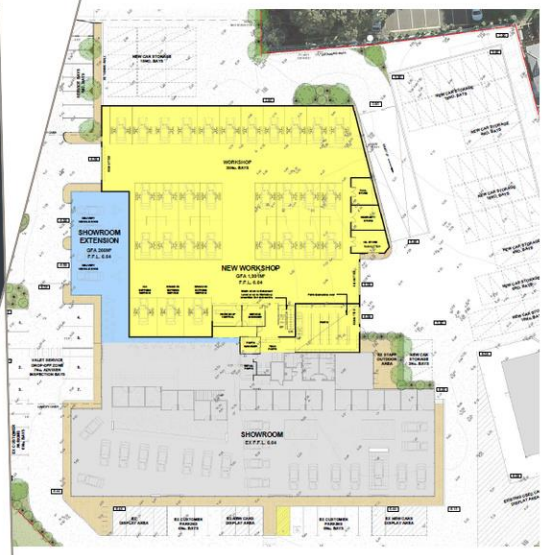
Transport Impact Statement

Melville Motors, Lot 532 Canning Highway, Attadale

CW1200469



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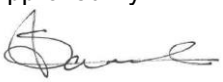

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A	5/9/2022	First Issue	GB	SJL
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C	25/10/2022	Minor Update	BS	SJL

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1 Introduction

1.1 Background

Cardno now Stantec was commissioned by Melville Motors (2006) Pty Ltd ("the Client") to prepare a Transport Impact Statement (TIS) for a proposed showroom expansion located at Lot 532 Canning Highway, Attadale within the City of Melville.

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).*

1.2 Existing Site Context

The Site is located at Lot 532 Canning Highway, Attadale. **Figure 1-1** shows an aerial image of the Site which is found at the corner of Canning Highway and Hislop Road. The current site has existing showrooms and workshops.

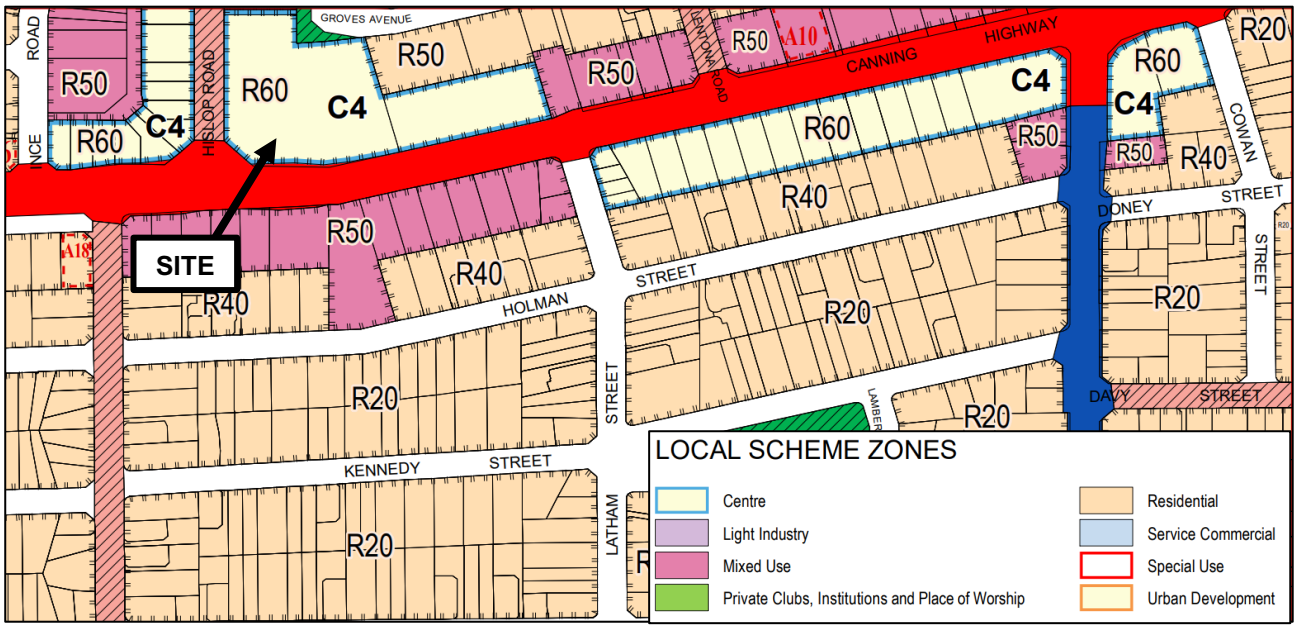
Figure 1-1 Aerial Image of Site

Source: MetroMap (2022)

1.3 Surrounding Land Uses

Pursuant to the provision of the *City of Melville Local Planning Scheme No. 6*, the Site is classified as *Centre*. Located north of the Site is a public open space while to the east are residential and light industry land uses. **Figure 1-2** shows the location of the Site and its surrounding land uses.

