Proposed WAPOU Office Development

Lot 18 (#38) Summers Street, East Perth

TRANSPORT IMPACT AND CAR PARKING

ASSESSMENT FINAL REPORT – V2

Prepared for: Whitehaus Architects

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February 2021

DOCUMENT ISSUE AUTHORISATION

VERSION	DATE	PREPARED BY:	REVIEWED BY:
2	25/02/2021	HH	HH

Table of Contents

1. INTRODUCTION

1.1 OVERVIEW

This Transport Impact and Car Parking Assessment has been prepared by Move Consultants on behalf of Whitehaus Architects for the WA Prison Officers Union (WAPOU) with regard to a proposed office development to be located at Lot 18 (38) Summers Street, East Perth in the City of Vincent. the City of Vincent. The subject land is currently vacant.

1.2 SITE LOCATION

The site is located on the north side of Summers Street, east of East Parade, approximately 2km north-east of the Perth CBD and immediately opposite the East Perth Railway Station as well as immediately north of the East Perth Power Station. Existing uses in place in the vicinity of the site are degraded residential homes to the north along the east side of East Parade, commercial development to the immediate eat and west of the site along Summers Street; future development to the south; and the Swan River foreshore to the east. There is an established existing crossover to the site on the north side of Summers Street; however, this crossover will be closed and future access via a public ROW system along the east-west ROW provided as part of the development along the northern boundary of the site at the rear of the property. Established public parallel parking is in place on both sides of Summers Street adjacent to the southern boundary of the site. The site is currently vacant.

The location of the site is shown in **Figure 1.**

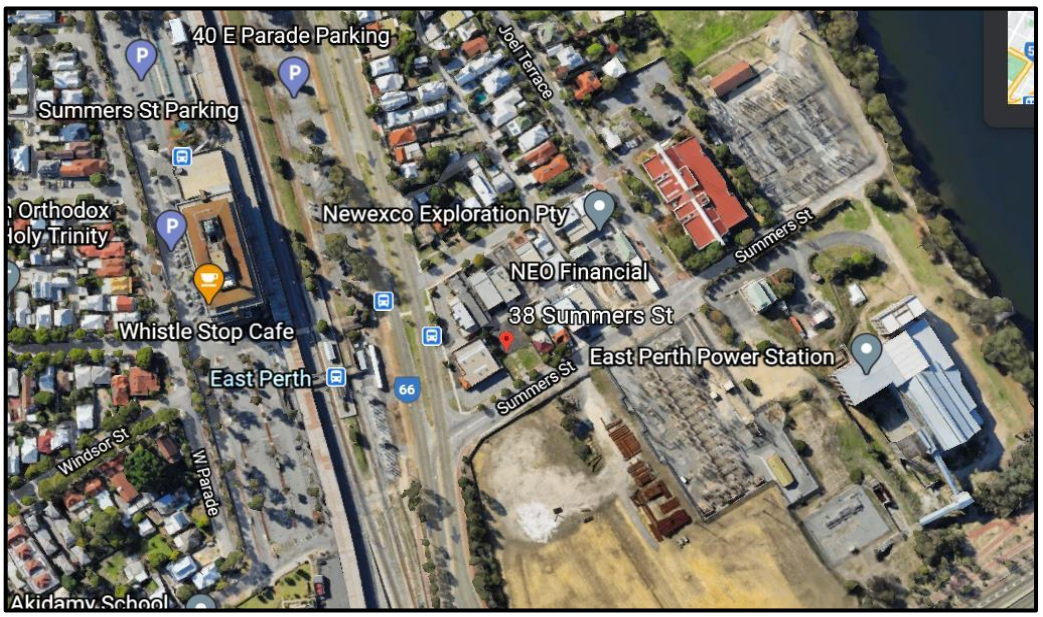
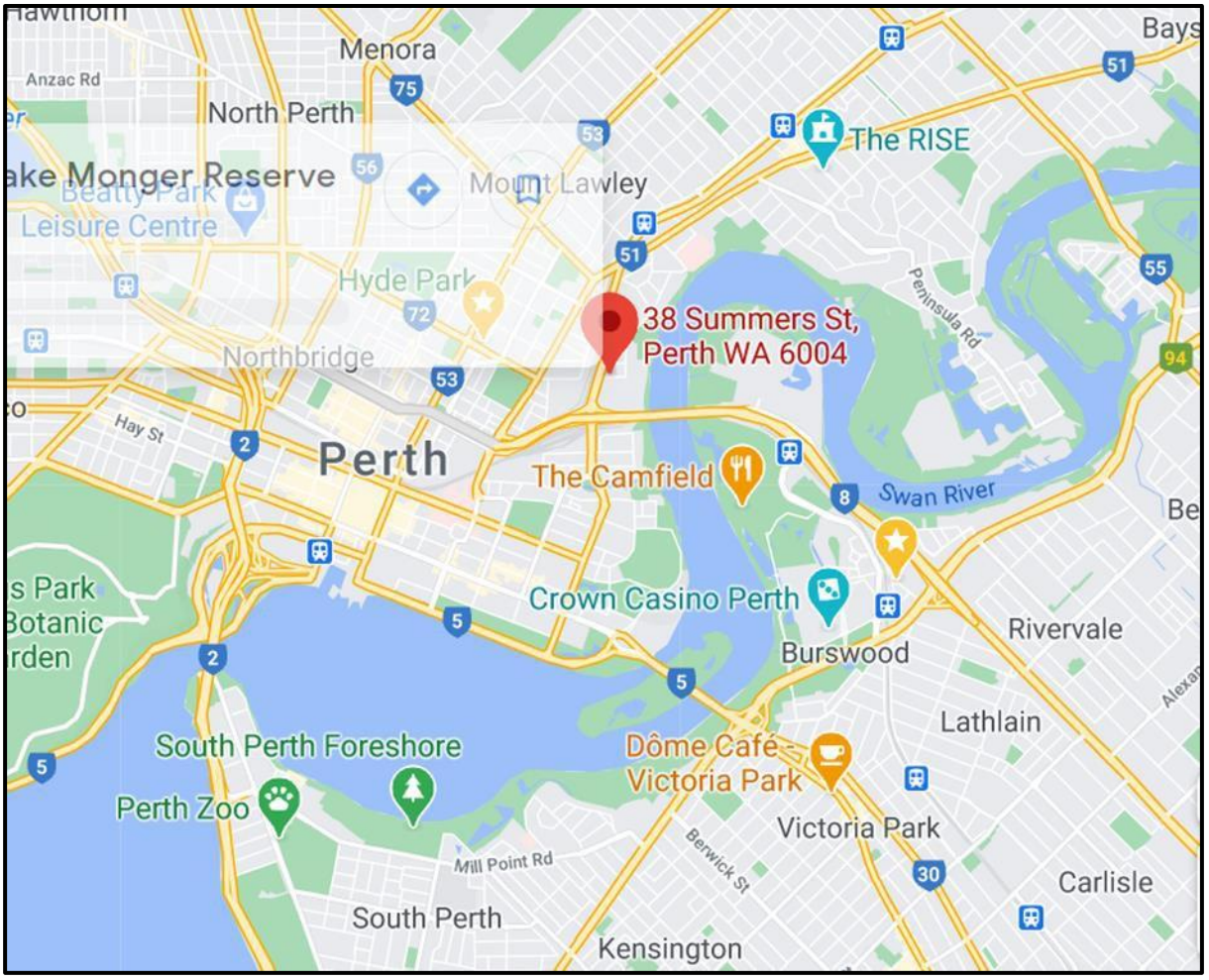


