths demonstrating access are attached at Appendix C

This arrangement is acceptable noting that car parking is allocated for residential car parking and the users will be familiar with the access requirements.

4.5. Loading and Waste Collection Arrangements

Clause 65.01 of the Planning Scheme states that the Responsible Authority must consider a number of matters as appropriate including:

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

4.5.1. Loading

Loading activities for the apartments will be generally via courier deliveries and more occasionally associated with furniture movers/removalists when residents move in/out. These activities can readily occur on-street or informally on-site and do not warrant a dedicated on-site loading bay.

Given the small size of the commercial tenancies, regular deliveries to the site are expected to be by smaller trucks and vans which can be accommodated on-street.

We are satisfied this is appropriate, given the site's inner city context and frequency of loading requirements.

4.5.2. Waste Collection

Waste collection will occur on-site, within the basement level carpark by a private contractor utilising the mini waste truck (6.4m long x 2.08m high). This vehicle will access the site, collect bins and exit the site in a forward's direction. Swept path diagrams confirming suitable access by this vehicle are attached at Appendix C.

Overall, waste collection is satisfactory from a traffic engineering perspective.

4.6. Traffic Impact Assessment

Residential

It is appropriate to consider both the AM and PM peak hours having regard to the proposed development and nearby land uses.

The development comprises 61 dwellings, including:

- 16 x one-bedroom dwellings,
- 37 x two-bedroom dwellings, and
- 8 x three-bedroom dwellings.

The following traffic generation rates for each dwelling type have been adopted:

- The one- and two-bedroom dwelling with one car space will generate 3 vehicle trips per day.
- Larger three-bedroom dwellings will generate an average of 5 vehicle trips per day.
- 10% of the daily traffic generation occurs during the road network peak hours.

A total of 40 car parking spaces are provided overall that will be allocated to the various dwellings. The distribution of parking amongst the various dwellings will be resolved closer to the time of sale. For the purpose of this assessment we have conservatively assumed that each three-bedroom dwelling will be allocated a single car space with the balance of spaces allocated to two-bedroom dwellings with each dwelling allocated a single car space.

Commercial tenancies

As the commercial tenancies are not allocated any on-site carparking they are not expected to generate any vehicle movements from the on-site car parking areas. As previously detailed we expect that up to 13 staff may park on-street (assumes car parking demands are consistent with the statutory requirement).

Traffic associated with off-site parking by customers will be evenly distributed across the nearby road network and will have negligible impacts on the wider road network.

Summary

The table below summarises the traffic generation of the proposal.

Table 10: Expected Post Development Traffic Generation

Use	Size/No.	Daily Traffic Generation Rate	Daily	Peak Traffic Generation Rate	Peak hour
One-bed dwelling with no car space	16	-	-	-	-
Two-bed dwelling with no car space	5	-	-	-	-
Two-bed dwelling with one car space	32	3/dwelling	96	0.4/dwelling	13
Three-bed dwellings with one car space	8	5/dwelling	40	0.6/dwelling	5
Shop	102m^2	-	-	-	-
Office	482.1m^2	-	-	-	-
Total			**136**		**18**

The above rates are considered conservative in context to the site location. The site is located within the Core Industrial and Employment Precinct and near the Sydney Road Activity Centre and well served by efficient public transport services that are within an appropriate walking distance of the development site.

We are satisfied that this level of traffic can be accommodate by the surrounding road network without any adverse impact to its operation. Access will be directly to Albert Street (a Council Collector road) and consequentially impacts on local streets will be limited.

5. Conclusions

Having undertaken a detailed traffic engineering assessment of the proposed mixed use development at 427 Albert Street, Brunswick, we are of the opinion that:

a) the proposed development has a statutory car parking requirement of 86 car spaces under Clause 52.06-5 and the provision and allocation of 40 car spaces results in a shortfall of 46 spaces (29 residential spaces and 14 office and 3 shop spaces),

b) The required reduction in parking under Clause 52.06-7 is supported on the following grounds:

   i) consideration of Merri-Bek Council's local policies and State Planning Policy,

   ii) empirical assessment of car parking demands demonstrates adequate parking is provided to accommodate long-term parking demands by residents, with overflow parking relating to short-term parking by commercial customers only,

   iii) the availability of extensive alternative transport modes ensures no level of transport disadvantage for future residents. The available options include public transport services, car share schemes and bicycle facilities,

   iv) staff without on-site parking can pay for off-street parking, if they so choose, or use alternative transport modes,

   v) the site's location within the Core Industrial and Employment Precinct and near the Sydney Road Activity Centre,

   vi) the reduced traffic impacts on the local and broader road network due to the lower car parking provision, and

   vii) the provision of bicycle parking in accordance with the requirements of Clause 52.34 of the Planning Scheme ensure that bicycles are encouraged as a mode of non-car based transport by residents.

c) bicycle parking is provided in accordance with the requirements set out at Clause 52.34 of the Planning Scheme,

d) the proposed parking layout and vehicle access arrangements accord with the requirements of the Planning Scheme, Australian Standards (where relevant) and current practice,

e) loading and waste collection arrangements are acceptable,

f) the level of traffic generated by the proposal can be accommodated without any adverse impacts to the operation of the local road network, and

g) there are no traffic engineering reasons why a planning permit for the proposed mixed-use development at 427 Albert Street, Brunswick should be refused, subject to appropriate conditions.

Appendix A

Development Plans

General Notes:

1. These drawings are to be read in conjunction with the Urban Context Report prepared by Austin Maynard Architects, and the following consultant team reports;

Tract
Planning Report

HIP V. HYPE
Sustability Management Plan
Waste Management Plan

Gardens of the Sun
Landscape Architect Design

Traffix Group
Traffic Engineering Assessment
Green Travel Plan

Vipac Engineers & Scientists
Wind Impact Assement
Acoustic Report

Access Solutions
Accessibility Report

Webster Survey Group
Title Reistablishemnt & Feature Survey

Tree Department
Arborist Report

2. All POS areas are provided with a garden tap, stormwater drainage & a weatherproof electricity outlet

3. All Landscaping areas are to be irrigated. Irragation system to be supplied with water collected onsite.

Plan Key:
F. = Fridge
P. = Pantry
S. = Store
L. = Laundry

austin maynard architects

Directors Andrew Maynard & Mark Austin

Web: www.maynardarchitets.com
Email: hello@maynardarchitects.com
Phone: 03 9000 5645
Address: Level 1, 458 Swanston Street, Carlton VIC 3053

ABN: 1911 74 80 636

Austin Maynard Architects is the trading name of Andrew Maynard Architects Pty Ltd

REVISION	DATE	REVISION NOTE	BY
A	24/7/2024	PLANNING SUBMISSION SET	MS

Better Apartment Living

427 Albert Street, Brunswick 3056

HIP V. HYPE

Plan: Level Ground

PLANNING SUBMISSION SET

25/7/2024	24/7/2024	1:200
print date	issue date	scale @ A1

230314	240220 427 Albert - A 000 - Plot File.vwx
austin maynard project#	file#

A 100 A

General Notes:

1. These drawings are to be read in conjunction with the Urban Context Report prepared by Austin Maynard Architects, and the following consultant team reports;