Figure 1-2 City of Melville Local Planning Scheme No. 6 Map 3 – Melville and Myaree



Source: City of Melville Local Planning Scheme No. 6

1.4 Existing Road Network

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

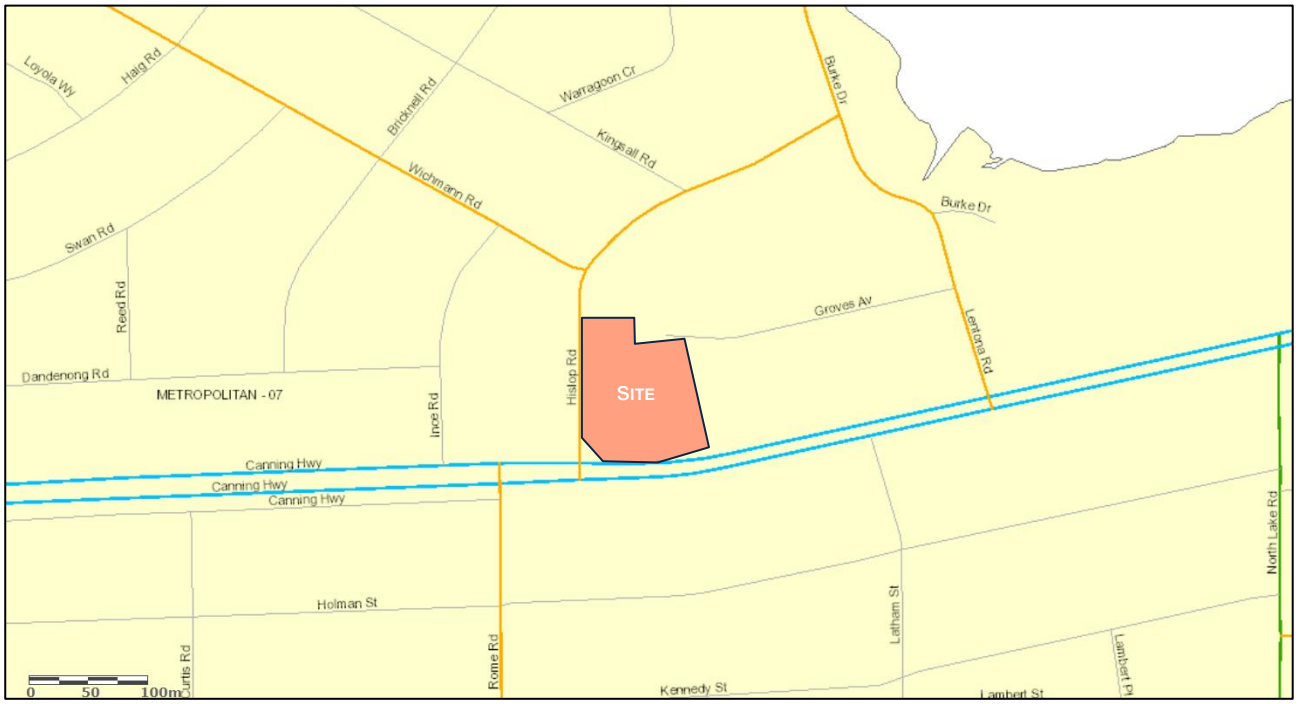
- **Primary Distributors (light blue):** Form the regional and inter-regional grid of Main Roads WA traffic routes and carry large volumes of fast-moving traffic. Some are strategic freight routes and all are National or State Roads WA.
- **Regional Distributors (red):** Roads that are not Primary Distributors, 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 properties. They are managed by Local Government.
- **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 Canning Highway to the south, Hislop Road to the west, and Groves Ave to the northeast. The characteristics of the surrounding road network is further summarised in **Table 1-1** and **Figure 1-3** shows the road hierarchy as per the Main Roads WA Road Information Mapping System.

