



204 Hume Highway, Chullora Traffic Impact Assessment

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EG Property Advisory

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The Transport Planning Partnership

204 Hume Highway, Chullora

Traffic Impact Assessment

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APPENDICES

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1 Introduction

1.1 Background

A Planning Proposal (PP) is to be lodged with Strathfield Municipal Council and Canterbury Bankstown Council seeking approval to construct 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.

The Transport Planning Partnership (TPPP) Pty Ltd has prepared this traffic impact assessment report to accompany the Planning Proposal.

1.2 Report Structure

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.

1.3 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
- Canterbury-Bankstown Development Control Plan 2023
- Guide to Transport Impact Assessment 2024 (TfNSW).

2 Existing Conditions

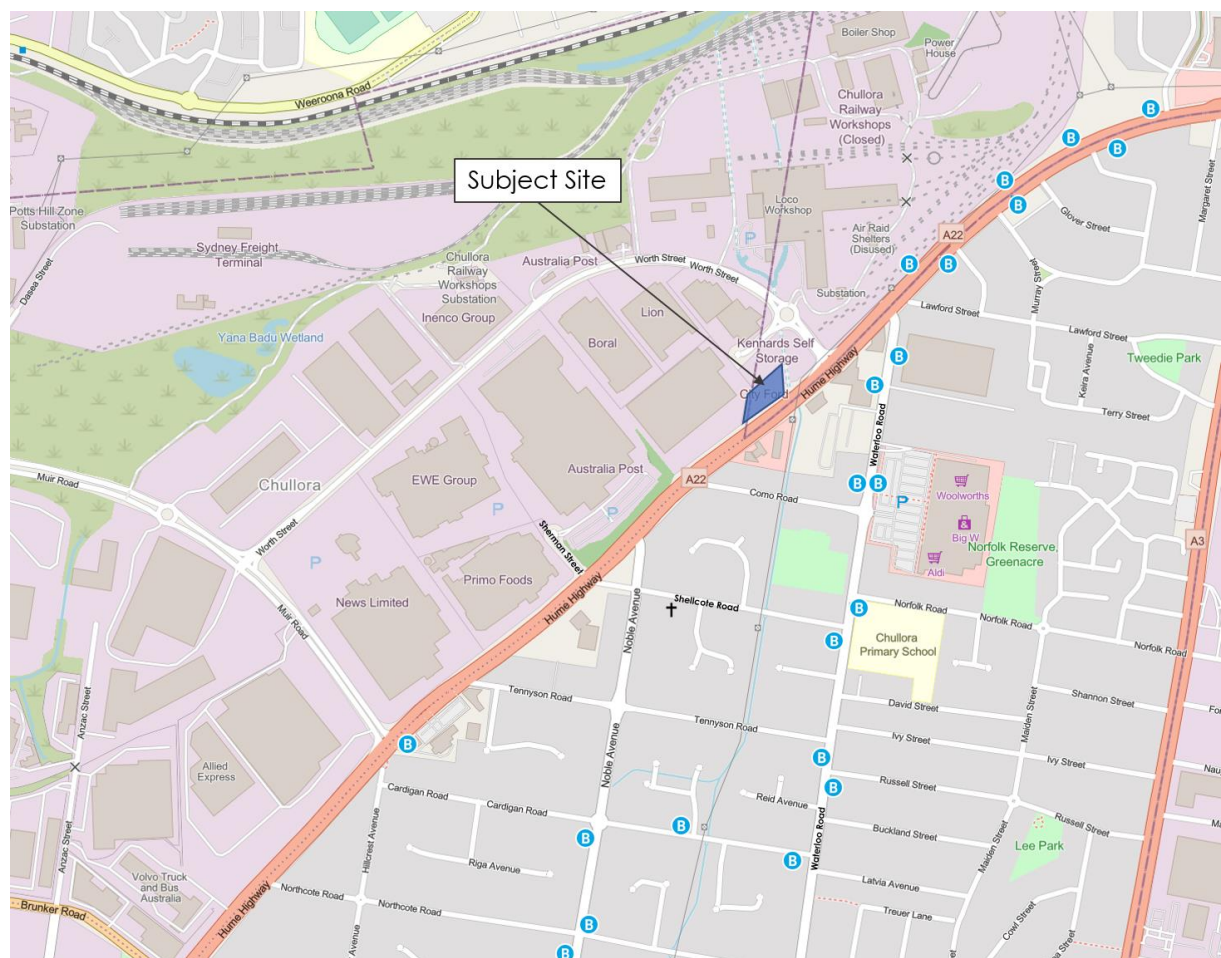
2.1 Site Description

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/E4 General Industry based on the NSW Planning Portal Spatial Viewer.

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.

