MARTINUS INLAND RAIL

# PRECINCT TRAFFIC MANAGEMENT SUB PLAN – STAGE A - WAGGA WAGGA

## A2I | Albury to Illabo

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# GLOSSARY

**TABLE 1: GLOSSARY**

| TERM | DEFINITION |
|---|---|
| ARTC | Australian Rail Track Corporation |
| CCS | Community Communication Strategy |
| CEMP | Construction Environmental Management Plan |
| CoA | Conditions of Approval |
| Construction | Includes work required to construct the CSSI as defined in the Project Description described in the documents listed in Condition A1 including commissioning trials of equipment and temporary use of any part of the CSSI but excluding Low Impact Work which is carried out or completed prior to approval of the CEMP. |
| CSSI | Critical State Significant Infrastructure |
| DPHI | NSW Department of Planning, Housing and Infrastructure |
| EAD | Per CoA A1, Environmental Assessment Documentation that includes:<br>• Inland Rail – Albury to Illabo Environmental Impact Statement (ARTC, August 2022);<br>• Albury to Illabo Response to Submissions (ARTC, November 2023);<br>• Albury to Illabo Preferred Infrastructure Report (ARTC, November 2023);<br>• Albury to Illabo Preferred Infrastructure Report Response to Submissions (ARTC, February 2024);<br>• Inland Rail – Albury to Illabo (SSI-10055) Response to request for additional information – Air Quality Assessment (letter dated 1 May 2024);<br>• Part 1 - Revised Technical Paper 8: Biodiversity Development Assessment Report (WSP, February 2024);<br>• Part 2 - Revised Technical Paper 8: Biodiversity Development Assessment Report (WSP, February 2024). |
| EIS | Environmental Impact Statement |
| EPA | Environment Protection Authority (NSW) |
| EPBC Act | *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (Federal) |
| EPL | Environment Protection Licence |
| Environmental Representative (ER) | The Environmental Representative(s) for the CSSI approved by the Planning Secretary |
| km | Kilometre |
| LoS | Level of Service |
| m | metre |
| MR | Martinus Rail |
| NHVR | National Heavy Vehicle Regulator |
| NSW | New South Wales |
| Planning Secretary | Secretary of the NSW Department of Infrastructure, Housing and Infrastructure, or delegate |
| PIR | Preferred Infrastructure Report |

| TERM | DEFINITION |
|---|---|
| PTMP | Precinct Traffic Management Plan (this Plan) |
| Primary CoA/UMM | CoA and/or UMMs that are specific to the development of this Plan |
| POEO Act | *NSW Protection of Environment Operations Act 1997* |
| Rail Corridor | Land that is:<br>a. owned, leased, managed or controlled by a public authority for the purpose of a railway or rail infrastructure facilities, or zoned under an environmental planning instrument predominantly, or<br>b. solely for development for the purpose of a railway or rail infrastructure facilities. |
| RMAR | Road Maintenance Access Road |
| ROL | Road Occupancy Licence |
| Transport | Transport for New South Wales (formerly Roads and Maritime Services) |
| TMP | Traffic Management Plan |
| UMM | Updated Environmental Management Measures |
| VMP | Vehicle Movement Plan |

# REFERENCED DOCUMENTS

This Precinct Traffic Management Plan (PTMP) is a subplan to the project wide Construction Traffic, Transport, and Access Management Plan – Stage A and has been prepared by Martinus in accordance with:

- Albury to Parkes (A2P) Construction Environment Management Framework (CEMF) (ARTC).
- Construction Traffic, Transport, and Access Management Plan - Stage A Albury to Illabo | A2I.
- Australian Standard 1428.1-2009 Design for access and mobility.
- Australian Standard AS 1742 Parts 1 to 14, Manual of Uniform Traffic Devices (as required).
- Australian Standard AS 1743.3-2019 Traffic control devices for works on roads.
- Australian Standard AS 3845.2:2017 Road Safety Barrier Systems and Devices.
- Australian Standard AS 3845.1:2015 Road Safety Barrier Systems and Devices.
- Austroads Guide to Temporary Traffic Management: Parts 1-10 (2021).
- Austroads Guide to Traffic Management – Parts 1-13 (2020).
- Austroads Guide to Road Design – Parts 1-8 (2020).
- Austroads Guide to Road Safety – Parts 1-9 (2019).
- Austroads Safe System Assessment Framework (2016).
- Austroads Design Vehicles and Turning Path Templates (2023).
- Transport Management Centre – Road Occupancy Manual (2015).
- NSW Speed Zoning Standard (Transport for NSW (Transport), 2023).
- Transport for NSW Traffic control at work sites Technical Manual (2022).
- Roads and Maritime Delineation Manual (2008);
- Guide to Traffic Generating Developments Version 2.2 (Roads and Traffic Authority (RTA), 2002);
- Level Crossing Closures Policy (Transport for NSW (Transport), n.d.).
- Cycling Aspects of Austroads Guides (Austroads, 2014).
- NSW Bicycle Guidelines version 1.2 (RTA, 2005).
- Planning Guidelines for Walking and Cycling (Department of Infrastructure, Planning and Natural Resources (DIPNR), 2004);
- Construction of New Level Crossing Policy (Transport, 2017a).
- Future Transport Strategy 2056 (Transport, 2018a).
- NSW Freight and Ports Plan 2018-2023 (Transport, 2018b).
- NSW Sustainable Design Guidelines Version 4.0 (Transport, 2017b).
- Railway Crossing Safety Series 2011, Plan: Establishing a Railway Crossing Safety Management Plan (RTA, 2011).
- Guides to Road Design (Austroads, 2021).
- Supplement to Austroads Guide to Road Design (Transport, 2023).
- ARTC Inland Rail Albury to Illabo (A2I) Project Technical Paper 1 – Traffic and Transport (July 2022).
- Appendix C Addendum Assessment to Technical Paper 1: Traffic and Transport Parts 1 and 2 (November 2023).
- Appendix D Addendum Assessment to Technical Paper 1: Traffic and Transport (February 2024).
- All relevant TfNSW Supplements and Technical Directions.
- All relevant TfNSW Austroads Supplements.

