204 Hume Highway, Chullora
Traffic Impact Assessment

Prepared for:

TFA Project Group

25 September 2020

The Transport Planning Partnership

204 Hume Highway, Chullora
Traffic Impact Assessment

Client: TFA Project Group

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Quality Record

Version	Date	Prepared by	Reviewed by	Approved by	Signature
V01	23/09/20	Clinton Cheung	Oasika Faiz	Ken Hollyoak	-
V02	24/09/20	Clinton Cheung	Oasika Faiz	Ken Hollyoak	-
V03	25/09/20	Clinton Cheung	Oasika Faiz	Ken Hollyoak	KJ Hollyoak

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APPENDICES

1 Introduction

1.1 Background

This traffic impact assessment report relates to a proposed service station with an ancillary convenience store and two food and drink retail outlets with drive-thru facilities at 204 Hume Highway, Chullora NSW. A Planning Proposal (PP) is to be lodged with Strathfield Municipal Council (Council) seeking approval to amend the Strathfield Local Environmental Plan (SLEP) 2012 to permit a service station at the subject site.

The Transport Planning Partnership (TTPP) Pty Ltd has prepared this report for TFA Project Group on behalf of Sydney Fuels Pty Ltd to accompany the PP.

This report assesses the traffic and parking implications of the proposed development and is set out as follows:

- Chapter 2 discusses the existing conditions including a description of the subject site
- Chapter 3 provides a brief description of the proposed development
- Chapter 4 assesses the proposed on-site parking provision and internal layout
- Chapter 5 examines the traffic generation and its impact, and
- Chapter 6 presents the conclusions of the assessment.

1.2 References

In preparing this report, reference has been made to the following:

- Strathfield Local Environmental Plan (SLEP) 2012
- Strathfield Municipal Council Consolidated Development Control Plan 2005
- Canterbury-Bankstown Local Environmental Plan 2015
- Guide to Traffic Generating Developments 2002 (RMS)
- Draft Guide to Transport Impact Assessments (March 2018)
- Roads and Maritime Services Trip Generation Surveys, Service Stations, Analysis Report (2013)

2 Existing Conditions

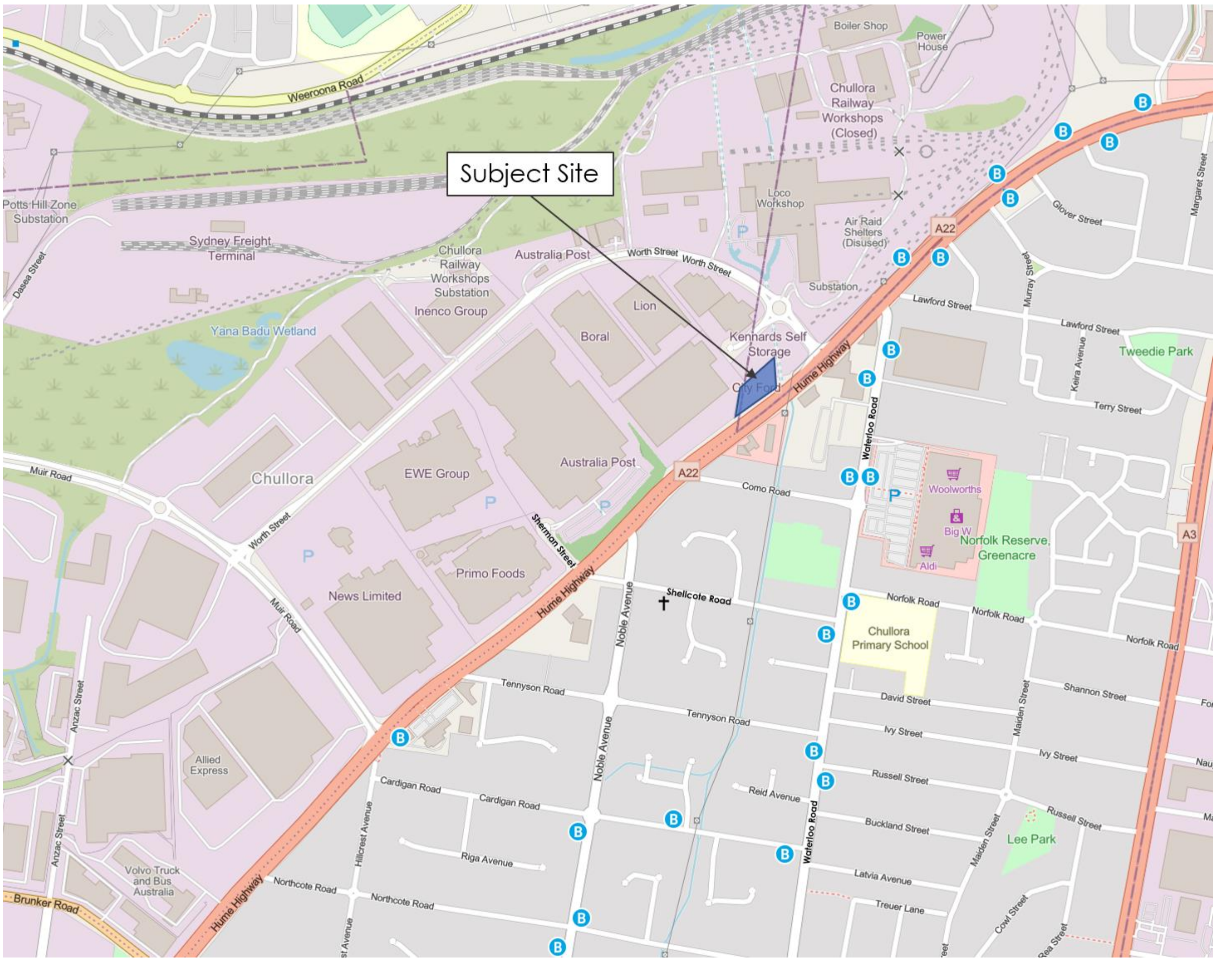
2.1 Site Description

The subject site is located at 204 Hume Highway, Chullora (Lot 1 DP547215) and is located across two local government areas namely, Strathfield Municipal Council (approx. 85%) and Canterbury-Bankstown local government area (15%). The site is approximately 3,962m² and is currently occupied by a car sales yard. The site is located in IN1 General Industry based on the SLEP 2012 and Canterbury LEP 2015.

The subject site has a southern frontage of approximately 108m along the Hume Highway. The site is currently accessed via the Hume Highway by two separate vehicle access points.

