Traffic Impact Statement

Proposed Service Apartments - 998 Albany Highway

CW1200379 / 304900779

Prepared for Mahesh Amritlal Ramchand Pty Ltd

25 January 2023









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1 Introduction

1.1 Background

Cardno now Stantec has been commissioned by Mahesh Amritlal Ramchand Pty Ltd ('the Client') to prepare a Transport Impact Statement (TIS) for the proposed service apartments ('the Site') located at 998 Albany Highway, under the jurisdiction of the Town of Victoria Park.

This report aims to assess the impact of the development upon the adjacent road network. The report will focus on traffic operations, circulation and car parking requirements.

This TIS has been prepared in accordance with the Western Australian Planning Commission (WAPC) Transport Impact Assessment Guidelines for Developments: Volume 4 – Individual Developments (2016) and the checklist is included in **Appendix A**.



2 Existing Site Situation

2.1 Site Location

The Site is located near Albany Highway in East Victoria Park. The Site is bounded by Albany Highway to the south, commercial/retail land uses to the west and east and residential units to the north. **Figure 2-1** shows the location of the proposed development.

Figure 2-1 Site Location



Source: Metromap (2022)

2.2 Zoning

The Town of Victoria Park Local Planning Scheme No. 1, zoned the Site as "Residential / Commercial" as shown in **Figure 2-2**. The land uses in the area comprises a mix of residential dwellings, parks and recreation and commercial land uses within the surrounding area.



Figure 2-2 **Existing Zoning R40 R40** CU/CP **R60** PS R60 **R30 R30** R40 R40 Residential/Commercial Commercial District Centre Special Use Parks and Recreation CP/D Industrial 1 Special Use: Carpark/Drainage Public Purposes: Civic Use and Community Purpose Industrial 2 Е Special Use: Educational Facilities Public Purposes : Civic Uses PCP Local Centre Special Use: Private Carpark Public Purposes : Primary School Office/Residential RandSF Special Use: Residential and Special Facilities Public Purposes: University TP Residential Special Use: Technology Park

Source: Town of Victoria Park, Local Planning Scheme No:1

2.3 Existing Road Network

The Road classifications are defined in the Main Roads Functional Hierarchy as follows:

- > **Primary Distributors (light blue):** Form the regional and inter-regional grid of Main Roads WA traffic routes and carry large volumes of fast-moving traffic. Some are strategic freight routes and all are National or State Roads WA.
- > **Regional Distributors (red):** Roads that are not Primary Distributors, but which link significant destinations and are designed for efficient movement of people and goods within and beyond regional areas. They are managed by Local Government.



- > **District Distributor A (green):** These carry traffic between industrial, commercial, and residential areas and connect to Primary Distributors. These are likely to be truck routes and provide only limited access to adjoining property. They are managed by Local Government.
- > **District Distributor B (dark blue):** Perform a similar function to "District Distributor A" but with reduced capacity due to flow restrictions from access to and roadside parking alongside adjoining property. These are often older roads with traffic demand in excess of that originally intended. District Distributor A and B roads run between land-use cells and not through them, forming a grid that would ideally be around 1.5 kilometres apart. They are managed by Local Government.
- > Local Distributors (orange): Carry traffic within a cell and link District Distributors at the boundary to access roads. The route of the Local Distributor discourages through traffic so that the cell formed by the grid of District Distributors only carries traffic belonging to or serving the area. These roads should accommodate buses but discourage trucks. They are managed by Local government.
- > **Access Roads (grey):** Provide access to abutting properties with amenity, safety and aesthetic aspects having priority over the vehicle movement function. These roads are bicycle and pedestrian friendly. They are managed by Local government.

The site is bounded by Albany Highway to the south, Lane 125a to the north and Hill View Terrace/Oats Street to the east. **Figure 2-3** shows the surrounding area road hierarchy and the characteristics of the surrounding road network are summarised in **Table 2-1**.