# 1 INTRODUCTION

## 1.1 Background

This Precinct Traffic Management Plan (PTMP) has been developed to document the Temporary Traffic Management arrangements and Construction Access Routes proposed during Stage A works within the Wagga Wagga Precinct.

## 1.2 Objectives

The objectives of this PTMP are to:

- Avoid or minimise potential impacts of construction activities on road safety and the existing transport network and associated infrastructure.
- Avoid or minimise potential impacts on the community and stakeholders with respect to traffic and transport.
- Where potential impacts cannot be avoided, identification of site-specific mitigation measures to minimise and mitigate impacts on road safety, traffic flow and access.
- Demonstrate how compliance with the obligations imposed by the requirements of the Ministers Conditions of Approval with respect to traffic and transport will be achieved.

## 1.3 Scope of this Stage A Plan

Stage A works within the Wagga Wagga Precinct are limited to short term utility works at the following locations:

- **Pearson Street Bridge enhancement site**
  - Water main relocation between Urana Street and northern side of railway.
  - High pressure gas main relation within rail corridor.
- **Cassidy Parade Pedestrian Bridge enhancement site**
  - High pressure gas main protection within rail corridor.
- **Edmondson Street Bridge enhancement site**
  - High pressure gas main relation (HDD) under rail corridor and Edmondson Street.
  - Medium pressure gas main relocation (HDD) along MacLeay Street and Erin Street.
  - String new conductors along western side of Edmondson Street.

# 2 LOCALITY AND EXISTING CONDITIONS

## 2.1 Overview

Characteristics of the key roads and intersections proposed to support the Stage A construction activities are described below for each enhancement site. Enhancement sites in the vicinity of Wagga Wagga Station share the same road network and have been combined in the following sections for:

- Cassidy Parade Pedestrian Bridge enhancement site
- Edmondson Street Bridge enhancement site.

## 2.2 Pearson Street Bridge Enhancement Site

### 2.2.1 Key Roads

#### Edward Street / Sturt Highway

***Traffic and Lane Configurations***

The following table details the typical traffic and lane configurations of Edward Street / Sturt Highway, proximate the Pearson Street Bridge enhancement site.

**TABLE 2: TRAFFIC AND LANE CONFIGURATIONS – EDWARD STREET / STURT HIGHWAY**

| Road name | Road hierarchy | Road Configuration | Lane Configuration | Speed Limit | AADT |
|---|---|---|---|---|---|
| Edward Street / Sturt Highway | State-controlled road | Four-lane, two-way | ~3.4m wide lanes | 60km/hr | 6,907, 12% HV (2021)[1] |

1 10-hour (am to 10am and 2pm to 7pm) traffic survey volumes


**FIGURE 1: EDWARD STREET / STURT HIGHWAY (SOURCE: *GOOGLE MAPS)***

### *Pedestrian and Cyclist Facilities*

The following table provides a review of pedestrian and cyclist provisions along Edward Street / Sturt Highway, proximate the Pearson Street Bridge enhancement site.

**TABLE 3: PEDESTRIAN AND CYCLIST FACILITIES – EDWARD STREET / STURT HIGHWAY**

| Provisions | Comment |
|---|---|
| Are footpaths provided on one or both sides of the road? | Footpaths are provided along both sides of Edward Street / Sturt Highway east of Dobney Avenue. |
| If yes, what is the width of the footpath(s)? | ~1.2m |
| Does the road currently form part of a Principal Cycle Network? | No |
| Are designated on-road cycle lanes provided? | No |
| Is the road designated as a Bicycle Awareness Zone (BAZ)? | No |

### *Public Transport Facilities*

Details of public transport facilities and services operating along Edward Street / Sturt Highway, proximate the Pearson Street Bridge enhancement site is detailed in Table 4 below.