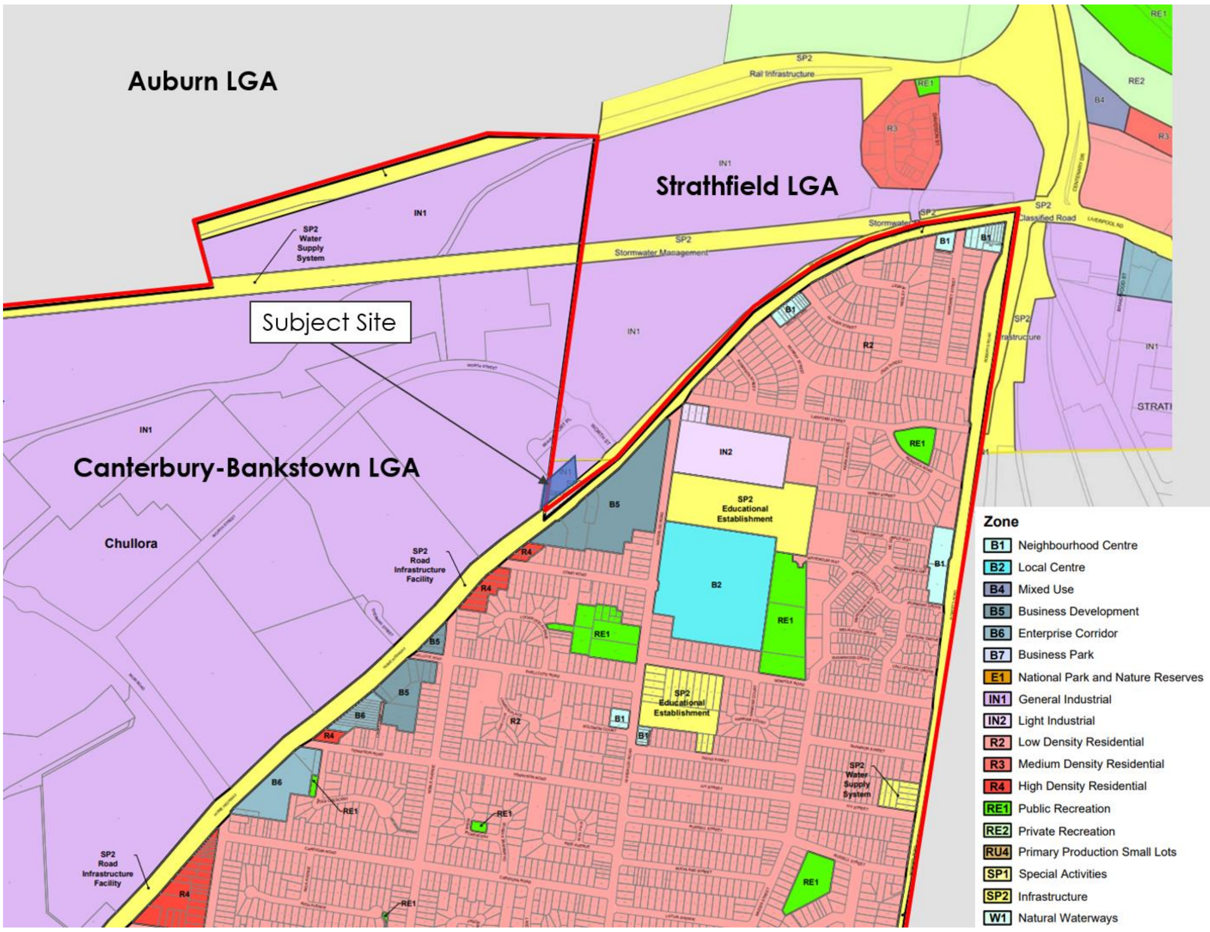
The subject site and its surrounds are shown in Figure 2.1 while Figure 2.2 illustrates the respective land zoning boundaries for each LGA.

Figure 2.1: Locality Map



Source: OpenStreetMaps

Figure 2.2: Strathfield LEP 2012 and Canterbury LEP 2015 Land Zoning Map



Source: Strathfield LEP 2012, Canterbury LEP 2015

Land use surrounding the site predominately comprises IN1 general industrial west of the Hume Highway while B5 business development and R2 low density residential are located east of the Hume Highway.

2.2 Abutting Road Network

The road network adjacent the proposal site is shown in Figure 2.1. A description of key roads surrounding the site is provided below.

Hume Highway (A22)

Hume Highway (A22) is classified as a state road which generally runs in a north-south direction and forms frontage to the proposal site. Within the vicinity of the site, Hume Highway is a six-lane road divided by a 4 m wide raised median. There are three traffic lanes in each direction with a width of approximately 3.3 m wide. The road has a posted speed limit of 70 km/hr. The Hume Highway functions as a clearway at all times.

Muir Road

Muir Road is a local road which generally runs in an east-west direction and provides connectivity between the Hume Highway and Rookwood Road (Metroad 6). Muir Road is a four-lane road with two lanes per direction (one through lane and one parking lane) with opposing flows separated by an 8 m wide raised median. The posted speed limit on Muir Road is 60 km/hr.

Worth Street

Worth Street is a local road configured in an arc connecting the Hume Highway to the east and Muir Road to the south-west. Worth Street provides vehicle access to the surrounding industrial developments in the area. Worth Street is a four-lane undivided road with two lanes per direction (one through lane and one parking lane). The posted speed limit on Muir Road is 60 km/hr.

2.3 Existing Site Access Arrangements

Vehicle access to the site is currently provided off the Hume Highway via two separate ingress and egress access points. The existing vehicle access arrangements to/from the site is shown in Figure 2.3.

Figure 2.3: Existing Vehicle Access Arrangements

Aerial Source: Nearmap

2.4 Public Transport

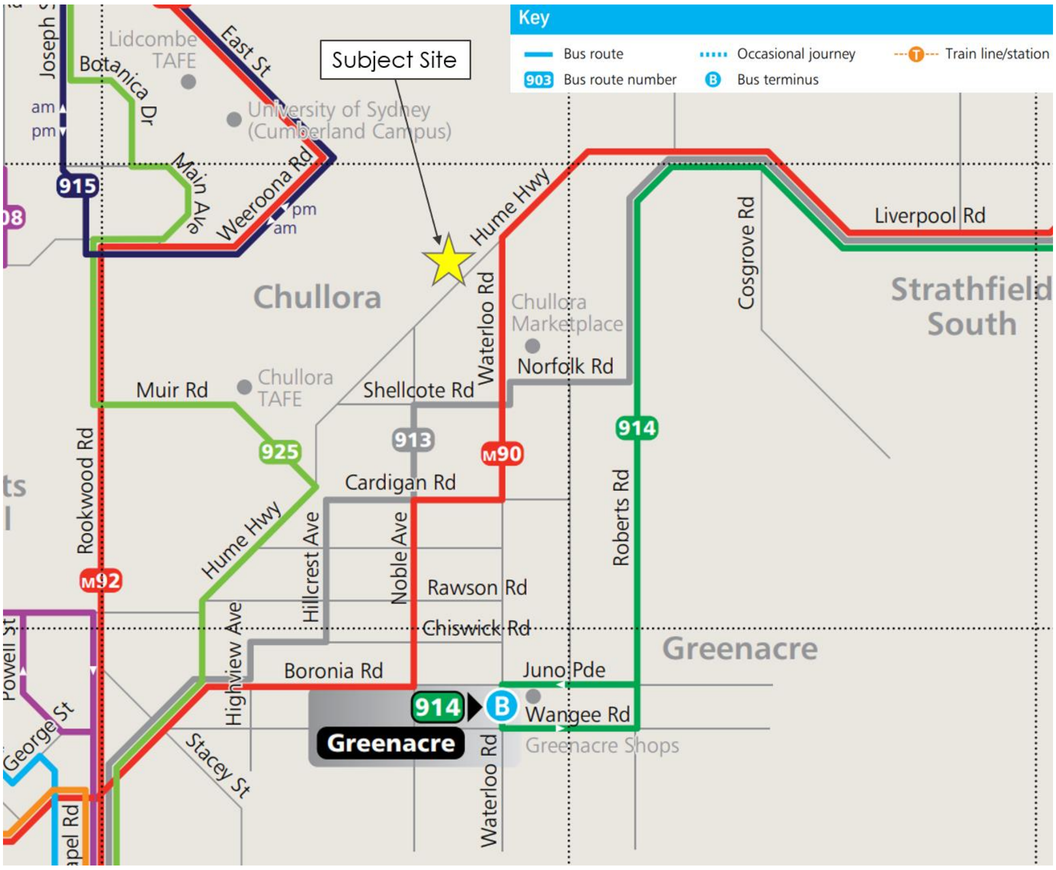
Limited public transport facilities are provided within the vicinity of the site. Within a 500m catchment radius of the site, there are currently nine existing bus stops. The majority of the bus stops are located along Waterloo Road, Shellcote Road and Norfolk Road, which service bus routes M90 and 913. A description of these routes is provided in Table 2.1.