Figure 1: Site Location

The general metropolitan context is shown in Figure 2.



1.

Figure 2: Metropolitan Context

1.3 SCOPE OF ASSESSMENT

This assessment has been prepared in accordance with the Western Australian Planning Commission's *Transport Assessment Guidelines for Developments: Volume 4 – Individual Developments* (2016) as well as the City of Vincent's *Policy 7.7.1.*

Specifically, this report aims to assess the impacts of the proposed development on the local boundary road network to identify any modifications, to site or road layout, which may be required to serve the proposed site. In addition, the assessment considers the proposed access, circulation, and egress arrangements to and from the site.

2. EXISTING SITUATION

2.1 ROAD INFRASTRUCTURE

The proposed development is to be constructed on a vacant site with direct frontage to Summers Street, east of East Parade. The existing crossover to the site on the north side of Summers Street will be closed with direct access to the under-croft ground floor car parking area to be afforded via the northern boundary to the existing public ROW system in an east-west direction from East Parade to north-eastern corner of 26 Summers Street and then running in a north-south direction between Summers Street and Bramall Street approximately 100m east of the intersection with East Parade. Established public parallel parking is in place on both sides of Summers Street adjacent to the southern boundary of the site. The site is currently vacant.

East Parade, located to the west of the site, is a primary north-south connecting road providing direct access to and from the Perth CBD as well as providing direct access to the Graham Farmer Freeway to the south-west and the Mount Lawley Town Centre to the north-west. It functions as a parallel reliever route to Beaufort Street to the north-west and also provides direct access to Guildford Road to the north. East Parade has been designated under the Main Roads WA *Functional Road Hierarchy* as a *Primary Distributor* road which is defined as a road which *"…provides for major regional and inter-regional traffic movement and carry large volumes of generally fast-moving traffic. Some are strategic freight routes, and all are National or State roads. These roads are managed by Main Roads Western Australia".* It has been constructed as a dual divided Control-of-Access carriageway with a flush central median between intersections with on-road cycle lanes on both sides south of Summers Street transitioning to a dedicated Principal Shared Path on the west side adjacent to the East Perth Railway Station. A footpath is in place on the east side of the road. East Parade operates under a speed limit of 60kph and is owned, operated, and maintained by the Main Roads WA.