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Planning Report

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Plan Key:
R. = Fridge
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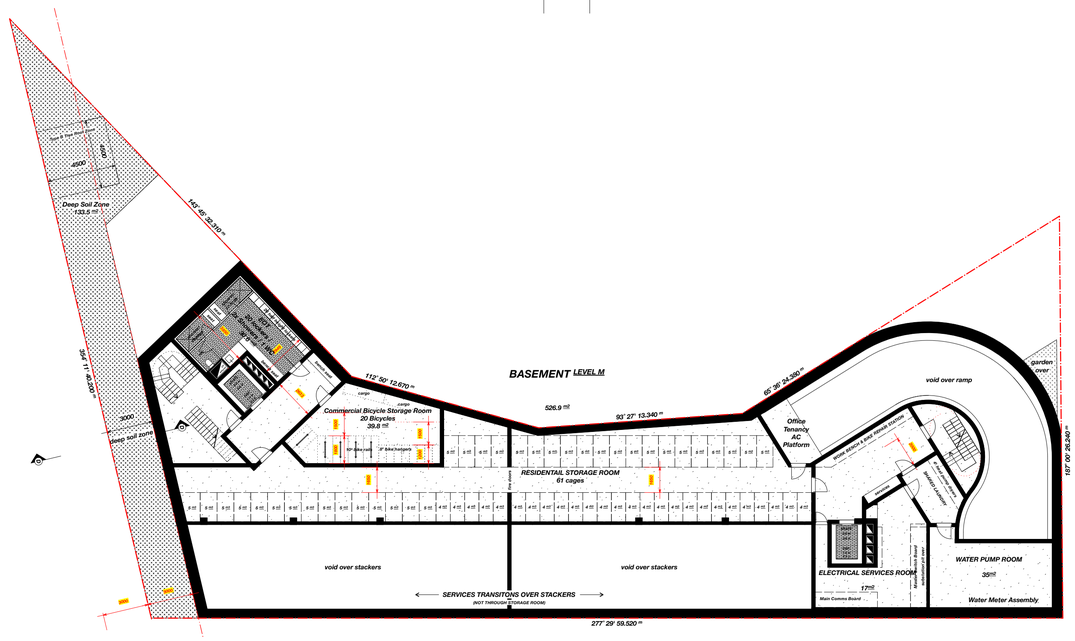
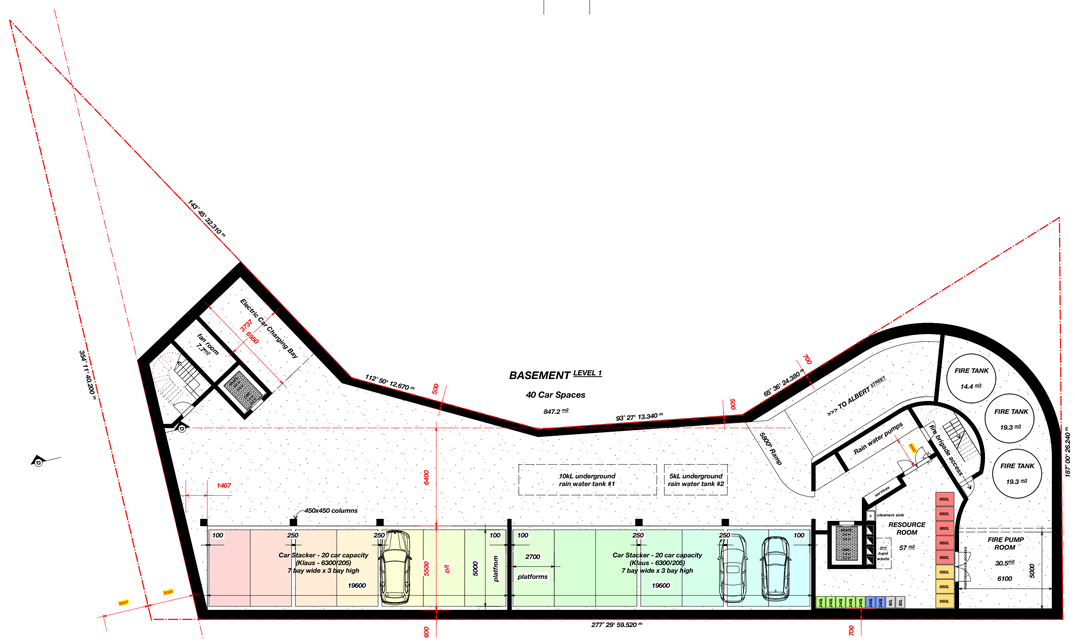
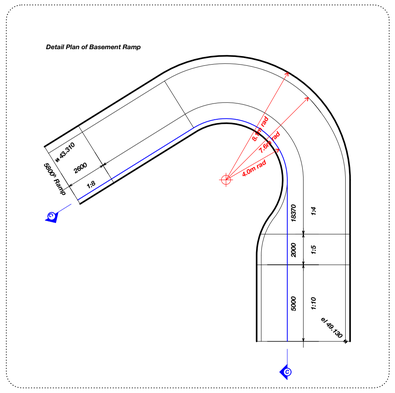


Plan: Basement Level B1



Plan: Basement Level B2



Directors Andrew Maynard & Mark Austin

Web: www.maynardarchitets.com
Email: hello@maynardarchitects.com
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REVISION	DATE	REVISION NOTE	BY
A	24/7/2024	PLANNING SUBMISSION SET	MS

Better Apartment Living

427 Albert Street, Brunswick 3056

HIP V. HYPE

Plan: Basement Levels; Mezz & B

PLANNING SUBMISSION SET

25/7/2024	24/7/2024	1:200
print date	issue date	scale @ A1

230314	240220 427 Albert - A 000 - Plot File.vwx
austin maynard project#	file#

A 109 A

Appendix B

Parking Survey

GRP33113
427 Albert Street, Brunswick
Parking Surveys

Traffix Group

Supervised By: Jordan Mitropoulos
Surveyed By: Frank Feller

Survey Dates & Times: See below

Location		Restriction	Capacity Min - Max	Thursday, 15th, February, 2024				Saturday, 17th, February, 2024			
				12noon	1pm	7pm	8pm	12noon	1pm	7pm	8pm
ON-STREET CARPARKING											
Map Ref.	**ALBERT STREET**										
	North Side										
A	EB#487 to Pearson Street	Unrestricted	15	13	13	15	15	13	13	13	12
		DDA Parking Only	1	0	0	0	0	0	1	0	0
		Unrestricted	10	11	12	4	4	10	7	6	6
		No Stopping	-	0	0	0	0	0	0	0	0
B	Pearson Street to WB Subject Site	No Stopping	-	0	0	0	0	0	0	0	0
		Unrestricted	14	16	16	6	6	15	7	6	6
C	WB Subject Site to EB Subject Site	Unrestricted	6	10	10	1	1	10	8	1	1
D	EB Subject Site to WB Clifton Park	Unrestricted	1	6	6	4	4	7	8	4	4
		Construction Activites	-	0	0	0	0	0	0	0	0
	WB Clifton Park to EB Clifton Park	Unrestricted	15	15	16	6	6	15	8	2	3
		Keep Clear	-	0	0	0	0	0	0	0	0
		Unrestricted	5	5	5	3	4	5	2	4	4
	South Side										
E	Syme Street to EB Park	No Stopping	-	1	0	0	0	1	0	0	0
		Unrestricted	5	5	7	1	1	4	1	1	1
	EB Gilpin Park to WB Gilpin Park	Unrestricted	49	55	51	18	18	43	30	25	21
	WB Park to Pearson Street	Unrestricted	6	7	6	4	5	6	3	0	2
		No Stopping	-	0	0	0	0	0	0	0	0
F	Pearson Street to EB#402	No Stopping	-	0	0	0	0	0	0	0	0
		Unrestricted	16	14	14	9	10	8	8	10	10
	EB#402 to WB#446	Unrestricted	26	17	16	22	23	22	18	20	22
ALBERT STREET		**Capacity**	**169 - 169**	**169**	**169**	**169**	**169**	**169**	**169**	**169**	**169**
		Total Number of Cars Parked		**175**	**172**	**93**	**97**	**159**	**114**	**92**	**92**
		Total Number of Vacant Spaces		**-6**	**-3**	**76**	**72**	**10**	**55**	**77**	**77**
		Percentage Occupancy		**104%**	**102%**	**55%**	**57%**	**94%**	**67%**	**54%**	**54%**
Map Ref.	**PEARSON STREET**										
	East Side										
G	Opposite Hunter Street (Power Pole) to Albert Street	Unrestricted	5	5	6	4	4	5	4	5	5
		No Stopping	-	0	0	0	0	0	0	0	0
H	Albert Street to NB Gilpin Park	No Stopping	-	0	0	0	0	0	0	0	0
		Unrestricted	7	9	9	7	7	8	6	6	6
	West Side										
I	Smith Street to Albert Street	No Stopping	-	0	0	0	0	0	0	0	0
		Unrestricted	6	6	6	5	5	5	3	5	5
		No Stopping	-	1	1	0	0	1	0	0	0
J	Albert Street to Hunter Street	No Stopping	-	0	0	0	0	0	0	0	0
		1P 8am-6pm Mon-Fri	6	4	4	4	4	5	6	5	5
		No Stopping	-	0	0	0	0	0	0	0	0
PEARSON STREET		**Capacity**	**24 - 24**	**24**	**24**	**24**	**24**	**24**	**24**	**24**	**24**
		Total Number of Cars Parked		**25**	**26**	**20**	**20**	**24**	**19**	**21**	**21**
		Total Number of Vacant Spaces		**-1**	**-2**	**4**	**4**	**0**	**5**	**3**	**3**
		Percentage Occupancy		**104%**	**108%**	**83%**	**83%**	**100%**	**79%**	**88%**	**88%**
SUMMARY => ON-STREET CARPARKING											
Car Parking Supply			**193 - 193**	**193**	**193**	**193**	**193**	**193**	**193**	**193**	**193**
Total Number of Cars Parked				**200**	**198**	**113**	**117**	**183**	**133**	**113**	**113**
Total Number of Vacant Spaces				**-7**	**-5**	**80**	**76**	**10**	**60**	**80**	**80**
Percentage Occupancy				**104%**	**103%**	**59%**	**61%**	**95%**	**69%**	**59%**	**59%**
OFF-STREET CARPARKING											
Map Ref.	**CLIFTON PARK CARPARK**										
K	Accessed from Albert Street	Unrestricted	8	16	16	3	4	17	2	2	2
CLIFTON PARK CARPARK		**Capacity**	**8 - 8**	**8**	**8**	**8**	**8**	**8**	**8**	**8**	**8**
		Total Number of Cars Parked		**16**	**16**	**3**	**4**	**17**	**2**	**2**	**2**
		Total Number of Vacant Spaces		**-8**	**-8**	**5**	**4**	**-9**	**6**	**6**	**6**
		Percentage Occupancy		**200%**	**200%**	**38%**	**50%**	**213%**	**25%**	**25%**	**25%**