**TABLE 4: PUBLIC TRANSPORT FACILITIES – EDWARD STREET / STURT HIGHWAY**

| Bus stop ID | Direction | Services | Service frequency |
|---|---|---|---|
| Edward Street opposite Emblen Street | Eastbound | 931 | Two (2) services daily |
| | | S134, S136, S197 | One (1) service daily |
| Edward Street before Docker Street | Eastbound | 963 | Hourly |
| Edward Street opposite Wagga Wagga Hospital | Eastbound | 922, 924, 930, 931, 961, 962, 963, 998 | Half hourly |
| | | S130, S140, S141, S197 | One (1) service daily |
| Wagga Wagga Base Hospital, Edward Street | Westbound | 922, 931, 961, 962, 963, 998 | Half hourly |
| | | S130, S140, S141, S197 | One (1) service daily |

### *Parking Facilities*

Details of parking facilities along Edward Street / Sturt Highway, proximate the Pearson Stret Bridge enhancement site is detailed in Table 5 below.

**TABLE 5: PARKING FACILITIES – EDWARD STREET / STURT HIGHWAY**

| Location | Parking | Time of day restriction |
|---|---|---|
| Edward Street / Sturt Highway | Kerbside parking | No restrictions |

## Pearson Street

### *Traffic and Lane Configurations*

The following table details the typical traffic and lane configurations of Pearson Street, proximate the Pearson Street Bridge enhancement site.

**TABLE 6: TRAFFIC AND LANE CONFIGURATIONS – PEARSON STREET**

| Road name | Road hierarchy | Road Configuration | Lane Configuration | Speed Limit | AADT |
|---|---|---|---|---|---|
| Pearson Street | Local road | Two-lane, two-way | ~3.3m wide lanes | 60km/hr | 9,814, 5% HV (2021)[1] |

1 10-hour (am to 10am and 2pm to 7pm) traffic survey volumes


**FIGURE 2: PEARSON STREET (SOURCE: *GOOGLE MAPS)***

### *Pedestrian and Cyclist Facilities*

The following table provides a review of pedestrian and cyclist provisions along Pearson Street, proximate the Pearson Street Bridge enhancement site.

**TABLE 7: PEDESTRIAN AND CYCLIST FACILITIES – PEARSON STREET**

| Provisions | Comment |
|---|---|
| Are footpaths provided on one or both sides of the road? | No |
| If yes, what is the width of the footpath(s)? | - |
| Does the road currently form part of a Principal Cycle Network? | No |
| Are designated on-road cycle lanes provided? | No |
| Is the road designated as a Bicycle Awareness Zone (BAZ)? | No |

### *Public Transport Facilities*

Details of public transport facilities and services operating along Pearson Street, proximate the Pearson Street Bridge enhancement site is detailed in Table 8 below.

**TABLE 8: PUBLIC TRANSPORT FACILITIES – PEARSON STREET**

| Bus stop ID | Direction | Services | Service frequency |
|---|---|---|---|
| Pearson St before Edward Street | Northbound | 931 | Two (2) services daily |
| Pearson Street before Dobney Avenue | Southbound | 931 | Two (2) services daily |
| Dobney Ave before Pearson Street | Northbound | 963 | Hourly |

### *Parking Facilities*

Details of parking facilities along Pearson Street, proximate the Pearson Street Bridge enhancement site are detailed in Table 9 below.

**TABLE 9: PARKING FACILITIES – PEARSON STREET**

| Location | Parking | Time of day restriction |
|---|---|---|
| Pearson Street | Kerbside parking | Areas of 1P (one-hour parking) parking restrictions north of Dobney Avenue |

## Cheshire Street

### *Traffic and Lane Configurations*

The following table details the typical traffic and lane configurations of Cheshire Street, proximate the Pearson Street Bridge enhancement site.

**TABLE 10: TRAFFIC AND LANE CONFIGURATIONS – CHESHIRE STREET**

| Road name | Road hierarchy | Road Configuration | Lane Configuration | Speed Limit | AADT |
|---|---|---|---|---|---|
| Cheshire Street | Local road | Two-lane, two-way | ~12.2m wide carriageway | 50km/hr | 491, 5% HV (2021)[1] |

1 No data available – volumes estimated as 5% of Pearson Street 1-hour with equivalent HV proportion


**FIGURE 3: CHESHIRE STREET (SOURCE: *GOOGLE MAPS)***

***Pedestrian and Cyclist Facilities***

The following table provides a review of pedestrian and cyclist provisions along Cheshire Street, proximate the Pearson Street Bridge enhancement site.

