

# 6415 Newell Highway, Gilgandra

Proposed Service Station  
Transport Impact Assessment



Prepared by: Stantec Australia Pty Ltd for Benzina Group

on 15/12/2021

Reference: 301401047

Issue #: A

# 6415 Newell Highway, Gilgandra

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### Quality Record

Issue	Date	Description	Prepared By	Checked By	Approved By	Signed
A	15/12/2021	Final	Connor Hoang	Rhys Hazell	Rhys Hazell	

# CONTENTS

<b>1. Introduction</b>	<b>3</b>
1.1. Background & Proposal	4
1.2. Purpose of this Report	4
1.3. References	4
<b>2. Existing Conditions</b>	<b>5</b>
2.1. Location	6
2.2. Transport Network	7
2.3. Traffic Volumes	9
<b>3. Development Proposal</b>	<b>10</b>
3.1. Land Use	11
3.2. Site Access and Parking	12
3.3. Waste Collection and Loading	12
<b>4. Parking Appraisal</b>	<b>13</b>
4.1. Parking Requirements	14
4.2. Parking Adequacy	14
4.3. Car Park Layout Review	15
<b>5. Traffic Appraisal</b>	<b>16</b>
5.1. Traffic Generation	17
<b>6. Conclusion</b>	<b>18</b>

## Appendices

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- A. Compliance Review and Swept Path Analysis

## Figures

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Figure 2.1: Subject site and its environs	6
Figure 2.2: Land use map	7
Figure 2.3: Newell Highway (looking north)	8
Figure 2.4: Newell Highway (looking south)	8
Figure 3.1: Proposed site layout	11

## Tables

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Table 2.1:	Newell Highway AADT volumes	9
Table 2.2:	Newell Highway AADT northbound peak hour traffic volumes	9
Table 4.1:	TfNSW service station parking requirements	14

# 1. INTRODUCTION

01

## 1.1. Background & Proposal

A Development Application is to be lodged with Gilgandra Shire Council (Council) for a proposed service station development on land at 6415 Newell Highway, Gilgandra. The proposed development incorporates both car and heavy vehicle refuelling areas, convenience store, food and drink premises and associated drive-thru facilities. Car, trailer/ caravan and heavy vehicle parking is also proposed.

Benzina Group engaged GTA, now Stantec in September 2021 to complete a transport impact assessment for the proposed development.

## 1.2. Purpose of this Report

This report sets out an assessment of the anticipated transport implications of the proposed development, including consideration of the following:

- existing traffic and parking conditions surrounding the site
- suitability of the proposed parking in terms of supply (quantum) and layout
- service vehicle requirements
- pedestrian and bicycle requirements
- the traffic generating characteristics of the proposed development
- suitability of the proposed access arrangements for the site
- the transport impact of the development proposal on the surrounding road network.

## 1.3. References

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

- an inspection of the site and its surrounds
- Gilgandra Development Control Plan (DCP) 2011
- Gilgandra Local Environmental Plan (LEP) 2011
- Australian Standard/ New Zealand Standard, Parking Facilities, Part 1: Off-Street Car Parking AS/NZS 2890.1:2004
- Australian Standard, Parking Facilities, Part 2: Off-Street Commercial Vehicle Facilities AS 2890.2:2018
- Australian Standard / New Zealand Standard, Parking Facilities, Part 6: Off-Street Parking for People with Disabilities AS/NZS 2890.6:2009
- plans for the proposed development prepared by A Blefari, Project number 20721, drawing number 101, dated 27 August 2021
- other documents and data as referenced in this report.

## 2. EXISTING CONDITIONS

02

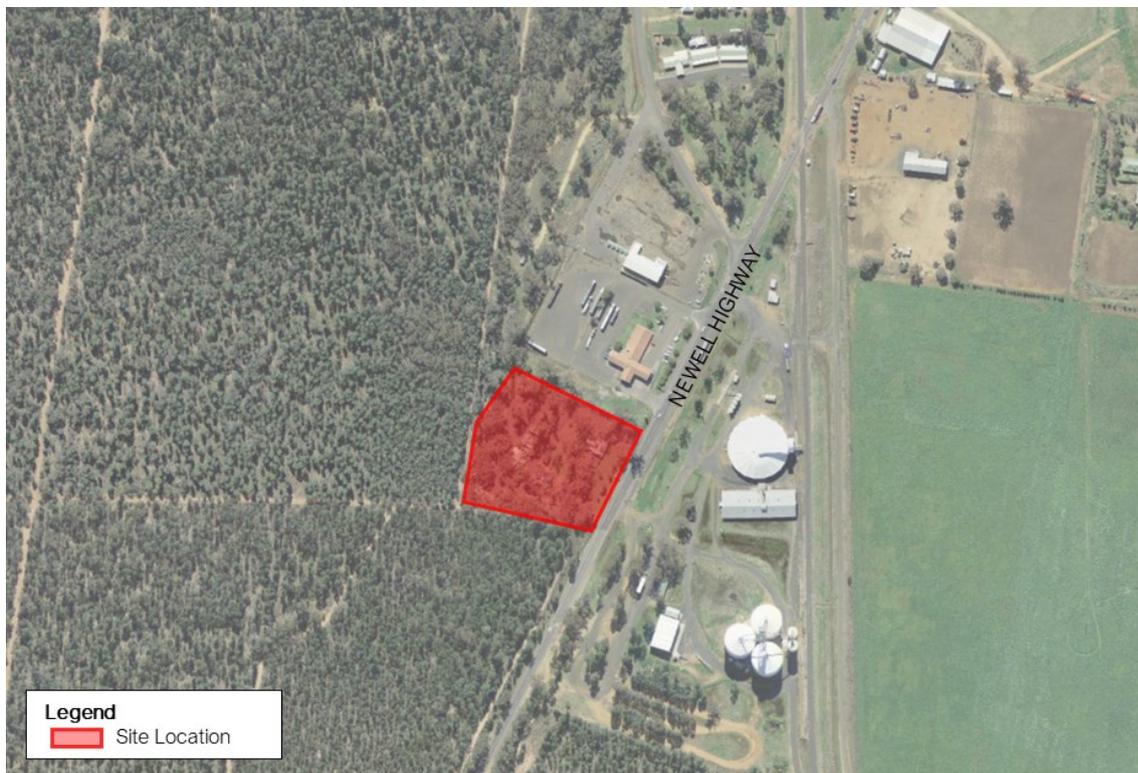
## 2.1. Location

The subject site is at 6415 Newell Highway, Gilgandra and is legally described as Lot 2632/DP749017. The site has a total area of 17,040 square metres and has a single frontage of approximately 100 metres to Newell Highway along the eastern boundary.

The existing site land uses comprise a motor inn with surrounding properties mostly comprising commercial and rural agriculture uses. A Caltex fuel station and associated food and drink premises bounds the northern boundary of the site, with access via the Newell Highway. State Forest surrounds the site to the south and west. Under Gilgandra Local Environmental Plan (LEP) 2011, the site is zoned as IN1 – General Industrial.