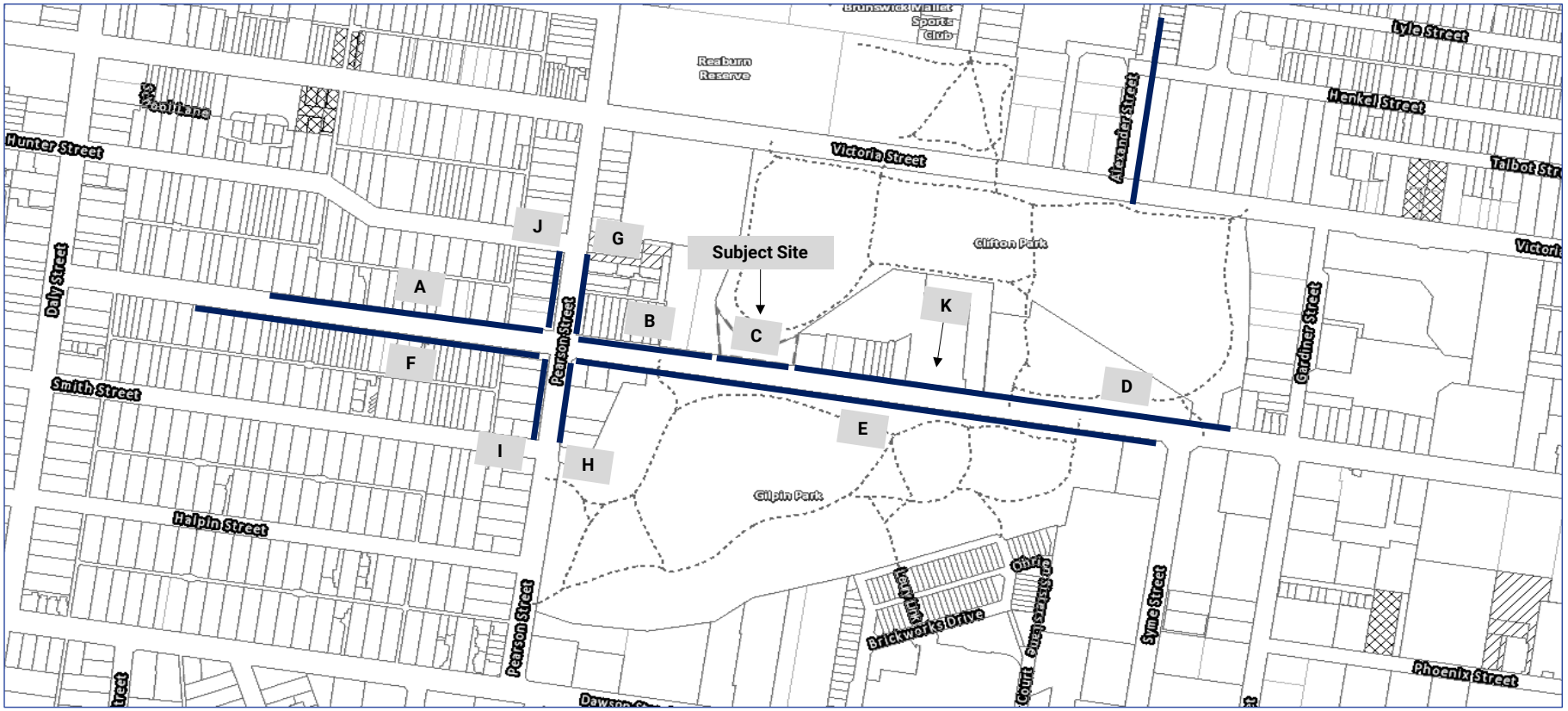
Note: Public parking includes spaces that are available to the general public and excludes 'No Stopping', 'Loading Zones' and 'No Parking' areas, etc., during the relevant enforcement periods

LEGEND:

Public Parking	
Not available to the general public	
Not Available, illegally parked cars included in analysis	
No Stopping/ Other No Parking	

Nb/Sb - Northern/Southern Property Boundary
Eb/Wb - Eastern/Western Property Boundary
Mid pt - Mid point
ROW - Right of Way