Source: MRWA, Road Information Mapping System



Table 2-1 Road Network Classification

Road Name	Road Hierarchy	Jurisdiction	No. Lanes	No. of Footpaths	Pavement Width (m)	Posted Speed Limit (km/h)
Albany Highway	Distributor B	Local Government	2	2	Approximately 12.0m	40
Hill View Terrace	Distributor A	Local Government	2	2	Approximately 14.0m includes on-road bike lanes both directions	60
Oats Street	Distributor A	Local Government	2	2	Approximately 12.0m	50
Lane 125a	Access Road / Laneway	Local Government	2	0	5.0	50

2.4 Existing Traffic Volumes

Existing traffic volumes were sourced from Main Roads WA (MRWA) Traffic map and are summarised in **Table 2-2.**

Table 2-2 Existing Traffic Volumes

Road Name	Date	Average Weekday Traffic Volume	AM Peak Hour	PM Peak Hour
Albany Highway – North of Hill View Terrace. Counting station 3885	2020/21	13,318	808	971
Oats Street - North of Albany Highway. Counting station 0245	2020/21	10,261	763	897
Hill View Terrace - Hill View Terrace & Albany Highway & Oats Street. Counting station LM00147	21/02/2022- 27/02/2022	25,291	8,955	9,485

2.5 Future Road Network

Cardno now Stantec contacted the Town of Victoria Park and was advised that the Town is updating the land use/planning framework through the Albany Highway Precinct Structure Plan, nevertheless, this will not result in any changes to the planning scheme for another 12-18 months. At the time of preparing this report, future changes are not known.

The study area of these upgrades is shown in Figure 2-4.

Figure 2-4 Study Area – Shape Albany Highway



Source: Town of Victoria Park. Shape Albany Highway

2.6 Existing Intersections

The following section describes the intersections in the vicinity of the site:

> Albany Highway / Hill View Terrace-Oats Street Intersection is a signalised 4-way intersection as illustrated in Figure 2-5 and is located to the south-east of the site.

Figure 2-5 Albany Highway / Hill View Terrace-Oats Street Intersection



Source: Metromap (2022)

> Hill View Terrace-Oats Street / Lane 125a Intersection is a give way control T-junction with priority given to Hill View Terrace and Oats Street as shown in > and located to the east of the proposed site.



Figure 2-6 Hill View Terrace-Oats Street / Lane 125a Intersection



Source: Metromap (2022)

2.7 Crash Assessment

A crash assessment for the surrounding road network of the site has been completed using the Main Roads WA Reporting centre. The assessment covers all the recorded accidents for the 5-year period between 1 January 2017 to 31 December 2021 for the following sections of roads and intersections.

- > Albany Highway between Baillie Avenue and Hill View Terrace-Oats Road;
- > Hill View Terrace-Oats Road between Albany Highway and lane 125a.

The crashes recorded at identified intersections and midblock are summarised in **Table 2-3** to **Table 2-5** and **Figure 2-7** shows the locations of the crashes and their severity.



Table 2-3 Total Crashes

TOTAL CRASHES								
Type of Crash (RUM Code)	Fatal	Hospital	Medical	Major Property Damage	Minor Property Damage	Total Crashes		
Rear End	-	-	-	9	6	15		
Right Turn Thru	-	2	2	15	1	20		
Right Angle	-	2	-	2	-	4		
Sideswipe Same Direction	-	-	-	1	1	2		
Unspecified	-	1	-	2	2	5		
Total	-	5	2	29	10	46		