Summers Street, to the south of the site, has been designated as *Access Roads* under the Main Roads WA *Functional Road Hierarchy* and have been defined as a road which *"…provides access to abutting properties with amenity, safety and aesthetic aspects having priority over the vehicle movement function which is bicycle and pedestrian friendly and is managed by Local Government."* It has been constructed as a wide undivided single carriageway with a 12 to 13m seal. Bramall Street, to the north, and Joel Terrace, to the east, respectively, have also been classified as *Local Access* roads. These roads all operate under a Local Area Traffic Zone speed limit of 40kph and are owned, operated, and maintained by the City of Vincent.

The intersection of East Parade and Summers Street operate operates under Give Way control on the Summers Street approach and allows for full movements into and out of Summers Street. The intersection of East Parade with Bramall Street, to the north of the site, operates as a partial movements (left-in/left-out only) intersection. Joel Terrace provides direct access to the south-western quadrant of Maylands to the north-east and alternative access to Guildford Road, to the east along Summers Street.

A public ROW is in place between East Parade and Summers Street which runs in an east-west direction between East Parade and the north-eastern boundary of 26 Summers Street intersecting with a north-south ROW running between Summers Street and Bramall Street Terrace. The southern terminus of the north-south ROW intersects with Summers Street approximately 100m east of the site. The width of the east-west ROW varies throughout its length from approximately 4.0m to an upgraded width of 5.0m near its eastern boundary with the north-south ROW. As redevelopment occurs abutting both ROW's, this section of carriageway will eventually be upgraded to a consistent width of 5.0m.

Figure 3 shows the road hierarchy in the vicinity of the site.

A detailed site visit was conducted on Thursday 14th January 2021 to collect information relating to existing road geometry, speed limits, and sightlines and to observe existing traffic operations on the adjacent boundary road network.

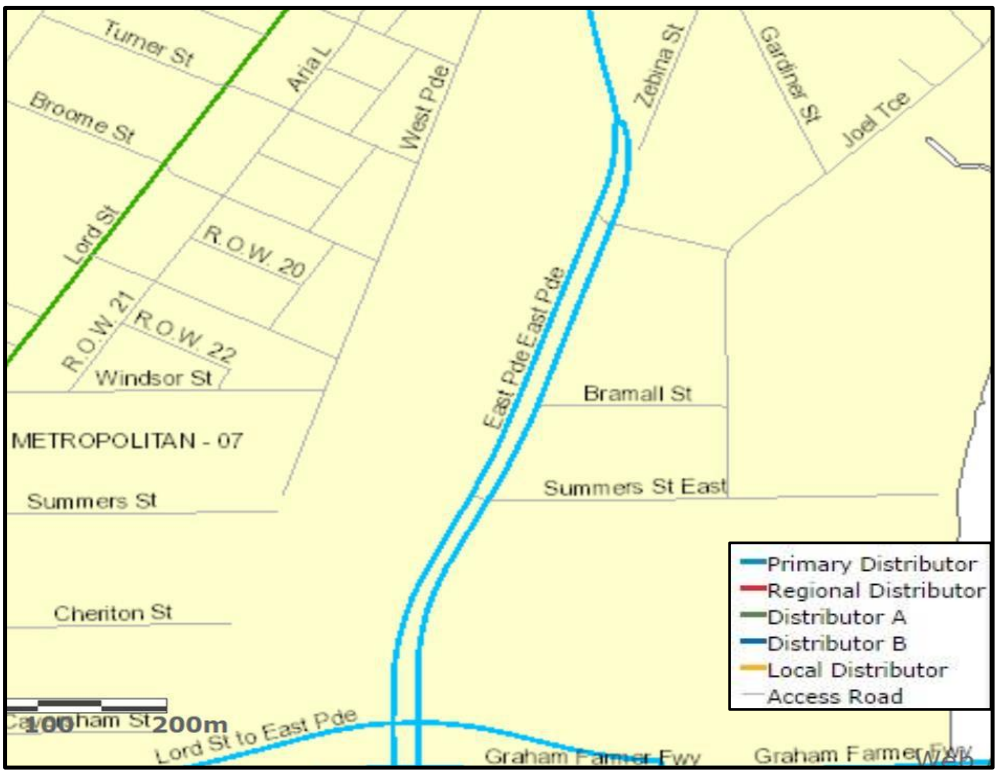


Figure 3: MRWA Functional Road Hierarchy – Local Road Network

Existing traffic volumes were obtained via data from Main Roads Western Australia for East Parade in the vicinity of the intersection with Summers Street with the road currently carrying in the order of 42,000 vpd north of Summers Street (MRWA, 2018/19). Based upon a review of the existing travel patterns, spatial distribution of land uses and access to the higher order road network, it is estimated that Summers Street, east of East Parade carries approximately 1,950 vpd. Existing traffic volumes along the east-west and north-south ROW's are less than 200vpd.