Table 2.1: Existing Public Transport Services

Bus Route #	Route Description	Location of Service	Proximity to Site	Frequency (on-peak / off-peak)
M90	Burwood to Liverpool	Waterloo Road	450m walking distance	10-mins / 10-15mins
913	Bankstown to Strathfield	Shellcote Road	650m walking distance	1-hour / 1-hour

The existing public transport network is shown in Figure 2.4.

Figure 2.4: Site Proximity to Public Transport Facilities



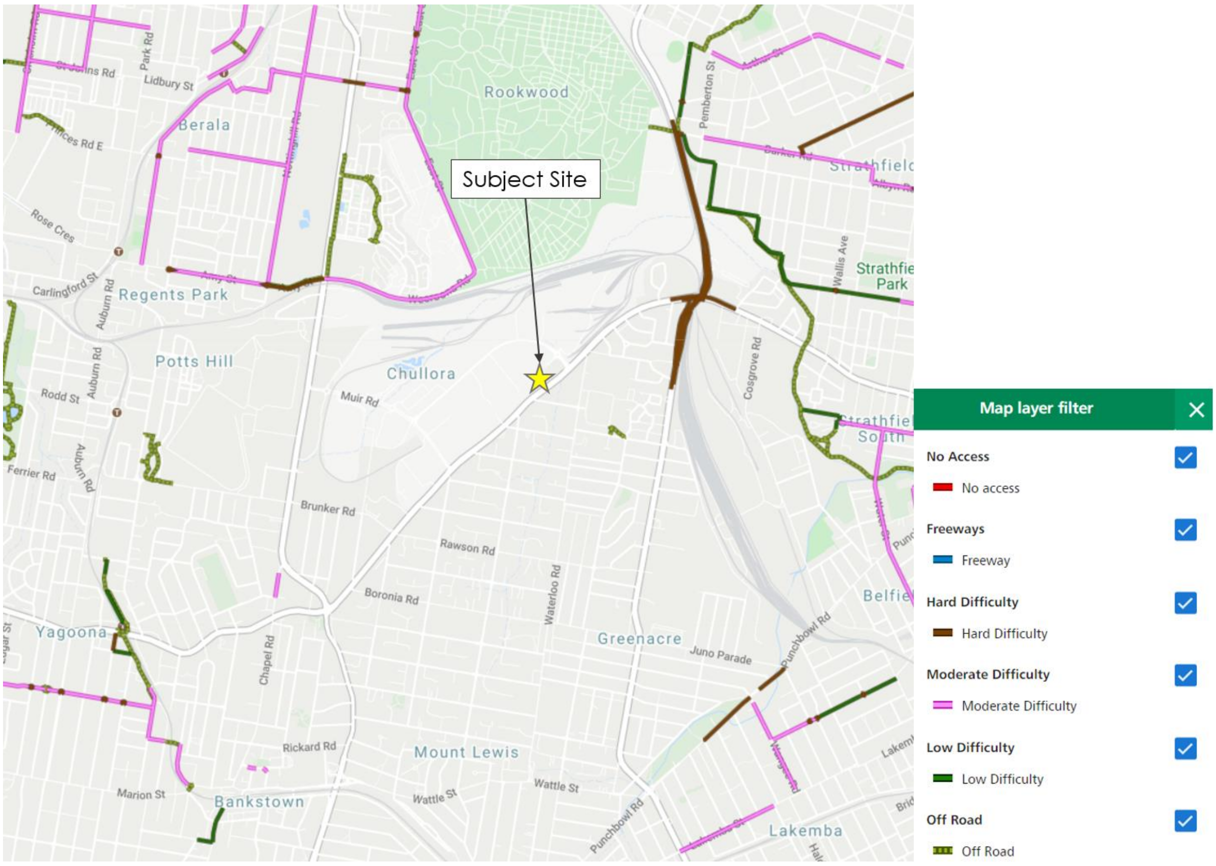
Source: State Transit NSW, Parramatta, Bankstown and Liverpool bus network map

2.5 Pedestrian and Cycling Facilities

Limited pedestrian facilities are provided in the local area. However, pedestrian footpaths are provided on the south side of the Hume Highway and signalised pedestrian crossings are provided at the intersection of Hume Highway – Worth Street with zebra crossings across the left turn slip lanes on Hume Highway and Worth Street.

No dedicated signage or line marking are provided to indicate any cycleways within the vicinity of the site. Cycling in the vicinity of the proposal site is generally not observed. The nearest cycling route is located north of the site along Weeroona Road as shown Figure 2.5.

Figure 2.5: Existing Cycle Routes Map



Source: RMS Cycleway Finder

2.6 Traffic Volumes

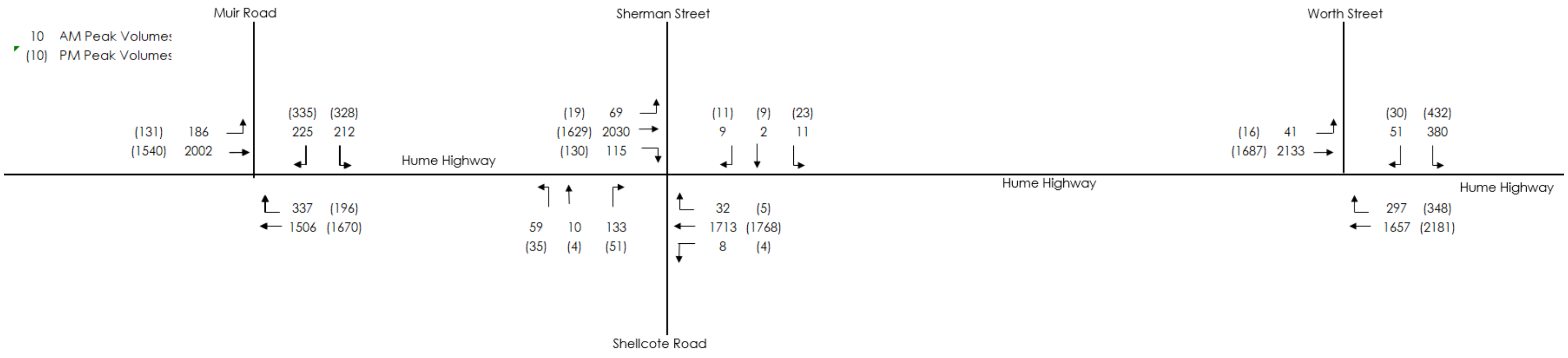
2.6.1 Commissioned Traffic Surveys

Traffic survey data was collected at the following intersections on Tuesday 1 September 2020 during the hours of 7:00am to 9:00am and 4:00pm to 6:00pm:

- Hume Highway – Worth Street (signal),
- Hume Highway – Sherman Street – Shellcote Road (signal), and
- Hume Highway – Muir Road (signal).