**TABLE 11: PEDESTRIAN AND CYCLIST FACILITIES – CHESHIRE STREET**

| Provisions | Comment |
|---|---|
| Are footpaths provided on one or both sides of the road? | No |
| If yes, what is the width of the footpath(s)? | - |
| Does the road currently form part of a Principal Cycle Network? | No |
| Are designated on-road cycle lanes provided? | No |
| Is the road designated as a Bicycle Awareness Zone (BAZ)? | No |

***Public Transport Facilities***

Details of public transport facilities and services operating along Cheshire Street, proximate the Pearson Street enhancement site is detailed in Table 12 below.

**TABLE 12: PUBLIC TRANSPORT FACILITIES – CHESHIRE STREET**

| Bus stop ID | Direction | Services | Service frequency |
|---|---|---|---|
| There are no public transport facilities, nor do any public transport services operate along Cheshire Street. | | | |

### *Parking Facilities*

Details of parking facilities along Cheshire Street, proximate the Pearson Street Bridge enhancement site is detailed in Table 13 below.

**TABLE 13: PARKING FACILITIES – CHESHIRE STREET**

| Location | Parking | Time of day restriction |
|---|---|---|
| Cheshire Street | Kerbside parking | No restrictions |

## Urana Street

### *Traffic and Lane Configurations*

The following table details the typical traffic and lane configurations of Urana Street, proximate the Pearson Street Bridge enhancement site.

**TABLE 14: TRAFFIC AND LANE CONFIGURATIONS – URANA STREET**

| Road name | Road hierarchy | Road Configuration | Lane Configuration | Speed Limit | AADT |
|---|---|---|---|---|---|
| Urana Street | Local road | Two-lane, two-way | ~8.8m wide carriageway | 50km/hr | 4,758, 2% HV (2021)[1] |

1 10-hour (5am to 10am and 2pm to 7pm) traffic survey volumes


**FIGURE 4: URANA STREET (SOURCE: *GOOGLE MAPS)***

***Pedestrian and Cyclist Facilities***

The following table provides a review of pedestrian and cyclist provisions along Urana Street, proximate the Pearson Street Bridge enhancement site.

**TABLE 15: PEDESTRIAN AND CYCLIST FACILITIES – URANA STREET**

| Provisions | Comment |
|---|---|
| Are footpaths provided on one or both sides of the road? | No |
| If yes, what is the width of the footpath(s)? | - |
| Does the road currently form part of a Principal Cycle Network? | No |
| Are designated on-road cycle lanes provided? | No |
| Is the road designated as a Bicycle Awareness Zone (BAZ)? | No |

***Public Transport Facilities***

Details of public transport facilities and services operating along Urana Street, proximate the Pearson Street Bridge enhancement site is detailed in Table 16 below.

**TABLE 16: PUBLIC TRANSPORT FACILITIES – URANA STREET**

| Bus stop ID | Direction | Services | Service frequency |
|---|---|---|---|
| There are no public transport facilities, nor do any public transport services operate along Urana Street. | | | |

***Parking Facilities***

Details of parking facilities along Urana Street, proximate the Pearson Street Bridge enhancement site is detailed in Table 17 below.

**TABLE 17: PARKING FACILITIES – URANA STREET**

| Location | Parking | Time of day restriction |
|---|---|---|
| Urana Street | Kerbside parking east of Peacock Drive | No restrictions |

## 2.2.2 Key Intersections

### Overview

The following table provides an overview of key intersections proximate the Pearson Street Bridge enhancement site proposed to support the Stage A construction activities.

**TABLE 18: KEY INTERSECTIONS – PEARSON STREET BRIDGE ENHANCEMENT SITE**

| Intersection number | Intersection | Control |
|---|---|---|
| 1 | Pearson Street / Edward Street | Priority-controlled (roundabout) |
| 2 | Pearson Street / Urana Street | Priority-controlled (roundabout) |


**FIGURE 5: KEY INTERSECTIONS LOCATION**

## Olympic Highway / Sturt Highway / Pearson Street

### *Background Traffic Volumes*

Background traffic volumes at the Olympic Highway / Sturt Highway / Pearson Street intersection have been obtained from 12-hour traffic surveys undertaken by *Matrix Traffic and Transport Data* on Thursday 8th June 2023. The morning (AM) and afternoon (PM) peak periods for the intersection was determined to be between 8:00am – 9:00am and between 3:30pm – 4:30pm. Recorded traffic volumes during the peak period are presented in Table 19.