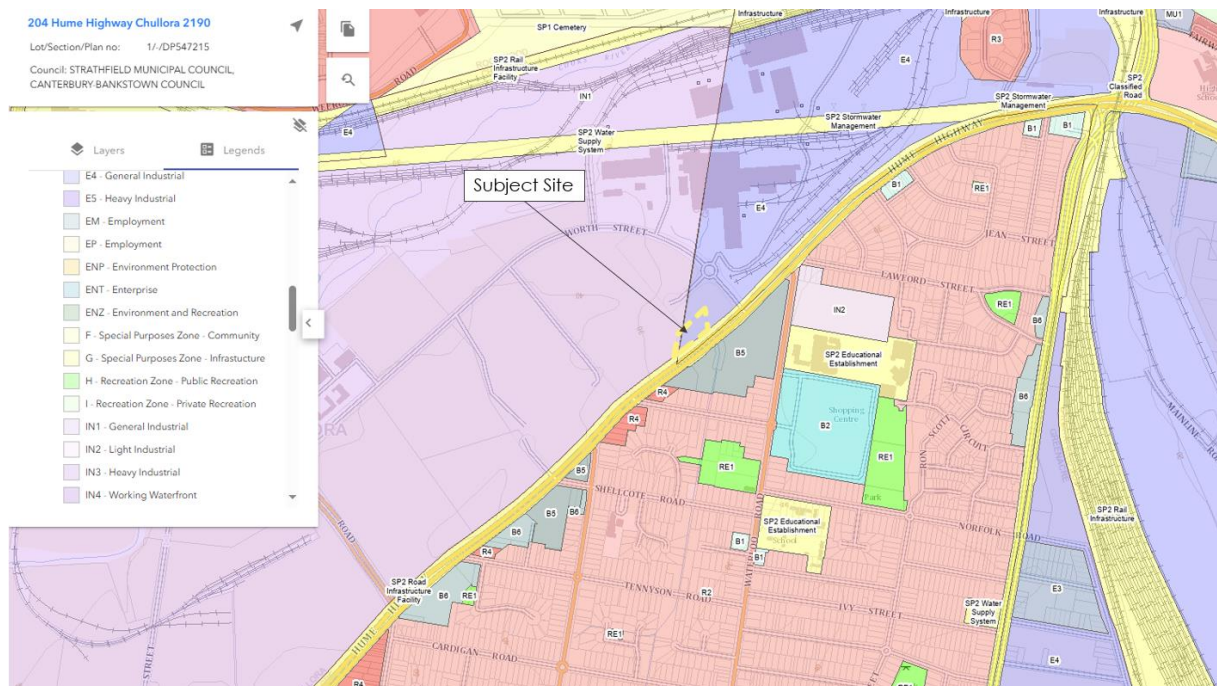
The subject site and its surrounds are shown in Figure 2.1 while Figure 2.2 illustrates the respective land zoning boundaries for each LGA.

Figure 2.1: Locality Map



Source: OpenStreetMaps

Figure 2.2: NSW Planning Portal - Land Zoning Map



Source: NSW Planning Portal Spatial Viewer

Land use surrounding the site predominately comprises IN1/E4 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.