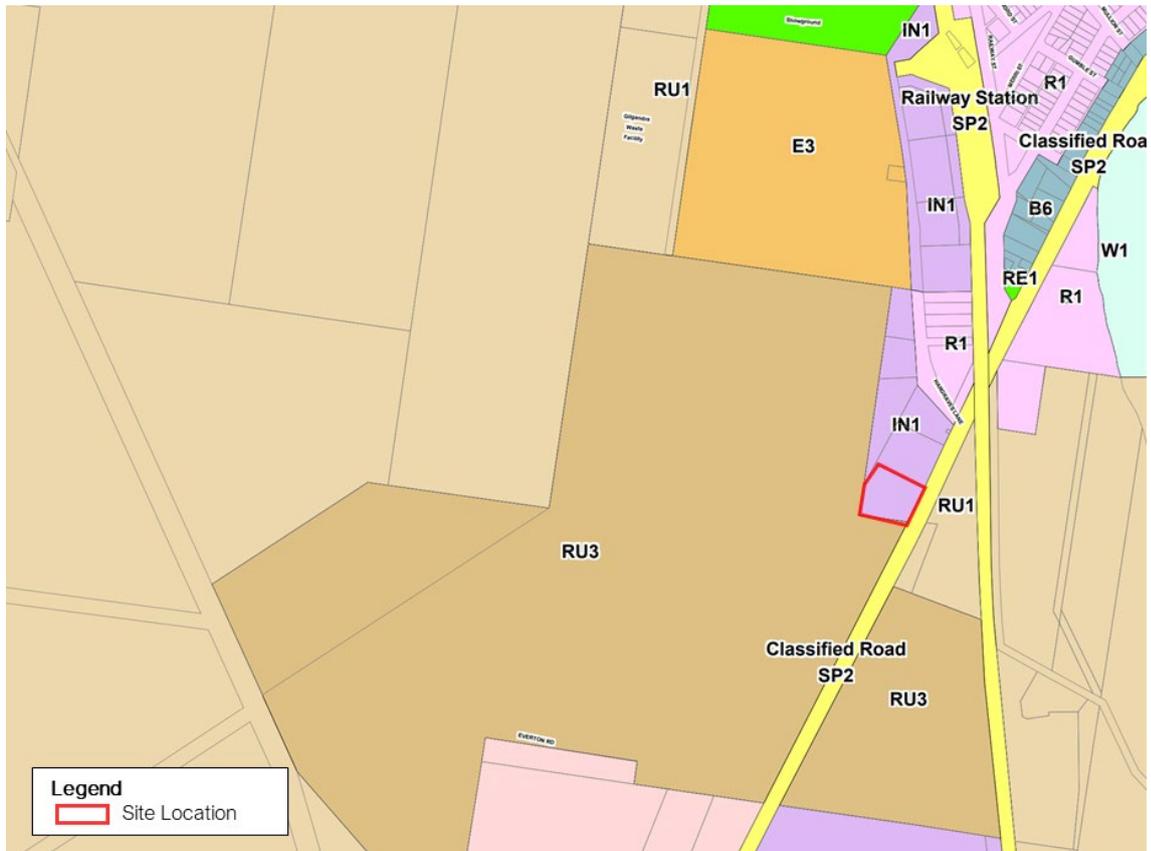
The location of the site and its surrounding environs is shown in Figure 2.1 with the LEP land use map shown in Figure 2.2.

Figure 2.1: Subject site and its environs



Base image source: SixMaps <https://maps.six.nsw.gov.au/>

Figure 2.2: Land use map



Base image source: Gilgandra Council LEP 2011

## 2.2. Transport Network

### 2.2.1. Road Hierarchy

Roads are classified according to the functions they perform. The main purpose of defining a road's functional class is to provide a basis for establishing the policies which guide the management of the road according to their intended service or qualities.

In terms of functional road classification, State roads are strategically important as they form the primary network used for the movement of people and goods between regions, and throughout the State. Transport for NSW (TfNSW) is responsible for funding, prioritising and carrying out works on State roads. State roads generally include roads classified as freeways, state highways, and main roads under the Roads Act 1993, and the regulation to manage the road system is stated in the Australian Road Rules, most recently amended on 19 March 2018.

TfNSW defines four levels in a typical functional road hierarchy, ranking from high mobility and low accessibility, to high accessibility and low mobility. These road classes are:

**Arterial Roads** – Controlled by TfNSW, typically no limit in flow and designed to carry vehicles long distance between regional centres.

**Sub-Arterial Roads** – Managed by either Council or TfNSW under a joint agreement. Typically, their operating capacity ranges between 10,000 and 20,000 vehicles per day, and their aim is to carry through traffic between specific areas in a sub region or provide connectivity from arterial road routes (regional links).

**Collector Roads** – Provide connectivity between local sites and the sub-arterial road network, and typically carry between 2,000 and 10,000 vehicles per day.

**Local Roads** – Provide direct access to properties and the collector road system and typically carry between 500 and 4,000 vehicles per day.

### 2.2.2. Surrounding Road Network

#### Newell Highway

The Newell Highway is a classified State Road providing one traffic lane in each direction and gravel shoulders on the southern outskirts of Gilgandra. It is the key inland arterial road through regional NSW and effectively links Melbourne with Brisbane providing for critical heavy vehicle freight transport.

It is aligned in a north-south direction past the site and provides an eight metre wide carriageway set within a 42-metre-wide road reserve. The Newell Highway has a posted speed limit of 60 kilometres per hour, increasing to 80 kilometres per hour about 100 metres south of the site. Informal kerbside parking is generally permitted on both sides of the road south of the site, with areas of no stopping along the site frontage and to the north.

The Newell Highway is shown in Figure 2.3 and Figure 2.4.

Figure 2.3: Newell Highway (looking north)



Figure 2.4: Newell Highway (looking south)



## 2.3. Traffic Volumes

Transport for NSW (TfNSW) provides average road traffic volumes in the form of permanent and sample counters at key locations across New South Wales. The closest traffic volume station (Station Id: 6147) is located 870 metres south of Balladoran Railway Road, Gilgandra approximately 2.5 kilometres south of the site.

The annual average daily traffic (AADT) volumes are summarised in Table 2.1 and the average peak volumes for northbound traffic shown in Table 2.2. Data for 2020 and 2021 were excluded due to travel restrictions associated with COVID-19.

Table 2.1: Newell Highway AADT volumes

Year	Direction		Total
	Northbound	Southbound	
2015	1,640	1,558	3,198
2016	1,573		
2017	1,623	1,581	3,204
2018	1,630	1,579	3,209
2019	1,614	1,561	3,175
<b>Average</b>	<b>1,616</b>	<b>1,570</b>	<b>3,197</b>

Table 2.2: Newell Highway AADT northbound peak hour traffic volumes

Year	Northbound	
	AM (8:00am-9:00am)	PM (3:00pm-4:00pm)
2015	121	145
2016	116	141
2017	120	145
2018	123	145
2019	123	145
<b>Average</b>	<b>121</b>	<b>144</b>

Table 2.1 indicates that Newell Highway carries an average 3,200 vehicles per day immediately south of Gilgandra. The northbound AM and PM peak hours occur between 8:00am and 9:00am, and 3:00pm and 4:00pm with a relatively even split between northbound and southbound traffic volumes. The data also indicates that 33 per cent of all traffic on the Newell Highway are heavy vehicles.

