207-217 Pittwater Road, Manly – Service Station

Traffic Impact Assessment

Prepared for:

Ultra Petroleum Group Pty Ltd

29 April 2024

The Transport Planning Partnership

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Traffic Impact Assessment

Client: Ultra Petroleum Group Pty Ltd

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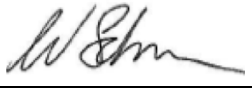
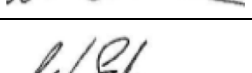
Quality Record

Version	Date	Prepared by	Reviewed by	Approved by	Signature
V01	31/03/2023	Sokan Chhoun	Wayne Johnson	Wayne Johnson	
V02	12/04/2024	Sokan Chhoun	Wayne Johnson	Wayne Johnson	
V03	29/04/2024	Sokan Chhoun	Wayne Johnson	Wayne Johnson	

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APPENDICES

1 Introduction

1.1 Background

Ultra Petroleum is proposing to redevelop an existing service station located at 201-217 Pittwater Road, Manly. A development application (DA) has been lodged with The Northern Beaches Council (the Council) seeking approval for the proposed development and was subsequently refused by Council, with concerns relating to the proposed automatic car wash facility.

A Section 8.3 Review of Determination (S8.3 Review) is to be lodged with Council, which is based on the removal of the automatic carwash facility and replaced with retail sales area.

The site is currently occupied by an Ultra Petroleum service station with an ancillary convenience store, car wash facility and two workshop bays. The existing service station comprises three refuelling bowsers (six refuelling pumps), with four access driveways off Pittwater Road. Generally speaking, the proposed development includes the following:

- Expansion of the existing convenience store
- Removal of two workshop bays
- A small self-contained laundromat unit

The proposed service station will retain the three existing refuelling bowsers.

The Transport Planning Partnership (TTPP) has prepared this updated traffic and parking impact assessment (TIA) report to accompany the S8.3 Review and assess the traffic and parking implications of the new proposal for submission to Council.

1.2 Structure of the Report

The layout of the report is set out as follows:

- Chapter 2 discusses the existing conditions including a description of the site.
- Chapter 3 provides a brief description of the proposed development.
- Chapter 4 assesses the parking requirements and implications.
- Chapter 5 assesses the traffic generation of the proposal and its implications.
- Chapter 6 presents the conclusion of the assessment.

2 Existing Conditions

2.1 Site Context

The subject site is located at 207-217 Pittwater Road, Manly, which falls under the Northern Beaches Council. According to the Manly Local Environmental Plan (LEP) 2013, the zoning of the subject site is B1-Neighbourhood Centre.

The site fronts Pittwater Road which forms the eastern and northern boundary of the site. Commercial buildings are located to the south and residential buildings are located to the west of the site.

Figure 2.1 shows the site location and the surrounding context of the subject site.

Figure 2.1: Site Context

Basemap Source: Google Maps, last accessed on 08/04/2024

2.2 Surrounding Road Network

Pittwater Road is a classified state road, which connects Mona Vale to the north and Manly to the south. In the vicinity of the site, Pittwater Road is a two-lane, two-way road with restricted parking generally available on both sides of the road. Along the site frontage, no parking restriction applies on the western side of Pittwater Road with northbound and southbound traffic separated by a central median. The posted speed limit is 50km/h in the vicinity of the site.

Collingwood Street, to the north of Pittwater Road, is a two-lane, two-way local road, which intersects with Pittwater Road at a signalised intersection. Kerbside uses on both sides of the road are restricted parking with a posted speed limit of 50km/h.

Balgowlah Road is a two-lane, two-way road, which runs in a general east-west direction. It connects with Pittwater Road at a three-way roundabout to the east and with a cul-de-sac to the west. Kerbside parking is generally available on both sides of the road.

2.3 Public Transport Infrastructure

Bus stops are located on Pittwater Road, which service bus route 199, providing connection between Palm Beach and Manly via Mona Vale and Dee Why. The closest bus stop to the subject site is located just south of Collingwood Street, which is a 50m walking distance (1-minute walk) from the site. Bus services run every 10 minutes during the peak period and every 15 minutes during the off-peak period.

Manly Wharf is located approximately 1.4km walking distance (17-minute walk) south of the site. Manly Wharf services Ferry Line F1 provides connection between Manly and Circular Quay with a 22-minute travel time. The service runs every 20 minutes on weekdays and between 10-30 minutes on the weekend. Express services are also available between Manly and Circular Quay, which are serviced by Manly Fast Ferry Line (MFF). The service runs every 20 minutes with a travel time of 20 minutes. Additional ferry services are also available between Wednesday and Friday, which are serviced by Manly to City via Watsons Bay (CCWM) line.