Table 1-1 Road Network Classification

Road Names	Road Hierarchy		Road Network			
	Road Hierarchy	Jurisdiction	No. of Lanes	No. of Footpaths	Width (m)	Posted Speed
Canning Hwy	Primary Distributor	MRWA	4	2	21.0	60kph
Hislop Rd	Local Distributor	Local Government	2	2	13.0	50kph
Groves Ave	Access Road	Local Government	2	-	7.4	50kph

Figure 1-3 Road Hierarchy



Source: Main Roads Road Information Mapping System

1.5 Traffic Volumes

The most recent traffic volumes for the surrounding roads in the vicinity of the Site were obtained from the Main Roads Traffic Map and are summarised in **Table 1-2**.

Table 1-2 Daily Traffic Volumes

Road	Year	Peak Hourly AM Two-Way Traffic Volumes	Peak Hourly PM Two-Way Traffic Volumes
Canning Highway (East)	2019	2413	2478
Canning Highway (West)	2019	2765	2843
Hislop Road	2019	484	473

Source: Main Roads Traffic Map

1.6 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 between 1 January 2017 and 31 December 2021 and the results are summarised in **Table 1-3** and **Table 1-6** while **Figure 1-4** illustrates the crash locations and their severity within the vicinity of the Site.

Table 1-3 Total Crashes

Type of Crash (RUM Code)	Fatal	Hospital	Medical	Major Property Damage	Minor Property Damage	Total Crashes
Right Angle	-	-	1	5	5	11
Rear End	-	-	1	4	1	6
Right Turn Thru	-	-	-	1	-	1
Hit Object	-	1	-	1	1	3
Unspecified	-	-	-	1	-	1
Total	**-**	**1**	**2**	**12**	**7**	**22**

Table 1-4 Crashes per Road

Type of Crash (RUM Code)	Fatal	Hospital	Medical	Major Property Damage	Minor Property Damage	Total Crashes
Hislop Rd	-	-	-	4	2	6
Lentona Rd	-	1	1	3	1	6
Canning Hwy	-	-	1	5	4	10
Total	**-**	**1**	**2**	**12**	**7**	**22**

Table 1-5 Intersection Crashes

Intersection Name	Fatal	Hospital	Medical	Major Property Damage	Minor Property Damage	Total Crashes
Hislop Rd - Wichmann Rd	-	-	-	1	1	2
Lentona Rd - Groves Av	-	-	1	-	-	1
Lentona Rd - Burke Dr	-	1	-	-	-	1
Canning Hwy - Lentona Rd	-	-	1	4	1	6
Canning Hwy - Latham St	-	-	-	1	-	1
Canning Hwy - Hislop Rd	-	-	-	4	2	6
Total	**-**	**1**	**2**	**10**	**4**	**17**

Table 1-6 Midblock Crashes

Road Name	Fatal	Hospital	Medical	Major Property Damage	Minor Property Damage	Total Crashes
Hislop Rd	-	-	-	1	1	2
Lentona Rd	-	-	-	1	1	2
Canning Hwy	-	-	-	-	1	1
Total	**-**	**-**	**-**	**2**	**3**	**5**

Figure 1-4 Crash Locations

A summary of the crash data is as follows:

- One crash at the intersection of Lentona Road and Burke Drive resulted into hospitalisation,
- Two crashes required medical attention,
- Majority of the crashes resulted in minor/major property damage,
- Majority of the crashes recorded involved Canning Highway.

It is very unlikely that this development expansion would have any material impact on road safety in the area due to its small scale.

2 Public Transport Facilities

2.1 Existing Public Transport Facilities

There are multiple bus stops within the vicinity of the Site. The nearest one can be found along Hislop Road, served by Routes 148 and 158, while some can also be found along Canning Highway which are served by Routes 111 and 910. **Figure 2-1** shows the bus stops and routes that service the Site and **Table 2-1** lists the route frequencies.

Figure 2-1 Existing Routes and Bus Stops

Source: Transperth

Table 2-1 Public Transport Frequency

Bus Routes	Route Description	Frequencies		
		Weekdays	Saturdays	Sundays and Public Holidays
111	Perth - Fremantle Stn via Kwinana Fwy & Canning Hwy	Every 15 minutes (No AM service)	No service	No service
148	Applecross - Fremantle Stn via Bicton & Attadale	Every 30 minutes (0600 to 0700) Every hour (0930 to 1130; 1230 to 1530)	1 hour to 1hour and 30minutes (0845 to 1115)	2 hours (1000 to 1200)
158	Perth - Fremantle Stn via Bicton & Attadale	Every 30 minutes (0745 to 0900) Every 15 minutes in PM	No service	No service
910	Perth - Fremantle Stn via Canning Hwy	Every 15 minutes	Every 20 minutes	Every 20 minutes