The morning and afternoon peak hour volumes are presented in Figure 2.6. The identified AM and PM peak periods are 7:45am-8:45am and 4:45pm-5:45pm respectively.

Figure 2.6: Existing Peak Hour Volumes



2.6.2 RMS (Transport NSW) Traffic Volume Viewer

The current unprecedented events surrounding Covid-19 pandemic have generally affected the typical number of vehicle trips on the road network. In order to appreciate the level of traffic volume fluctuations, a comparative assessment of the historical traffic volumes on the Hume Highway has been undertaken to quantify the traffic fluctuations and to derive appropriate adjustment factors that could apply to the recent traffic survey data.

Average daily traffic data was available between 2018 and 2020 at Transport for NSW (TfNSW) Count Station (Hume Highway 43239) located 70m east of Stacey Street, Greenacre. To obtain a relative comparison between historical traffic flows and the recent traffic surveys (September 2020) the daily average traffic data for the month of August for 2018, 2019 and 2020 has been assessed.

Figure 2.1 depicts the historical August traffic fluctuations between 2018 to 2020 while Table 2.2 summarises the historical traffic volumes for the month of August to the recently commissioned traffic surveys in September 2020.

Figure 2.7: RMS Traffic Counter Data (Counter ID 43239)

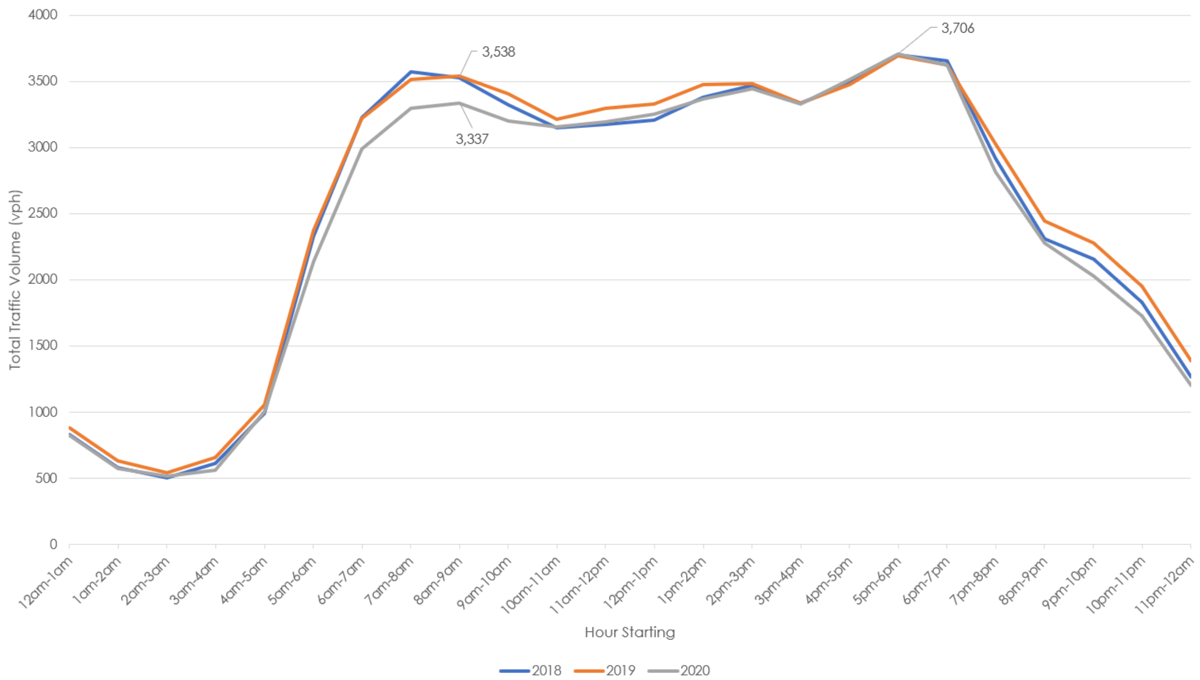


Table 2.2: Historical Traffic Volume Comparison

	Hour Starting 0800	Hour Starting 1700
RMS Counter August 2018	3,527 veh	3,700 veh
RMS Counter August 2019	3,538 veh	3,691 veh
RMS Counter August 2020	3,337 veh	3,706 veh
Commissioned Traffic Surveys (1 September 2020)	3,965 [1]	3,680 [1]

Note:
[1] Represents the average mid-block flows between the (x3) surveyed intersections

Based on the above, it is observed that traffic volume fluctuations on Hume Highway are minor with the commissioned AM surveys indicating a larger traffic volume than historic data. On this basis, the commissioned traffic survey data has been used herein for traffic modelling purposes.

3 Proposed Development

3.1 Proposal Description

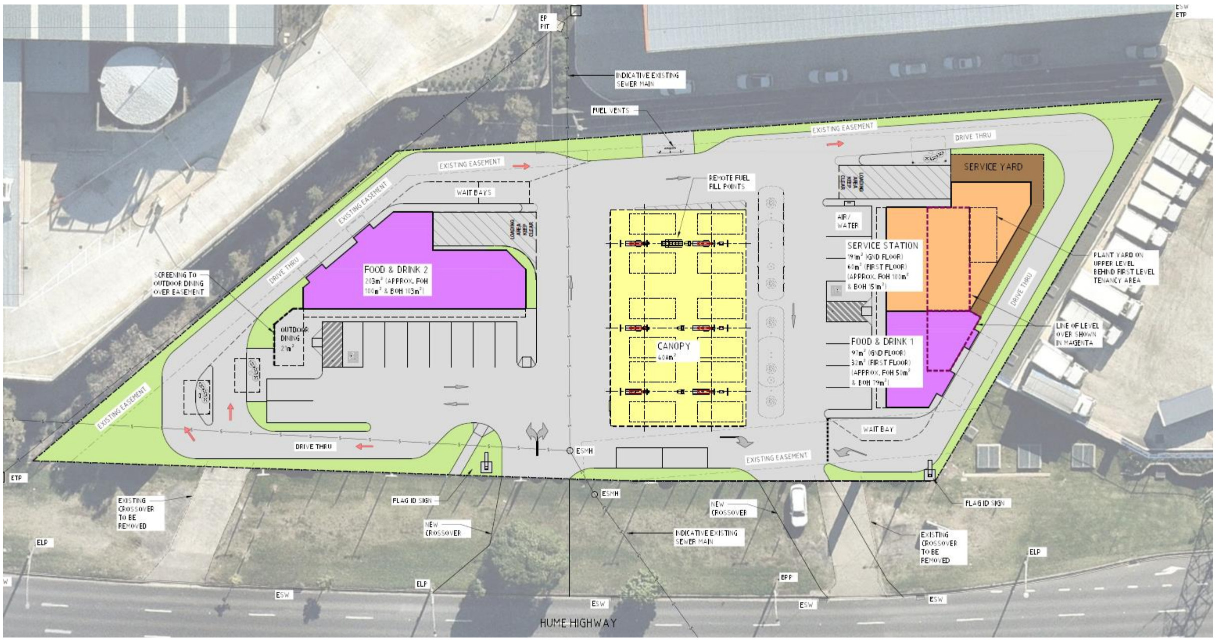
The objective of the Planning Proposal is to enable a 'service station' on the subject site via an addendum to the current Strathfield LEP 2012. The planning proposal is to ultimately lead to a forthcoming Development Application (DA) to Strathfield Council for all uses proposed over the site.