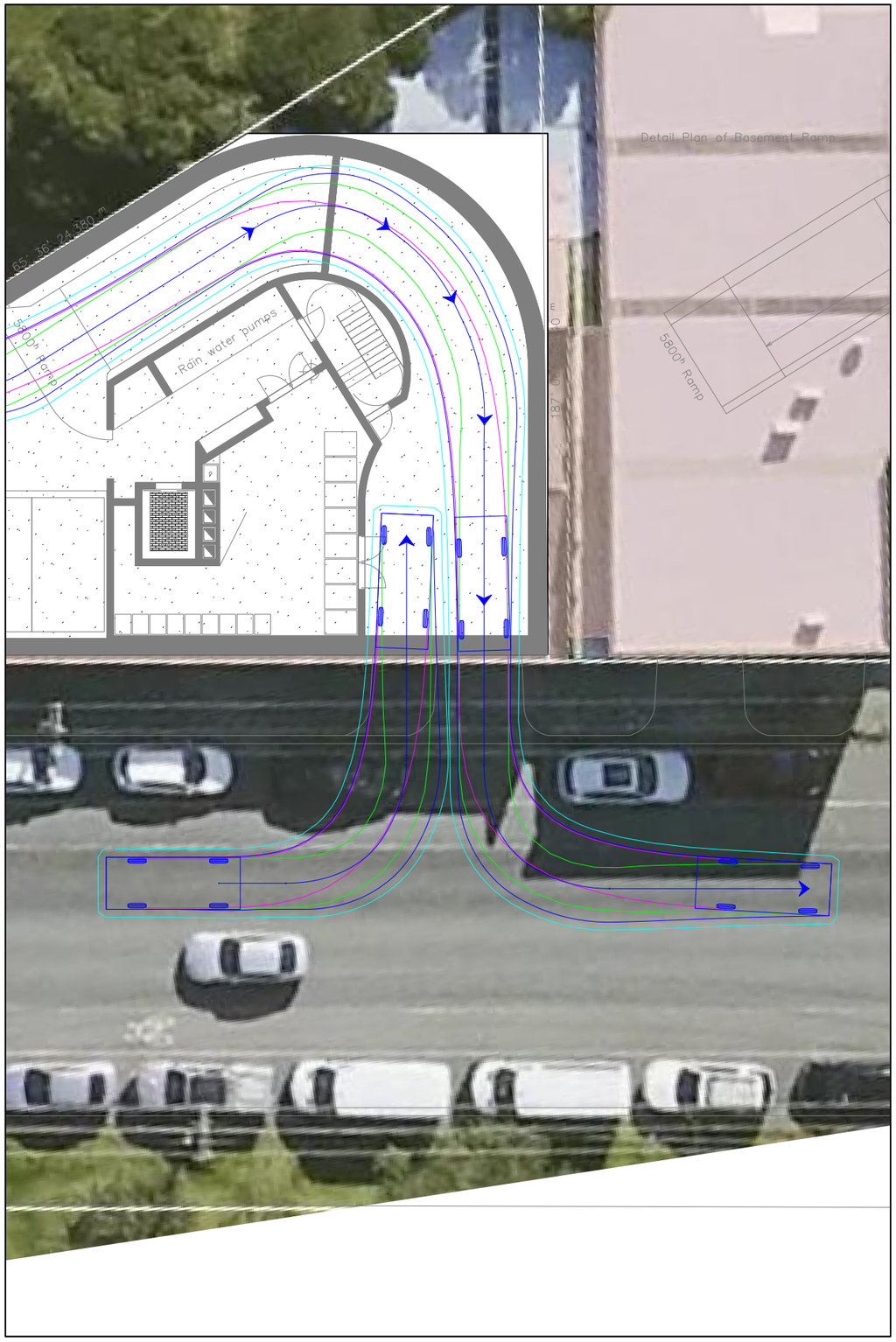
Traffix Group



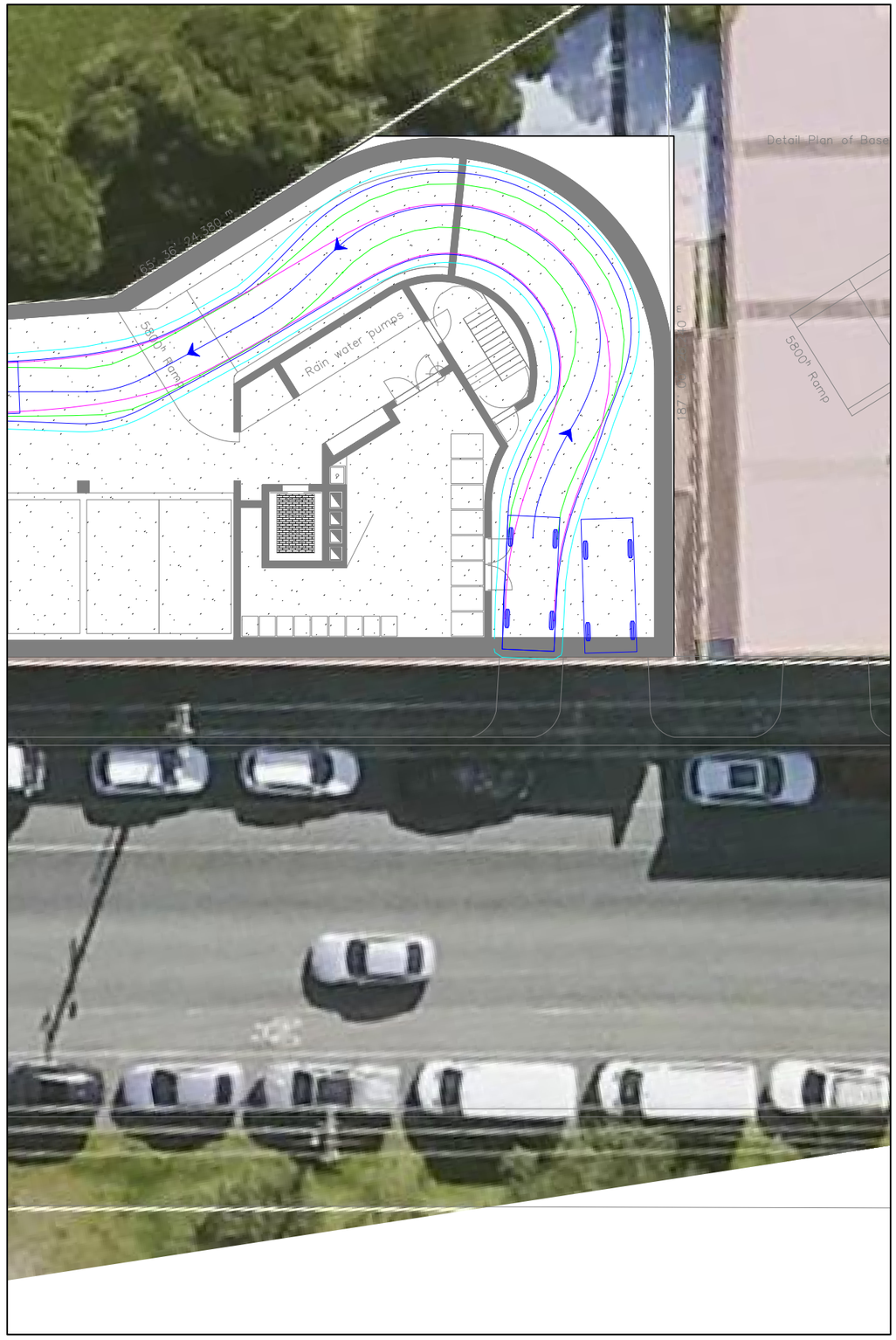
Appendix C

Swept Path Diagrams

VEHICLE ACCESS - MOVEMENT A



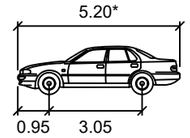
VEHICLE ACCESS - MOVEMENT B



VEHICLE PROFILE

VEHICLE USED IN SIMULATION

(VEHICLE SPEED - 5KM/H)



99th percentile
(AS/NZS 2890.1:2004)

Width	:	1.94
Track	:	1.84
Kerb to Kerb Radius	:	12.5m

* actual template based on 'relevant longitudinal dimensions that affect swept path' as set out in Section B2.1 of AS/NZS 2890.1:2004

LEGEND

REAR WHEELS — VEHICLE BODY
FRONT WHEELS — BODY CLEARANCE

REV	DATE	NOTES	DESIGNED BY	CHECKED BY
A	22/02/2024	TOWN PLANNING	J. MITROPOULOS	M. O'SHEA
B	26/07/2024	TOWN PLANNING	J. MITROPOULOS	M. O'SHEA

427 ALBERT STREET, BRUNSWICK

PROPOSED MIXED USE DEVELOPMENT

GENERAL NOTES:

BASE PLAN: B2.dwg
PREPARED BY: Austin Maynard Architects

FILE NAME: G33113

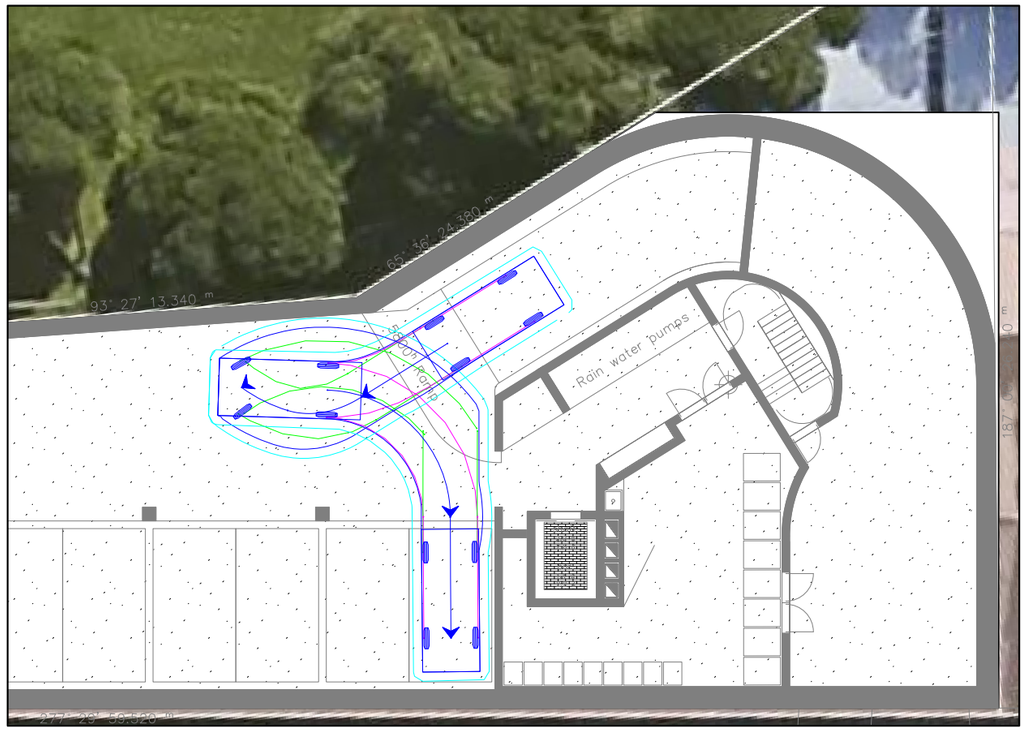
SHEET NO.: 01

SCALE: 1:200 (A3)

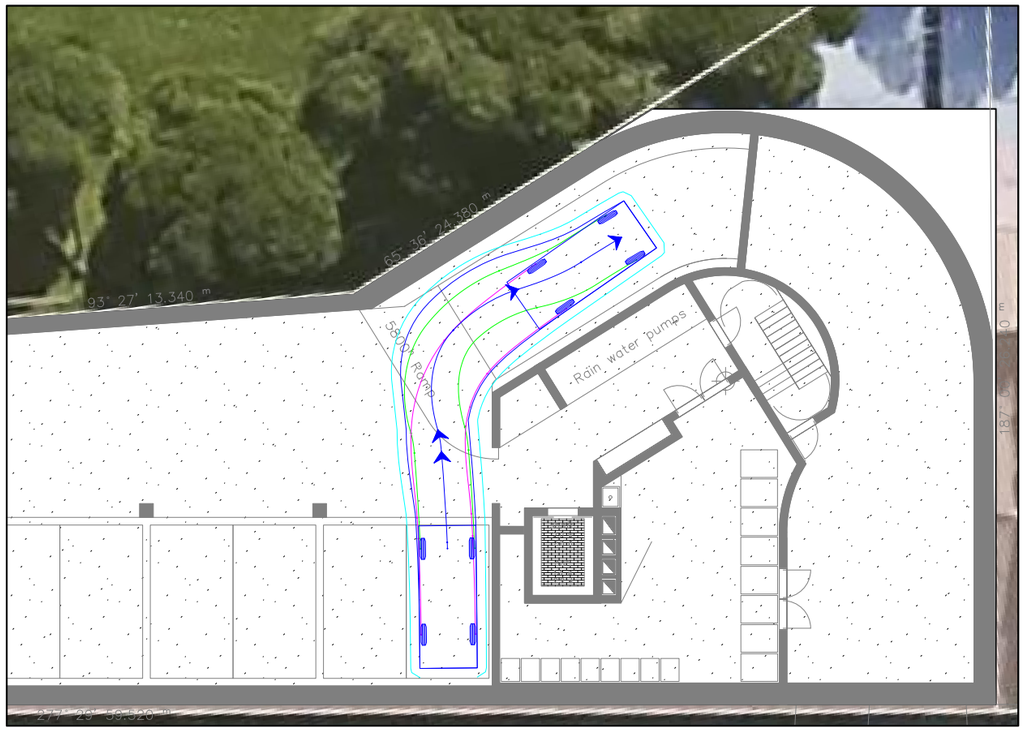
0 2 4

Traffix Group
Level 28, 459 Collins St, MELBOURNE VIC 3000
T: (03) 9822 2888
www.traffixgroup.com.au