Table 2-4 Intersection crashes

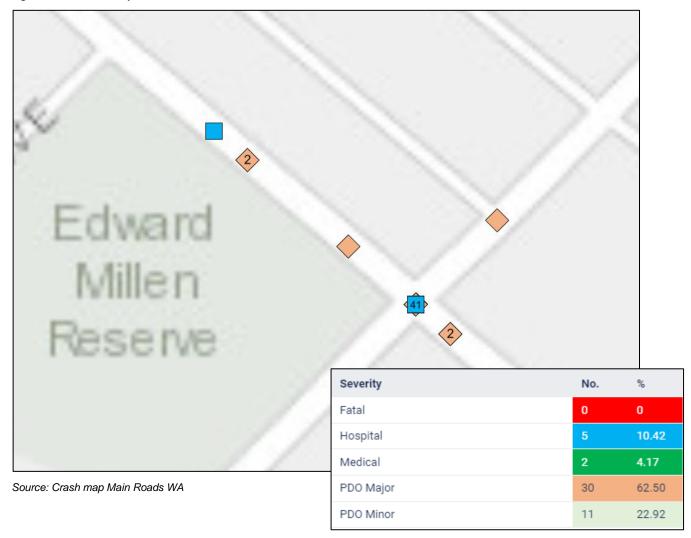
INTERSECTION CRASHES							
Intersection Name	Fatal	Hospital	Medical	Major Property Damage	Minor Property Damage	Total Crashes	
Albany Hwy - Hill View Tce & Oats St	-	4	2	26	9	41	
Total	-	4	2	26	9	41	

Table 2-5 Midblock crashes

MIDBLOCK CRASHES								
Road Name	Fatal	Hospital	Medical	Major Property Damage	Minor Property Damage	Total Crashes		
Albany Hwy	-	1	-	2	1	4		
Oats St	-	-	-	1	-	1		
Total	-	1	-	3	1	5		



Figure 2-7 Summary of Crash Locations



From the crash assessment conducted, the following is concluded:

- > A total of 46 crashes were recorded on the surrounding road network of the site;
- > No fatalities were recorded;
- > 20 crashes were associated with Right turn thru, followed by 15 rear end collisions;
- Out of the total crashes 63% were classified as PDO Major, 23% PDO Minor, 10% Hospital and 4% Medical;
- > 60% of the crashes took place during daytime; and
- > 71% occurred on dry surface, while 17% of the collisions occurred on wet surface.

Overall, it is expected that the proposed development is unlikely to worsen safety in the area due to its small scale.



3 **Public Transport Facilities**

3.1 **Existing Public Transport Facilities**

Figure 3-1 indicates the bus stops located within 400m and train stations located within 800m from the Site. Table 3-1 summarises the public transport routes and frequencies that could potentially service the Site.

The Western Australian Oats Stree Table Tennis Association Saint Mary & Archangel Zuka Alliance South Michael Coptic Metropolitan TAFE Carlisle eum Campus Park A Block Aqualife Centre F Block Hog House Gilbeyla Motown Auto Wholesale Franklins 5 Sevenoaks Catering Walk The Plank Costumes Ace Refrig Lashperth 5 BananaBro Pharmacy 777 East Victoria Park Victoria Park The Emerald Veterinary Clinic JOHNY'S KEBAB Pole Boutique BURGER & GRILL Fast Food Brightwater Oats Street Bollywo Cellarbrations Vic Park Mei's Noor Swansea Street Mercado Protector CPT Victoria Park intoJapanese John Hugh Victoria Pa nnings East MitordSt Victoria Park Edward Millen Park View lettere Hill View lettere Lime Apartments Supercheap Auto Victoria Park Auto parts store Train Station 30 ABS Institute **Bus Stop** Swansea

Figure 3-1 Location of Nearby Public Transport Facilities

Source: Google Maps (2022)

Welshpool Rd



Table 3-1 Public Transport Service and Frequency

Public Transport Service	Route / Name	Weekday	Saturday	Sunday & Public Holiday
Bus	220	30-60min	60min	2hr
Bus	930	10-20min	15-30min	15-30 min
Bus	282	30-60min	2hr	No service
Bus	283	30-60min	2hr	2hr
Train Station – Armadale/Thornlie Line	Oats Street	5-10min	6-15min	8-15min

Figure 3-2 Bus Routes in the vicinity of the Site



Source: Transperth

The site is included within Zone 1 as per Transperth zone Map and there are 4 bus routes serving this site: Route 220, 930, 282, and 283; and the Armadale & Thornlie train lines.