# 3. DEVELOPMENT PROPOSAL

03

### 3.1. Land Use

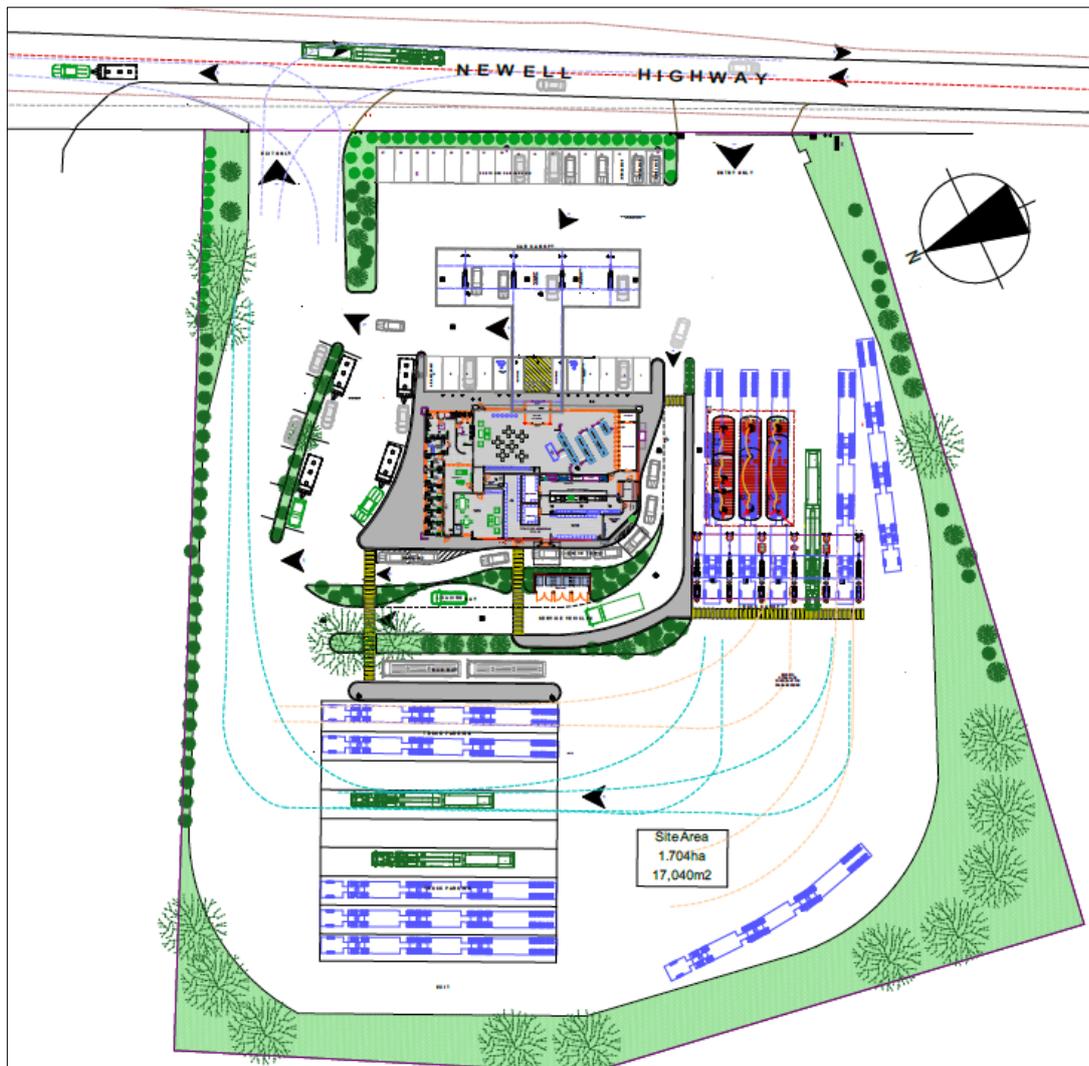
The proposed service station development includes car refuelling and heavy vehicle refuelling hardstand areas, air and water facilities, convenience/ food and drink premises with associated drive-thru facility. Car and car with caravan plus dedicated truck and coach parking is also provided.

Four double sided light vehicle fuel pumps accommodating eight vehicles and five high flow heavy vehicle fuel pumps are proposed. The light vehicle refuelling area and associated customer parking is located along the Newell Highway side of the site with heavy vehicle refuelling to the south of the main structure. Heavy vehicle parking is located at the southern and western end of the site.

The main structure covers 590 square metres Gross Floor Area (GFA) and includes a convenience store, food and drink premises (with about 60 seats) and drive-thru facility. A dedicated truckies area including lounge/ gym and shower/ change rooms is also provided. An independent operator (as opposed to a commercial fast-food provider) is expected to operate the food and drink premises and drive-thru facility.

The proposed site layout is shown in Figure 3.1.

Figure 3.1: Proposed site layout



Source: Site Plan - A Blefari, drawing no. 101, dated 4 December 2021

## 3.2. Site Access and Parking

The proposed development includes two separated entry and exit driveways along the Newell Highway close to the northern and southern boundaries. Each access is appropriately dimensioned to ensure access by all vehicles up to 36.5-metre-long A-Doubles. All vehicles will enter and exit in a forward direction.

Good sightlines in each direction along the Newell Highway are afforded at each access driveway.

The proposed development includes 60 on-site spaces, including:

- 36 car parking spaces, including four car with caravan spaces and two accessible spaces
- eight spaces for light vehicles at the fuel pumps
- nine heavy vehicle parking spaces including capacity for both 36.5m A-Doubles and 26m B-Doubles
- two designated coach bays
- five heavy vehicle spaces at the high flow fuel pumps.

The drive-thru facility also includes a dedicated queuing lane with capacity for six cars, plus two waiting bays.

## 3.3. Waste Collection and Loading

A waste storage is proposed at the rear of the main structure and adjacent to the drive-thru facility. The area would ensure access by all rigid trucks including 12.5m heavy rigid vehicles. Garbage trucks and service vehicles would use this area as necessary with access via a dedicated lane adjacent to the drive-thru entry lane with the area adequately separated from other on-site facilities. Pedestrian connection to the main structure ensures practical use with marked crossings where necessary.

Refuelling of the underground tanks would be facilitated as part of the heavy vehicle refuelling area with practical access by the largest tanker to the underground fill points.

A pedestrian linkage would run from the control building to the waste storage area. A dedicated service lane running adjacent to drive-through facilities would allow for waste collection and loading/ unloading to occur away from public parking and pedestrians. Access to these fill points will be managed as necessary on-site with temporary and minor reduction in capacity of the heavy vehicle refuelling area. This is common in such circumstances, with such activity primarily during non-peak periods.

# 4. PARKING APPRAISAL

04

## 4.1. Parking Requirements

### 4.1.1. Parking Requirements

Gilgandra Shire DCP 2011 specifies the following parking rates for service station developments:

- four spaces per service bay, plus
- one space per 200m<sup>2</sup> site area, plus
- one space per 20m<sup>2</sup> GFA of convenience store area.

Application of this results in the need for 113 on-site parking spaces. This is excessive for the proposed land use where much of the site area is associated with heavy vehicle parking and manoeuvring.

In this regard, reference is also important to the TfNSW Guide to Traffic Generating Developments (2002). The Guide includes specific parking requirements for service station developments, as detailed in Table 4.1. for the purposes of the assessment an even split between the convenience store and food and drink premises has been applied.

**Table 4.1: TfNSW service station parking requirements**

Type	Size / No	Rate	Requirement
Convenience Store	295sqm GFA	5 spaces per 100sqm GFA	15
Restaurant	295sqm GFA and 60 seats	Greater of 15 spaces per 100sqm GFA or 1 space per 3 seats	45
<b>Total</b>			<b>60</b>

On this basis, the proposed development generates a parking requirement of 60 spaces under the TfNSW Guide.

For developments including 50 or more parking spaces, DCP 2011 also requires a minimum of two per cent of the parking supply be dedicated for accessible users and located close to the building entrances.

## 4.2. Parking Adequacy

The proposed development includes a total of 60 on-site spaces, including the spaces at the fuel pumps and accessible parking. This meets the TfNSW guidelines and is considered appropriate for the proposed land use in this location. The split between light and heavy vehicle parking and refuelling areas is appropriate, especially considering the importance of the Newell Highway as the key inland freight route through NSW. Two accessible spaces adjacent to the building entrances are also provided.

The drive-thru facility for the food and drink premises would moderate parking demand during peak periods. There is capacity for five cars to queue before the order point and two waiting bays beyond the pick-up point, in accordance with TfNSW guidelines.

### 4.3. Car Park Layout Review

The car park layout has been reviewed against the requirements of DCP 2011 and the Australian Standard for Off Street Car Parking (AS/NZS2890.1:2004, AS/NZS2890.2:2018 and AS/NZS2890.6:2009). This assessment included a review of the following:

- access driveways
- car space dimensions and aisle widths
- refuelling areas and queuing capacity
- drive-thru facilities and queuing capacity
- service areas/ loading
- adjacent structures
- internal circulation
- parking for persons with disabilities.

The review indicates that the proposed parking layout is expected to operate satisfactorily, with a detailed review included in Appendix A.

All light and heavy vehicle parking spaces have been designed in accordance with the relevant Australian Standards, with more than adequate aisle widths and manoeuvring areas. All car spaces are 2.6 metres wide and 5.4 metres long with the accessible parking spaces a minimum 2.4 metres wide with adjacent dedicated shared area (with bollard) to ensure appropriate use, in accordance with AS2890.6.