2.2 PUBLIC TRANSPORT, PEDESTRIAN, AND CYCLIST FACILITIES

The site is located directly opposite the East Perth Railway Station which is within a 5-minute walking distance to the site. Pedestrian access is afforded via a new at-grade pedestrian crossing over East Parade to the recently commissioned railway station concourse on the west side of East Parade. Access to the Yellow and Red CAT bus services as well as conventional line haul bus services are in place to the north-west, north and south-west of the site beyond the 800m maximum walking distance. Figure 4 shows the existing public transport services in the area.

A footpath is in place on the north side of Summers Street, east of East Parade, and on the east side of East Parade, west of the site. On-road bicycle lanes are in place on both sides of East Parade, south of Summers Street, with a dedicated off-road Principal Shared Path (Veloway) in place on the west side of East Parade running parallel to the railway line. Summers Street, Bramall Street and Joel Terrace are all designed as *Good Riding Environments.* The higher order cycling facilities provide a direct connection into the *Principal Shared Path Network* of the *Perth Bicycle* Network providing direct access into the Perth CBD, the Mount Lawley Town Centre and to the Maylands Town Centre. Figure 5 shows the cycling and pedestrian infrastructure in the vicinity of the site.

Figure 4: Existing Public Transport Services

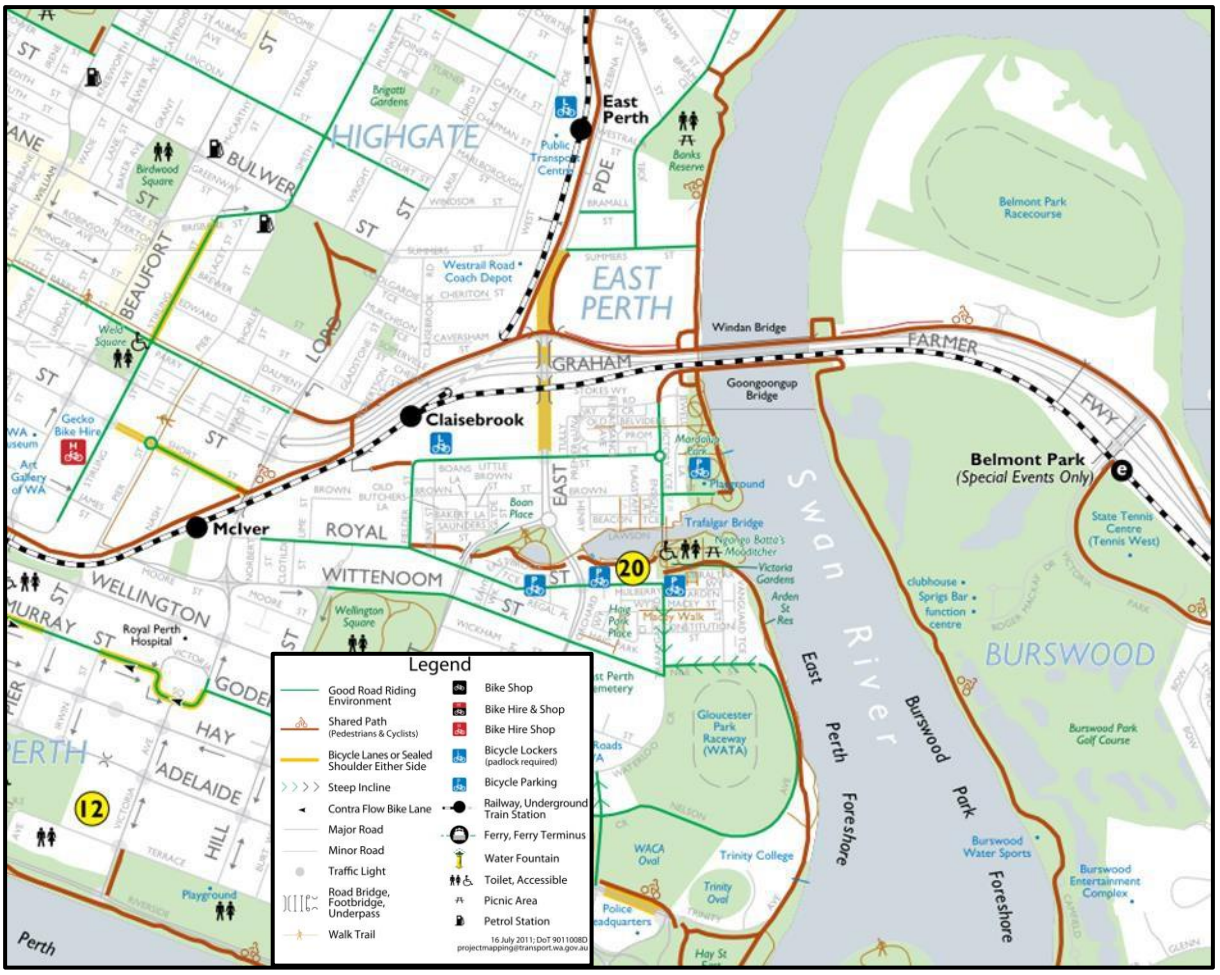


Figure 5: Existing Cycling and Pedestrian Infrastructure

3. PROPOSED DEVELOPMENT

A site plan of the proposed development has been prepared by Whtiehaus Architects. A copy of the site plan is contained in **Appendix A**.