There are no train stations located within the vicinity of the site and the nearby Northern Beaches town centres.

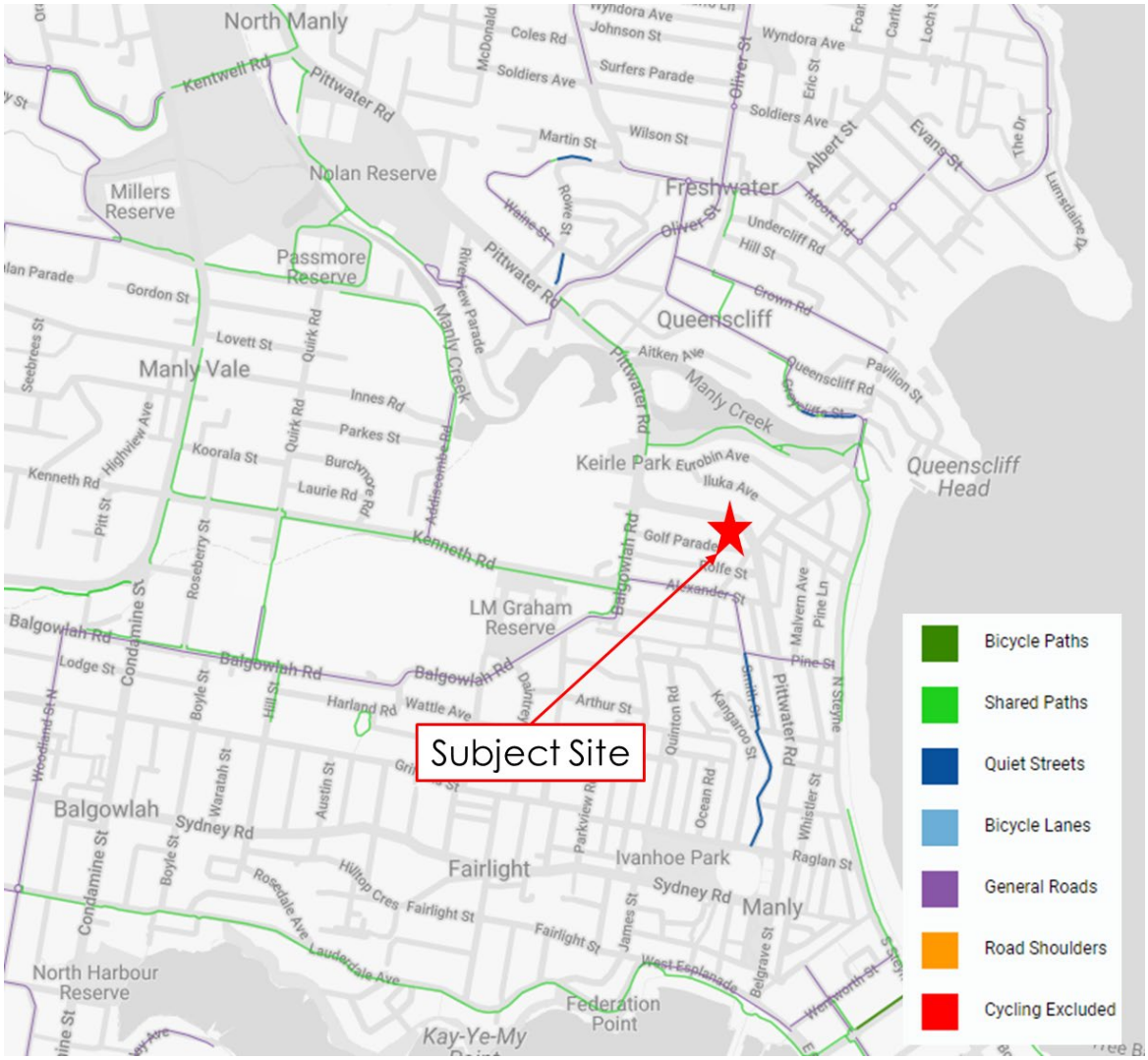
2.4 Pedestrian and Cyclist Infrastructure

Pedestrian footpaths are available on both sides of Pittwater Road. The closest pedestrian crossing facility is located at the Collingwood Street / Pittwater Road intersection which provides pedestrian crossing connections on all legs, except the northern crossing.

Shared walking and cycling paths are available on the surrounding roads, such as Balgowlah Road, Pittwater Road (north of Balgowlah Road), Queenscliff Lagoon Reserve, etc. However, there is no cycling path within the immediate vicinity of the site.