CAR SPACE A - INGRESS



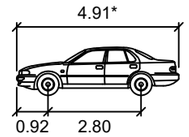
CAR SPACE A - EGRESS



VEHICLE PROFILE

VEHICLE USED IN SIMULATION

(VEHICLE SPEED - 5KM/H)



85th percentile
(AS/NZS 2890.1:2004)

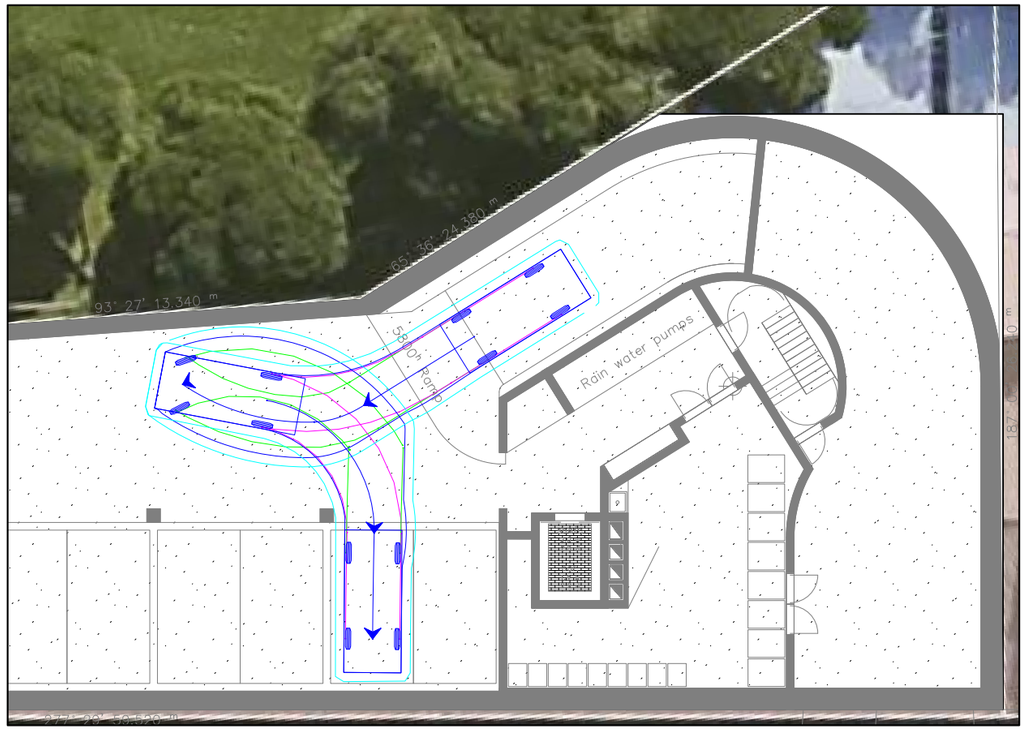
Width	:	1.87m
Track	:	1.77m
Kerb to Kerb Radius	:	11.5m

* actual template based on 'relevant longitudinal dimensions that affect swept path' as set out in Section B2.1 of AS/NZS 2890.1:2004

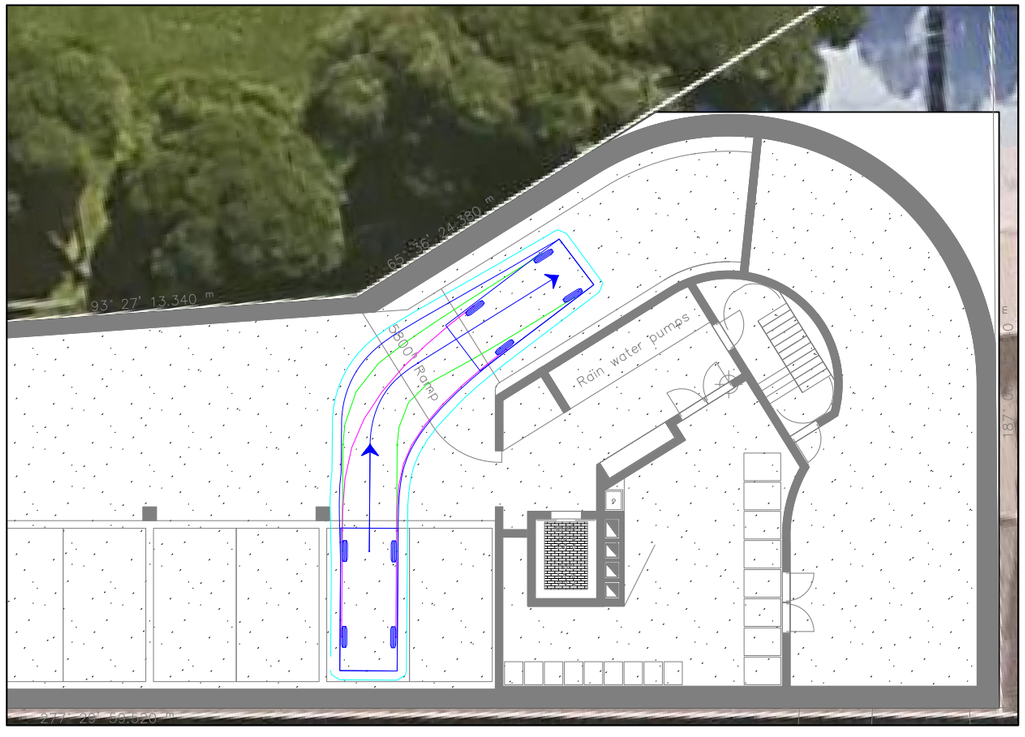
LEGEND

REAR WHEELS — VEHICLE BODY
FRONT WHEELS — BODY CLEARANCE

CAR SPACE B - INGRESS



CAR SPACE B - EGRESS



REV	DATE	NOTES	DESIGNED BY	CHECKED BY
A	22/02/2023	TOWN PLANNING	J. MITROPOULOS	M. O'SHEA
B	26/07/2024	TOWN PLANNING	J. MITROPOULOS	M. O'SHEA

427 ALBERT STREET, BRUNSWICK
PROPOSED MIXED USE DEVELOPMENT

GENERAL NOTES:

BASE PLAN: B2.dwg
PREPARED BY: Austin Maynard Architects

FILE NAME: G33113
SHEET NO.: 02

SCALE: 1:200 (A3)