3.1 PROPOSED LAND USES

The proposal seeks the development of a three-storey office building to house the Western Australia Prison Officers Union (WAPOU) consisting of ten (10) workstations, ancillary facilities inclusive of kitchen and ablution facilities, a lobby and reception area, lunchroom, a multi-purpose room and an outdoor terrace area.

3.2 PROPOSED ACCESS AND PARKING ARRANGEMENTS

The proposed access arrangements are shown to consist of a single crossover to the rear of the site connecting directly to the south side of the public ROW flanking the northern boundary of the property, approximately 40m east of the intersection with East Parade.

This crossover will function as a full movement's crossover provided direct access to the ground floor at-grade car parking area. Proposed car parking supply consists of nine (9) right-angle bays inclusive of one (1) ACROD bay. Additional secure bicycle parking of five (5) bays will also be provided as part of the development.

The proposed car parking supply which is consistent and compliant with the City of Vincent's *Policy 7.7.1: Non- Residential Development Parking Requirements* as the site is located within 800m of a railway station. Rubbish collection will be undertaken via rubbish collection will be undertaken by a private contractor with these arrangements negotiated in consultation with the City of Vincent in a separate Waste Management Plan prepared during the detailed design stages of the project.

3.3 END OF TRIP FACILITIES

End-of-trip facilities (including 8 bicycle racks) are proposed to be provided on the site through the provision of secure bicycle parking for employees as well as end-of-journey facilities. The provision of these facilities is compliant with City of Vincent and Austroads guidelines for the proposal.

4. TRANSPORT ANALYSIS

A traffic generation and distribution exercise has been undertaken to assess the potential traffic impacts associated with the proposed development. The aim of this exercise was to establish the traffic volumes which would be generated from the proposed development and to quantify the effect that the additional traffic has on the surrounding road network,

4.1 TRIP GENERATION

The traffic generated by the proposed development has been predicted by applying trip generation rates for the *Corporate Headquarters (Category 714)* category. These rates were derived from the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 10th Edition*. This trip generation was then modified to reflect the location of the proposal on a high frequency railway line and proximate to high quality pedestrian and cycling infrastructure. As a result, the total anticipated traffic generated by the proposed development is estimated to be in the order of 43 vehicular trips (50% inbound/50% outbound) on a daily basis; 8 vehicular trips.

(7 inbound/1 outbound) during the a.m. peak hour; and 7 vehicular trips (1 inbound/6 outbound) during the p.m. peak hour.

4.2 TRIP DISTRIBUTION

Based upon the existing traffic patterns in the area and the spatial distribution of adjacent land uses, the following distribution for the proposed 'new' development generated traffic has been assumed:

- 30% to and from the north via East Parade.
- 20% to and from the north via and Joel Terrace; and
- 50% to and from the south via East Parade and Summers Street.

The number of trips entering / exiting the site via the proposed site crossover to the public ROW has been assigned based upon the most logical route for vehicles to take given their origin / destination.

The resultant increases to the boundary road network are anticipated as follows:

- East Parade (North)
  - Daily: +13 vpd
  - A.M. Peak Hour: +3 vph
  - P.M. Peak Hour: +2 vph
- East Parade (South):
  - Daily: +22 vpd
  - A.M. Peak Hour: +4 vph
  - P.M. Peak Hour: +5 vph
- Bramall Street:
  - Daily: +13 vpd
  - A.M. Peak Hour: +3 vph
  - P.M. Peak Hour: +2 vph
- Joel Terrace:
  - Daily: +8 vpd
  - A.M. Peak Hour: +1 vph
  - P.M. Peak Hour: +1 vph
- Summers Street:
  - Daily: +22 vpd
  - A.M. Peak Hour: 4 vph
  - P.M. Peak Hour: +5 vph

These increases in daily and a.m./p.m. peak hour volumes will have a negligible impact on existing traffic operations in the area and represent an increase in daily volumes of less than 1% on East Parade and well within the practical capacity of the local road network in the vicinity of the site. The addition of this traffic will still result in acceptable traffic operations on the adjacent road network. The impact of approximately 43vpd on the public ROW at the rear of the site will not impact traffic operations along this section of roadway and will still allow for safe operations along the ROW's providing primary access to and from the car parking area on the site. A detailed site visit during the respective typical weekday roadway peak periods has confirmed that no outbound or inbound right-turn queuing observed at the East Parade/Summers Street intersection and more than sufficient capacity is available at this location to accommodate an increase in turning movements at this location, inclusive of inbound and outbound right-turning movements at this location associated with the development. This is in large part due to the 'platooning' effect induced by the locations of signalised intersections equidistant from the Graham Farmer Freeway southbound off-ramp to the south, and Guildford Road, to the north, along East Parade which results in significant gaps in through traffic on East Parade to accommodate inbound and outbound right-turning movements.