The proposed development, located at 204 Hume Highway, would involve the construction of a new service station with two fast food restaurants and an ancillary convenience store. A full breakdown of development is as follows:

- site area: 3,962m^2
- proposed service station convenience store: 251m^2 (approx. 100m^2 front-of-house (FOH), 151m^2 back-of-house (BOH))
- a drive-through fast food restaurant (Food & Drink 1) of 129m^2 (approx. 50m^2 FOH) and 21m^2 of outdoor dining
- a drive-through fast food restaurant (Food & Drink 2) of 203m^2 (approx. 100m^2 FOH)
- fuelling station canopy to service 6 fuel dispensers (or 12 light vehicles)
- 20 car parking spaces (including 2 accessible spaces).

The proposed site layout is shown in Figure 3.1 and provided in Appendix A.

Figure 3.1: Proposed Site Layout



3.2 Vehicle Access

The proposed development is to be accessed via separate ingress and egress driveways off Hume Highway. Access into the site is to be provided as left-in/ left-out movements only.

It is noted that SEPP Infrastructure (2007) Clause 101 does not permit access to and from sites to be achieved onto a classified road if there is any practicable alternative. It is noted that there is no alterative practicable access that is available.

The ingress and egress driveways will be designed to allow access for up to a 19m AV tanker refuelling truck (largest anticipated vehicle). Signage is to be installed detailing vehicle size restrictions at each fuel dispenser.

Swept paths of the proposed access is provided in Appendix B.

3.3 Loading Arrangements

Two loading bays are proposed on site including:

- one loading bay located adjacent to Food & Drink 1 with capacity for vehicles up to a 12.5m Heavy Rigid Vehicle (HRV)
- one loading bay located adjacent to Food & Drink 2 (the convenience store) with capacity for vehicles up to a 12.5m Heavy Rigid Vehicle (HRV).

It is anticipated that vehicles would reverse into the loading bays and exit forward out in a forward movement, as is typical for service station sites.

4 Parking Assessment

4.1 Car Parking

The parking requirements for the proposed development have been assessed against the Strathfield Municipal Council (Council) DCP 2005. Car parking requirements are set out within *Part I Provision of Off-Street Parking Facilities* in the DCP 2005.

The DCP specifies a parking rate for service station/convenience stores and drive-in take-away food outlets. As such, car parking requirements for the proposed development are summarised in Table 4.1.

Table 4.1: Car Parking Assessment

Land Use	Size		Minimum DCP Rate	DCP Requirement
	GFA [2]	Seats		
Work Bays [1]	-		6 spaces per work bay, plus 5 spaces per 100m² GFA for convenience store, plus 15 spaces per 100m² of restaurant, OR 1 space per 3 seats, whichever is greater	0
Convenience Store	100m²			5
Restaurant	171m²	NA		26
Total				**31**

[1] No work bays are proposed
[2] Restaurant parking is based on front-of-house area and outdoor dining area

Table 4.1 indicates that the proposed development is required to provide a minimum of 31 car parking spaces including 5 spaces for the proposed service station (and convenience store) and 26 spaces for the proposed fast food premises.

However, it is believed that Council's parking rates do not take into account multi-purpose visits or the drive-through nature of the site, with the parking rate for fast food matching RMS parking rate for a standalone restaurant with no drive-through facility. Additionally, it is likely that many drivers would visit both the service station and a fast-food restaurant. On this basis, the requirement of 31 spaces is likely to be excessive.

The proposed development includes a parking provision of 20 formal car parking spaces (including 2 accessible spaces) and can accommodate an additional 12 vehicles at the fuel pump positions. Noting that most convenience store visitors would also visit the fuel pumps, it is considered that the site parking provisions are adequate to support the expected demand.

4.2 Drive-way Queueing Area

The DCP does not stipulate that fast food outlets with drive-through facilities need to provide a queueing area for cars.

However, the RMS Guide recommends that a drive through queue length of 10 cars be provided for a McDonalds or 6 cars for a KFC. However, allowance should be made for the queues to extend beyond the drive through, to 12 cars for a McDonalds and 8 cars for a KFC.

The proposed drive-through facilities have been designed to accommodate approximately 12 vehicles for Food & Drink 1 and 9 vehicles for Food and Drink 2. Therefore, the proposed drive-through facility has satisfactory vehicle queue storage area.

4.3 Accessible Parking Requirements

Council's DCP does not stipulate specific parking rates for accessible parking spaces. The Building Code of Australia (BCA) recommends accessible parking spaces to be provided at a rate of 1 space for every 50 car parking spaces or part thereof. Therefore, for a provision of 20 formal car parking spaces, the development is required one accessible space. It is proposed to provide two accessible parking spaces, which complies with BCA requirements.

4.4 Bicycle Parking

The DCP does not stipulate bicycle parking requirements for service station/convenience stores or drive-in take-away food outlets.

4.5 Servicing and Deliveries

Council's DCP does not stipulate specific parking rates for delivery and service vehicles.

However, in accordance with the RMS *Guide to Traffic Generating Developments* states that "provision is to be made on-site or at a convenient location for the type of delivery or service vehicle appropriate to the type of development".

On this basis, two separate loading bay areas are proposed for the development, accommodating vehicles up to a 12.5m Heavy Rigid Vehicle.

4.6 Car Parking Layout

The service station car park and associated access arrangements will be designed in accordance with Australian Standard requirements, namely AS2890:2004.

All parking spaces are to be designed as Australian Standard Class 3A car parking spaces (which have minimum dimensions of 2.6m wide by 5.4m long with aisle width of 6.6m).

The accessible parking spaces are to be designed as per AS2890.6:2009 (with dimensions of 2.4m wide by 5.4m long and an adjacent shared space of equal dimensions with bollard).

A fuel dispensing canopy of 4.5m height clearance or higher will be provided to ensure passage for heavy vehicles e.g. the fuel tanker. The internal circulation within the development has been designed to accommodate vehicles up to and including a 19m Articulated Vehicle (i.e. approximate size of a fuel tanker). All service vehicles would be able to enter and exit the site in a forward direction.

5 Traffic Impact Assessment

5.1 Traffic Generation Estimates

5.1.1 Fast Food Services

The site provides two fast food outlets, each including a drive-through facility.

Traffic generation estimates for the proposed fast food premises have been assessed using Transport for NSW' *Draft Guide to Transport Impact Assessments (March 2018)* (herein, draft TfNSW Guide). This includes information from updated studies from those contained in the *RTA Guide to Traffic Generating Developments 2002* on service stations across New South Wales.

For fast food restaurants, the draft TfNSW Guide provides sample survey data for three fast food chains, namely McDonalds, KFC and Hungry Jacks. Notably, McDonalds generates the highest trip rates while KFC does not generate AM peak trips as this is usually outside of its general operating hours.