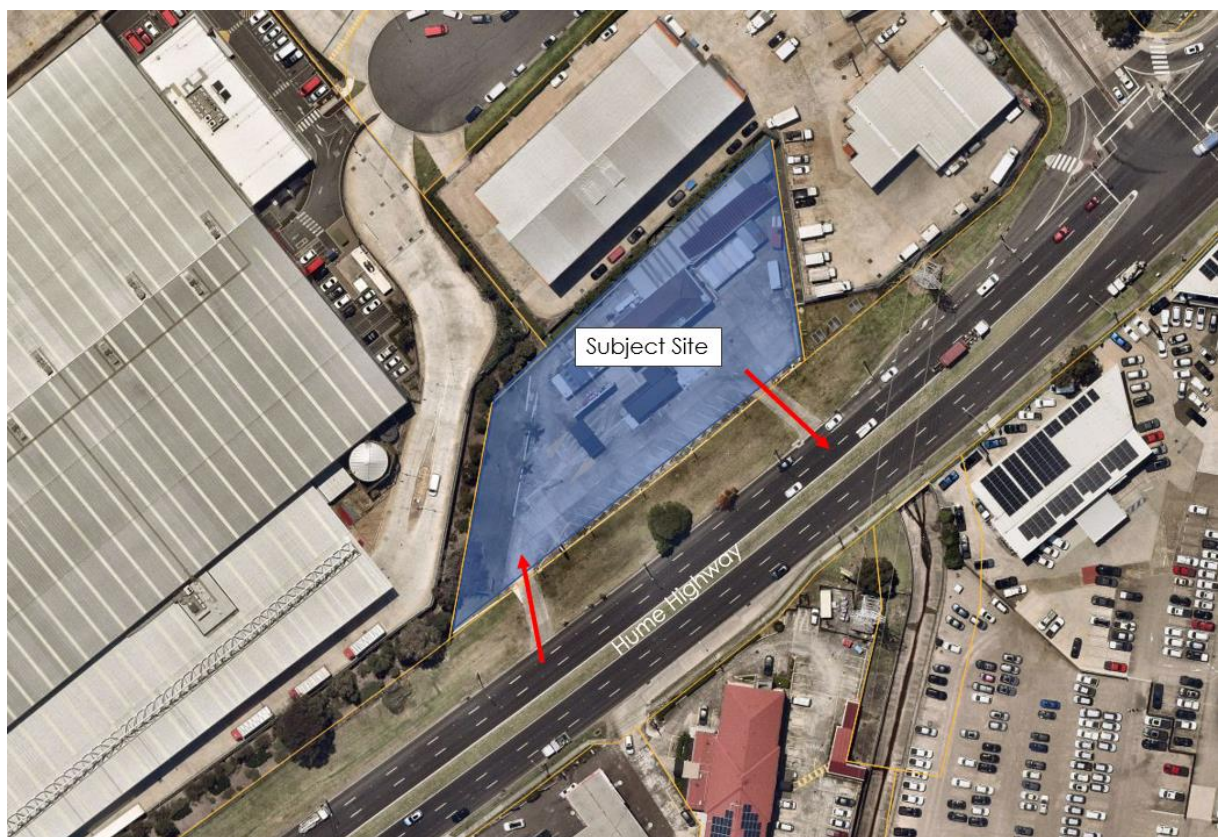
Worth Street

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

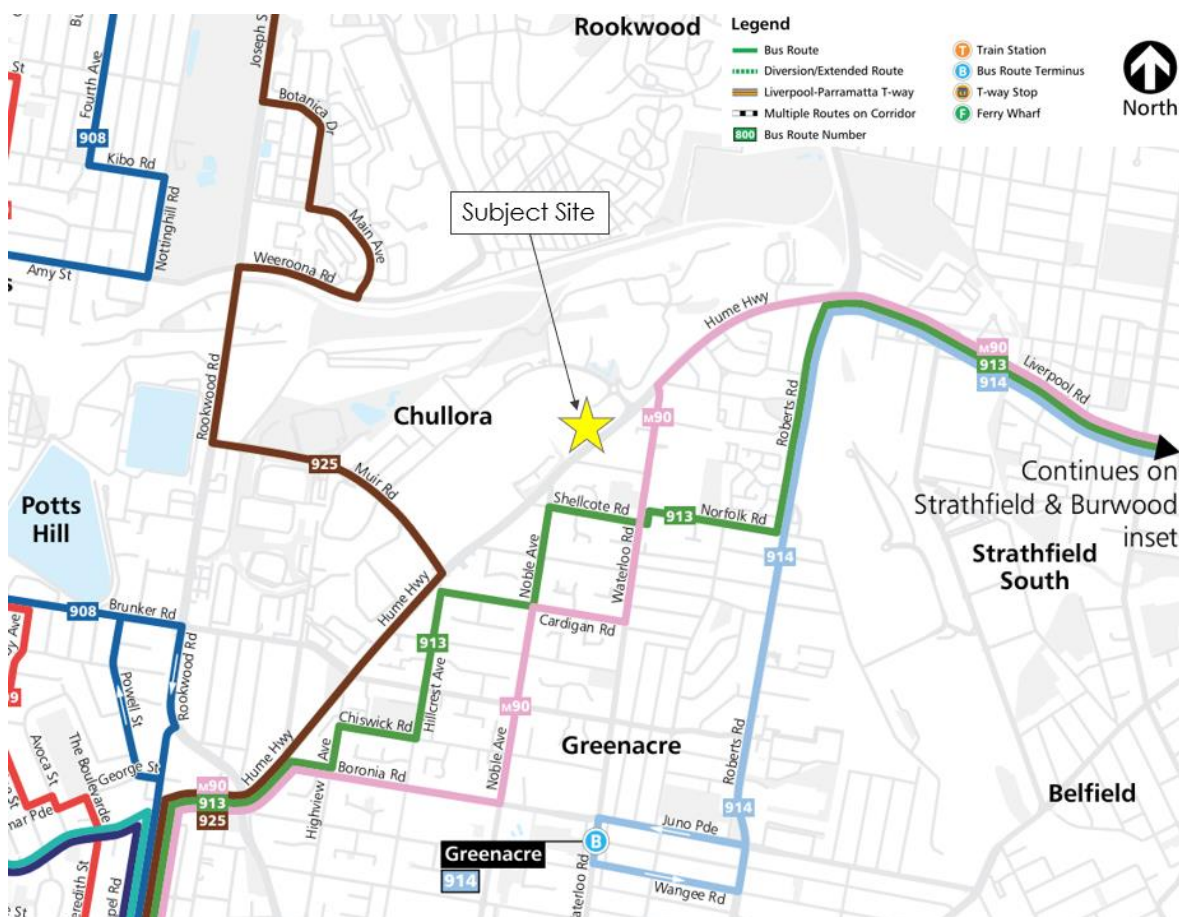
bus stops are located along Waterloo Road, Shellcote Road and Norfolk Road, which service bus routes M90 and 913. A description of these routes is provided in Table 2.1.

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: Transit Systems Western Network Map