Additional detailed traffic analysis is not warranted due to the relatively low entering and existing volumes at the crossover combined with the low ambient background traffic during peak periods on the local rod network and on the public ROW's. Austroads' *Guide to Traffic Management* provides advice on the capacity of unsignalised intersections. For minor roads where there are relatively low volumes of turning traffic, capacity considerations are usually not significant and capacity analysis is unnecessary. Intersection volumes below which capacity analysis is unnecessary are indicated in **Table 1.**

Table 1: Threshold Analysis Parameters (Austroads Guide to Traffic Management)

Type of Road	Light cross and turning volumes maximum design hour (vehicles per hour two-way)		
Two-lane major road	400	500	950
Cross Road	250	200	100

In conclusion, it should be noted that based both on a review of the modelled total traffic assessment and observed traffic operations of the boundary road system, the anticipated site-generated traffic associated with the redevelopment proposal is negligible and that no external boundary road improvements will be required.

5. VEHICULAR ACCESS AND PARKING

5.1 ON-SITE QUEUING, CIRCULATION AND ACCESS

The site plan indicates a single crossover to be located at the rear of the site providing direct access to the south side of the east-west ROW leading to an at-grade under croft car parking area consisting of nine (9) right-angle bays inclusive of one (1) ACROD bay. The minimal level of peak hour traffic anticipated at the site crossover indicates that potential conflict with vehicles entering and/or exiting the car parking area simultaneously as peak hour volumes are expected to be in the order of one (1) vehicle every 6 to 8 minutes with the impact to the risk profile both within the car parking area and within the adjacent ROW to be minimal. the risk profile on the adjacent local road network. All movements to and from the site crossovers will be undertaken in forward gear.

A review of the proposed on-site circulation and car parking layout was undertaken to assess the adequacy of the proposed site access and circulation in addition to service/delivery areas on the site. The design of the proposed car parking areas within the upper and lower basement levels via the site crossover has been reviewed using traffic engineering standards and the relevant Australian Standards and Austroads guidelines, with the proposed design considered adequate to accommodate on-site maneuvering and circulation with all vehicles entering and exiting the car parking areas in forward gear from and to the ROW. Commercial rubbish collection will be negotiated in consultation with the City of Vincent and provided as part of the Waste Management Plan under separate cover.

Service, delivery and loading activities can either be accommodated along the Summers Street frontage during off- peak periods within the existing on-street public parking area as is currently accommodated for other commercial developments in the area.

5.2 SIGHTLINE REVIEW AND CRASH HISTORY

A review of the sightlines along the east-west ROW for exiting and entering vehicles in the vicinity of the proposed crossover location has been undertaken and it can be concluded that due to the low speed and low volume environment as well as in the context of the very low site-generated traffic expected, the sightlines meet minimum Austroads sightline requirements; however, the judicious placement of a convex mirror at the north-west corner of the crossover at the ROW will assist exiting vehicles to be alerted to priority movement vehicles travelling eastbound from East Parade along the right-of-way.

A review of the updated crash history for the reporting period of 2015-2019 indicates a total of three (3) crashes in the vicinity of the western terminus of the east-west ROW with East Parade, with two (2) of these crashes occurring along East Parade in the form of a rear end crash and a side swipe crash of which neither occurred as a result of entering or exiting vehicles from the ROW. A review of the crash history for the East Parade/Summers Street intersection for the same reporting period indicates a total of 14 crashes with four (4) northbound right-turning crashes with southbound through vehicles during this time period into Summers Street.

These crash rates, particularly in the context of the traffic volumes on the boundary road network, indicate that the additional traffic associated with the development will have a negligible impact on the risk profile on the boundary road network and can accommodate pedestrians, cyclists, and public transport users safely to and from the site.

5.3 PARKING DEMAND AND SUPPLY

The proposed on-site car parking supply consists of nine (9) right-angle bays within an at-grade under croft car parking area. Bicycle parking will also be provided in the form of five (5) secure bays.

This car parking supply for the site is consistent with the tenets outlined in the City of Vincent's *Policy 7.7.1: Non- Residential Development Parking Requirements*

It should be noted that the location of the site due to its location within close walking distance of high quality and high frequency bus and railway services enhances its accessibility to alternative transport modes. This approach is consistent with the City's planning policies.

In addition, the WAPC's *Development Control Policy (DC) 1.6: Planning to Support Transit Use and Transit Oriented Development* provides the following guidance with respect to car parking concessions due to proximity to public transport options.

Excerpts from Clause 4.6: state "…in carrying out the necessary analysis as part of the local planning strategy process, and in developing related planning provisions, local governments should have particular regard to matters such as…":

- the encouragement of public transport use over car use.
- the encouragement of mixed-use development, both generally and within individual developments.
- the development and application of scheme parking standards that reflect the availability within the precinct of transit facilities and that provide discretion to vary standards, and to progressively replace surface level car parking close to stations with other more transit supportive uses over time.
- the potential to use planning provisions to provide incentives for appropriate development in transit-oriented precincts, including reduced parking standards and floor-space 'bonuses'; and
- For the immediate environs of transit facilities, local government is encouraged to consider the preparation of precinct plans that provide greater detail with respect to both land use and the physical form and relationship of development in the precinct to the transit facility, including design guidelines."