0 2 4

Traffix Group
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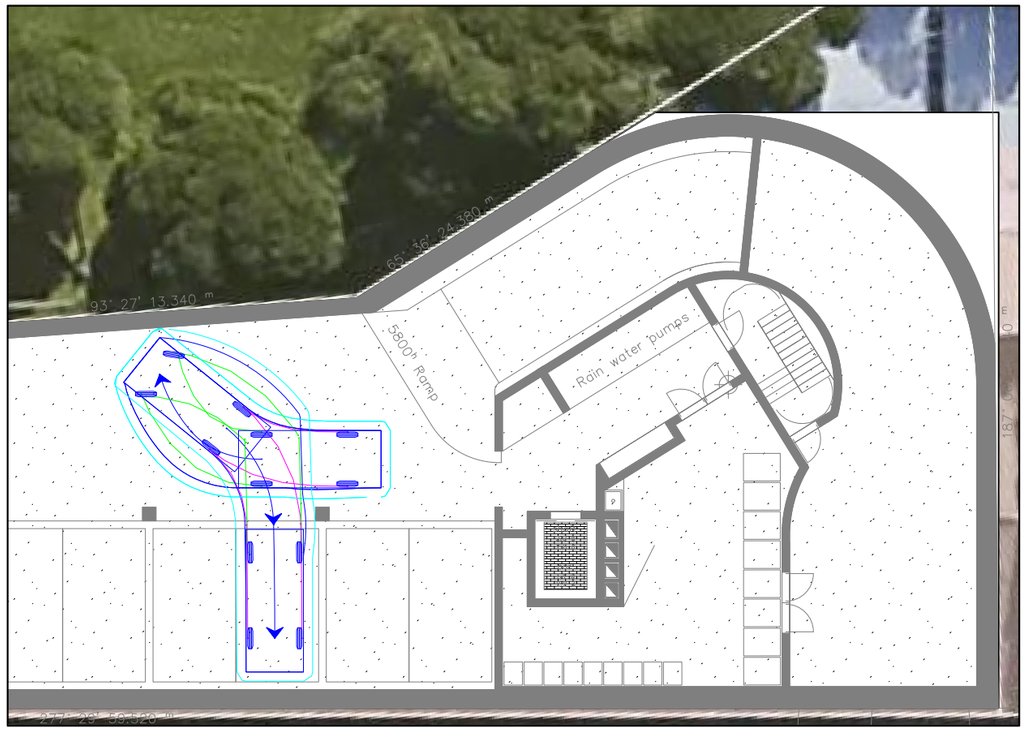
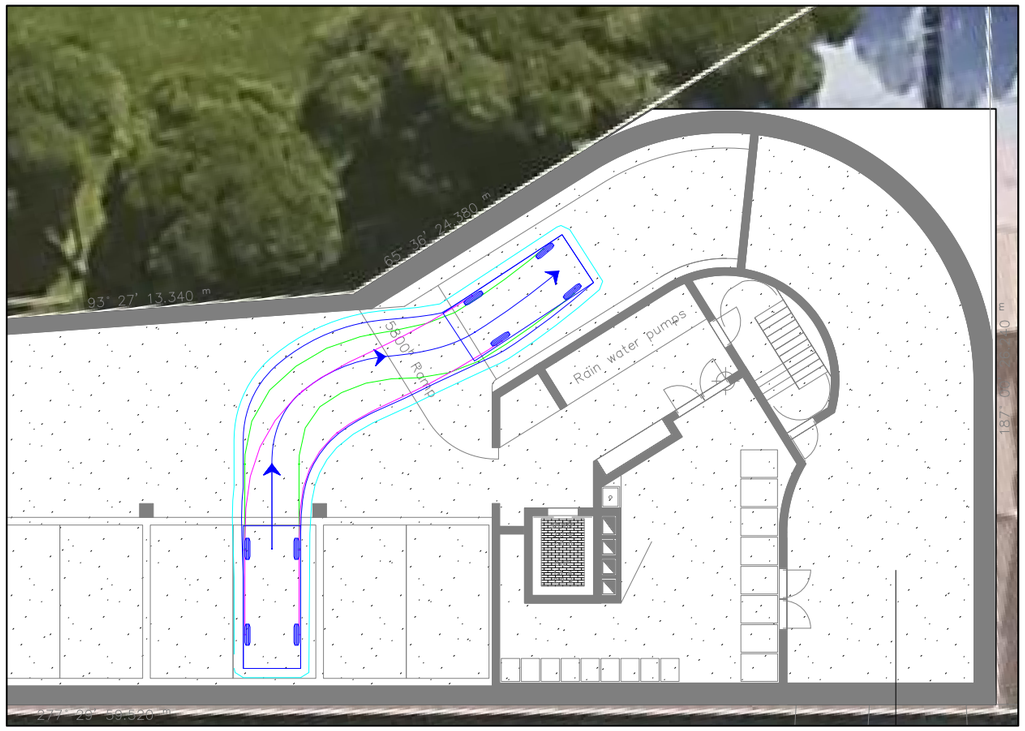
T: (03) 9822 2888
www.traffixgroup.com.au

CAR SPACE C - INGRESS



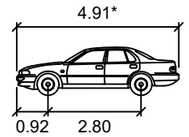
CAR SPACE C - EGRESS



VEHICLE PROFILE

VEHICLE USED IN SIMULATION

(VEHICLE SPEED - 5KM/H)



85th percentile
(AS/NZS 2890.1:2004)

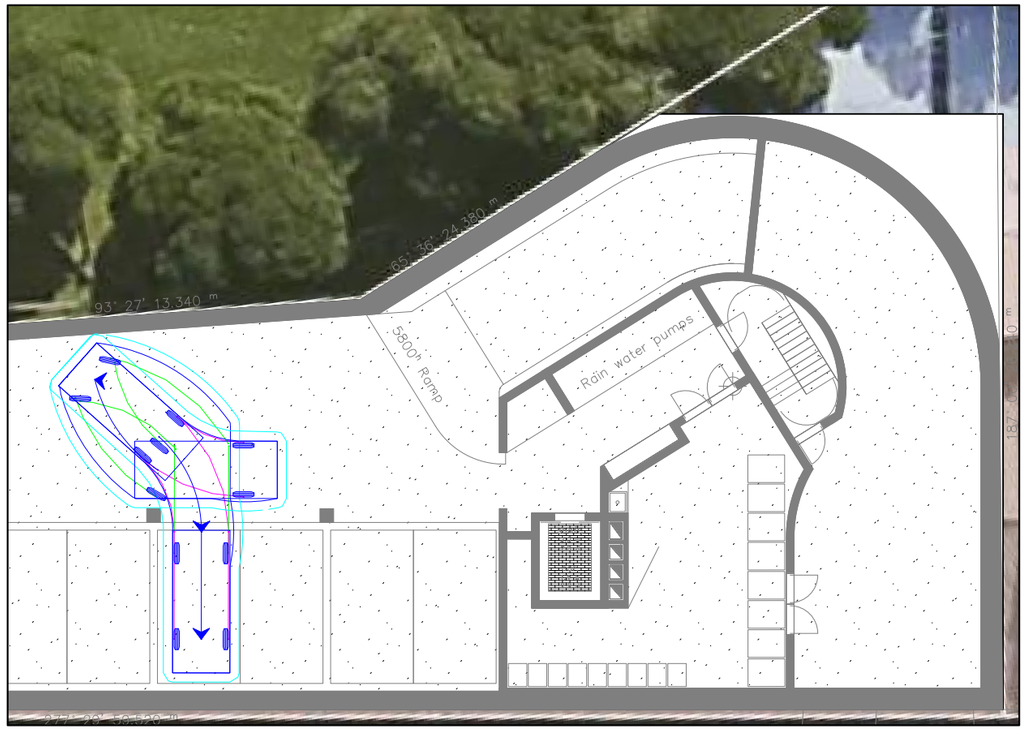
Width	:	1.87m
Track	:	1.77m
Kerb to Kerb Radius	:	11.5m

* actual template based on 'relevant longitudinal dimensions that affect swept path' as set out in Section B2.1 of AS/NZS 2890.1:2004

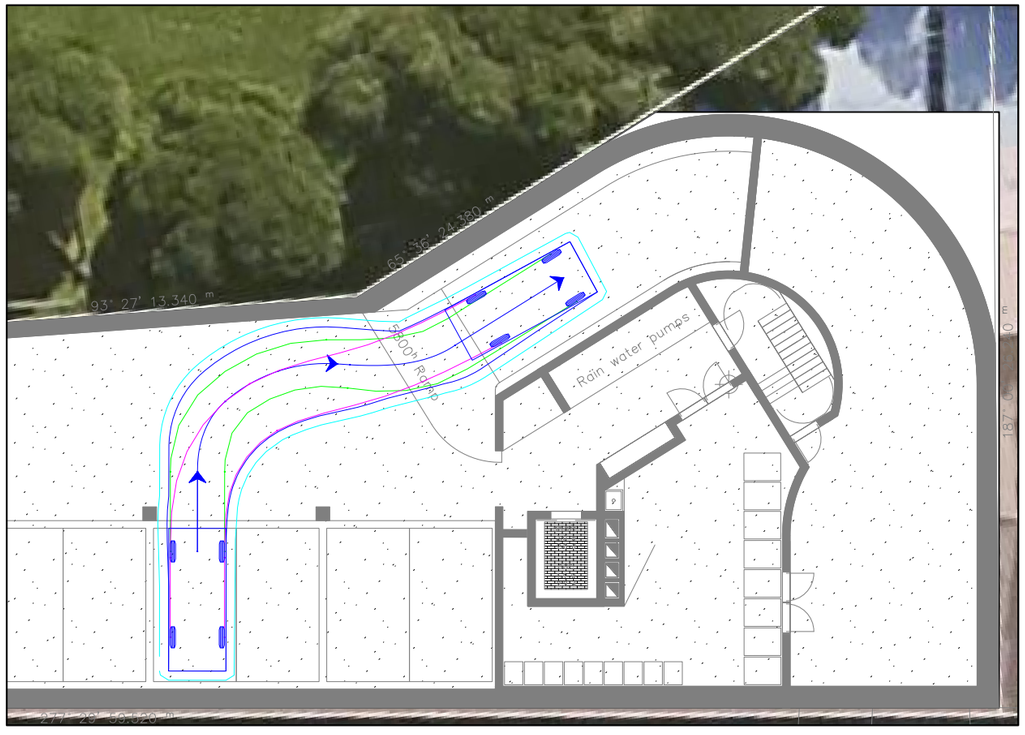
LEGEND

REAR WHEELS — VEHICLE BODY
FRONT WHEELS — BODY CLEARANCE

CAR SPACE D - INGRESS



CAR SPACE D - EGRESS



REV	DATE	NOTES	DESIGNED BY	CHECKED BY
A	22/02/2023	TOWN PLANNING	J. MITROPOULOS	M. O'SHEA
B	26/07/2024	TOWN PLANNING	J. MITROPOULOS	M. O'SHEA

427 ALBERT STREET, BRUNSWICK
PROPOSED MIXED USE DEVELOPMENT

GENERAL NOTES:

BASE PLAN: B2.dwg
PREPARED BY: Austin Maynard Architects

FILE NAME: G33113
SHEET NO.: 01

SCALE: 1:200 (A3)

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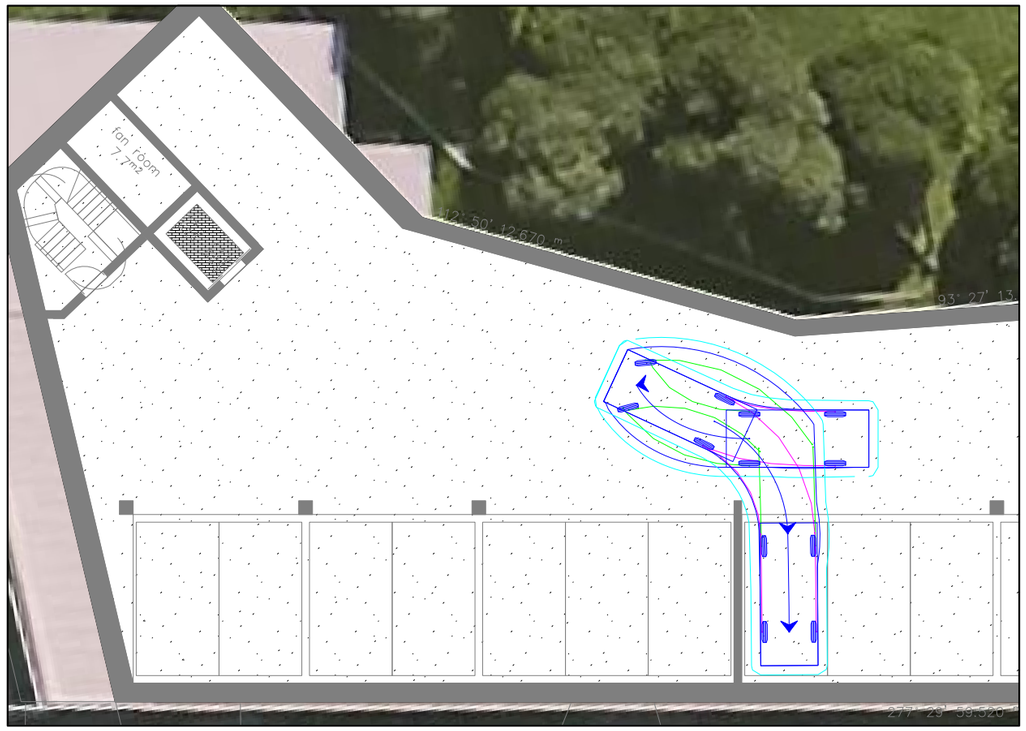
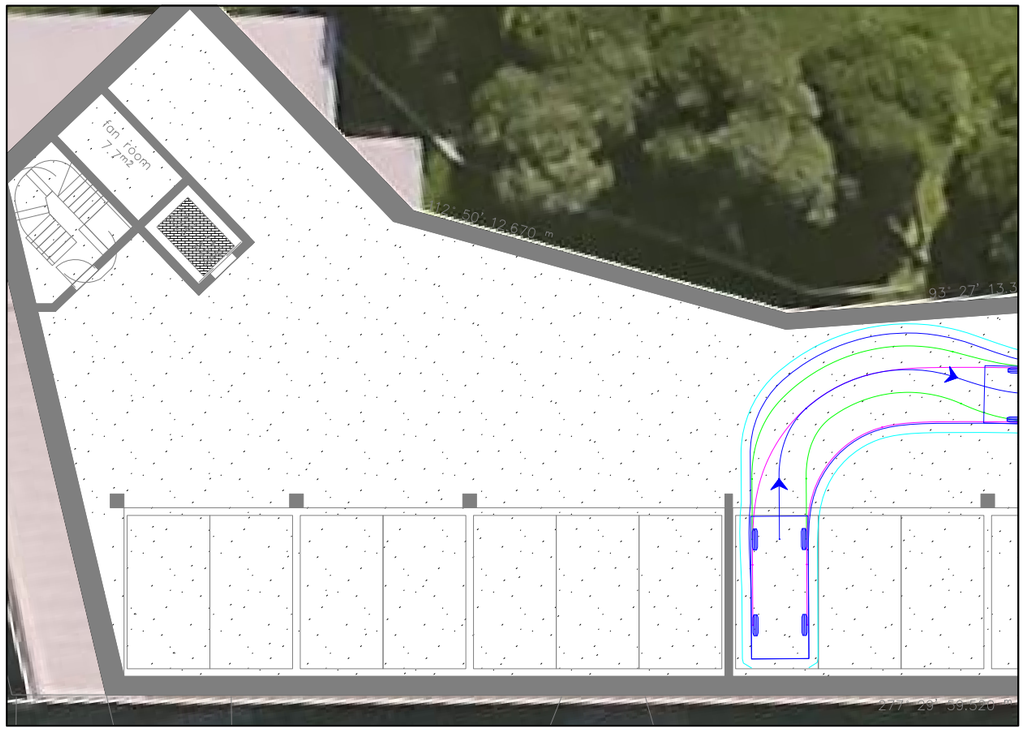
CAR SPACE E - INGRESS



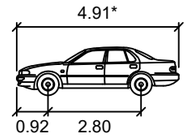
CAR SPACE E - EGRESS



VEHICLE PROFILE

VEHICLE USED IN SIMULATION

(VEHICLE SPEED - 5KM/H)



85th percentile
(AS/NZS 2890.1:2004)

Width	:	1.87m
Track	:	1.77m
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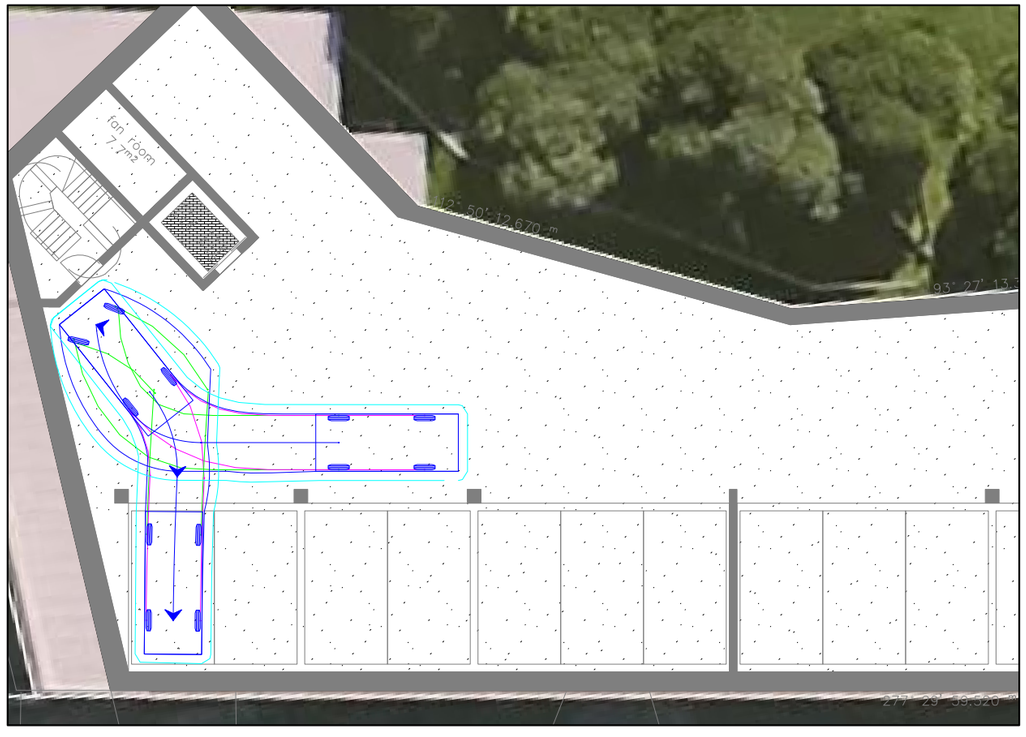
* actual template based on 'relevant longitudinal dimensions that affect swept path' as set out in Section B2.1 of AS/NZS 2890.1:2004