The site has good access to public transport facilities, with four bus routes that connect the Perth CBD with Armadale, Thornlie, and Kalamunda and two train lines that connects the CBD with Thornlie and Armadale.



3.2 Future Public Transport Facilities

Cardno now Stantec contacted Transperth Service Development and was advised that short term changes will occur along Shepperton Road and Oats Street as a result of the 18-month temporary closure of the Armadale Line which will start in early 2023. This closure is associated with the Inner Armadale Line Level Crossing Removal Program (LXR).

Details regarding LXR are still yet to be finalised, however they will likely lead to a significant increase in bus frequency along Shepperton Road. Until LXR commences and post LXR there are unlikely to be any material changes to the network currently operating. Albany Highway is expected to remain largely unchanged.



4 Pedestrian/Cycle Networks and Facilities

4.1 Existing Pedestrian/Cycle Network Facilities

According to the Department of Transports, the site is within the Perth and Fremantle Bike Map; and includes shared paths along Albany Highway, a good riding environment along Baillie Avenue and Somerset Street and bicycle lanes or sealed shoulders along High View Terrace-Oats Street.

Overall, the walking and cycling network in the surroundings of the site is considered to be excellent, with numerous pedestrian/cycling links within close proximity to the Site. **Figure 4-1** shows the bicycle network within the surrounding area of the site.

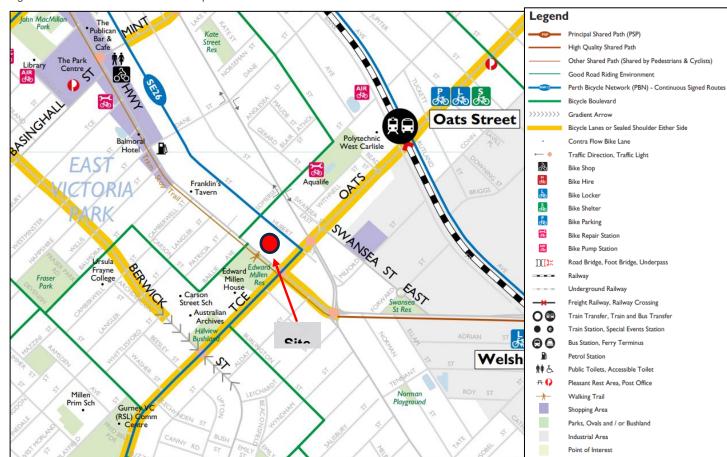


Figure 4-1 Perth/Fremantle Bike Map

Source: Department of Transport WA - Metropolitan Cycle Maps

4.2 Future Pedestrian/Cycle Network Facilities

4.2.1 Joint Bike Plan

The Town of Victoria Park and the City of South Perth have developed a joint bike plan which aims to set out the long-term vision for a strategic cycling network covering both local government areas. The bike plan outlines a five-year action plan for specific improvements to the cycle network and environment. The proposals aim to provide new cycling and pedestrian friendly networks which would be beneficial for the walkability and accessibility to the subject site. **Figure 4-2** shows the proposed cycle routes.



Carlisle Site Street Welshpool Legend Aspirational Network Overpass/Underpass LGA Boundary (Town of Victoria Park/City of South Perth) Principal Route - by others Proposed Overpass/Underpass Community Facility Highway Hospital Facility Strategic Routes - by other Education Facility Local Routes - by others Recreational Park or Reserve Within Curtin University Reserve (Miscellaneous & Other)

Figure 4-2 Proposed Networks for Cycle Routes

Source: Town of Victoria Park - Joint Bike Plan- August 2018

4.2.2 Causeway Pedestrian and Cyclist Bridge

Main Roads is also in the process of creating a causeway pedestrian and cyclist bridge, which would allow travel from Victoria Park to Perth CBD. The new bridge is anticipated to be six metres wide, with dedicated pedestrian and cyclist lanes, Figure 4-3 shows an image of the proposed bridge. It will be connected from Victoria Park foreshore with Heirisson Island and Perth's CBD. The project is currently under construction and is expected to be completed by 2024.