**TABLE 19: BACKGROUND TRAFFIC VOLUMES – OLYMPIC HIGHWAY / STURT STREET / PEARSON STREET**

| Intersection approach | AM peak volume (8:00am – 9:00am) | PM peak volume (3:30pm – 4:30pm) | Daily Volumes |
|---|---|---|---|
| **Olympic Highway (west)** | | | |
| Left (onto Olympic Highway) | 216 | 141 | 1,445 |
| Through (onto Sturt Highway) | 294 | 243 | 2,617 |
| Right (onto Pearson Street) | 19 | 3 | 158 |
| U-turn (onto Olympic Highway) | 0 | 0 | 2 |
| **Olympic Highway / Moorong Street (north)** | | | |
| Left (onto Sturt Highway) | 290 | 227 | 2,515 |
| Through (onto Pearson Street) | 475 | 552 | 4,722 |
| Right (onto Olympic Highway) | 126 | 150 | 1,361 |

| Intersection approach | AM peak volume (8:00am – 9:00am) | PM peak volume (3:30pm – 4:30pm) | Daily Volumes |
|---|---|---|---|
| U-turn (onto Olympic Highway / Moorong Street) | 0 | 0 | 1 |
| **Sturt Highway (east)** | | | |
| Left (onto Pearson Street) | 89 | 117 | 1,230 |
| Through (onto Olympic Highway) | 167 | 314 | 2,536 |
| Right (onto Olympic Highway / Moorong Street) | 175 | 316 | 2,250 |
| U-turn (onto Sturt Highway) | 28 | 49 | 401 |
| **Pearson Street (south)** | | | |
| Left (onto Olympic Highway) | 28 | 52 | 443 |
| Through (onto Olympic Highway / Moorong Street) | 649 | 508 | 4,829 |
| Right (onto Sturt Highway) | 273 | 212 | 2,366 |
| U-turn (onto Pearson Street) | 6 | 4 | 85 |

***Background Intersection Performance***

An intersection delay and LOS analysis was completed by WSP as part of Appendix D *Addendum to Technical Paper 1: Traffic and Transport.* The LOS criteria adopted for assessing intersection performance is shown below.

**TABLE 20: LEVEL OF SERVICE CRITERIA**

| Level of service | Average delay per vehicle (secs/veh) |
|---|---|
| A | <14 |
| B | 15 to 28 |
| C | 29 to 42 |
| D | 53 to 56 |
| E | 57 to 70 |

The results of the WSP assessment are presented below for the “2024 Base” scenarios (AM peak, midday peak and PM peak).

**TABLE 21: INTERSECTION DELAY AND LOS ANALYSIS - OLYMPIC HIGHWAY / STURT STREET / PEARSON STREET**

| Intersection | 2024 Base (AM Peak) | | 2024 Base (Midday Peak) | | 2024 Base (PM Peak) | |
|---|---|---|---|---|---|---|
| | Delay (sec.) | LOS | Delay (sec.) | LOS | Delay (sec.) | LOS |
| Olympic Highway / Sturt Highway / Pearson Street | 8 | A | 4 | A | 8 | A |

## Pearson Street / Urana Street / Glenfield Road

### *Background Traffic Volumes*

Background traffic volumes at the Pearson Street / Urana Street / Glenfield Road intersection have been obtained from 12-hour traffic surveys undertaken by *Matrix Traffic and Transport Data* on Thursday 8th June 2023. The morning (AM) and afternoon (PM) peak periods for the intersection was determined to be between 8:00am – 9:00am and between 3:30pm – 4:30pm. Recorded traffic volumes during the peak period are presented in Table 22.

**TABLE 22: BACKGROUND TRAFFIC VOLUMES - PEARSON STREET / URANA STREET / GLENFIELD ROAD**

| Intersection approach | AM peak volume (8:00am – 9:00am) | PM peak volume (3:30pm – 4:30pm) | Daily Volumes |
|---|---|---|---|
| **Pearson Street (north)** | | | |
| Left (onto Urana Street | 171 | 184 | 1,302 |
| Through (onto Glenfield Road | 428 | 784 | 6,333 |
| U-turn (onto Pearson Street) | 2 | 6 | 35 |
| **Urana Street (east)** | | | |
| Left (onto Glenfield Road) | 121 | 238 | 1,692 |
| Right (onto Pearson Street) | 181 | 106 | 939 |
| U-turn (Urana Street) | 0 | 0 | 2 |
| **Glenfield Road (south)** | | | |
| Through (onto Pearson Street) | 701 | 475 | 5,639 |
| Right (Urana Street) | 288 | 193 | 2,047 |
| U-turn (onto Glenfield Road) | 5 | 2 | 31 |

### *Background Intersection Performance*

An intersection delay and LOS analysis was completed by WSP as part of Appendix D *Addendum to Technical Paper 1: Traffic and Transport.* The LOS criteria adopted for assessing intersection performance is shown below.