The underground fuel tanks will be filled from a central remote filling point close to the heavy vehicle refuelling area. This will ensure minimal disruption to site operations, with temporary minor reduction in the heavy vehicle refuelling capacity outside peak periods. The fuel storage tanks are typically serviced by 20 metre semi-trailers, or 26 metre B-Doubles.

## 5. TRAFFIC APPRAISAL

05

## 5.1. Traffic Generation

### 5.1.1. Guideline Trip Rates

Traffic generation estimates for service stations with a convenience store have been sourced from TfNSW Guidelines. The Guide provides the following formula to calculate the evening peak two-way (in and out) vehicle trips:

- evening peak hour vehicle trips =  $0.04 A(S) + 0.3 A(F)$  or
- evening peak hour vehicle trips =  $0.66 A(F)$

where  $A(S)$  = area of site (square metres) and  $A(F)$  = gross floor area of convenience store (square metres).

With the site covering a significant area, and with much incorporating heavy vehicle parking and manoeuvring areas, application of the above calculated rate based on a combination of site area and convenience store GFA is not considered appropriate. It would result in an impractical traffic generation.

Similarly, application of the convenience store GFA rate is also considered excessive when considering existing traffic volumes on the Newell Highway. Application of this rate (assuming the convenience store over 295sqm) would result in 195 vehicle trips per hour. It is expected that the food and drink premises is ancillary to the main use, and certainly the drive-thru would be unlikely to generate significant additional activity given the expectation of an independent operator.

This trip generation is excessive and impractical given the existing peak hour traffic volumes passing the site on the Newell Highway. In this regard, a practical first principles assessment that considers the 'draw-in' ability of the site is considered more accurate and to assess future traffic movements associated with the proposed development.

Spot-check counts at the time of the site visit on Monday 22 February 2021 between 10:30am and 12 midday were completed of Newell Highway traffic volumes plus the traffic generation of the adjacent Caltex service station. Overall, a total of about 170 vehicles were counted on the Newell Highway passing the site with about 20 entering the Caltex. This indicates that the Caltex draws in about 12 per cent of passing traffic.

On this basis, the proposed development could generate about 40 vehicle trips (in + out) in any peak hour. Applying a 20 per cent contingency to account for seasonal holiday periods and primary trips (that is, those that make a purposeful trip to the site), the proposed development could generate up to 50 vehicle trips in any peak hour. This is more realistic and considered appropriate for the proposed development.

The sites' location also lends itself to good sightlines along the Newell Highway, with adequate setbacks and separation of driveways from any adjacent crossovers. The posted 60km/h speed limit would also aid the safe movement of vehicles in and out of the site, including heavy vehicles.

Overall, there are no noticeable adverse traffic impacts anticipated as a result of the proposed development and it can be supported on traffic grounds.

## 6. CONCLUSION

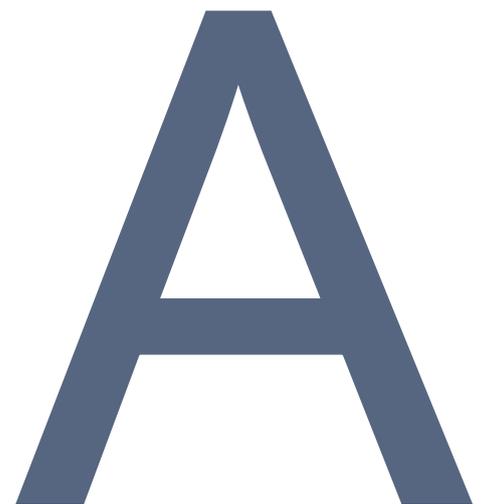
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## CONCLUSION

Based on the analysis and discussions presented within this report, the following conclusions are made:

- It is proposed that a service station be developed on land at 6415 Newell Highway, Gilgandra. The site would include both light vehicle and heavy vehicle refuelling areas, air and water fill points, convenience store, food and drink premises with associated drive-thru facility, and all necessary on-site car, car with trailer and heavy vehicle parking.
- The site area covers a total of 17,040 square metres, with a single main structure housing the convenience store and food and drinks premises across 590 square metres GFA.
- A total of 60 on-site parking spaces are proposed, including two accessible spaces and complies with TfNSW guidelines. This includes eight light vehicle refuelling spaces and five spaces at the high flow heavy vehicle fuel pumps.
- The car park layout and access driveways have been reviewed against the requirements of DCP 2011 and the Australian Standard for Off Street Car Parking (AS/NZS2890.1:2004, AS/NZS2890.2:2018 and AS/NZS2890.6:2009). Overall, the review confirms that the proposed layout is expected to operate well with appropriate separation of light and heavy vehicles, drive-thru and loading facilities with all vehicles entering and exiting the site in a forward direction. The full review is included in Appendix A.
- The proposed development is expected to generate up to 50 vehicle trips (in + out) during any peak hour, with most demand associated with vehicles already on the Newell Highway passing the site. An estimated 10 per cent are expected to be associated with those making a purposeful trip to the site.
- There are good sightlines along the Newell Highway at the proposed access driveways and within the posted 60km/h speed zone.
- The proposed development is not expected to present a significant impact to the operation and safety of the Newell Highway and can be supported from a traffic and transport perspective.