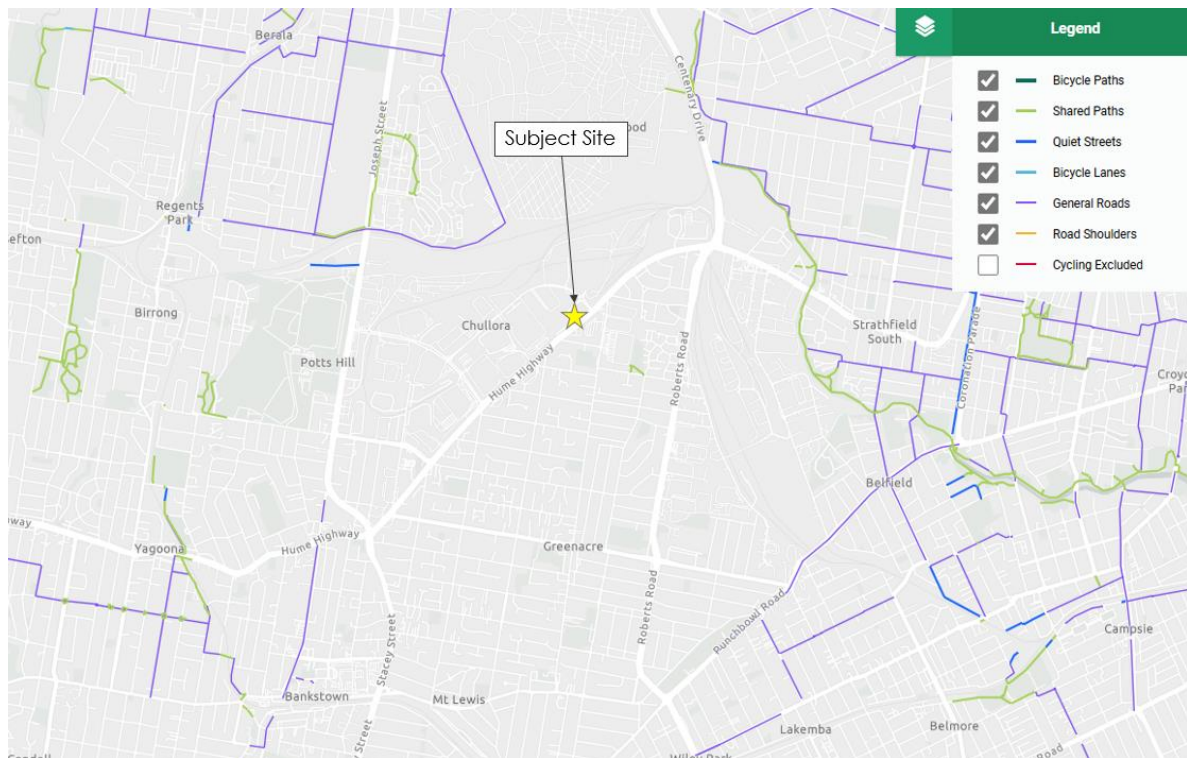
2.5 Pedestrian and Cycling Facilities

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

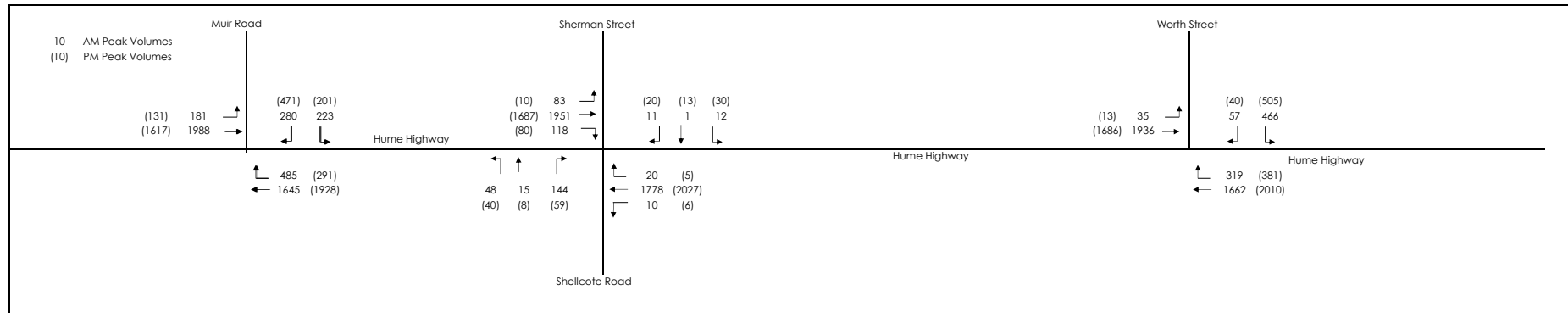
2.6 Traffic Volumes

Traffic survey data was collected at the following intersections on Tuesday 12 November 2024 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



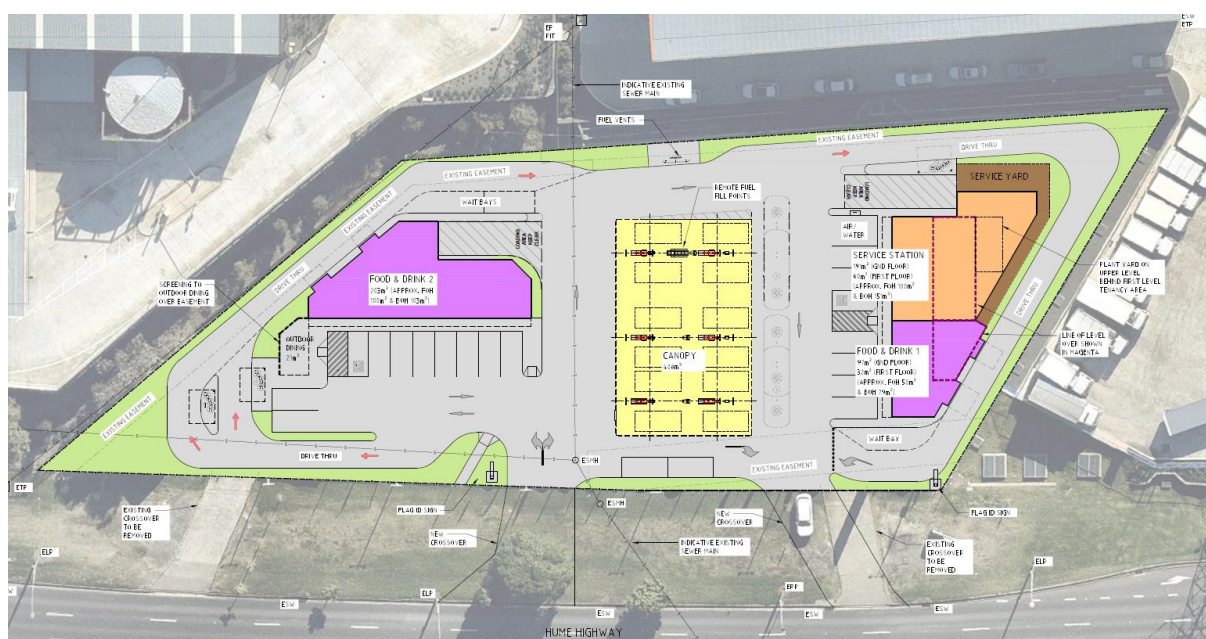
3.1 Proposal Description

The proposed development 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: 3,962m²
- proposed service station convenience store: 251m² (approx. 100m² front-of-house (FOH), 151m² back-of-house (BOH))
- a drive-through fast food restaurant (Food & Drink 1) of 129m² (approx. 50m² FOH) and 21m² of outdoor dining
- a drive-through fast food restaurant (Food & Drink 2) of 203m² (approx. 100m² 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 alternative 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 DCP 2005 and Canterbury Bankstown DCP 2023.