Figure 2.2 shows the existing cycleway infrastructure surrounding the subject site.

Figure 2.2: Surrounding Cycling Infrastructure



Source: TfNSW Cycleway Finder, last accessed on 08/04/2024

2.5 Existing Vehicle Access Arrangement

There are four access driveways at the existing service station, all of which are located off Pittwater Road. The middle two driveways (Driveway 2 & 3) facilitate both ingress and egress movements, whereas the southern driveway (Driveway 1) is for ingress only and the northern driveway (Driveway 4) is for egress only.

3 Proposed Development

3.1 Overview of the Proposal

A Development Application (DA) has been submitted to Northern Beaches Council (Council) seeking approval for the redevelopment of an existing service station at 207-217 Pittwater Road, Manly. This report has since been updated to accompany the S8.3 Review which is based on the removal of the previously proposed automatic car wash facility.

The new proposal comprises the following key features:

- Removal of the two existing workshop bays.
- Expansion of the existing convenience store sales floor area from 32m^2 to 95m^2.
- A new fully self-contained laundromat facility located near the southeast corner of the site, adjacent to the ice freezer.
- Modification of the at-grade parking facilities and retention of nine car parking spaces.
- Provision of one loading bay for Small Rigid service vehicles, located adjacent to the convenience store.

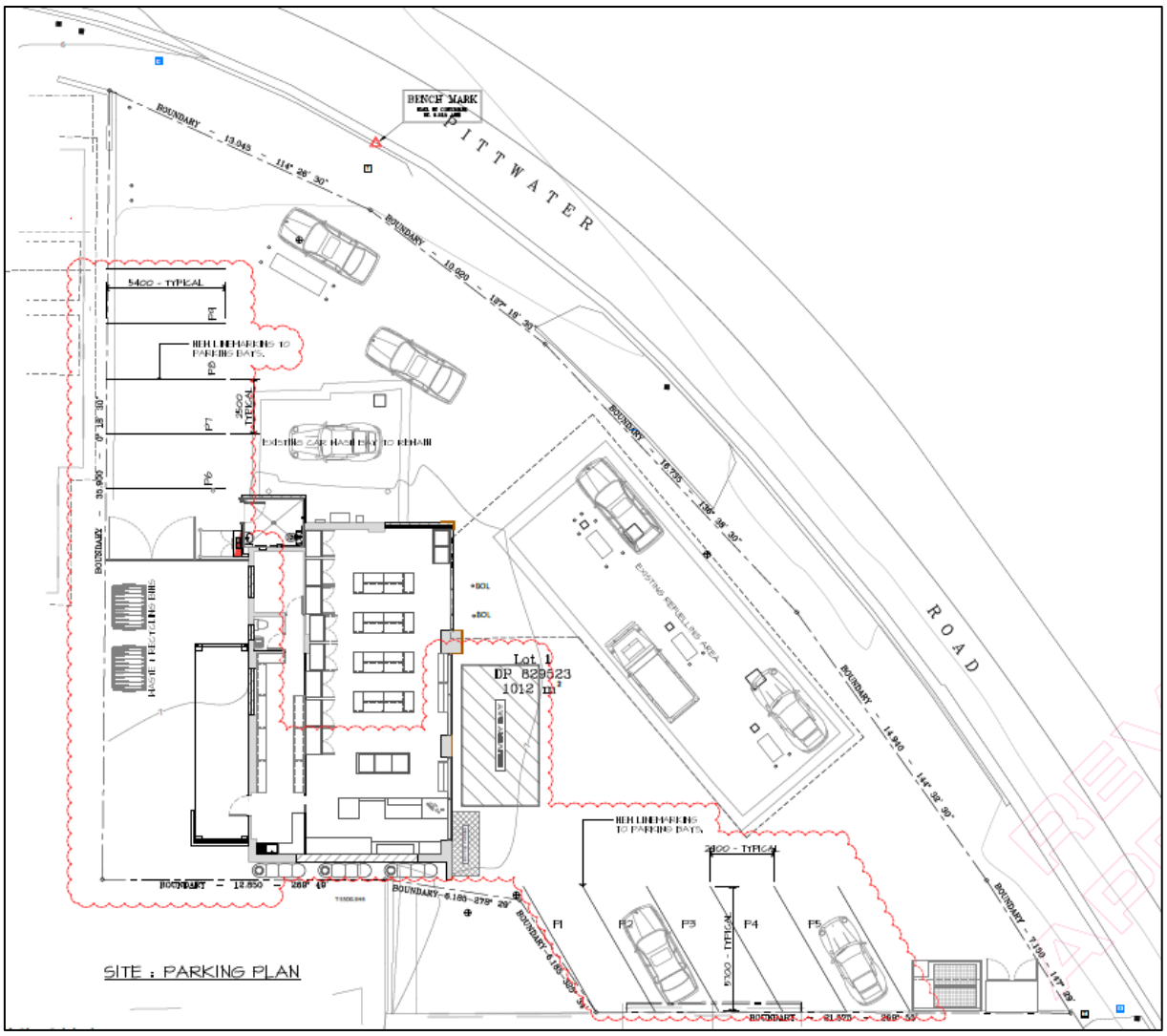
The proposed service station will remove the two existing workshop bays to accommodate the expansion of the convenience store. A small self-contained laundromat unit, will be located next to the ice freezer near the southern boundary of the site.