Figure 4-3 Proposed Bridge Construction



Source: Main Roads WA



5 Proposed Development

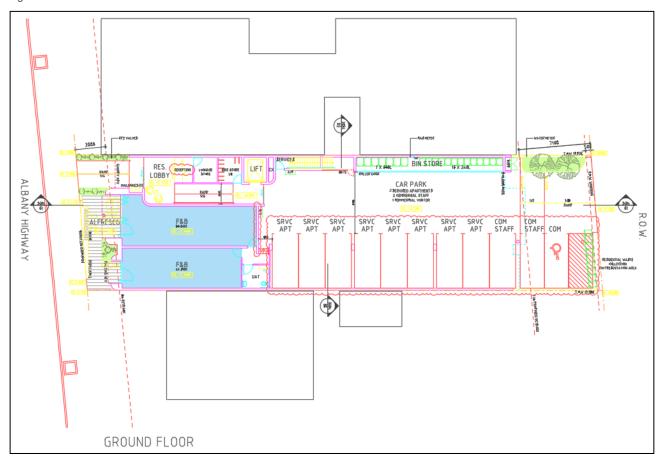
5.1 Proposed Land Uses

The proposed development will comprise a 3-storey service apartment building consisting of the following:

- > 8 two-bedroom apartments;
- > Two commercial tenancies with alfresco dining on the ground floor- 56m² and 46m² respectively;
- > 11 car bays distributed as listed below:
 - 8 car bays for service apartments;
 - 2 car bays for commercial-staff; and
 - 1 ACROD commercial bay.
- > Enclosure bike store with capacity for 8 bicycles.

Figure 5-1 presents the ground floor level of the development. Larger scale site layout plans are included in **Appendix B** .

Figure 5-1 Ground floor Level Plan



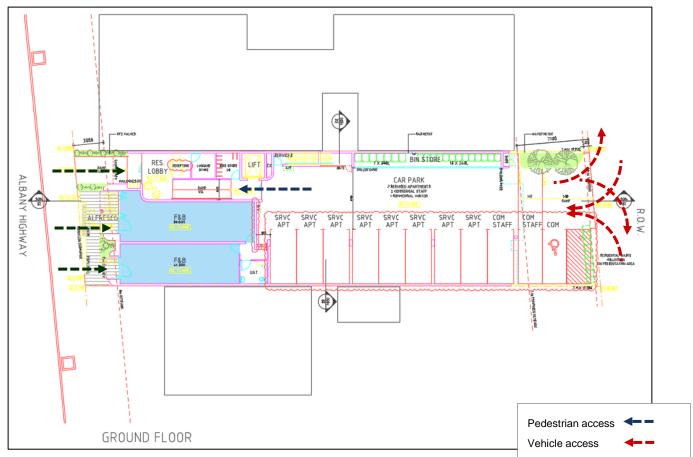
Source: Space collective Architects - 18 January 2023



5.2 Access Arrangements

As illustrated in **Figure 5-2**, pedestrian access to the residential and commercial tenancies is provided along Albany Highway. A full movement vehicle access to the site is proposed along Lane 125a as shown in **Figure 5-2**.

Figure 5-2 Access Arrangements



Source: Space Collective Architects - January 2023

5.2.2 Provision for Service /Waste Vehicles

The waste collection for the proposed service apartments and the commercial tenancy is proposed to be conducted on Lane 125a and the caretaker will ferry the bins to the verge presentation area either the evening before or on the waste collection days.

A swept path assessment has been completed with a 10.0m waste truck as shown in Figure 5-3.