Notwithstanding that a McDonalds and a Hungry Jacks are both located some 800-900m east of the subject site on Roberts Road (A3), for the purpose of this analysis the more conservative traffic generation estimate has been adopted for the proposed fast food restaurants i.e. McDonalds traffic generation and Hungry Jacks.

As provided in the draft TfNSW Guide, the traffic generation estimates for a McDonalds restaurant and Hungry Jacks restaurant during the road network peak for Sydney area, are provided in Table 5.1.

Table 5.1: Fast Food Traffic Generation

Sample	Traffic Generation	
	AM Peak	PM Peak
McDonalds	119	138
Hungry Jacks	18	72
Total Trips	**137 trips**	**210 trips**

The draft TfNSW Guide indicates that a portion of the above traffic generation is passing trade as follows:

- McDonalds - 51% passing trade
- Hungry Jacks – 54% passing trade

An average of 50% passing trade has been adopted for the purposes of this assessment. On this basis, the proposed fast food restaurants are estimated to generate a net increase of 69 and 105 trips per hour into the road network during the AM and PM peak periods respectively. An additional 68 and 105 trips per hour is anticipated to be passer by vehicles undertaking a detour via the site.

5.1.2 Service Station

The *RTA Guide to Traffic Generating Developments 2002* suggests the following peak hour traffic generation equation for service station developments:

- Evening peak hour vehicle trip rate = 0.66 x GFA of convenience store

Therefore, the proposed site of 251m^2 GFA is estimated to generate 166 vehicle trips per hour.

However, more up to date survey data of service stations is available in the report, *Roads and Maritime Services Trip Generation Surveys, Service Stations, Analysis Report* (2013) by TEF Consulting.

The Service Station Analysis Report has been produced for the draft TfNSW guide however, the report provides greater detail than the draft TfNSW guide. This study undertaken for Roads and Maritime Services includes survey data for a number of service stations, with varying services. For recent Land & Environment Court cases, TTPP has undertaken a detailed analysis of the survey sites that include a service station plus convenience store and have excluded any that include additional provisions such as fast food restaurants, to obtain an understanding of the traffic generation of service stations only.

Based on this data, the relationship between the number of peak hour vehicle trips and the number of fuel pumps was determined as shown in Figure 5.1 and Figure 5.2.

Figure 5.1: Morning Peak Hour Trips vs Number of Pumps

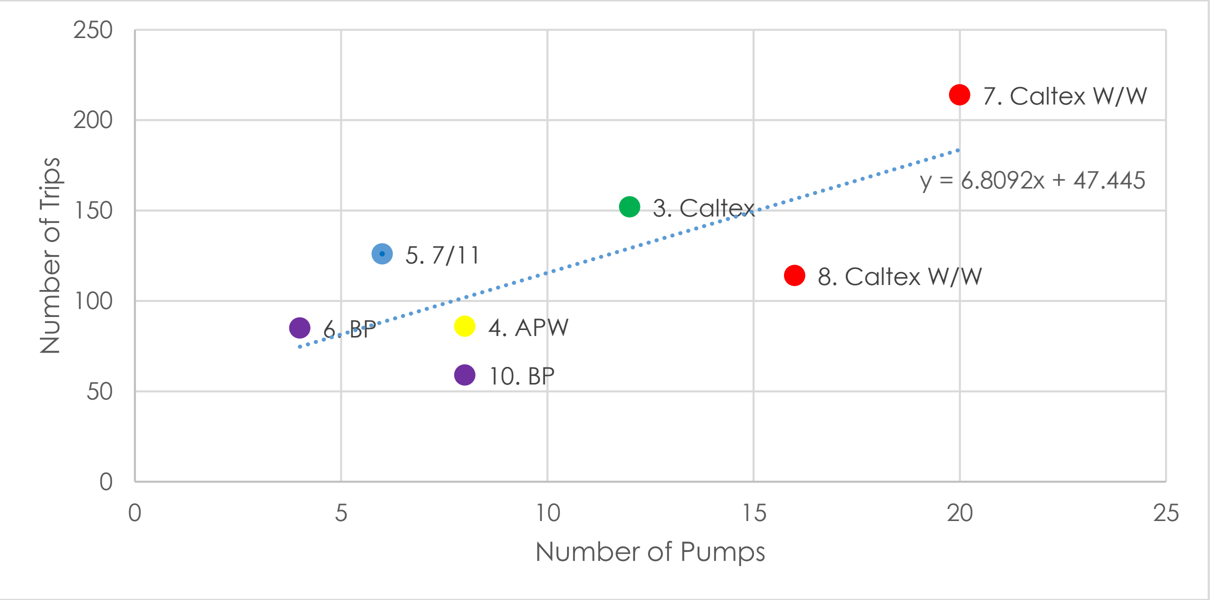
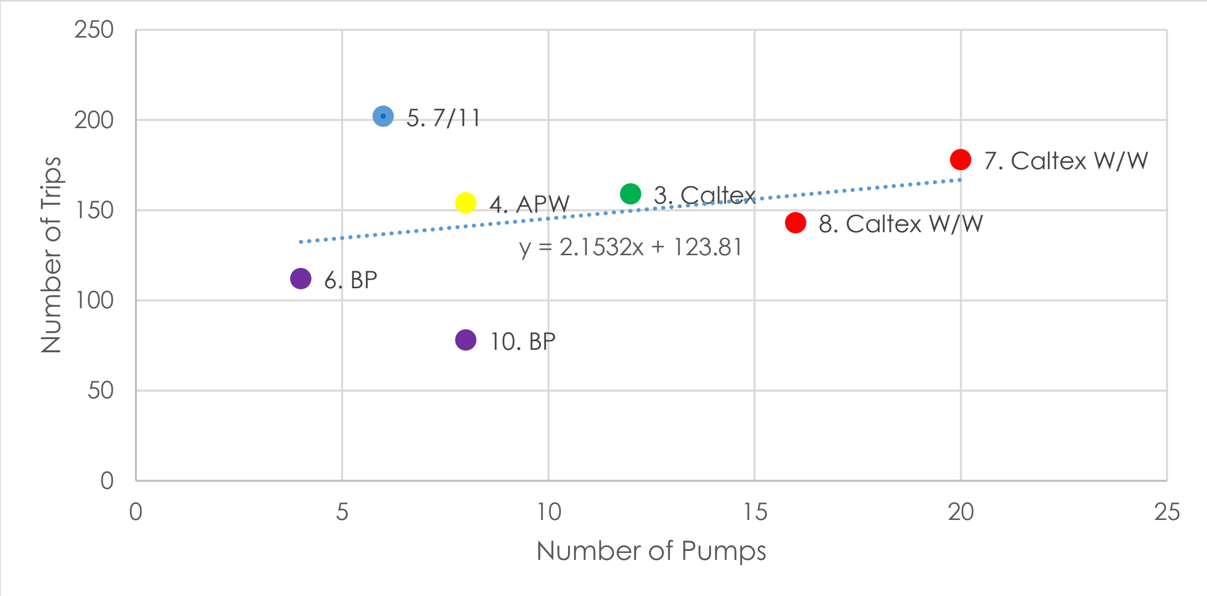


Figure 5.2: Evening Peak Hour Trips vs Number Pumps



Based on the regression equations obtained from the graphs in Figure 5.1 and Figure 5.2, the estimated number of trips generated by the proposed development has been assessed.