The existing service station has three refuelling bowsers (six refuelling pumps), which will be retained. No works will be undertaken on the refuelling area, overhead canopy, underground fuel storage tank or fuel dispensers. The existing car wash bay located to the east of the convenience store will also be retained.

The service station currently operates between 6am and 11pm on weekdays and between 7am and 11pm on weekends and public holidays. The car wash facility currently operates between 7am and 8pm on weekdays, between 8am and 10pm on Saturdays and between 8:30am and 8pm on Sundays and public holidays. These trading hours will be maintained for the proposed service station and the existing car wash facility.

The site layout of the proposed development is shown in Figure 3.1 and the architectural plans are provided in **Appendix A**.

Figure 3.1: Proposed Site Layout



3.2 Proposed Vehicle Access Arrangement

The proposed development will maintain the four access driveways off Pittwater Road. Two-way access will be retained for the middle driveways and one-way access (entry only and exit only) will be retained for the southern and northern driveways, respectively.

4 Parking Assessment

4.1 Car Parking Requirements

The Manly Development Control Plan (DCP) (amended in 2013) stipulates a requirement of 10 car parking spaces for service stations, which consist of workshop facilities. There is no mention of car parking requirements based on convenience store GFA nor the number of refuelling pumps / bowsers. As the workshop bays are to be removed, this car parking requirement should not be assessed against the proposal.

The Manly DCP makes reference to the Road and Maritime Services (RMS) technical direction and guidelines for parking requirements. The RMS Guide to Traffic Generating Development (the Guide) stipulates the car parking requirement for service stations, which is based on the convenience store GFA, number of work bays and restaurant GFA / seats.

The car parking assessment and the associated car parking rate stipulated in the Guide are summarised in Table 4.1.

Table 4.1: Car Parking Assessment

Land Use	Yield	Minimum Car Parking Rate (the Guide)	Parking Requirement
Service Station	95m² GFA convenience store	5 spaces per 100m² GFA of convenience store	5 spaces (rounded up)
	No work bay	6 spaces per work bay	0
	No restaurant	The greater of 15 spaces per 100m² GFA of restaurant and 1 space per 3 seats	0
Total			**5 spaces**

Based on Table 4.1, the proposed development would require a car parking provision of five spaces. The proposed development includes a parking provision of nine car spaces, which satisfies the RMS Guide parking requirements.

It is also noted that parking demand for car spaces at this service station is expected to be lower than the level of demand stipulated in the Guide, particularly for the ancillary convenience store. Generally speaking, customers typically refuel and leave their car in the refuelling position while making quick purchases from the convenience store, while also paying for fuel. As such, an increase in convenience store GFA will not result in an increase in car parking demand for the convenience store. There are six additional light vehicle spaces adjacent the six fuel pumps.

No parking requirements for car wash facility are stipulated in the Manly DCP. Given that the existing car wash facility is to continue operating in a traditionally manual way, it is expected that the finishing area and queuing area would not be required. Notwithstanding this, four existing car spaces are provided adjacent to the car wash facility and are expected to sufficiently accommodate the car parking demand associated with the car wash facility.

It is noted that the addition of a fully self-contained laundromat unit is considered an ancillary component and is likely to generate insignificant parking demand, considering its small size. It is anticipated that the majority of laundromat customers will be local residents within walking distance, hence will walk to/ from the laundromat. Notwithstanding this, the provision of four additional car parking spaces for the site to accommodate parking associated with the laundromat is considered beneficial.

On the above basis, the retention of nine existing car parking spaces in total is considered satisfactory for the proposed development.

4.2 Accessible Parking Requirements

Council's DCP and the Guide do not stipulate specific accessible parking requirements for service stations or convenience stores. Accordingly, no accessible car spaces will be provided at the proposed service station, noting that the existing service station does not provide an accessible car parking space.