# A.COMPLIANCE REVIEW AND SWEEP PATH ANALYSIS



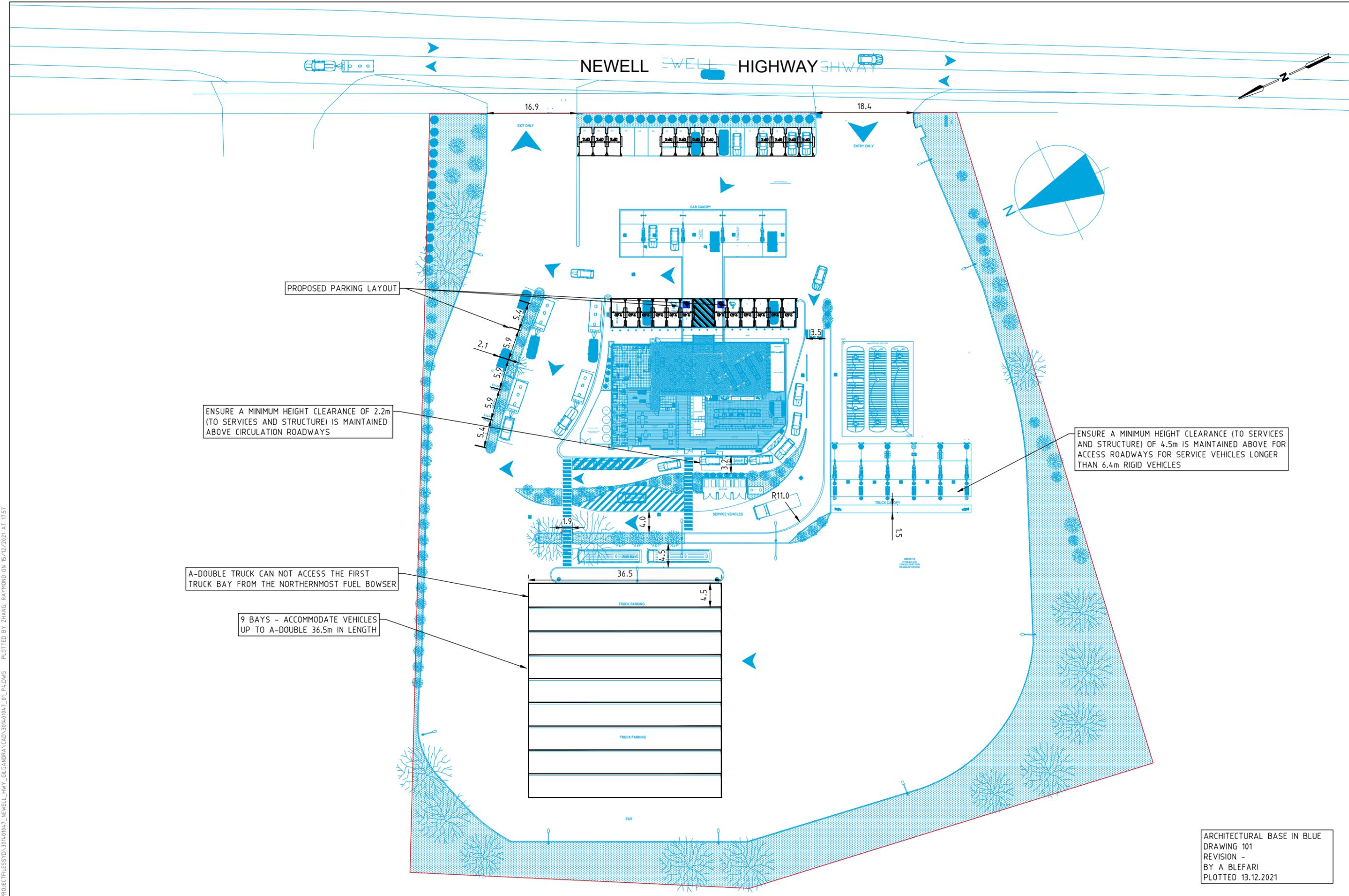


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ENSURE A MINIMUM HEIGHT CLEARANCE OF 2.2m (TO SERVICES AND STRUCTURE) IS MAINTAINED ABOVE CIRCULATION ROADWAYS

A-DOUBLE TRUCK CAN NOT ACCESS THE FIRST TRUCK BAY FROM THE NORTHERNMOST FUEL BOWSER

9 BAYS - ACCOMMODATE VEHICLES UP TO A-DOUBLE 36.5m IN LENGTH

ENSURE A MINIMUM HEIGHT CLEARANCE (TO SERVICES AND STRUCTURE) OF 4.5m IS MAINTAINED ABOVE FOR ACCESS ROADWAYS FOR SERVICE VEHICLES LONGER THAN 6.4m RIGID VEHICLES

ARCHITECTURAL BASE IN BLUE  
DRAWING 101  
REVISION -  
BY A BLEFARI  
PLOTTED 13.12.2021



**PRELIMINARY PLAN**  
FOR DISCUSSION PURPOSES ONLY  
SUBJECT TO CHANGE WITHOUT  
NOTIFICATION

**WARNING**  
BEWARE OF UNDERGROUND SERVICES  
THE LOCATIONS OF UNDERGROUND SERVICES ARE  
APPROXIMATE ONLY AND THEIR EXACT POSITION  
SHOULD BE PROVEN ON SITE. NO GUARANTEE IS  
GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

DESIGNED  
R.ZHANG

DESIGN CHECK  
R.HAZELL

SCALE  
A3 - N/A

6415 NEWELL HIGHWAY, GILGANDRA NSW 2827

APPROVED BY  
R.HAZELL

DATE ISSUED  
15 DECEMBER 2021

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COMPLIANCE REVIEW

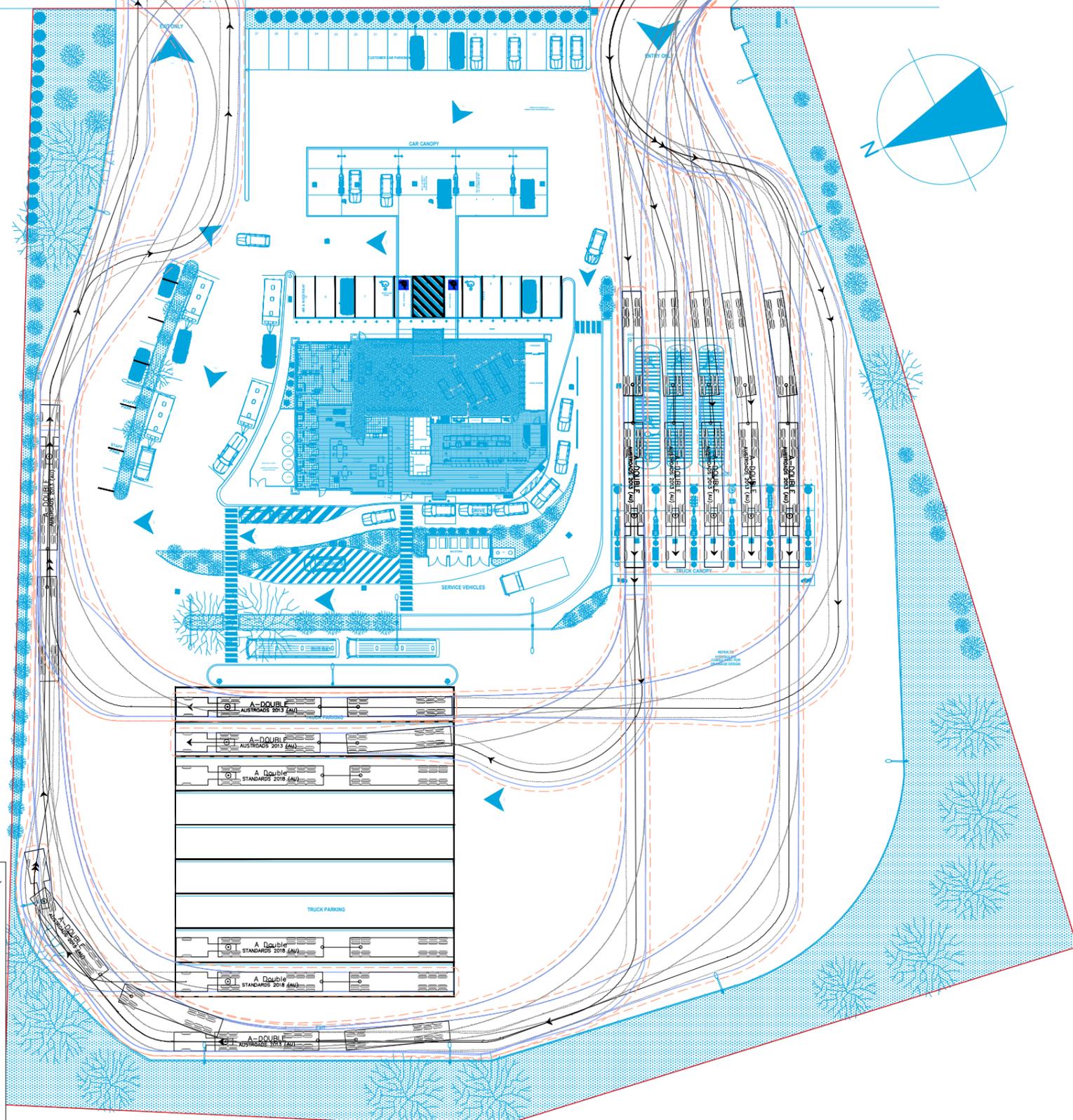
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ISSUE P4

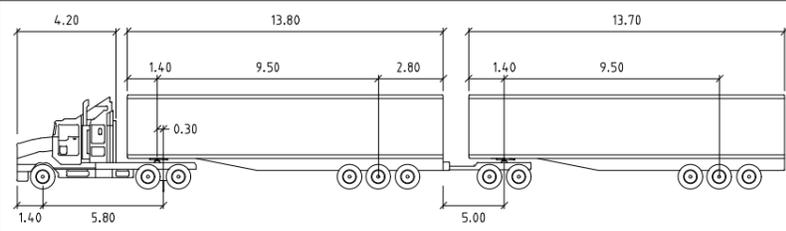
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# NEWELL HIGHWAY



### SWEPT PATH KEY

- VEHICLE CENTRE LINE
  - VEHICLE TYRE PATH
  - VEHICLE BODY PATH
  - - - 600mm CLEARANCE FROM VEHICLE BODY
- ASSUMED SPEED 5km/h



A Double

meters	
Tractor Width	: 2.50
Trailer Width	: 2.50
Tractor Track	: 2.50
Trailer Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 24.7
Articulating Angle	: 70.0