**TABLE 23: LEVEL OF SERVICE CRITERIA**

| Level of service | Average delay per vehicle (secs/veh) |
|---|---|
| A | <14 |
| B | 15 to 28 |
| C | 29 to 42 |
| D | 53 to 56 |
| E | 57 to 70 |

The results of the WSP assessment are presented below for the “2024 Base” scenarios (AM peak, midday peak and PM peak).

**TABLE 24: INTERSECTION DELAY AND LOS ANALYSIS - PEARSON STREET / URANA STREET / GLENFIELD ROAD**

| Intersection | 2024 Base (AM Peak) | | 2024 Base (Midday Peak) | | 2024 Base (PM Peak) | |
|---|---|---|---|---|---|---|
| | Delay (sec.) | LOS | Delay (sec.) | LOS | Delay (sec.) | LOS |
| Pearson Street / Urana Street / Glenfield Road | 17 | B | 6 | A | 56 | D |

## 2.3 Wagga Wagga Station and Surrounds

### 2.3.1 Key Roads

#### Edward Street / Sturt Highway

***Traffic and Lane Configurations***

The following table details the typical traffic and lane configurations of Edward Street / Sturt Highway, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 25: TRAFFIC AND LANE CONFIGURATIONS – EDWARD STREET / STURT HIGHWAY**

| Road name | Road hierarchy | Road Configuration | Lane Configuration | Speed Limit | AADT |
|---|---|---|---|---|---|
| Edward Street / Sturt Highway | State-controlled road | Two-lane, two-way | ~3.4m wide lanes | 60km/hr | 12,151, 8% HV (2021)[1] |

1 10-hour (5am to 10am and 2pm to 7pm) traffic survey volumes


**FIGURE 6: EDWARD STREET / STURT HIGHWAY (SOURCE: *GOOGLE MAPS)***

### *Pedestrian and Cyclist Facilities*

The following table provides a review of pedestrian and cyclist provisions along Edward Street / Sturt Highway, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 26: PEDESTRIAN AND CYCLIST FACILITIES – EDWARD STREET / STURT HIGHWAY**

| Provisions | Comment |
|---|---|
| Are footpaths provided on one or both sides of the road? | Footpaths are generally provided along both sides of Edward Street / Sturt Highway |
| If yes, what is the width of the footpath(s)? | ~1.2m wide |
| Does the road currently form part of a Principal Cycle Network? | No |
| Are designated on-road cycle lanes provided? | No |
| Is the road designated as a Bicycle Awareness Zone (BAZ)? | No |

### *Public Transport Facilities*

Details of public transport facilities and services operating along Edward Street / Sturt Highway, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 27 below.

**TABLE 27: PUBLIC TRANSPORT FACILITIES – EDWARD STREET / STURT HIGHWAY**

| Bus stop ID | Direction | Services | Service frequency |
|---|---|---|---|
| Edward Street opposite Wagga Wagga Hospital | Eastbound | 922, 924, 930, 931, 961, 962, 963, 998 | Half hourly |
| | | S130, S140, S141, S197 | One (1) service daily |
| Wagga Wagga Base Hospital, Edward St | Westbound | 922, 931, 961, 962, 963, 998 | Half hourly |
| | | S130, S140, S141, S197 | One (1) service daily |
| Edward St opposite Yanda Lane | Westbound | 931, 962, 963 | Half hourly |
| | | S103, S123, S130, S179, S197 | One (1) service daily |
| Edward St at Yanda Lane | Eastbound | 931, 961 | Half hourly |
| | | S103, S123, S130, S179, S197 | One (1) service daily |
| South Wagga Public School, Edward St | Westbound | 922, 931, 961, 962, 963, 969 | Half hourly |
| | | S105, S143, S144, S164, S172, S185, S187, S188, S191, S196, S203, S215, S216, S227, S248, S251 | One (1) service daily |
| | Eastbound | 931, 969 | Half hourly |

| | | | |
|---|---|---|---|
| Edward St opposite South Wagga Public School | | S105, S143, S144, S164, S172, S185, S187, S188, S191, S196, S203, S215, S216, S227, S248, S251 | One (1) service daily |

### *Parking Facilities*

Details of parking facilities along Edward Street / Sturt Highway, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 28 below.

**TABLE 28: PARKING FACILITIES – EDWARD STREET / STURT HIGHWAY**

| Location | Parking | Time of day restriction |
|---|---|---|
| Edward Street / Sturt Highway | Kerbside parking west of Edmondson Street | No restrictions |

## Murray Street

### *Traffic and Lane Configurations*

The following table details the typical traffic and lane configurations of Murray Street, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 29: TRAFFIC AND LANE CONFIGURATIONS – MURRAY STREET**

| Road name | Road hierarchy | Road Configuration | Lane Configuration | Speed Limit | AADT |
|---|---|---|---|---|---|
| Murray Street | Local road | Two-lane, two-way | ~18.5m wide carriageway | 50km/hr | 1,215, 8% HV (2021)[1] |