It is noted that refuelling pumps can be used by disabled drivers given there is no hard markings. Therefore, accessible car parking can be accommodated at the refuelling pumps, when required.

4.3 Bicycle Parking Requirements

Council's DCP stipulate a bicycle parking requirement of one bicycle space for every three car parking spaces for developments other than residential dwellings and boarding houses, with a minimum of one space for each premise.

The bicycle parking demand at the service station is expected to be minimal given the nature of service station, which generally attracts vehicular traffic.

Notwithstanding this, a bicycle parking area will be provided near the entrance to the convenience store, which measures approximately 2.9m long and 1.2m wide. This is sufficient to accommodate up to two bicycle spaces. Therefore, the proposed bicycle parking provision is considered satisfactory for the proposed development, noting that the existing service station does not provide any bicycle parking spaces.

4.4 Motorcycle Parking Requirements

Council's DCP does not stipulate specific motorcycle parking requirements for service stations or convenience stores.

It is not proposed to provide any motorcycle parking at the service station, noting that motorcycle parking can be accommodated within the proposed car parking spaces and at the refuelling pumps.

4.5 Loading Bay Requirements

Council's DCP does not stipulate specific loading and service parking requirements for service stations or convenience stores.

However, in accordance with the RMS Guide, "*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*".

It is proposed to provide one loading bay at the frontage of the convenience store to accommodate service vehicles.

Deliveries for the convenience store are proposed to be undertaken by a 6.4m Small Rigid Vehicle (SRV). The loading bay has been designed to accommodate an SRV, in accordance with Section 4 of AS2890.2. Servicing and deliveries would generally be undertaken outside of the road network peak hours (early morning or late evening), which would result in minimal impacts on the surrounding roads and the service station operation.

AS2890.2 stipulates a minimum vertical clearance of 3.5m is to be provided for an SRV. A vertical clearance of 4.4m between the ground and the refuelling canopy is currently provided. Therefore, the service station would have sufficient vertical clearance to accommodate service vehicles within the site.

4.6 Car Parking Layout

The linemarking of the five car parking spaces to the south of the refuelling bowsers will be modified to comply with AS2890.1:2004, in accordance with Class 2, 60-degree angle car parking spaces. The four 90-degree parking spaces, located to the west of the car wash facility, will also be provided in accordance AS2890.1 Class 2, with a minimum width of 2.5m and length of 5.4m. This is considered an improvement to the existing parking provision.

The proposed loading bay, which is expected to accommodate up to 6.4m SRV, will be provided with 6.4m in length and 3.5m in width. This is compliant with the requirement for a SRV loading bay, stipulated in AS2890.2:2018.

5 Traffic Assessment

5.1 Service Station and Convenience Store

For recent Land & Environment Court cases, TTPP has undertaken a detailed analysis of survey sites that include a service station and a convenience store. TTPP 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 is determined as shown in

Figure 5.1 and Figure 5.2.

Figure 5.1: AM Peak Hour Trips vs Number of Pumps

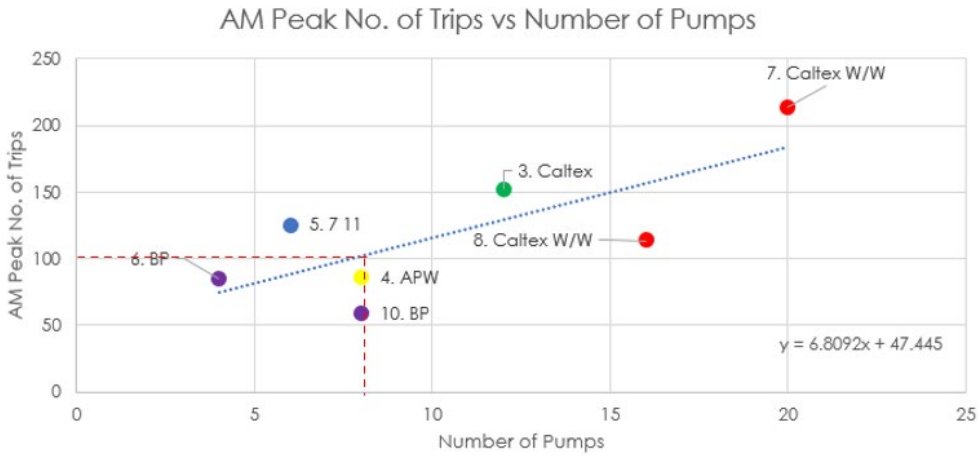
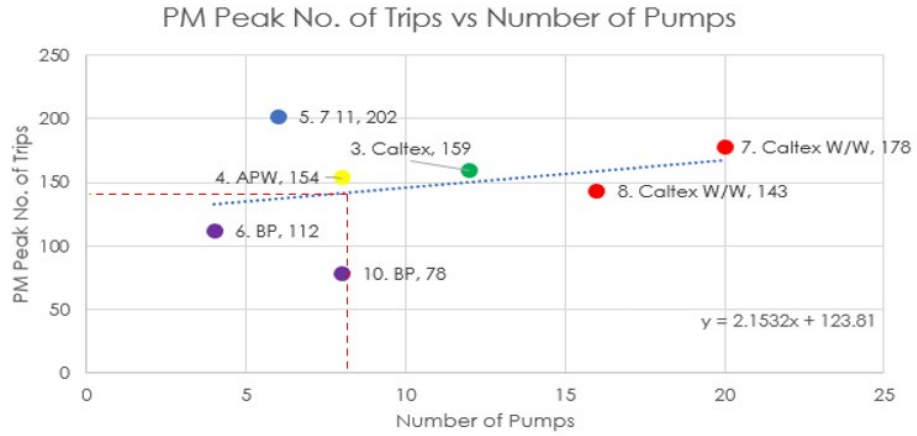