Source: Transperth

2.2 Future Public Transport Facilities

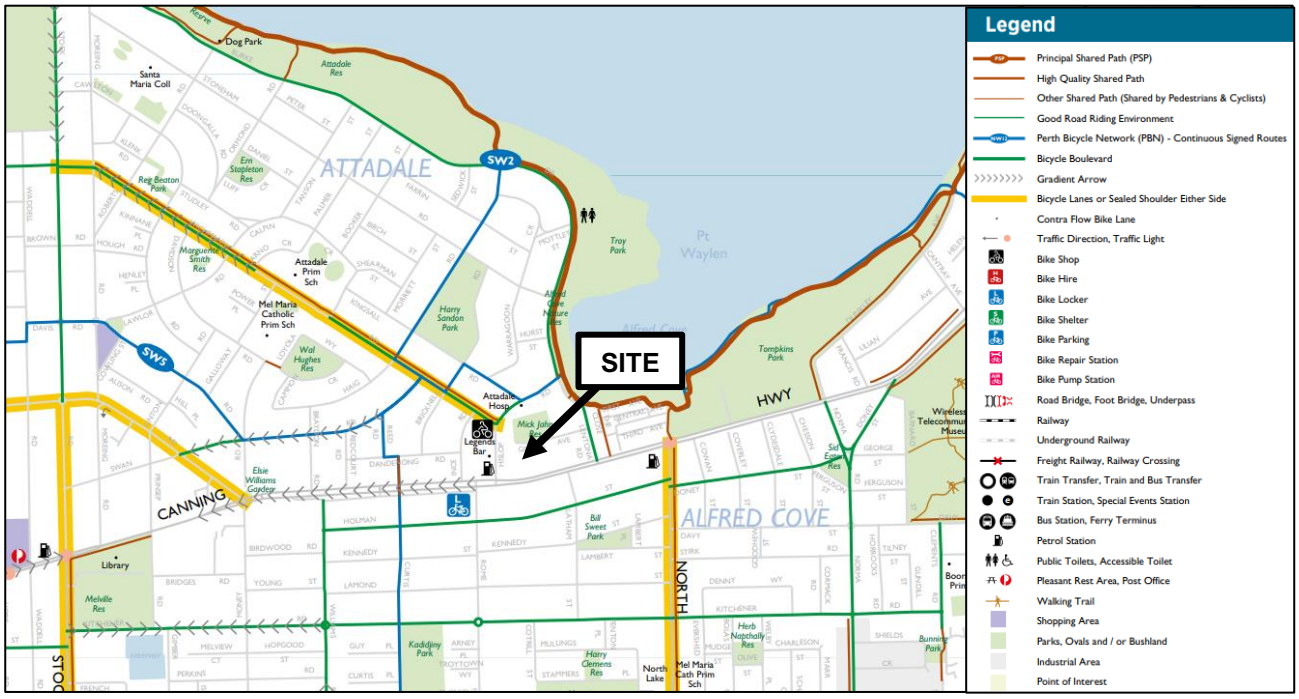
According to the Public Transport Authority, there are no short to medium term plans to change the bus services in the vicinity. However, changes will most likely occur once the Canning Bridge bus interchange is completed in the longer term.

3 Pedestrian/Cycle Networks and Facilities

3.1 Existing Pedestrian/Cycle Network Facilities

The Site benefits from having multiple cycling and pedestrian facilities within its vicinity. Located northwest of the Site is Wichmann Road which is classified as a Bicycle Boulevard, has connection to the Perth Bicycle Network, has bicycle lanes, and a High-Quality Shared Path. Located northeast of the Site is Burke Dive which is classified as a Bicycle Boulevard and a Principal Shared Path, while to the east bicycle lanes and High-Quality Shared Path can be found along North Lake Road. **Figure 3-1** shows the existing pedestrian and cycle network facilities around the Site.

Figure 3-1 Existing Pedestrian/Cycle Network Facilities



Source: Department of Transport

3.2 Future Pedestrian/Cycle Network Facilities

The Site is located within the City of Melville that is included in the Western Australia Long Term Cycling Network. It will benefit from a Local Route located along Hislop Road and a Primary Route that will be located along Burke Drive. Figure 3-2 shows the Western Australia Long-Term Cycling Network and the Site location.

Figure 3-2 Western Australia Long-Term Cycling Network

Source: Department of Transport

4 Proposed Development

4.1 Proposed Development

The proposed development is an expansion of the existing showroom and workshop. Below are the components of the expansion:

- Workshop bays (30 bays)
- Showroom (598 sqm)
- Staff and public parking provision (118 bays)
- New car storage

The layout of the proposed development at the Site is shown below in **Figure 4-1**.