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

Table 4.1: Car Parking Assessment

Land Use	Size		Strathfield Council DCP Rate	Canterbury Bankstown Council DCP Rate	Strathfield DCP Requirement	Canterbury Bankstown DCP Requirement
	GFA [2]	Seats				
Work Bays [1]	-		6 spaces per work bay, plus 5 spaces per 100m ² GFA for convenience store, plus	6 car spaces for each work bay; or if no work bay is provided, 1 car space for each employee.	0	1 (assumed 1 service station employee)
Convenience Store	100m ²		15 spaces per 100m ² of restaurant, OR 1 space per 3 seats, whichever is greater	1 car space per 20m ² GFA for convenience store.	5	5
Restaurant	171m ²	NA		0.15 car space per square metre in excess of 100m ² .	26	11
Total					31	17

[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 based on Strathfield Council's DCP. While based on Canterbury Bankstown's DCP, the proposed development would have a requirement of 17 parking spaces. The proposed provision of 20 car parking spaces would comply with Canterbury Bankstown Council's DCP requirements however would have a shortfall under Strathfield Council's DCP requirements.

However, it is believed that Strathfield 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 TfNSW 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 multi-purpose nature of the site is further discussed in Section 5.1.3.

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

Neither Council's DCP stipulate that fast food outlets with drive-through facilities need to provide a queueing area for cars.

However, the TfNSW Guide recommends that a drive through queue length of 5-12 car lengths from pick-up point may be considered dependant on turnover and four car lengths from ordering point may be considered as a guide.

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 facilities have satisfactory vehicle queue storage area.

4.3 Accessible Parking Requirements

Neither Council's DCP stipulate specific parking rates for accessible parking spaces for service station and fast food developments. However, 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

Strathfield Council's DCP does not stipulate bicycle parking requirements for service station/convenience stores or drive-in take-away food outlets. Canterbury Bankstown Council's DCP stipulates a bike parking rate of 1 per 5 staff for service stations. A service station typically has one employee which manages the convenience store. On this basis, the development would have a requirement of 0 bicycle spaces (0.2 spaces rounded down).

4.5 Servicing and Deliveries

Neither Council's DCP stipulate specific parking rates for delivery and service vehicles.

However, in accordance with the TfNSW *Guide to Transport Impact Assessment* states that "an adequate number of loading docks for the development to prevent queueing or conflicts on the road network".

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

TfNSW recently published an updated Guide to Transport Impact Assessment 2024 which stipulates updated traffic generation rates for different land uses based on more recent surveys.

5.1.1 Fast Food Services

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

For fast food restaurants, the 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 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 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 passed by vehicles undertaking a detour via the site.

5.1.2 Service Station

TfNSW's *Guide to Transport Impact Assessment 2024* suggests the following peak hour traffic generation equation for service station developments:

- Morning peak hour (AM): $0.2815N^2 + 14.047N + 16.715$
- Evening peak hour (PM): $0.0205S + 88.52$

Where N = number of service channels, S = total site area in sqm.

The estimated traffic generation is summarised in Table 5.2.

Table 5.2: Service Station Traffic Generation

Land Use	Yield/Size	Trip Rate		Traffic Generation	
		AM Peak	PM Peak	AM Peak	PM Peak
Service Station	6 service channels (N), Site area 3,962m ² (S)	$0.2815N^2 + 14.047N + 16.715$	$0.0205S + 88.52$	111	170

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. While TfNSW has not published any statistics relating to the percentage of passing trade for service stations, reference can be made to the widely recognised Institute of Traffic Engineers (ITE) Manual which suggests 56% of service centre trips are passing trade, 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 a 50% figure, the proposed service station could be expected to generate a net additional 56-85 trips per hour during the peak periods to the road network (i.e. new primary trips).

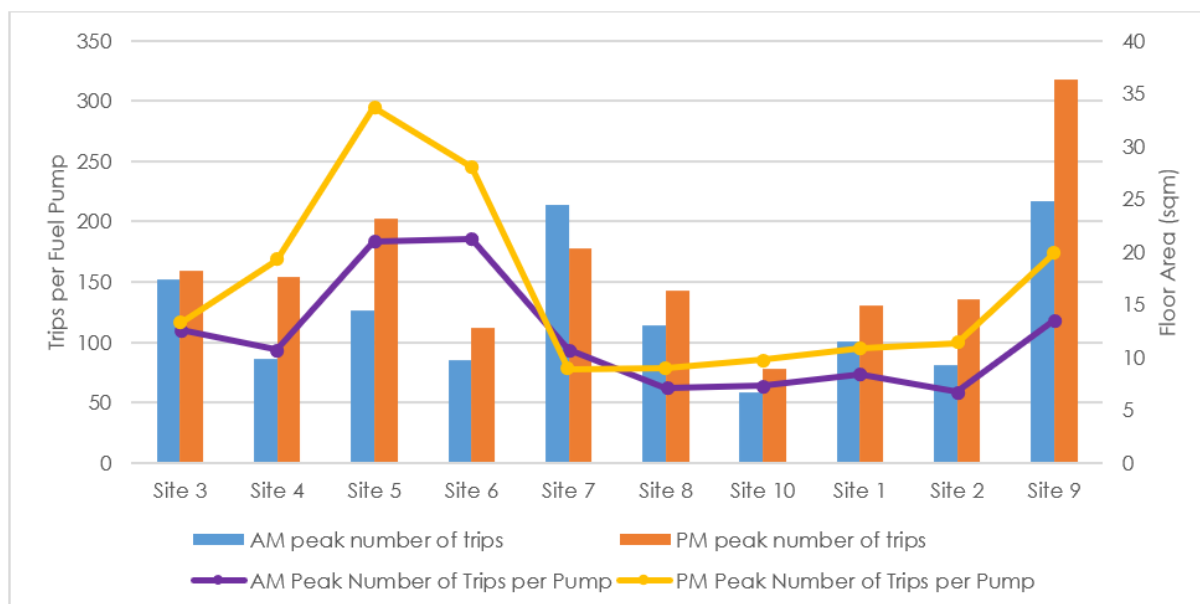
5.1.3 Cumulative Traffic Generation

The trip rates discussed above are considered to be highly conservative. The latest TfNSW survey data of fast food and service station facilities suggests that fast food and service stations are complimentary uses with the trip generation of service stations with a fast-food facility not that much higher than a standalone service station, with people visiting the service station and the fast food facility in one trip.