Figure 5.2: PM Peak Hour Trips vs Number of Pumps



Based on the capacity of six refuelling pumps (three refuelling bowsers), the estimated trip generation of the existing service station is summarised in Table 5.1.

Table 5.1: Service Station Trip Generation

Size	Trip Rate		Trip Generation	
	AM Peak	PM Peak	AM Peak	PM Peak
6 Pumps (P)	6.8092 P + 47.445	2.1532 P + 123.81	88	137

Based on the regression formula, the existing service station generates up to 137 vehicle trips per hour during the busiest peak period of the day.

It is proposed to retain the six existing refuelling pumps (three refuelling bowsers) for the proposed service station. Therefore, the estimated traffic generation from the proposed refuelling is forecast to be relatively comparable with the existing operation of the service station.

Although the convenience store will be expanded as part of the proposal, it is not expected to generate any significant additional traffic volume due to the ancillary nature of convenience store at a service station.

5.2 Car Wash Facilities

The TfNSW Guide does not provide a traffic generation rate for car wash facilities. A traffic generation rate has instead been obtained from the '*Proposed Carwash, 412-416 Liverpool Road, Croydon*" report (K&H Kane Investments Pty Ltd, 2006), which provides an average traffic rate based on survey data of several car wash facilities on Saturday and Sunday. Based on this data, a rate of 13.3 vehicle trips per car wash bay has been conservatively adopted for both morning and evening peak periods. It should be noted that during the weekday peaks, traffic generation is likely to be lower (based upon this report, it is about a third of the weekend trip generation).

Based on this, the existing car wash facility (one car wash bay) is anticipated to generate approximately five vehicle trips during the busiest peak period during the weekday. It is proposed to retain the one existing car wash bay. Therefore, the expected traffic generation associated with the car wash would be relatively comparable with the existing operation.

5.3 Laundromat and Workshop Bays

There is no specified trip rate for laundromats and workshop bays within a service station in the Guide. The laundromat will most likely cater to local residents, who are likely to walk to access the service, minimal traffic generation is expected from the laundromat services.

Traffic generation associated with the workshop bays is expected to be minimal. Removal of two workshop bays would eliminate any traffic generation associated with the workshops.

For the purposes of this traffic analysis, it has been assumed that the trip generation of the two workshop bays generate approximately 8 vehicle movements during the morning and afternoon peak periods. i.e. 4 vehicle movements per workshop.

The laundromat is anticipated to generate approximately two vehicle movements per hour during the weekday morning and afternoon peak period, not associated with the service station.

5.4 Summary of Traffic Generation

A summary of the above traffic generation estimates is presented in Table 5.2.

Table 5.2: Summary of Traffic Generation – Weekday Road Network Peak Periods

Land Use	Existing Size	Existing Traffic Generation		Proposed Size	Proposed Traffic Generation		Traffic Generation Net Difference	
		AM Peak	PM Peak		AM Peak	PM Peak	AM Peak	PM Peak
Service Station	6 Pumps (P)	88	137	6 Pumps (P)	88	137	+0	+0
Car Wash	1 car wash bay	5	5	1 car wash bay	5	5	+0	+0
Workshop Bays	2 workshop bays	8	8	N / A	0	0	- 8	- 8
Laundromat	N / A	0	0	1 Laundromat	2	2	+2	+2
Net Balance							-6	-6

Table 5.2 indicates that when compared to the existing operation, the proposed development is anticipated to generate a lower level of traffic during the weekday AM peak and PM peak periods, with the removal of the workshop bays.