Figure 5-3 10m Waste truck Swept Path – Residential and Commercial waste collection



5.2.3 Car Parking and Circulation Swept Paths

5.2.3.1 B85 and B99 Passenger Cars

The swept path analysis was conducted using the B85 and B99 design vehicles as illustrated in **Figure 5-4** to **Figure 5-5**. Larger scaled swept path diagrams are included in **Appendix C**.

Figure 5-4 Swept Path Vehicle B85 – Ground Floor

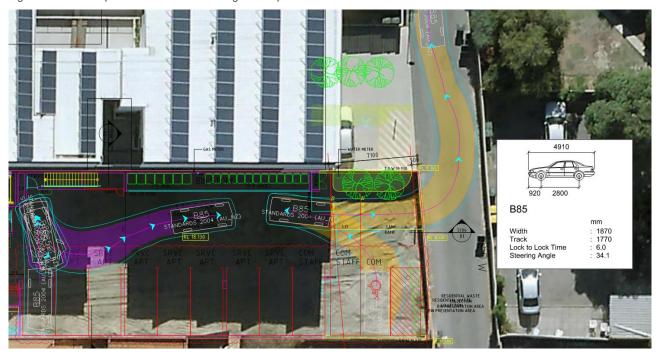


Figure 5-5 Swept Path Vehicles B85 and B99 – Car park access





Figure 5-6 Swept Path Ground Floor exiting the car park



The swept paths show that B85 and B99 vehicles would appear to be able to safely and adequately enter and exit the parking bays in the proposed car park.

In the event where a B85 and B99 vehicle enter and exit the site simultaneously, it is suggested that priority to be given to vehicles entering the site to avoid vehicles queuing along Lane 125a.

5.3 Traffic Generation

Trip generation has been calculated for the proposed development utilising trip generation rates from the Institute of Transportation Engineers (ITE) "Trip Generation" 10th Ed and the Western Australia Planning Commission WAPC. The following tables summarise the directional distribution and the estimated total trips to be generated by the proposed development.

Table 5-1 provides the trip generation rates during the AM and PM peak hour periods. **Table 5-2** outlines the directional distribution and **Table 5-3** summarises the total estimated trips to be generated by the proposed development.

Table 5-1 Trip Generation Rates

Land Use	Source	AM Peak	PM Peak
Service Apartment (based on All suites Hotel)	ITE Code 231	0.37 trips per room	0.38 trips per room
Retail (Food)	WAPC	2.5 trips per 100m ² GFA	10.0 trips per 100m ² GFA

Table 5-2 Directional Distribution

Land Use	AM Peak		PM Peak		
	In	Out	In	Out	
Service Apartment	52%	48%	47%	53%	
Retail (Food)	75%	25%	50%	50%	

Table 5-3 Total Trip Generation

Land Use	AM Peak		PM Peak	
	In	Out	In	Out
Service Apartment	3	3	3	3



Retail (Food)	2	1	5	5
Total	9		16	

The proposed development is expected to generate approximately 9 vehicles during the AM peak hour and 16 vehicles during the PM peak hour period.

It should be noted that the site is accessible to a wide range of public transport services and cycling facilities and the estimated trips may potentially be reduced.

According to WAPC Transport Impact Assessment Guidelines, developments generating between 10-100 vehicle trips are considered as 'moderate impact' category. The site is expected to generate a maximum of 16 vehicle trips and is considered to have minimal impact on the surrounding road network.

5.4 Parking Requirements and Provision

The statutory parking requirements, in accordance with the Town of Victoria Park Local Planning Policy 23 – Parking (LPP23) have been considered in the context of the proposed development and are summarised in **Table 5-4**.