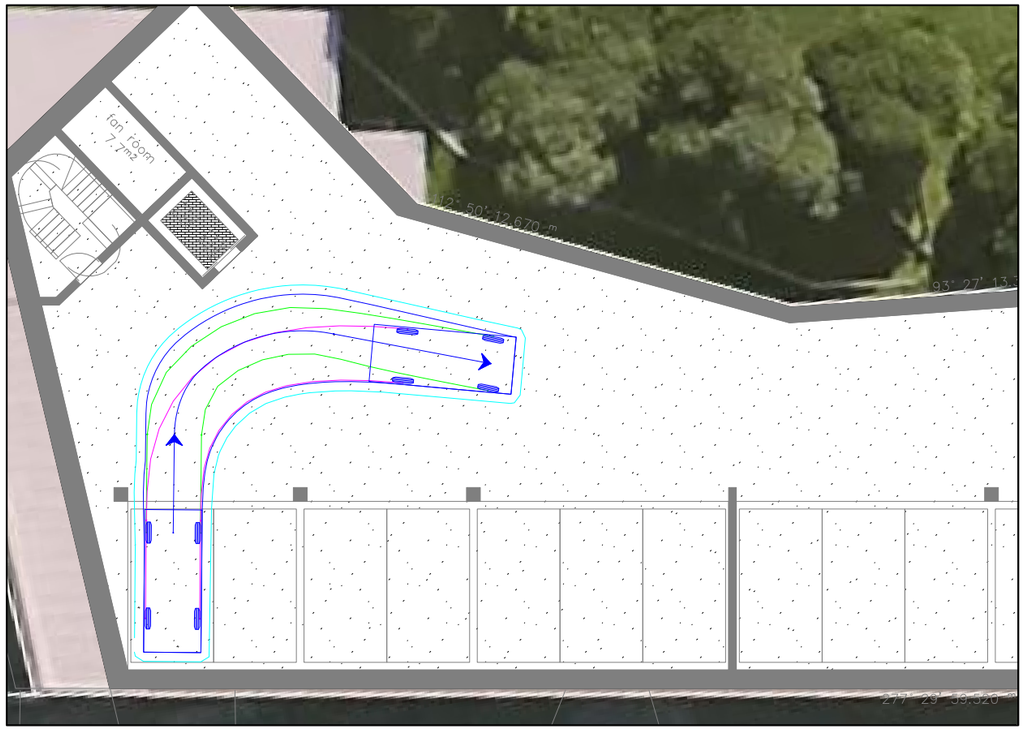
LEGEND

REAR WHEELS — VEHICLE BODY
FRONT WHEELS — BODY CLEARANCE

CAR SPACE F - INGRESS



CAR SPACE F - EGRESS



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A	22/02/2023	TOWN PLANNING	J. MITROPOULOS	M. O'SHEA
B	26/07/2024	TOWN PLANNING	J. MITROPOULOS	M. O'SHEA

427 ALBERT STREET, BRUNSWICK
PROPOSED MIXED USE DEVELOPMENT

GENERAL NOTES:

BASE PLAN: B2.dwg
PREPARED BY: Austin Maynard Architects

FILE NAME: G33113
SHEET NO.: 04

SCALE: 1:200 (A3)

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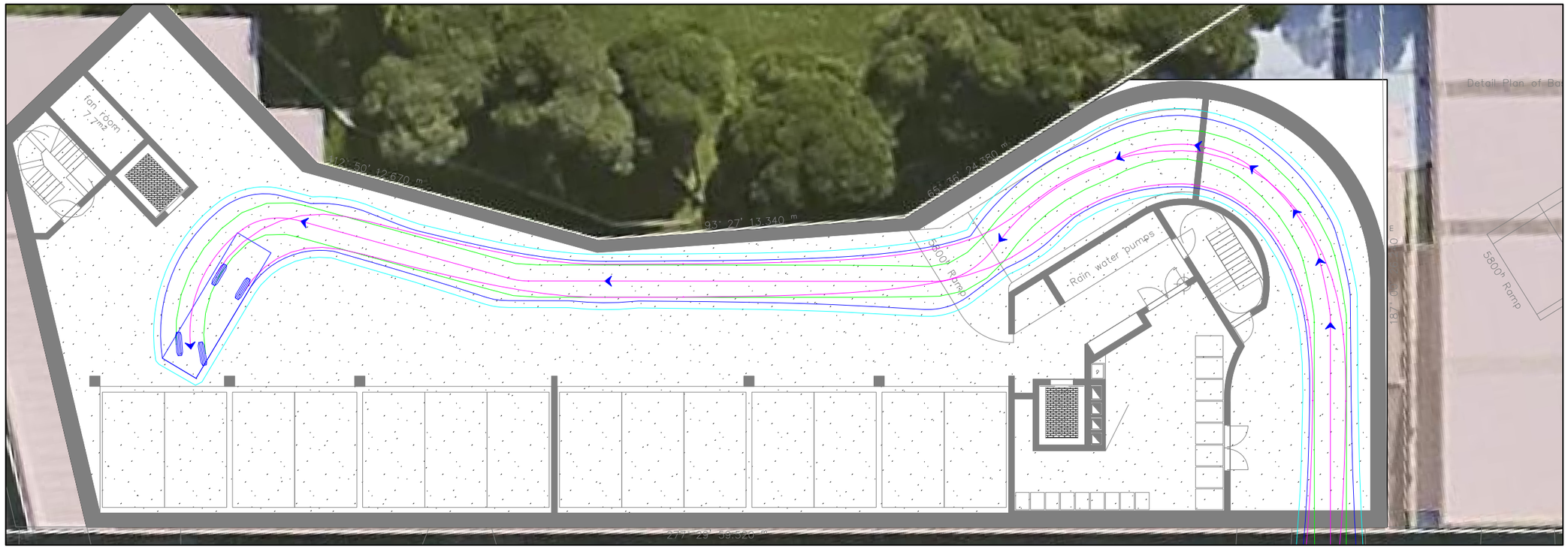
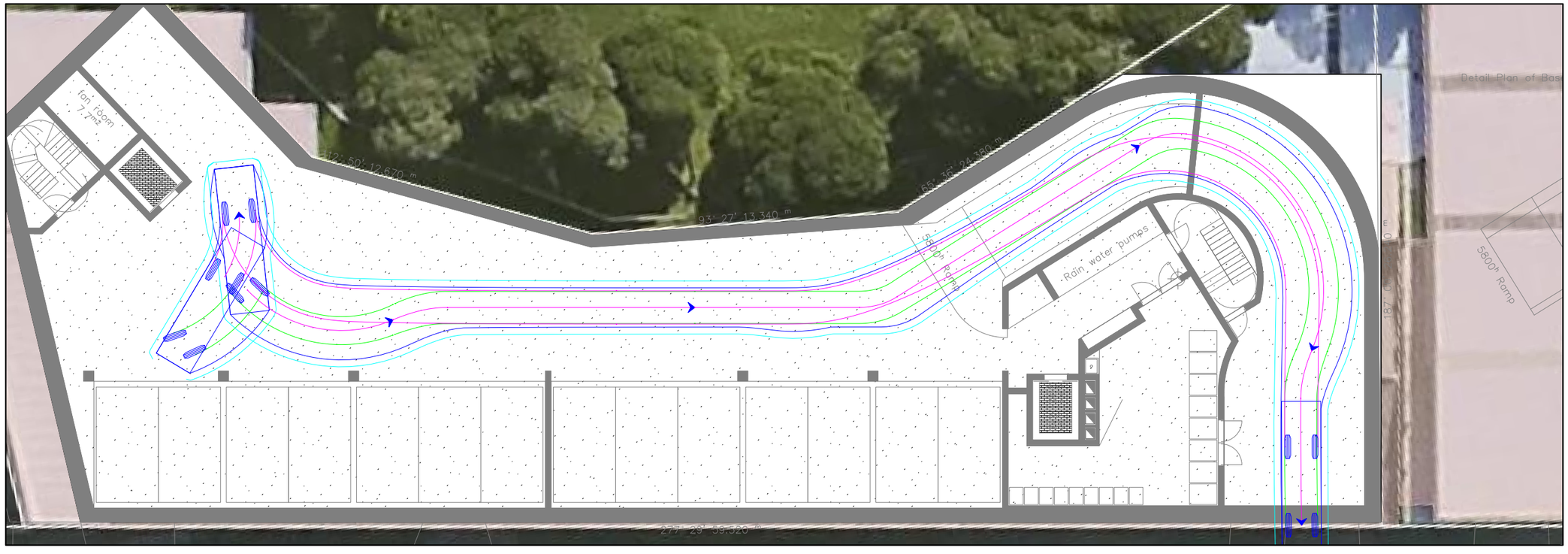
WASTE VEHICLE - INGRESS



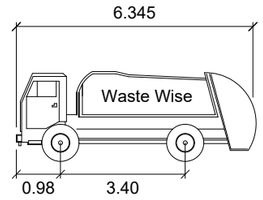
WSATE VEHICLE - EGRESS



VEHICLE PROFILE

VEHICLE USED IN SIMULATION

(VEHICLE SPEED - 5KM/H)



Waste Wise Mini (Hino 300)

Width	: 1.7m
Front Track	: 1.4m
Rear Track	: 1.44m
Kerb to Kerb Radius	: 12.4m

LEGEND

REAR WHEELS — VEHICLE BODY

FRONT WHEELS — BODY CLEARANCE

REV	DATE	NOTES	DESIGNED BY	CHECKED BY
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B	26/07/2024	TOWN PLANNING	J. MITROPOULOS	M. O'SHEA

427 ALBERT STREET, BRUNSWICK

PROPOSED MIXED USE DEVELOPMENT

GENERAL NOTES:

BASE PLAN: B2.dwg

PREPARED BY: Austin Maynard Architects

FILE NAME: G33113

SHEET NO.: 05

SCALE: 1:200 (A3)

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