Notwithstanding this, even if there are additional traffic movements, they are not expected to cause any adverse traffic impacts as a significant portion of traffic generated by a service station is considered "passing trade" (i.e. traffic already on the road network passing the site).

6 Summary and Conclusion

This traffic impact assessment relates to the proposed redevelopment of an existing service station at 201-217 Pittwater Road, Manly. The key findings of the report are presented below:

- The proposed redevelopment of the existing service station relates to the removal of two workshop bays and expansion of the convenience store and a self-contained laundromat facility.
- The redeveloped service station will retain the six existing refuelling pumps (three refuelling bowsers).
- The existing vehicle access to/from the subject site will be retained.
- While the laundromat service is expected to attract only local residents within walking distance, any car parking demand associated with the laundromat facilities can be accommodated on-site.

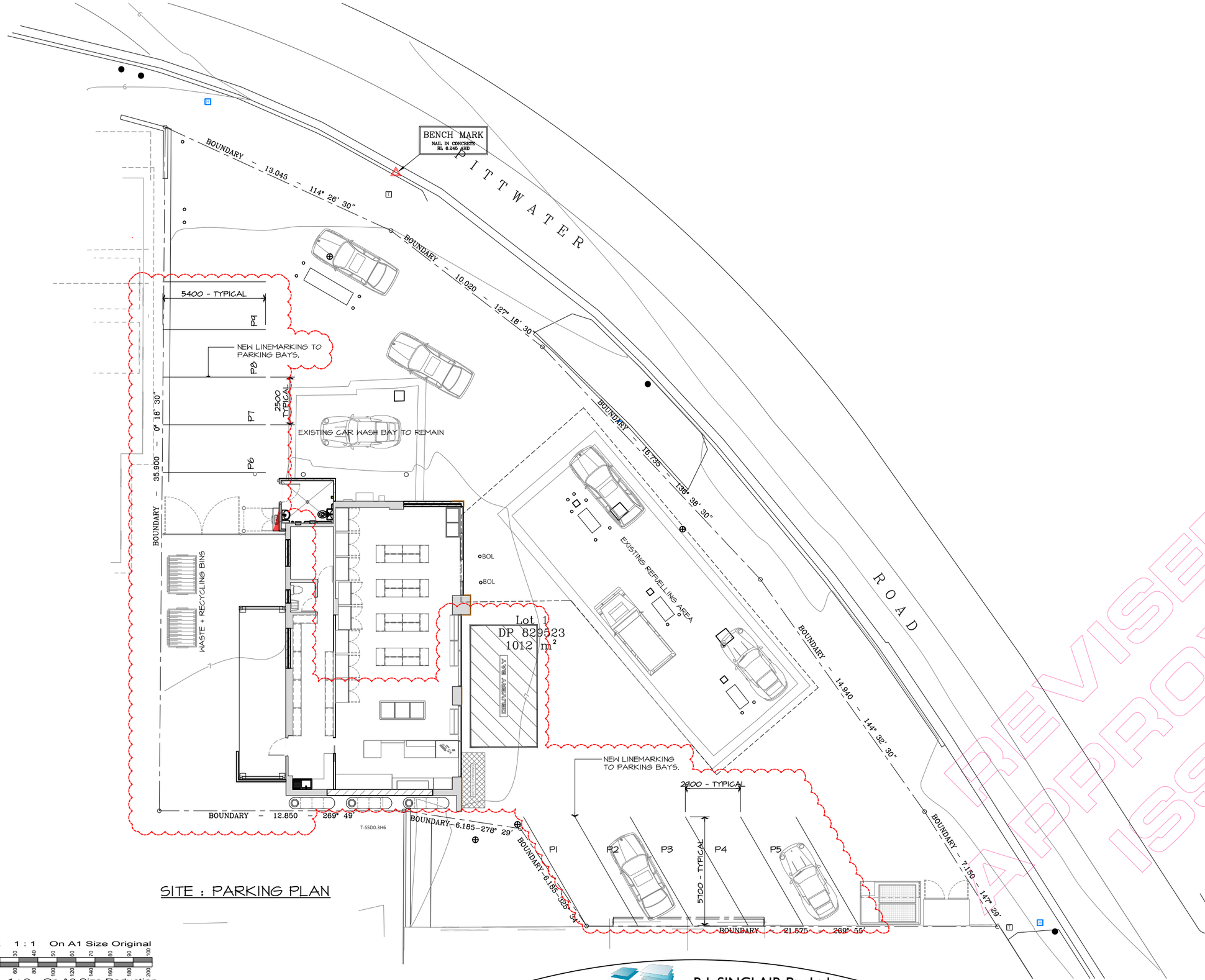
  The RMS Guide requires a minimum of five car parking spaces for the proposed service station and convenience store. The proposed development would retain the nine existing car parking spaces, which is expected to sufficiently accommodate the car parking demand associated with the car wash facility and laundromat facility.