1 No data available, volumes estimated as 10% of Edward Street 10-hour with equivalent HV proportion


**FIGURE 7: MURRAY STREET (SOURCE: *GOODLE MAPS)***

### *Pedestrian and Cyclist Facilities*

The following table provides a review of pedestrian and cyclist provisions along Murray Street, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 30: PEDESTRIAN AND CYCLIST FACILITIES – MURRAY STREET**

| Provisions | Comment |
|---|---|
| Are footpaths provided on one or both sides of the road? | Footpaths are generally provided along both sides of Murray Street. |
| If yes, what is the width of the footpath(s)? | ~2.5m wide |
| Does the road currently form part of a Principal Cycle Network? | No |
| Are designated on-road cycle lanes provided? | Yes |
| Is the road designated as a Bicycle Awareness Zone (BAZ)? | No |

### *Public Transport Facilities*

Details of public transport facilities and services operating along Murray Street, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 31 below.

**TABLE 31: PUBLIC TRANSPORT FACILITIES – MURRAY STREET**

| Bus stop ID | Direction | Services | Service frequency |
|---|---|---|---|
| There are no public transport facilities, nor do any public transport services operate along Murray Street. | | | |

### *Parking Facilities*

Details of parking facilities along Murray Street, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 32 below.

**TABLE 32: PARKING FACILITIES – MURRAY STREET**

| Location | Parking | Time of day restriction |
|---|---|---|
| Murray Street | Kerbside parking | No restrictions |

## Brookong Avenue

### *Traffic and Lane Configurations*

The following table details the typical traffic and lane configurations of Brookong Avenue, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 33: TRAFFIC AND LANE CONFIGURATIONS – BROOKONG AVENUE**

| Road name | Road hierarchy | Road Configuration | Lane Configuration | Speed Limit | AADT |
|---|---|---|---|---|---|
| Brookong Avenue | Local road | Two-lane, two-way | ~3.9m wide lanes | 50km/hr | 1,215, 8% HV (2021)[1] |

1 No data available, volumes estimated as 10% of Edward Street 10-hour with equivalent HV proportion


**FIGURE 8: BROOKONG AVENUE (SOURCE: *GOOGLE MAPS)***

***Pedestrian and Cyclist Facilities***

The following table provides a review of pedestrian and cyclist provisions along Brookong Avenue, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 34: PEDESTRIAN AND CYCLIST FACILITIES – BROOKONG AVENUE**

| Provisions | Comment |
|---|---|
| Are footpaths provided on one or both sides of the road? | Footpaths are generally provided along both sides of Brookong Avenue |
| If yes, what is the width of the footpath(s)? | ~1.2m wide |
| Does the road currently form part of a Principal Cycle Network? | No |
| Are designated on-road cycle lanes provided? | Yes |
| Is the road designated as a Bicycle Awareness Zone (BAZ)? | No |

***Public Transport Facilities***

Details of public transport facilities and services operating along Brookong Avenue, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 35 below.

**TABLE 35: PUBLIC TRANSPORT FACILITIES – BROOKONG AVENUE**

| Bus stop ID | Direction | Services | Service frequency |
|---|---|---|---|
| There are no public transport facilities, nor do any public transport services operate along Brookong Avenue. | | | |

### *Parking Facilities*

Details of parking facilities along Brookong Avenue, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 36 below.

**TABLE 36: PARKING FACILITIES – BROOKONG AVENUE**

| Location | Parking | Time of day restriction |
|---|---|---|
| Brookong Avenue | Kerbside parking | No restrictions |

## Fox Street

### *Traffic and Lane Configurations*

The following table details the typical traffic and lane configurations of Fox Street proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 37: TRAFFIC AND LANE CONFIGURATIONS – FOX STREET**

| Road name | Road hierarchy | Road Configuration | Lane Configuration | Speed Limit | AADT |
|---|---|---|---|---|---|
| Fox Street | Local road | Two-lane, two-way | ~17.9m wide carriageway | 50km/hr | 332, 3% HV (2021)[1] |


**FIGURE 9: FOX STREET (SOURCE: *GOOGLE MAPS)***

### *Pedestrian and Cyclist Facilities*

The following table provides a review of pedestrian and cyclist provisions along Fox Street, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 38: PEDESTRIAN AND CYCLIST FACILITIES – FOX STREET**

| Provisions | Comment |
|---|---|
| Are footpaths provided on one or both sides of the road? | Footpaths are generally provided along both sides of Fox Street |
| If yes, what is the width of the footpath(s)? | ~1.2m wide |
| Does the road currently form part of a Principal Cycle Network? | No |
| Are designated on-road cycle lanes provided? | No |
| Is the road designated as a Bicycle Awareness Zone (BAZ)? | No |

### *Public Transport Facilities*

Details of public transport facilities and services operating along Fox Street, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 39 below.