The study, *Roads and Maritime Services Trip Generation Surveys, Service Stations, Analysis Report* (2013) by TEF Consulting, which informs the latest TfNSW Guide, includes survey data for a number of service stations. The Service Station Analysis Report included surveys for ten (10) service station sites, three (3) of which included a fast food restaurant.

A comparison of each site's trip generation per fuel pump, convenience store size and fast-food outlet size has been summarised in Figure 5.1.

Figure 5.1: Service Station Site Comparison



Sites 1, 2 and 9 are service stations with an adjoining fast-food outlet. A review of the data in Figure 5.1 indicates that the service stations with an associated fast-food outlet did not show any evident increases in traffic generation per pump compared to the surveyed sites without a fast-food outlet.

This is due to many of the visitors stopping at both the service station and fast-food facilities in one trip.

Similarly, there is expected to be some overlap between the customer base of the two fast-food restaurants and the service station in the subject site. Notably, given the industrial location of the site situated on Hume Highway, the development would generate substantial passer-by traffic that are undertaking rest stops on long drives and thereby, visiting the service station and food outlets in one visit.

Therefore, the trip generation estimate which is based on the proposed facilities generating traffic similar to a standalone facility is highly conservative. However, for the purposes of this assessment a multi-purpose trip factor reduction has not been taken into account. On this basis, the traffic generation is considered to be a conservative and robust assessment.

5.1.4 Traffic Generation Summary

A summary of the estimated traffic generation arising from the proposed development without the 20% multi-purpose trip factor reduction 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	111	170	50%	56	85
Fast Food 1 (McDonalds)	119	138	50%	60	69
Fast Food 2 (Hungry Jacks)	18	72	50%	9	36
Total	248	380	-	125	190

Table 5.3 indicates that the proposed development is expected to generate a total of 248-380 vehicles per hour during the road network peak periods. This would include a net increase of 125-190 vehicle trips per hour to the road network.

However, as noted above, Table 5.3 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 and robust.

5.2 Background Traffic Growth

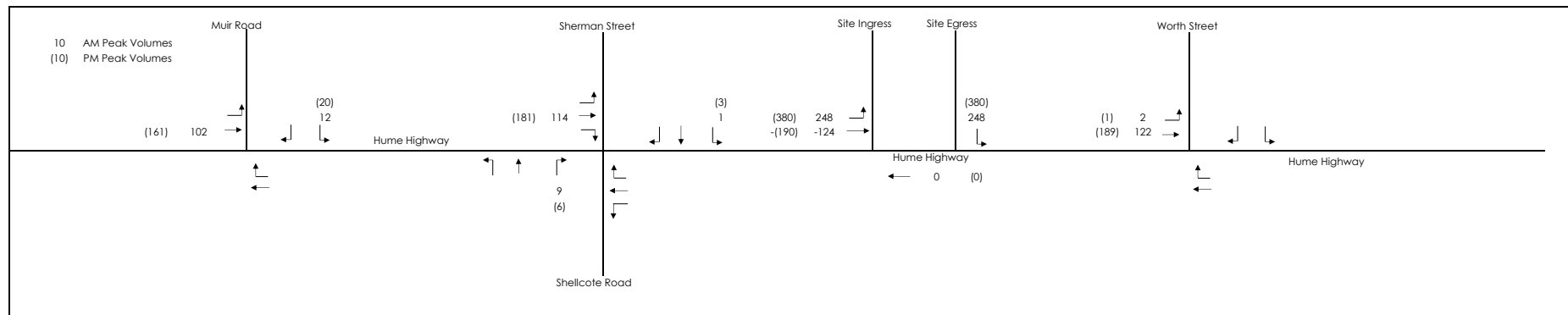
Future traffic growth has been estimated based on the Sydney's Strategic Travel Forecast Model (STFM) provided by TfNSW in November 2024. The STFM is a strategic transport planning model that considers population and employment growths and is used for high level assessment of major infrastructure proposals, 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.

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 5.2.

Figure 5.2: 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 9.1. 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 2024, with and without development, is presented in Table 5.5. The modelling results for a 10-year horizon (Year 2034) is presented in Table 5.6.

Table 5.5: 2024 Intersection Operation

Intersection	Morning Peak (7:45AM – 8:45AM)				Evening Peak (4:45PM – 5:45PM)			
	2024 Existing		2024 Existing + Development		2024 Existing		2024 Existing + Development	
	Ave. Delay (s)	LoS	Ave. Delay (s)	LoS	Ave. Delay (s)	LoS	Ave. Delay (s)	LoS
Hume Highway – Muir Road	24	B	31	C	25	B	26	B
Hume Highway – Sherman Street – Shellcote Road	17	B	19	B	13	A	12	A
Hume Highway – Worth Street	20	B	17	B	17	B	20	B

Table 5.6: 2034 Intersection Operation

Intersection	Morning Peak (7:45AM – 8:45AM)				Evening Peak (4:45PM – 5:45PM)			
	2034 Base		2034 Base + Development		2034 Base		2034 Base + Development	
	Ave. Delay (s)	LoS	Ave. Delay (s)	LoS	Ave. Delay (s)	LoS	Ave. Delay (s)	LoS
Hume Highway – Muir Road	31	C	31	C	25	B	26	B
Hume Highway – Sherman Street – Shellcote Road	16	B	19	B	13	A	12	A
Hume Highway – Worth Street	19	B	17	B	20	B	23	B

The above tables indicate that the existing road network is operating acceptably with LoS B or better in both assessed peak periods in the existing and 10-year future base scenarios.