ARCHITECTURAL BASE IN BLUE  
DRAWING 101  
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DESIGNED  
R.ZHANG  
  
APPROVED BY  
R.HAZELL

DESIGN CHECK  
R.HAZELL  
  
DATE ISSUED  
15 DECEMBER 2021

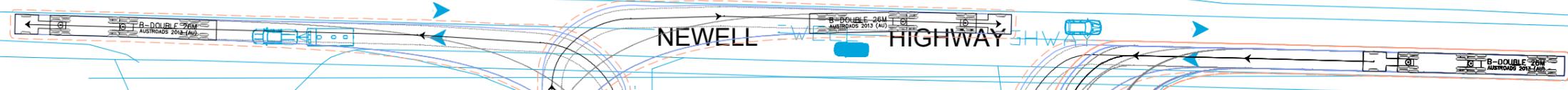
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VEHICLE SWEEP PATH ASSESSMENT

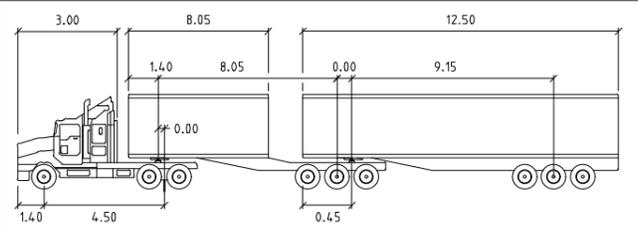
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**SWEPT PATH KEY**

- VEHICLE CENTRE LINE
  - VEHICLE TYRE PATH
  - VEHICLE BODY PATH
  - - - 600mm CLEARANCE FROM VEHICLE BODY
- ASSUMED SPEED 5km/h



**B-DOUBLE 26M**

meters	
Tractor Width	: 2.50
Trailer Width	: 2.50
Tractor Track	: 2.50
Trailer Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 23.4
Articulating Angle	: 70.0

ARCHITECTURAL BASE IN BLUE  
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DESIGNED  
R.ZHANG

APPROVED BY  
R.HAZELL

DESIGN CHECK  
R.HAZELL

DATE ISSUED  
15 DECEMBER 2021

SCALE  
A3 - N/A

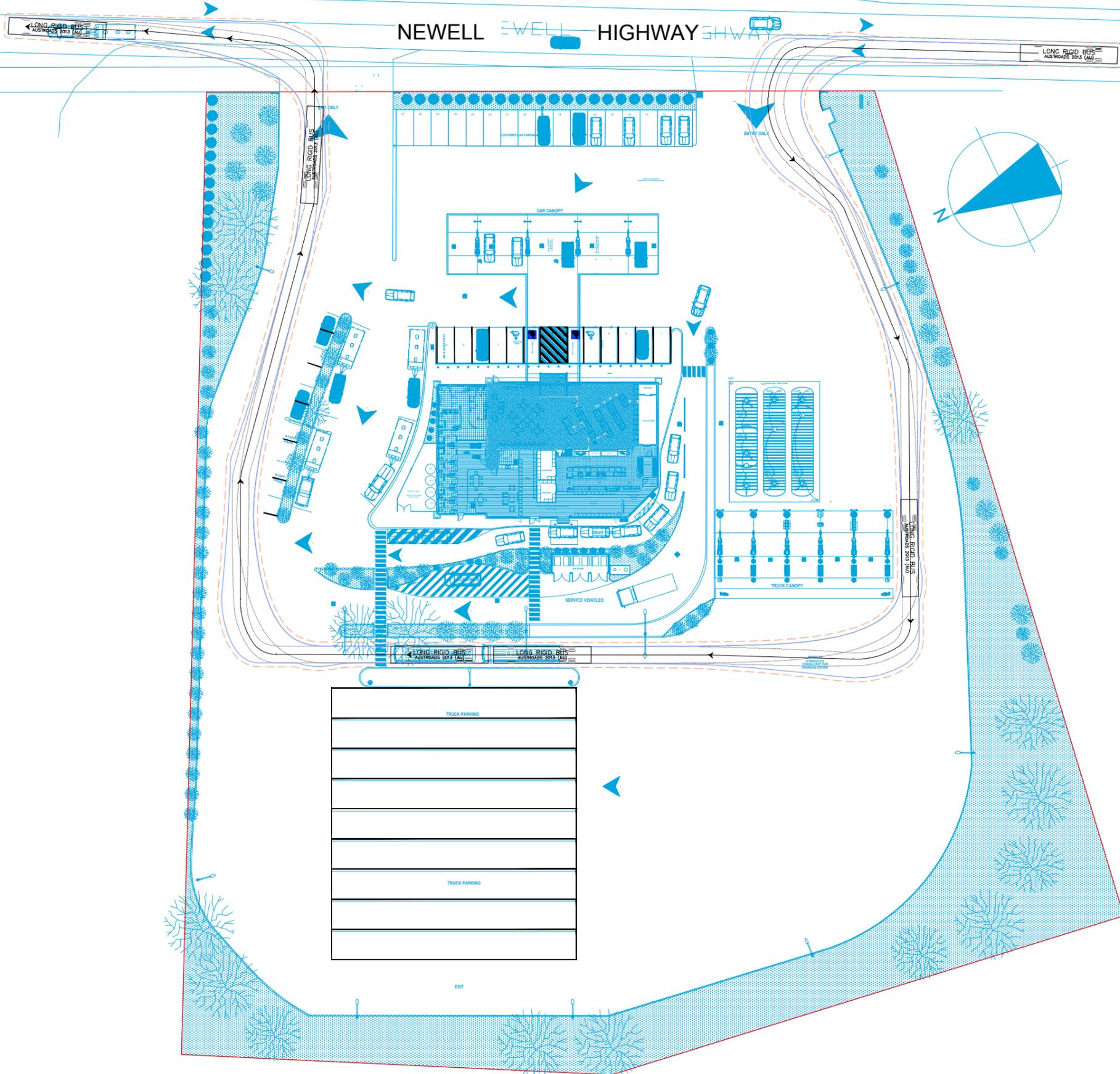
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VEHICLE SWEEP PATH ASSESSMENT

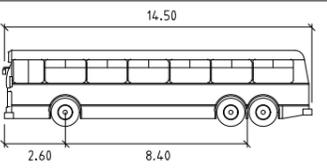
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**SWEPT PATH KEY**

- VEHICLE CENTRE LINE
  - VEHICLE TYRE PATH
  - VEHICLE BODY PATH
  - 600mm CLEARANCE FROM VEHICLE BODY
- ASSUMED SPEED 5km/h



**LONG RIGID BUS**  
meters

Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 46.4

ARCHITECTURAL BASE IN BLUE  
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R.HAZELL