  This does not consider the parking opportunities at the refuelling pumps (six light vehicle spaces), which are generally used by customers when refuelling and making quick purchases from the convenience store.
- The existing car parking spaces will be modified to comply with AS2890.1. A new loading bay, which can accommodate up to a 6.4m SRV, will be provided and has been designed in accordance with AS2890.2. Two bicycle parking spaces will also be provided in accordance with AS2890.3.
- The proposed development is expected to generate no additional traffic during the peak periods, when compared to the existing operation. Therefore, it will not result in any adverse impacts on the surrounding road network.

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

Appendix A

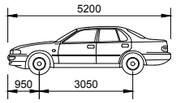
Proposed Site Layout Plan



SITE : PARKING PLAN

SCALE 1 : 1 On A1 Size Original

SCALE 1 : 2 On A3 Size Reduction



VEHICLE TYPE		CAR
LENGTH OVERALL	:	5.2m
WIDTH OVERALL	:	1.94m
TRACK	:	1.84m
WHEELBASE	:	3.05
LOCK TO LOCK TIME	:	6.0s
STEERING ANGLE	:	33.6°

THE VEHICLE TURNING PATHS SHOWN ON THIS DRAWING HAVE BEEN GENERATED USING AutoTURN 11.0.1, CONFIGURED TO MEET THE REQUIREMENTS OF AUSTROADS 2013 AS DETAILED ABOVE.

PARKING ASSESSMENT :

PARKING ASSESSMENT HAS BEEN CARRIED OUT IN ACCORDANCE WITH THE TINSW GUIDE TO TRAFFIC GENERATING DEVELOPMENTS :

PROPOSED SERVICE STATION (RETAIL PREMISES) WITHOUT WORKSHOP OR RESTAURANT - 5 SPACES / 100m^2 :
NEW RETAIL AREA : 95m^2 : 5 SPACES

PROVIDE ADDITIONAL SPACE FOR LAUNDROMAT : 1 SPACE

TOTAL REQUIRED SPACES : 6 SPACES

TOTAL SPACES PROVIDED : 9 SPACES

NOTE : ADDITIONAL PARKING IS PROVIDED FOR SERVICE STATION CUSTOMERS IN EACH REFUELLING POSITION :
6 SPACES

REVISED APPROVAL ISSUE

ULTRA
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THIS DRAWING IS TO BE PRINTED AND DISTRIBUTED IN COLOUR

REVISED ISSUE FOR SECTION 8.3 REVIEW NOT FOR CONSTRUCTION

No.	Amendment	By	Date
P1	PRELIMINARY ISSUE FOR DISCUSSION PURPOSES ONLY. NOT FOR CONSTRUCTION.	RJS	25.03.2023
P2	UPDATED TO SUIT TRAFFIC ENGINEER'S COMMENTS. REVISED PRELIMINARY ISSUE FOR DISCUSSION PURPOSES ONLY. NOT FOR CONSTRUCTION.	RJS	28.03.2023
DA-1	ISSUED FOR DEVELOPMENT APPROVAL WITHIN TRAFFIC ENGINEER'S REPORT. NOT FOR CONST'N.	RJS	30.03.2023
DA-2	PROPOSED AUTO CAR WASH BAY REMOVED FROM APPLICATION. CAR PARKING AMENDED TO SUIT NEW TRAFFIC IMPACT ASSESSMENT REPORT. ISSUED FOR SECTION 8.3 APPROVAL PURPOSES ONLY. NOT FOR CONSTRUCTION.	RJS	17.04.2024

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Tasmania Lic. No. DP-AD 15529

Project: ALTERATIONS TO SERVICE STATION 209 PITTWATER ROAD MANLY NSW 2095 FOR ULTRA PETROLEUM GROUP Pty Ltd	Approved		Designed: RJS
	Date: 27th March 2023		Drawn: RJS
	Scale: 1 : 10 @ A1 1 : 200 @ A3		Checked
Drawing Title: SITE : PARKING STUDY	Project No.: 08-045-22	Drawing No.: PS - 01	Amdt.: DA-2

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