This is consistent with good and orderly transport planning as documented by the Victoria Transport Policy Institute with regard to shared parking between complementary uses and local custom generated by mixed-use developments in neighbourhood centres. A number of Councils within the Perth Metropolitan Area, such as the City of Melville, City of Perth and City of Subiaco, have also endorsed the application of *State Planning Policy 4.2: Activity Centres in Perth and Peel* in their approaches in their higher order tertiary planning by assigning a 'blanket' car parking standard of 1 bay per 50m^2 for non-residential uses such as restaurant, office and retail within mixed- use precincts with the allowance to reduce this requirement due to proximity to local catchment.

It can therefore be concluded that the proposed on-site car parking supply in the context of the location of the subject site proximal to a major public transport and other non-motorised transport infrastructure for these alternative modes will assist in the transition towards more sustainable transport in the area.

This approach is also consistent with the stated objectives of Western Australian Planning Commission in documentation including and *Directions 2031 and Beyond and Liveable Neighbourhoods*.

6. CONCLUSIONS

The aim of this Transport Impact and Car Parking Assessment was to discuss the traffic likely to be generated by the proposed office development proposed at Lot 18 (38) Summers Street, East Perth in the City of Vincent and to assess the impacts associated with anticipated site-generated upon the adjacent transport infrastructure. In particular, the assessment considered the impacts on the local boundary road network.

A review of the anticipated traffic generation associated with the proposal indicates that the expected traffic which will be generated by the development on a daily basis and during peak weekday a.m. and p.m. periods can be comfortably accommodated within the practical capacity of the boundary road network with no impacts expected to existing traffic operations.

The site plan indicates a single crossover to be located at the rear of the site providing direct access to the south side of the east-west ROW leading to an at-grade under croft car parking area consisting of nine (9) right-angle bays inclusive of one (1) ACROD bay. The minimal level of peak hour traffic anticipated at the site crossover indicates that potential conflict with vehicles entering and/or exiting the car parking area simultaneously as peak hour volumes are expected to be in the order of one (1) vehicle every 6 to 8 minutes with the impact to the risk profile both within the car parking area and within the adjacent ROW to be minimal. the risk profile on the adjacent local road network. A review of the sightlines along the east-west ROW for exiting and entering vehicles in the vicinity of the proposed crossover location has been undertaken and it can be concluded that due to the low speed and low volume environment as well as in the context of the very low site-generated traffic expected, the sightlines meet minimum Austroads sightline requirements; however, the judicious placement of a convex mirror at the north-west corner of the crossover at the ROW will assist exiting vehicles to be alerted to priority movement vehicles travelling eastbound from East Parade along the right-of-way.

A review of the proposed on-site circulation and car parking layout was undertaken to assess the adequacy of the proposed site access and circulation in addition to service/delivery areas on the site. The design of the proposed car parking areas within the upper and lower basement levels via the site crossover has been reviewed using traffic engineering standards and the relevant Australian Standards and Austroads guidelines, with the proposed design considered adequate to accommodate on-site maneuvering and circulation with all vehicles entering and exiting the car parking areas in forward gear from and to the ROW. Commercial rubbish collection will be negotiated in consultation with the City of Vincent and provided as part of the Waste Management Plan under separate cover.

A review of the 5-year crash rates, particularly in the context of the traffic volumes on the boundary road network, indicate that the additional traffic associated with the development will have a negligible impact on the risk profile on the boundary road network and can accommodate pedestrians, cyclists, and public transport users safely to and from the site.

Service, delivery and loading activities can either be accommodated along the Summers Street frontage during off- peak periods within the existing on-street public parking area as is currently accommodated for other commercial developments in the area.

The proposed on-site car parking supply for the site is consistent with the City of Vincent's *Policy 7.7.1: Non- Residential Development Parking Requirements* State planning policies as well as good traffic engineering and transport planning practice. It can therefore be concluded that the proposed on-site car parking supply in the context of the location of the subject site proximal to a major public transport and other non-motorised transport infrastructure for these alternative modes will assist in the transition towards more sustainable transport in the area.

In conclusion, it should be noted that based both on a review of the modelled total traffic and observed traffic operations of the boundary road system, the anticipated site-generated traffic associated with the proposed development can be accommodated within the existing practical capacity and functional road classification of the local road system.

Wednesday, 16 December 2020

Parking Management Plan

38 (Lot 18) Summers Street, East Perth

In accordance with the City's Non-Residential Parking Policy, a Parking Management Plan is required to be submitted given the proposal

- Provides parking that is not visible / accessed from the primary street; and
- The parking area is obstructed by a gate.

Owner/Applicant Details	
Name:	Hemsley Planning Pty Ltd
Address:	168 Stirling Highway, Nedlands
Phone:	Redacted for privacy purposes
Email:	
Applicant Signature:	

Property Details	
Lot Number:	Lot 18
Address:	38 Summers Street, East Perth

Parking Allocation

The following table is prepared for inclusion in this Parking Management Plan to outline the parking available for the different users of this development application.