Based on a capacity of 12 pumps (12 light vehicle positions), the trip generation of the service station is summarised in Table 5.2.

Table 5.2: Service Station Traffic Generation

Land Use	Size	Trip Rate		Traffic Generation	
		AM Peak	PM Peak	AM Peak	PM Peak
Service Station	12 Pumps (P)	6.8092 P + 47.445	2.1532 P+ 123.81	129	150

Based on the regression formulas as calculated in Figure 5.1 and Figure 5.2, it is estimated that the proposed development could generate up to 150 vehicle trips per hour during the busiest peak period.

Further to this, the site is located on a major arterial road (the Hume Highway) and is therefore expected to attract a significant proportion of passing trade i.e. traffic already on the road network passing the site. The RMS's Guide indicates that passing trade for service stations would typically be at least 50% although surveys undertaken by TTPP at other service stations suggest that this can be in the order of 59-71%.

However, as a conservative analysis using the 50% figure, the proposed service station could be expected to generate a net additional 75 trips per hour during the peak periods to the road network (i.e. new primary trips).

5.1.3 Summary

A summary of the estimated traffic generation arising from the proposed development is provided in Table 5.3.

Table 5.3: Traffic Generation Summary

Development	Traffic Generation		Passing Trade	Additional Vehicle Trips	
	AM Peak	PM Peak		AM Peak	PM Peak
Service Station	129	150	50%	65	75
Fast Food 1 (McDonalds)	119	138	50%	60	69
Fast Food 2 (Hungry Jacks)	18	72	50%	9	36
Total	**266**	**360**	**-**	**133**	**180**

Table 5.3 indicates that the proposed development is expected to generate a total of 266-360 vehicles per hour during the road network peak periods. This would include a net increase of 133-180 vehicle trips per hour to the road network.

However, the above does not take into account multi-purpose trips between the fast food restaurant and service station, with the fast food and service station anticipated to overlap in customers. On this basis, the above traffic generation estimate is conservative.

5.2 Background Traffic Growth

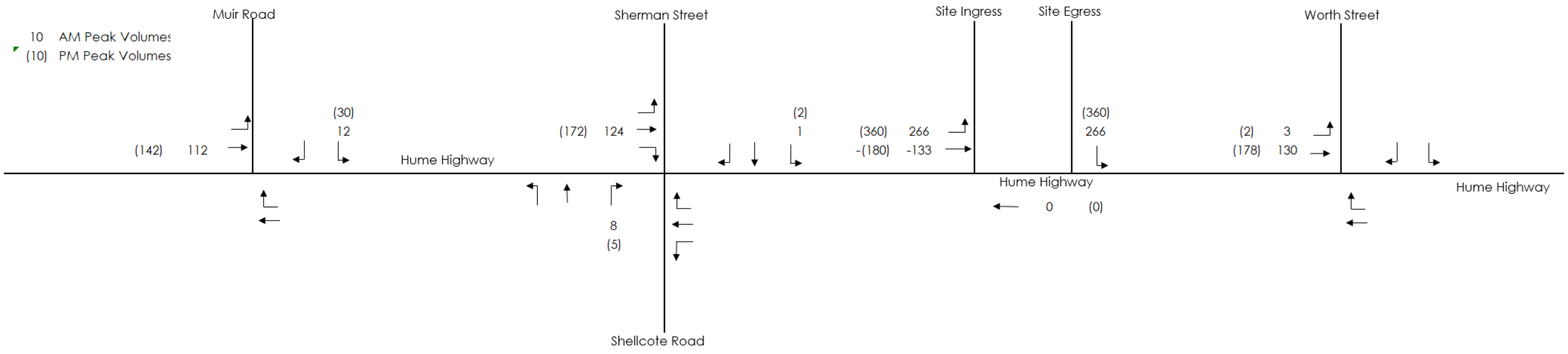
Future traffic growth has been estimated based on the Sydney's Strategic Travel Forecast Model (STFM) provided by TfNSW in September 2020. The STFM is a strategic transport planning model that considers population and employment growths and is used for high level assessment of major infrastructure proposals, transport strategies and policy decision making.

The STFM provides future year traffic forecasts to determine the relative traffic growth from the baseline traffic to provide estimations for future year traffic conditions. Traffic growth data from the STFM for the relevant roads are presented in Appendix D.

5.3 Traffic Distribution

The development traffic will access the site from eastbound lanes on the Hume Highway via left-in/left-out arrangement. The proposed development traffic has been distributed based on existing turning movement proportions, that is, Hume Highway carries on more traffic than Muir Road, Sherman Street, Shellcote Road and Worth Street. The distribution of the estimated traffic generation is shown in Figure 5.3.

Figure 5.3: Hume Highway – Site Access Volumes



5.4 Traffic Impact

5.4.1 Intersection Modelling Criteria

Network capacity analysis has been undertaken using the computer-based modelling package SIDRA Intersection 9.0. Roads and Maritime uses the performance measure Level of Service to establish the efficiency of an intersection under given prevailing traffic conditions.

Level of service (LoS) is directly related to the delays experienced by traffic traversing the intersection. Level of service indicators range from A (indicating good intersection operation) to F (indicating over-saturated conditions with long delays and queues). LoS D is the long-term desirable level of service.

At signalised intersections, the average delay is the volume weighted average of all movements. For roundabouts and priority (give way and stop sign) controlled intersections, the average delay relates to the worst movement.

Table 5.4 shows the criteria that SIDRA Intersection adopts in assessing the LoS.

Table 5.4: Level of Service Criteria for Intersection Operation

LoS	Average Delay per vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way & Stop Sign
A	Less than 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Near capacity	Near capacity, accident study required
E	57 to 70	At capacity; at signals incidents would cause excessive delays. Roundabouts require other control mode	At capacity, requires other control mode
F	Greater than 70	Unsatisfactory, requires additional capacity	Unsatisfactory, requires other control mode or major treatment

5.4.2 Modelling Results

The modelling results for the existing Year 2020, with and without development, is presented in Table 5.5. The modelling results for a 10-year horizon (Year 2030) is presented in Table 5.6.

Table 5.5: 2020 Intersection Operation

Intersection	Morning Peak (7:45AM – 8:45AM)				Evening Peak (4:45PM – 5:45PM)			
	2020 Existing		2020 Existing + Development		2020 Existing		2020 Existing + Development	
	Ave. Delay (s)	LoS	Ave. Delay (s)	LoS	Ave. Delay (s)	LoS	Ave. Delay (s)	LoS
Hume Highway – Muir Road	14	A	14	A	17	B	18	B
Hume Highway – Sherman Street – Shellcote Road	12	A	13	A	9	A	9	A
Hume Highway – Worth Street	11	A	12	A	9	A	11	A

Table 5.6: 2030 Intersection Operation

Intersection	Morning Peak (7:45AM – 8:45AM)				Evening Peak (4:45PM – 5:45PM)			
	2030 Base		2030 Base + Development		2030 Base		2030 Base + Development	
	Ave. Delay (s)	LoS	Ave. Delay (s)	LoS	Ave. Delay (s)	LoS	Ave. Delay (s)	LoS
Hume Highway – Muir Road	19	B	21	B	19	B	19	B
Hume Highway – Sherman Street – Shellcote Road	14	A	14	A	11	A	11	A
Hume Highway – Worth Street	16	B	17	B	20	B	22	B

The SIDRA network modelling undertaken by TTPP indicates that the existing road network is operating well with LoS B or better in both assessed peak periods in the existing and 10-year future base scenarios.