Table 5-4 Car Parking Requirements

Land Use	Source	Number of parking bays	Bays Required	Bays Provided
Shop	LPP23	1 for every 10m ² of retail floor area	11	3
Commercial accommodation (e.g. hotel, motel. Private hotel, lodging house, hostel, serviced apartments)	LPP23	1 for every bedroom or 1 for every 3 beds provided whichever is the greater	16	8
Total car bays			27	11

The development proposes to provide a total of 11 car bays, consisting of:

- > 2 bays for staff commercial;
- > 1 ACROD commercial bay; and
- > 8 bays for the proposed serviced apartments.

A shortfall of 16 bays is noted - 8 for the proposed serviced apartments and 8 for the commercial tenancy.

There are currently 9 on-street bays along Albany Highway with 2-hour parking allowed and on-street parking permitted along Baillie Avenue as illustrated in the diagram below which would be able to accommodate the subject site's parking shortfall for the commercial tenancy.



Figure 5-7 On-street parking location in the vicinities of the site



Source: Metromap (2022)

The development proposes to provide 1 parking bay per service apartment. To minimise parking impacts, it is proposed that a booking system be implemented, whereby apartment rooms and parking bays are booked simultaneously to manage the on-site parking supply. This approach would allow guests to determine the availability of parking spaces upon making a booking, which would have an influence on the decision to drive a vehicle or not. As a result of this booking system, it is anticipated that no parking shortage should arise in the proposed car park for the proposed service apartment development.

6 Summary

This Transport Impact Statement outlines the transport aspects of the proposed development focusing on traffic operations, access and provision of car parking. Included are discussion regarding pedestrian, cycle, and public transport considerations.

This statement has been prepared in accordance with the WAPC Transport Assessment Guidelines for Developments: Volume 4 – Individual Developments (2016).

The following are concluded:

- > The proposal is for service apartments located at 998 Albany Highway. The proposed development includes 8 two-bedroom apartments and two commercial areas of 56m² and 46m² respectively;
- > The Site has good access to public transport facilities with several bus routes serving the area and a train station located within 800m from the site, which provides connection to Armadale and Thornlie Lines;
- > Walking and cycling facilities within the surrounding area of the Site is considered to be excellent with many high-quality paths available which provides good connectivity and accessibility;
- > The development is expected to generate approximately 9 vehicles trips in the AM peak hour and 16 vehicle trips in the PM peak hour. According to WAPC Transport Impact Assessment Guidelines, developments generating between10 and 100 trips during the peak hour falls under the 'moderate impact' category. As the subject site is expected to generate a maximum of 16 vehicle trips, it is considered to have a minimal impact on the surrounding road network;
- It is unlikely that the proposed development would increase the number of crashes in the surrounding road network due to the low traffic volumes expected to be generated and the vehicle access to the site being provided along Lane 125a;
- > Based on the Town of Victoria Park LPP23, there is a shortfall of 8 parking bays for the proposed serviced apartments and 8 bays for the commercial tenancy. To minimise any parking impacts, it is suggested that consideration be given to implementing a booking system where apartment rooms and parking bays are booked simultaneously to effectively manage the parking on-site. Adequate on-street public parking in the proximity of the site is available which would potentially satisfy the anticipated parking shortfall for the commercial tenancy; and
- > Commercial and residential waste collection is expected to be conducted on the verge along Lane 125a and a caretaker will ferry the bins to the verge before collection times.

Overall, it is considered unlikely that the development will result in any material impact to the traffic operations and safety of the surrounding road network.