Figure 4-1 Site Plan

Source: Meyer Shircore Architects

4.2 Traffic Generation

Trip generation has been estimated for the changes to the Site, utilising trip generation from *Institute of Transportation Engineers (ITE) "Trip Generation" 10th Ed.* **Table 4-1** shows the estimated trip generation rates, **Table 4-2** shows the predicted directional distribution and **Table 4-3** summarises the estimated trips to be generated by the proposed development expansion.

Table 4-1 Trip Generation Rate

Land Use	ITE Code/Source	Yield	Unit	AM Peak	PM Peak
Existing					
Automobile Care Centre	ITE 942	22 bays	per bays	1.52	2.17
Automobile Sales (New)	ITE 840	1,977 sqm	per 100 sqm	2.01	2.62
Proposed					
Automobile Care Centre	ITE 942	30 bays	per bays	1.52	2.17
Automobile Sales (New)	ITE 840	2,013 sqm	per 100 sqm	2.01	2.62

Table 4-2 Directional Distribution

Land Use	AM Peak		PM Peak	
	In	Out	In	Out
Existing				
Automobile Care Centre	68%	32%	68%	32%
Automobile Sales (New)	73%	27%	40%	60%
Proposed				
Automobile Care Centre	68%	32%	68%	32%
Automobile Sales (New)	73%	27%	40%	60%

Table 4-3 Total Trip Generation of the Proposed Development

Land Use	AM Peak		PM Peak	
	In	Out	In	Out
Existing				
Automobile Care Centre	23	11	32	15
Automobile Sales (New)	29	11	21	31
Proposed				
Automobile Care Centre	31	15	44	21
Automobile Sales (New)	30	11	21	32
Net Increase				
Automobile Care Centre	8	4	12	6
Automobile Sales (New)	**1**	**0**	0	1
NET TRIP INCREASE	**13**		**19**	

The existing development at the Site has AM peak hour and PM peak hour volumes of **74** trips and **99** trips respectively, while the proposed development expansion will have a trip generation of approximately **87** trips during the AM peak hour and **118** trips in the PM peak hour.

It is to be noted that the current trips generated from the existing 22 workshop bays have been excluded from the proposed expansion due to these bays being replaced, resulting to a total net increase of **13** and **19** trips in traffic generation for the upgraded Site for in the AM and PM peak hour, respectively.

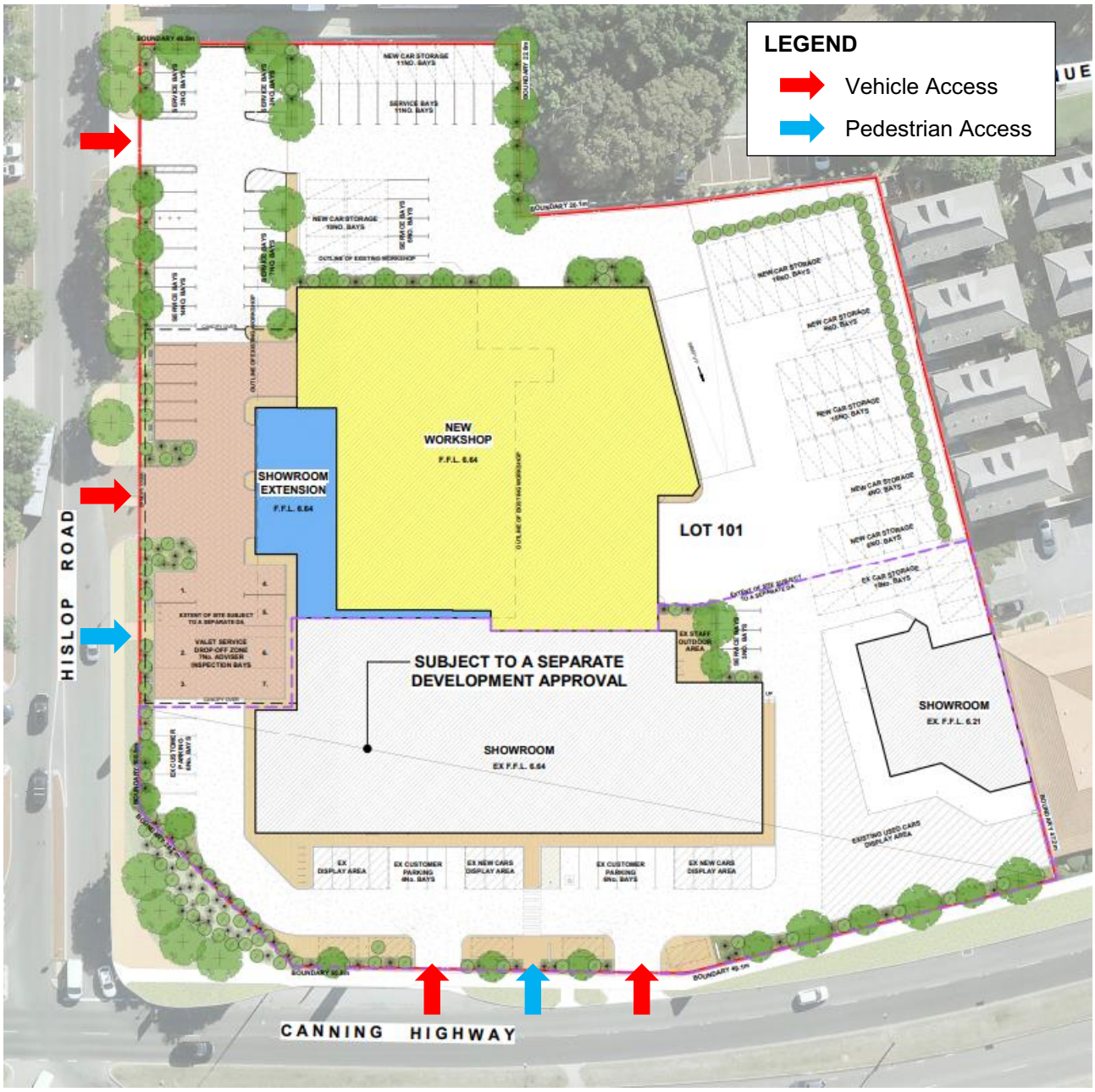
According to the WAPC Transport Impact Assessment Guidelines, developments generating between 10 and 100 trips during the peak hour fall under the 'moderate impact' category and is not considered to have