With the proposed development traffic, the maximum increase in average delay is expected to be up to 7 seconds which is considered minor. All intersections would continue to operate acceptably with LoS B or better. Minor decrease in average delay of up to 3 seconds would also occur. While it may seem counterintuitive in SIDRA development traffic can sometimes improve the performance at signalised intersections if traffic is added to an undersaturated movement (i.e. movement has spare capacity) as these additional vehicles already have low delay and delay at signalised intersections is the weighted average of all approach delays. Therefore, by adding additional traffic onto a movement with sufficient additional capacity e.g. eastbound through movement on Hume Highway, this will reduce the movement delay and consequently the overall intersection delay.

The additional development traffic and diverted traffic is expected to have a negligible impact on the road network, with level of service anticipated to generally remain consistent with the respective existing base and 10-year future base conditions. Overall, the proposed development is considered to be acceptable from a traffic perspective.

6 Conclusion

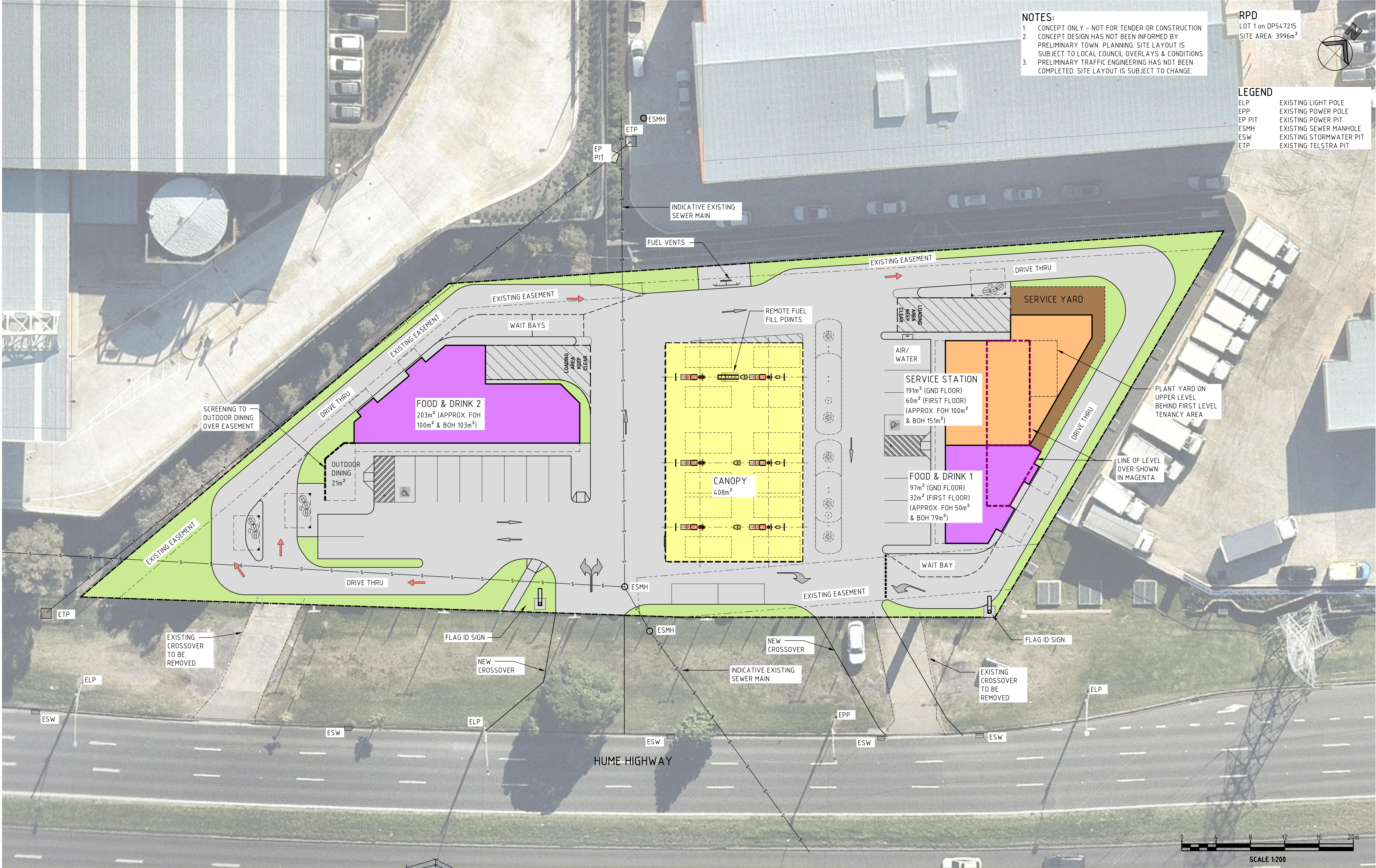
This traffic impact assessment report relates to a proposed new service station with two fast food restaurant and an ancillary convenience store at the 204 Hume Highway, Chullora NSW. The key findings of the report are presented below.

- The planning proposal seeks approval for construction of a new service station with two fast food restaurants and an ancillary convenience store.
- 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.
- Based on Strathfield Council's DCP the development requires a minimum of 31 car parking spaces including 5 spaces to accommodate the convenience store and 26 spaces to accommodate the fast-food premises.
- Based on Canterbury Bankstown Council's DCP the development requires a minimum of 17 car parking spaces including 6 spaces to accommodate the convenience store and 11 spaces to accommodate the fast-food premises.
- The Strathfield 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 TfNSW 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 compliant with Canterbury Bankstown's DCP requirements and is therefore 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 248 and 380 vehicle trips per hour in the morning and evening peak periods respectively, with 50% anticipated to be pass-by trips. Additionally, a multi-purpose trip factor reduction has not been taken into account and is therefore this assessment is considered conservative and robust.
- SIDRA Network modelling of the existing road network and anticipated future road network (Year 2034) 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



- NOTES:
- 1. CONCEPT ONLY - NOT FOR TENDER OR CONSTRUCTION
 - 2. CONCEPT DESIGN HAS NOT BEEN INFORMED BY PRELIMINARY TOWN PLANNING. SITE LAYOUT IS SUBJECT TO LOCAL COUNCIL OVERLAYS & CONDITIONS.
 - 3. PRELIMINARY TRAFFIC ENGINEERING HAS NOT BEEN COMPLETED. SITE LAYOUT IS SUBJECT TO CHANGE.