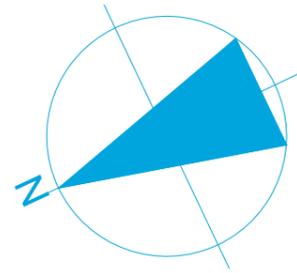
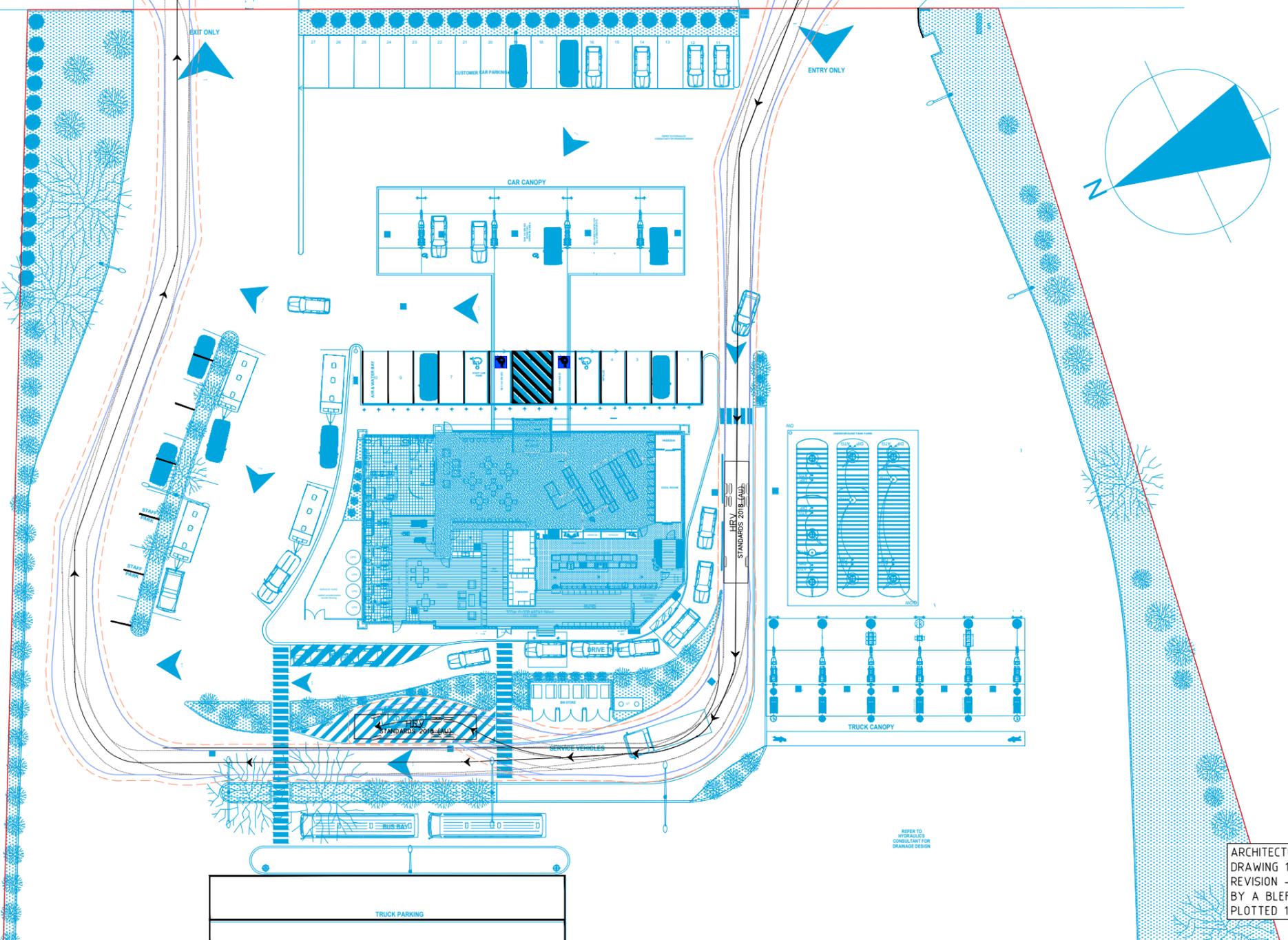
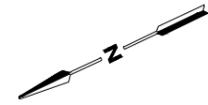
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R.HAZELL  
  
DATE ISSUED  
15 DECEMBER 2021

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301401047\_01\_P4.DWG

6415 NEWELL HIGHWAY, GILGANDRA NSW 2827

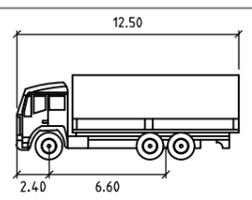
**VEHICLE SWEEP PATH ASSESSMENT**

DRAWING NO. 301401047\_01\_04 SHEET 04 OF 07 ISSUE P4



**SWEPT PATH KEY**

- VEHICLE CENTRE LINE
  - VEHICLE TYRE PATH
  - VEHICLE BODY PATH
  - 600mm CLEARANCE FROM VEHICLE BODY
- ASSUMED SPEED 5km/h



HRV

	metres
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 35.2

ARCHITECTURAL BASE IN BLUE  
DRAWING 101  
REVISION -  
BY A BLEFARI  
PLOTTED 13.12.2021



**PRELIMINARY PLAN**  
FOR DISCUSSION PURPOSES ONLY  
SUBJECT TO CHANGE WITHOUT  
NOTIFICATION

**WARNING**  
BEWARE OF UNDERGROUND SERVICES  
THE LOCATIONS OF UNDERGROUND SERVICES ARE  
APPROXIMATE ONLY AND THEIR EXACT POSITION  
SHOULD BE PROVEN ON SITE. NO GUARANTEE IS  
GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

DESIGNED  
R.ZHANG  
  
APPROVED BY  
R.HAZELL

DESIGN CHECK  
R.HAZELL  
  
DATE ISSUED  
15 DECEMBER 2021

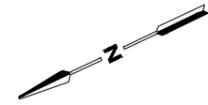
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6415 NEWELL HIGHWAY, GILGANDRA NSW 2827

VEHICLE SWEEP PATH ASSESSMENT  
DRAWING NO. 301401047\_01\_05 SHEET 05 OF 07 ISSUE P4

\\CORP-ADS\GTADATA\PROJECTS\301401047\_NEWELL\_HWY\_GILGANDRA\CAD\301401047\_01\_P4.DWG PLOTTED BY ZHANG, RAYMOND ON 15/12/2021 AT 17:57

\\CORP-ADS\GTADATA\PROJECTS\301401047\_NEWELL\_HWY\_GILGANDRA\CAD\301401047\_01\_P4.DWG PLOTTED BY ZHANG, RAYMOND ON 15/12/2021 AT 17:57