any substantial impact on the surrounding road network. Therefore, the proposed development expansion will not have a significant negative impact to the road network.

4.3 Access Arrangements

The proposed development expansion is located at the northern portion of the Site and will not amend the existing crossovers and pedestrian access. These crossovers and pedestrian access are found along Canning Highway and Hislop Road which are illustrated in **Figure 4-2**.

Figure 4-2 Access Arrangement



4.4 Service Vehicles Access

Service vehicles that currently enter the site will continue to do so without change to the current arrangements. All vehicle truck deliveries will continue to use the existing loading zone along Hislop Road. Waste collections will be conducted as per existing arrangement for the Site.

4.5 Swept Path Analysis

The majority of the vehicles that will access the Site are passenger vehicles up to and including B99 vehicles. A swept path assessment was conducted using B85 and B99 design vehicle in order to check if common passenger car vehicles can easily manoeuvre in and out of the parking bays, enter, exit, and circulate within the parking and workshop area. Swept paths can be seen in **Figure 4-3** to **Figure 4-6**.

Figure 4-3 Swept Path – Basement Circulation (B99 green path / B85 purple path)

Figure 4-4 Swept Path – Ramp to Basement (B99)

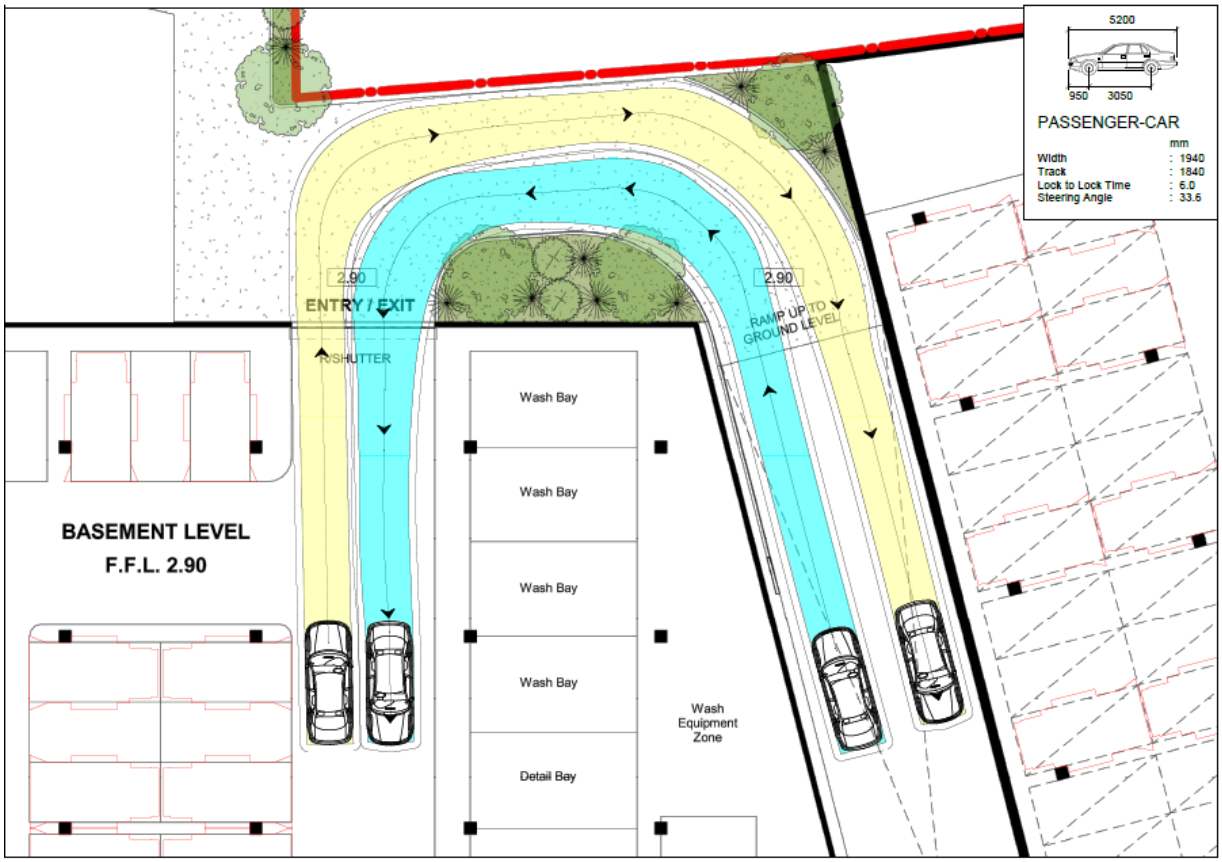


Figure 4-5 Swept Path – Basement Parking Manoeuvre

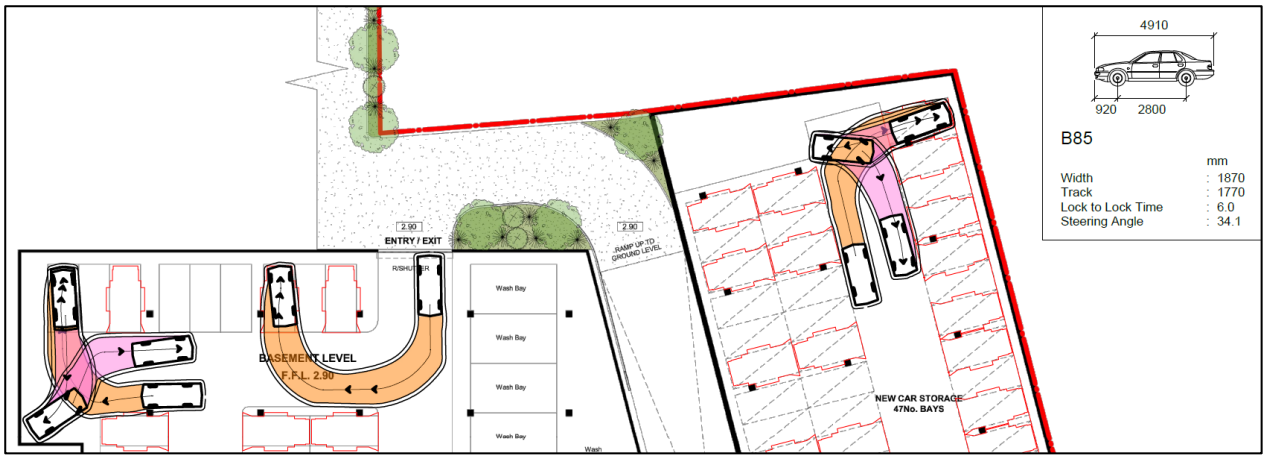
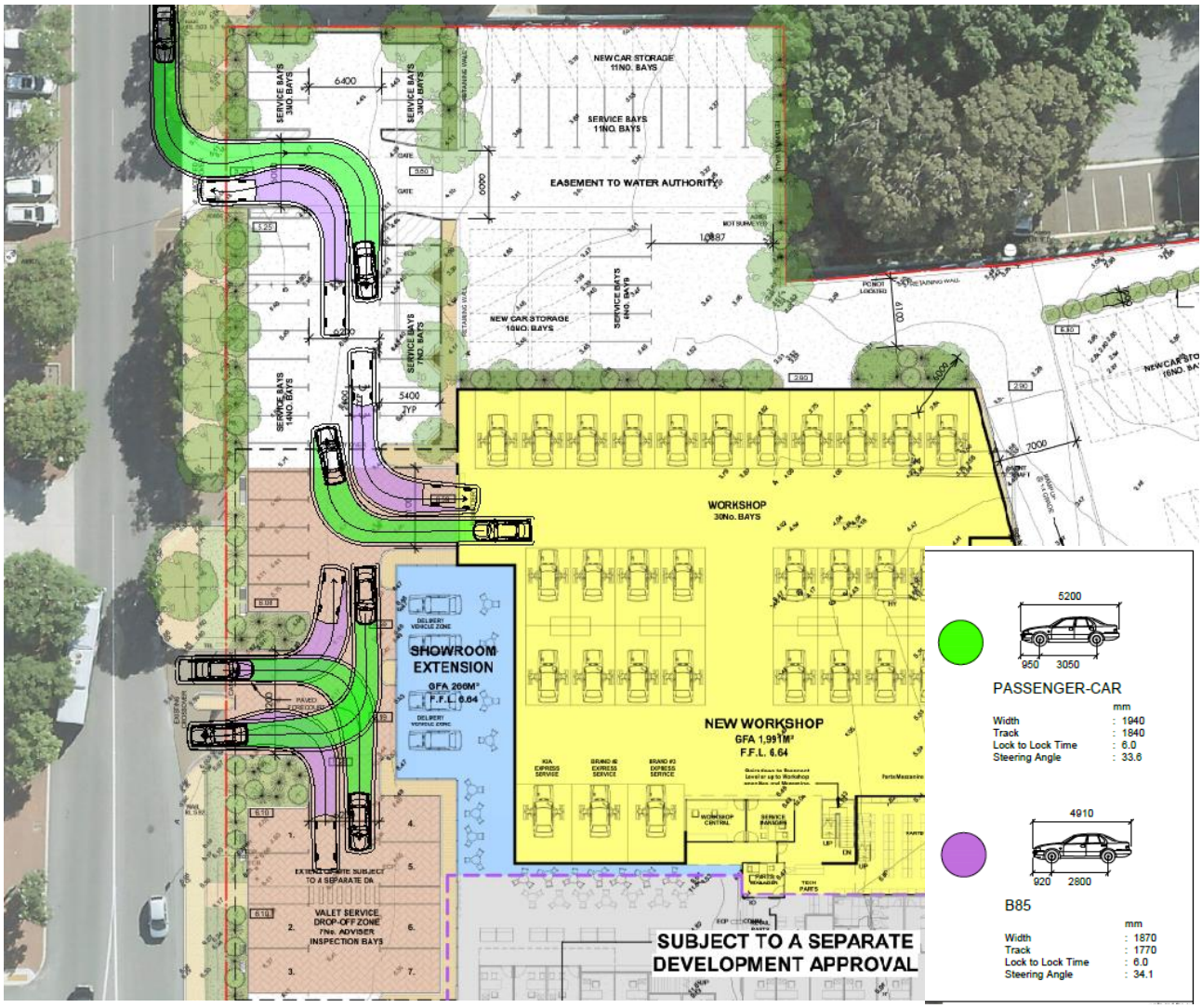


Figure 4-6 Swept Path – Ground Floor Access



6 Summary

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

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

The following conclusions are drawn for the proposed development:

- The proposed development comprises an upgraded workshop, showroom extension, and 118 car parking bays;
- The Site is currently being served by four bus routes and has bus stops immediately available within short walking distance;
- The Site benefits from having multiple cycling and pedestrian facilities within its vicinity;
- The estimated trips to be generated by the proposed development expansion are approximately 87 and 118 vehicles in the AM and PM peak hour, respectively. It also has a corresponding net increase in trip generation of 13 and 19 vehicles for AM and PM peak hour, respectively, which falls under the 'moderate impact' category in accordance with the WAPC Transport Impact Assessment Guidelines; and
- The proposed car parking provision satisfy the car parking requirement set out in the *City of Melville Policy No. LPP1.6*. In addition, the Site also benefits from high frequency public transportation, and quality cycling facilities which the staff may opt to use instead of private cars, further reducing the car parking demand on site.

Overall, the Site is anticipated to have no material impact on traffic operations and safety on the surrounding road network and no material impact on residential amenity.