RPD
LOT 1 on DP547215
SITE AREA: 3996m²

LEGEND

- ELP EXISTING LIGHT POLE
- EPP EXISTING POWER POLE
- EP PIT EXISTING POWER PIT
- ESMH EXISTING SEWER MANHOLE
- ESW EXISTING STORMWATER PIT
- ETP EXISTING TELSTRA PIT

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Check and verify all dimensions on site prior to commencement of works.

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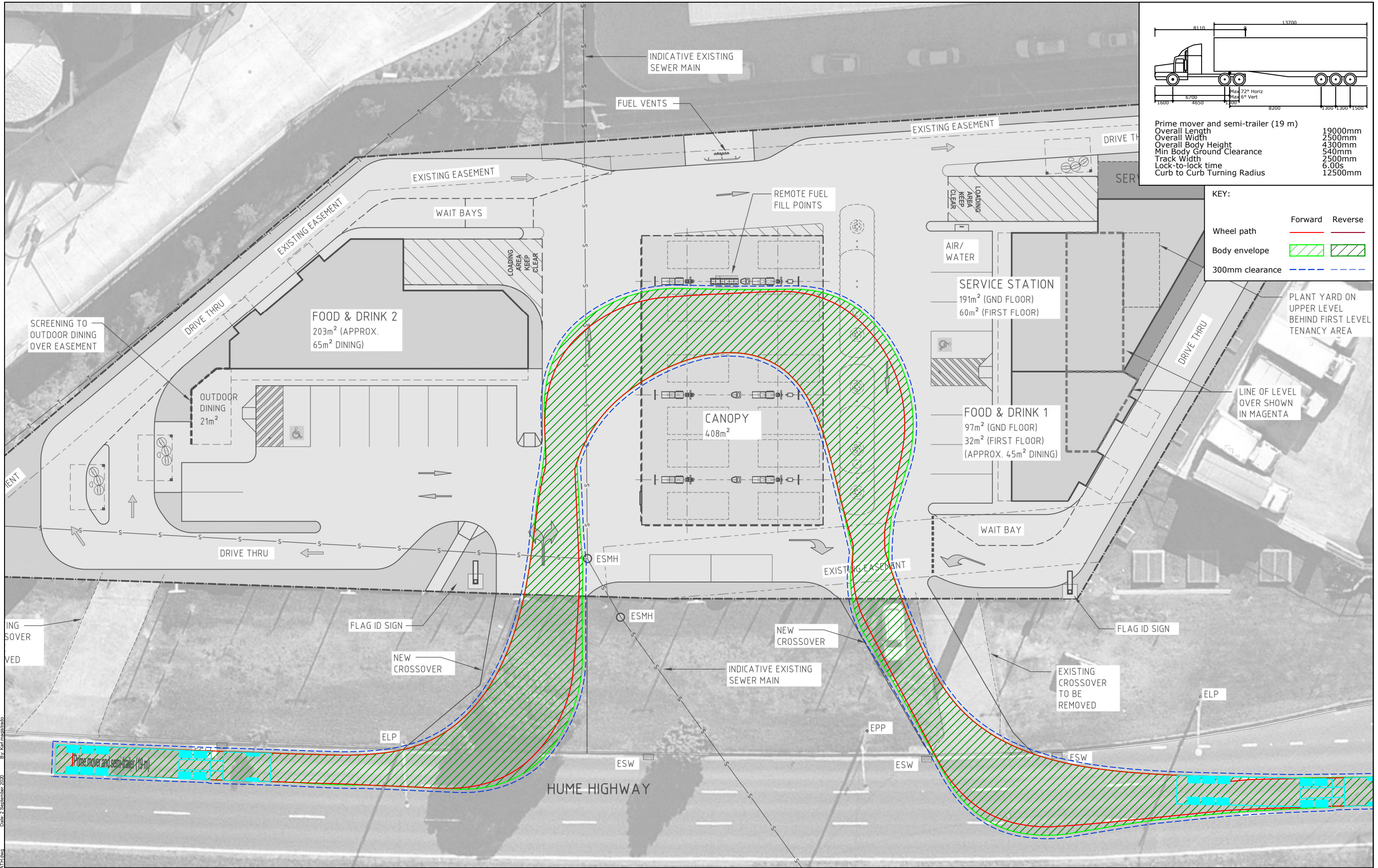
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REV	DATE	BY	DESCRIPTION	CHK	PROJECT DETAILS	DRAWING TITLE	STATUS
A	29.07.20	DGC	PRELIMINARY ISSUE FOR CLIENT REVIEW		PROPOSED SERVICE STATION & RETAIL DEVELOPMENT 204 HUME HIGHWAY, CHULLORA, NSW, 2190 for SYDNEY FUELS	CONCEPT SITE PLAN OPTION 5	CONCEPT
B	24.09.20	DGC	PRELIMINARY ISSUE FOR CLIENT REVIEW				

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

Appendix B

Swept Path



File name: 204317CAD001-204317CAD001-SWEPT PATH.dwg
By: Karl Maitland
Date: 2 September 2024

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	OF	KH	3/12/2024



PROJECT	204 HUME HIGHWAY, CHULLORA
TITLE	SWEPT PATH ANALYSIS 19m PRIME MOVER & SEMI-TRAILER

DWG No.	24317CAD001
FIGURE 1	
DATE STAMP	03 December 2024
PROJECT No.	24317
SCALE	1:300 @A3
REV.	A

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