NEWELL HIGHWAY

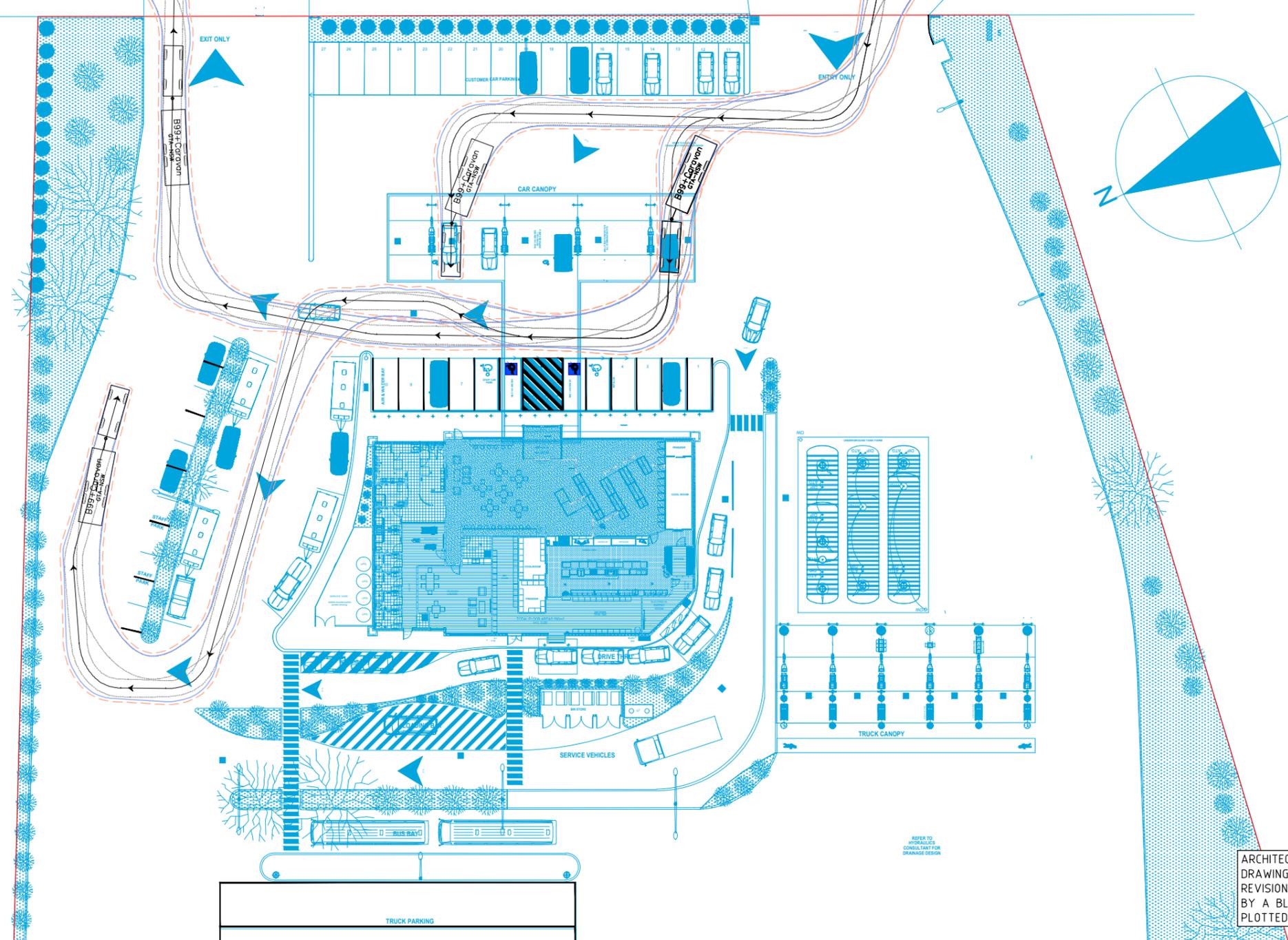
**SWEPT PATH KEY**

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h

**B99+Caravan**

	metres
Car Width	: 1.94
Trailer Width	: 2.42
Car Track	: 1.84
Trailer Track	: 2.32
Lock to Lock Time	: 6.0
Steering Angle	: 33.5
Articulating Angle	: 70.0



ARCHITECTURAL BASE IN BLUE  
DRAWING 101  
REVISION -  
BY A BLEFARI  
PLOTTED 13.12.2021



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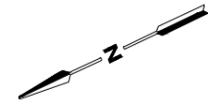
DESIGNED  
R.ZHANG  
  
APPROVED BY  
R.HAZELL

DESIGN CHECK  
R.HAZELL  
  
DATE ISSUED  
15 DECEMBER 2021

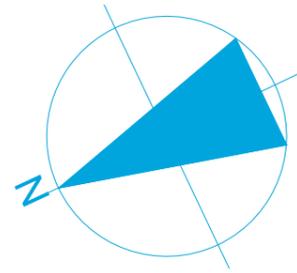
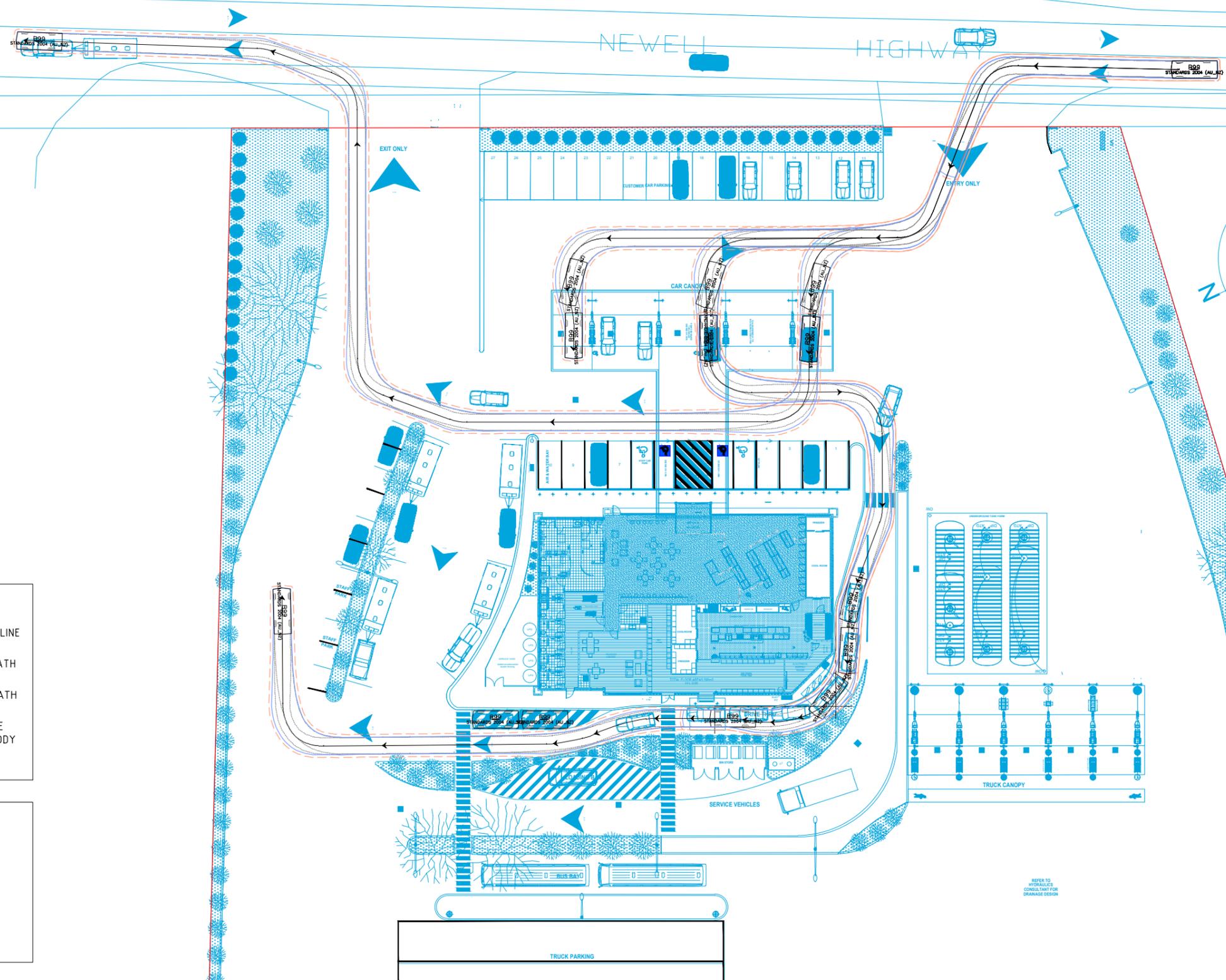
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6415 NEWELL HIGHWAY, GILGANDRA NSW 2827

**VEHICLE SWEEP PATH ASSESSMENT**  
DRAWING NO. 301401047\_01\_06 SHEET 06 OF 07 ISSUE P4

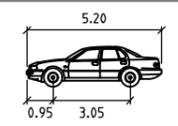


NEWELL HIGHWAY



**SWEPT PATH KEY**

-  VEHICLE CENTRE LINE
  -  VEHICLE TYRE PATH
  -  VEHICLE BODY PATH
  -  300mm CLEARANCE FROM VEHICLE BODY
- ASSUMED SPEED 5km/h



B99 6.3mR

Width : 1.94 meters  
 Track : 1.77  
 Lock to Lock Time : 6.0  
 Steering Angle : 34.0

ARCHITECTURAL BASE IN BLUE  
 DRAWING 101  
 REVISION -  
 BY A BLEFARI  
 PLOTTED 13.12.2021

\\CORP-ADS\GTADATA\PROJECTS\301401047\_NEWELL\_HWY\_GILGANDRA\CAD\301401047\_01\_P4.DWG PLOTTED BY ZHANG, RAYMOND ON 15/12/2021 AT 17:57



**PRELIMINARY PLAN**  
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DESIGNED  
R.ZHANG

APPROVED BY  
R.HAZELL

DESIGN CHECK  
R.HAZELL

DATE ISSUED  
15 DECEMBER 2021

SCALE  
A3 0 2.5 5 10 1:500

CAD FILE NO.  
301401047\_01\_P4.DWG

6415 NEWELL HIGHWAY, GILGANDRA NSW 2827

VEHICLE SWEEP PATH ASSESSMENT

DRAWING NO. 301401047\_01\_07 SHEET 07 OF 07 ISSUE P4