Parking Allocation	No.
Total Number Car Parking Spaces:	9
Total Number Short Term Bicycle Parking Spaces:	1
Total Number Long Term Bicycle Parking Spaces:	4
Total Number Other Bays:	0

Development Type	Development Users	Type / Duration	No. Car spaces	No. Bicycle Spaces	No. Other Spaces
Office	Staff	Employee (>three hours)	8	4	-
Office	Visitor	(<three hours)	1	1	-

Public Parking

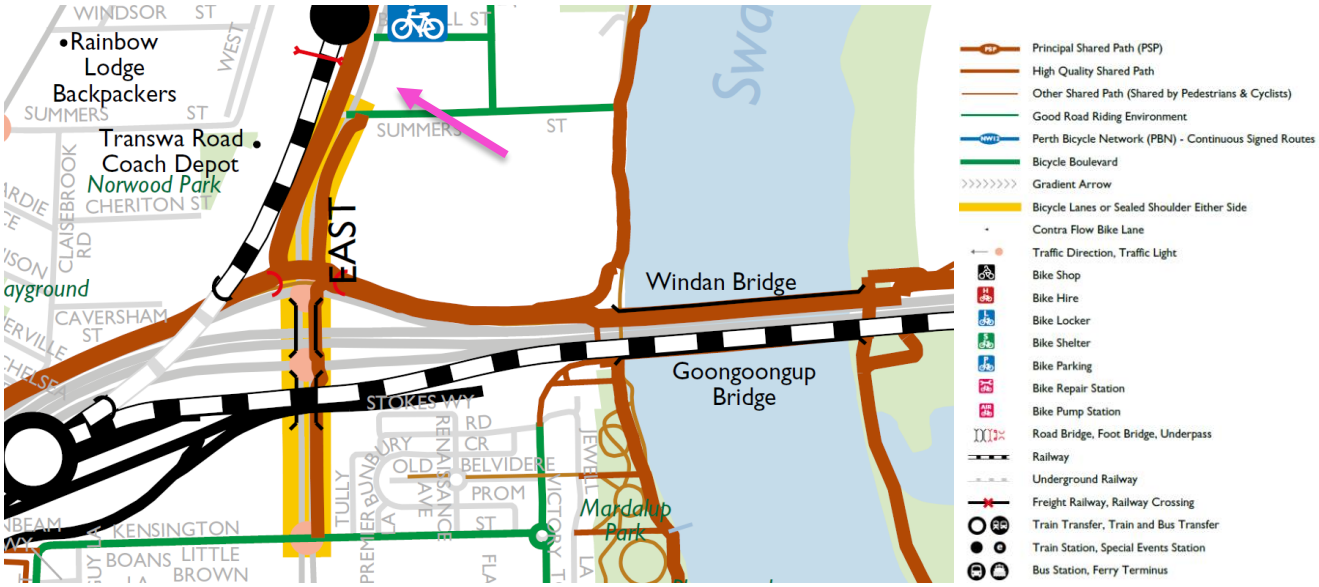
On street and off-street public parking in the vicinity of the subject site is identified in the following table.

	No. Marked Spaces	Location	Parking Restrictions
On Street Parking	~11 (Development will increase available bays. ~17	Northern Side Summers Street 5m+ Southern Side Summers Street 18+	1hr weekdays (City of Vincent) All day, no restrictions (MRA)
Off Street Parking	177	Eastern Side of East Perth Train Station 190m+	Anytime Saturday and Sunday – No charge. Please refer to signage at the station to check conditions.

Alternative Transport

The following table should be prepared for inclusion in this Parking Management Plan to outline the alternative transport options available to users of this development application.

Transport Option	Type & Level of Service
Public Transport	
Train	Regional and Metropolitan Rail Service available 190m from Development and is disability accessible
Bus	A bus stop is located on East Parade 100m from the development providing half hourly services to and from the Perth CBD bus port
Pedestrian	
Paths	Pedestrian paths are located on both sides of Summers Street and connect to a wider network. The development will connect to the path adjacent.
Facilities	End of trip facility of level 1
Cycling	
Paths	The development site is serviced by two Principal Shared Bike Paths
Facilities	End of trip facility of level 1
Secure Bicycle Parking	4 secure bike parking spaces
Lockers	One locker
Showers/Change Room	One shower



Parking Management Plan Particulars

1. The owner, who is also the occupant of the development will be responsible for the management, operation and maintenance of the parking area.
2. Visitors to the development will be in the form of scheduled appointments who can be provided with parking instructions if secure parking is required. Operation the gate will be via remote. It is anticipated that the 1hr on-street parking will adequately service the owners.
3. For ad-hoc training and AGM events detailed in the submission report, the promotion of alternative transport modes such as the provision of well-maintained bicycle and end of trip facilities, and alternative transport options such as the train and bus access will be sent to attendees prior to their attendance.