APPENDIX



WAPC CHECKLIST







Item	Status	Comments/proposals
Proposed development		
Proposed land use	Section 2	
Existing land uses	Section 2	
Context with surrounds	Section 2	
Vehicular access and parking		
Access arrangements	Section 5	
Public, private, disabled parking set down / pick up	N/a	
Service vehicles (non-residential)		
Access arrangements	Section 5	
On/off-site loading facilities	N/a	
Service vehicles (residential)		
Rubbish collection and emergency vehicle access	Section 5	
Hours of operation (non-residential only)	N/a	
Traffic volumes		
Daily or peak traffic volumes	Section 2	
Type of vehicles (e.g. Cars, trucks)	Section 2	
Traffic management on frontage streets	N/a	
Public transport access		
Nearest bus/train routes	Section 3	
Nearest bus stops/train stations	Section 3	
Pedestrian/cycle links to bus stops/train station	Section 3	
Pedestrian access/facilities		
Existing pedestrian facilities within the development (if any)	Section 4	
Proposed pedestrian facilities within development	Section 4	
Existing pedestrian facilities on surrounding roads	Section 4	
Proposals to improve pedestrian access	N/a	
Cycle access/facilities		
Existing cycle facilities within the development (if any)	Section 4	
Proposed cycle facilities within the development	N/a	
Existing cycle facilities on surrounding roads	Section 4	
Proposals to improve cycle access	Section 4	
Site specific issues	N/a	
Safety issues		
Identify issues	N/a	
Remedial measures	N/a	
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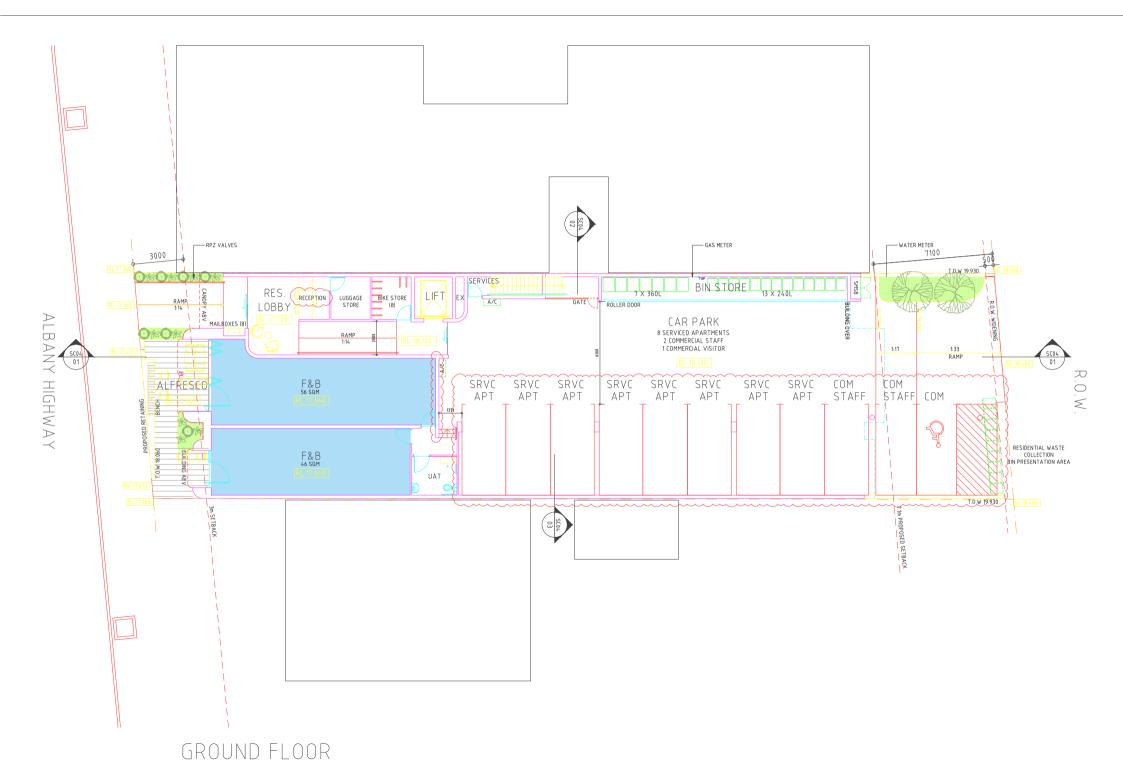
APPENDIX

B

SITE PLANS







APPENDIX

C

SWEPT PATHS