The additional development traffic and diverted traffic is expected to have a negligible impact on the road network, with delays and level of service anticipated to generally remain consistent with existing conditions.

6 Conclusion

This traffic impact assessment report relates to a proposed new service station with two fast food restaurant and an ancillary convenience store at the 204 Hume Highway, Chullora NSW. The key findings of the report are presented below.

- The planning proposal seeks approval to amend the current Strathfield LEP 2012 to permit 'service station' use over the subject site. The planning proposal is to ultimately lead to a forthcoming development application to Strathfield Council for all uses proposed over the site.
- The proposed development would involve redeveloping the existing car yard with a new service station with capacity for 6 fuel dispensers (or 12 light vehicle positions). The development also includes two drive-through fast food outlets and parking for cars.
- Vehicle access to the subject site would be provided off Hume Highway, via separate ingress and egress driveways operating with as left in/ left out only.
- The DCP requires the development to provide a minimum of 31 car parking spaces including 5 spaces to accommodate the convenience store and 26 spaces to accommodate the fast food premises.
- The DCP rate is considered to be excessive as it does not take into account multi-purpose visits (i.e. visitors would access both the service station and a fast food restaurant in one trip) and that a number of visitors would be going through the drive-through, with the restaurant parking rate matching the RMS Guide rate for a standalone restaurant. Therefore, the actual parking requirement is likely to be lower than the DCP estimate.
- The proposed development includes 20 car spaces and capacity for an additional 12 vehicles at the fuel pumps, which is considered adequate to service the fast food facility and the convenience store.
- One parking space is required to be accessible. The proposed development is compliant with two accessible spaces.
- The proposed development is estimated to generate 266 and 360 vehicle trips per hour in the morning and evening peak periods respectively, with 50% anticipated to be pass-by trips.
- SIDRA Network modelling of the existing road network and anticipated future road network (Year 2030) indicates that the development would have a negligible traffic impact.

Overall, the traffic and parking aspects of the proposed development is considered to be satisfactory.

Appendix A

Concept Layout

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REV	DATE	BY	DESCRIPTION	CHK
A	29.07.20	DGC	PRELIMINARY ISSUE FOR CLIENT REVIEW	
B	24.09.20	DGC	PRELIMINARY ISSUE FOR CLIENT REVIEW	

PROJECT DETAILS
PROPOSED SERVICE STATION & RETAIL DEVELOPMENT
204 HUME HIGHWAY,
CHULLORA, NSW, 2190
for SYDNEY FUELS

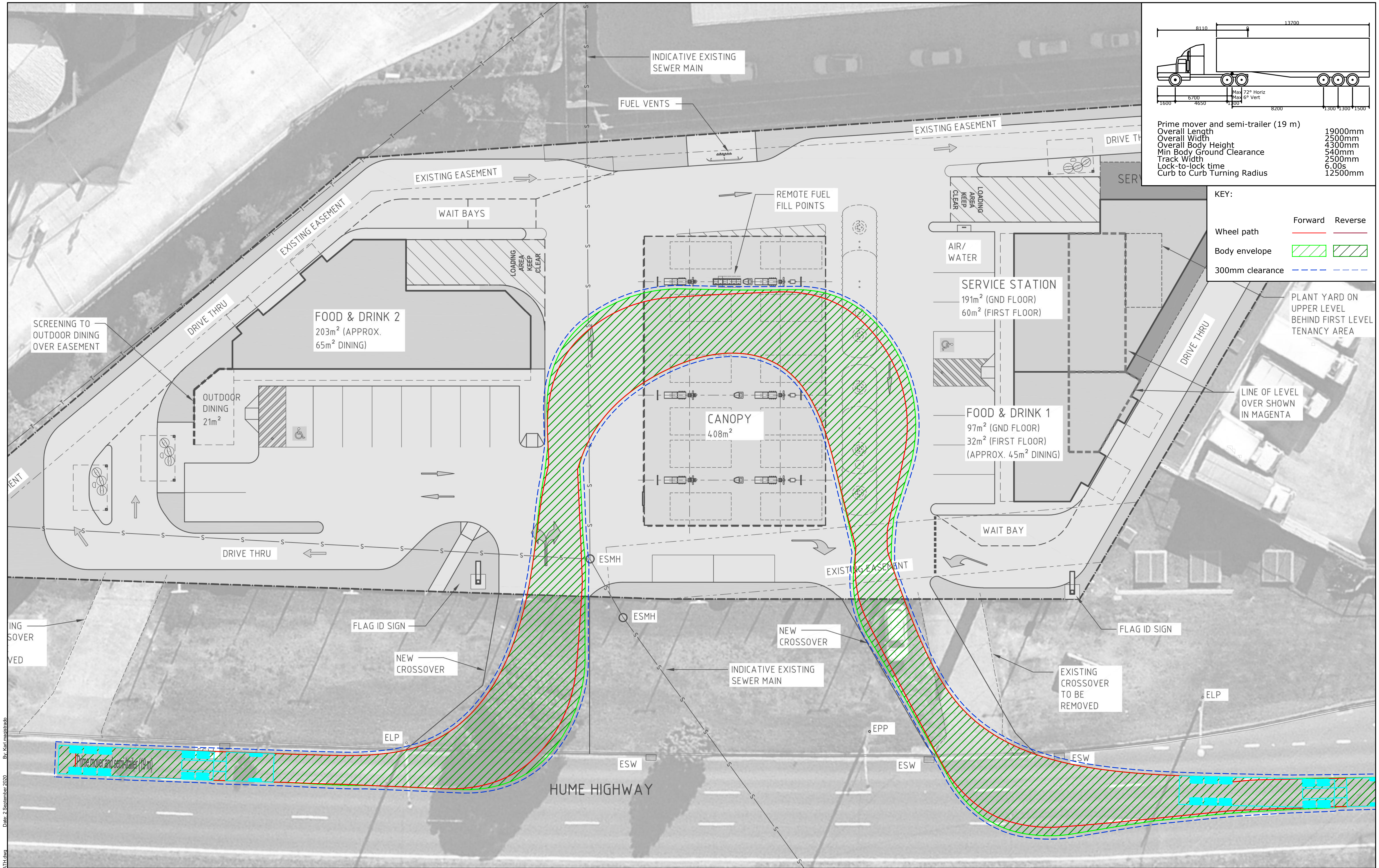
DRAWING TITLE
CONCEPT SITE PLAN
OPTION 5

STATUS
CONCEPT

DRAWN	APPROVED	
DGC		
DATE CREATED	A1 SCALE	A3 SCALE
29.07.20	1:200	
DRAWING NO		REV
20196-SK11		B

Appendix B

Swept Path



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	OF	KH	02/09/20

ttpp transport planning

PROJECT
204 HUME HIGHWAY, CHULLORA

TITLE
SWEPT PATH ANALYSIS
19m PRIME MOVER & SEMI-TRAILER

DWG No. 20301CAD001 FIGURE 1

DATE STAMP 02 SEPTEMBER 2020

PROJECT No. 20301 | SCALE 1:300 @A3 | REV. A

Filename: 20301CAD001-200902-SWEPT PATH.dwg Date: 2 September 2020 By: Karl.magistrado

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