**TABLE 39: PUBLIC TRANSPORT FACILITIES – FOX STREET**

| Bus stop ID | Direction | Services | Service frequency |
|---|---|---|---|
| There are no public transport facilities, nor do any public transport services operate along Fox Street. | | | |

### *Parking Facilities*

Details of parking facilities along Fox Street, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 40 below.

**TABLE 40: PARKING FACILITIES – FOX STREET**

| Location | Parking | Time of day restriction |
|---|---|---|
| Fox Street | Kerbside parking | No restrictions |

## Donnelly Avenue

### *Traffic and Lane Configurations*

The following table details the typical traffic and lane configurations of Donnelly Avenue proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 41: TRAFFIC AND LANE CONFIGURATIONS – DONNELLY AVENUE**

| Road name | Road hierarchy | Road Configuration | Lane Configuration | Speed Limit | AADT |
|---|---|---|---|---|---|
| Donnelly Avenue | Local road | Two-lane, two-way | ~6.5m wide carriageway | 50km/hr | No data available |


**FIGURE 10: DONNELLY AVENUE (SOURCE: *GOOGLE MAPS)***

***Pedestrian and Cyclist Facilities***

The following table provides a review of pedestrian and cyclist provisions along Donnelly Avenue, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 42: PEDESTRIAN AND CYCLIST FACILITIES – DONNELLY AVENUE**

| Provisions | Comment |
|---|---|
| Are footpaths provided on one or both sides of the road? | A footpath is provided along the northern side of Donnelly Avenue |
| If yes, what is the width of the footpath(s)? | ~1.2m wide |
| Does the road currently form part of a Principal Cycle Network? | No |
| Are designated on-road cycle lanes provided? | No |
| Is the road designated as a Bicycle Awareness Zone (BAZ)? | No |

***Public Transport Facilities***

Details of public transport facilities and services operating along Donnelly Avenue, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 43 below.

**TABLE 43: PUBLIC TRANSPORT FACILITIES – DONNELLY AVENUE**

| Bus stop ID | Direction | Services | Service frequency |
|---|---|---|---|
| There are no public transport facilities, nor do any public transport services operate along Donnelly Avenue | | | |

### *Parking Facilities*

Details of parking facilities along Donnelly Avenue, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 44 below.

**TABLE 44: PARKING FACILITIES – DONNELLY AVENUE**

| Location | Parking | Time of day restriction |
|---|---|---|
| Donnelly Avenue | Kerbside parking | No restrictions |

## Little Best Street

### *Traffic and Lane Configurations*

The following table details the typical traffic and lane configurations of Little Best Street, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 45: TRAFFIC AND LANE CONFIGURATIONS – LITTLE BEST STREET**

| Road name | Road hierarchy | Road Configuration | Lane Configuration | Speed Limit | AADT |
|---|---|---|---|---|---|
| Little Best Street | Local road | One-lane, one-way | ~6.5m wide carriageway | 50km/hr | No data available |


**FIGURE 11: LITTLE BEST STREET (SOURCE: *GOOGLE MAPS*)**

### *Pedestrian and Cyclist Facilities*

The following table provides a review of pedestrian and cyclist provisions along Little Best Street, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 46: PEDESTRIAN AND CYCLIST FACILITIES – LITTLE BEST STREET**

| Provisions | Comment |
|---|---|
| Are footpaths provided on one or both sides of the road? | A footpath is provided along the western side of Little Best Street |
| If yes, what is the width of the footpath(s)? | ~1.2m wide |
| Does the road currently form part of a Principal Cycle Network? | No |
| Are designated on-road cycle lanes provided? | No |
| Is the road designated as a Bicycle Awareness Zone (BAZ)? | No |

### *Public Transport Facilities*

Details of public transport facilities and services operating along Little Best Street, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 47 below.

**TABLE 47: PUBLIC TRANSPORT FACILITIES – LITTLE BEST STREET**

| Bus stop ID | Direction | Services | Service frequency |
|---|---|---|---|
| There are no public transport facilities, nor do any public transport services operate along Little Best Street. | | | |

### *Parking Facilities*

Details of parking facilities along Little Best Street, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 48 below.

**TABLE 48: PARKING FACILITIES – LITTLE BEST STREET**

| Location | Parking | Time of day restriction |
|---|---|---|
| Donnelly Avenue | Kerbside parking | No restrictions |

## Edmondson Street

### *Traffic and Lane Configurations*

The following table details the typical traffic and lane configurations of Edmondson Street, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 49: TRAFFIC AND LANE CONFIGURATIONS – EDMONDSON STREET**

| Road name | Road hierarchy | Road Configuration | Lane Configuration | Speed Limit | AADT |
|---|---|---|---|---|---|
| Edmondson Street | Local road | Two-lane, two-way | ~3.1m wide lanes | 50km/hr (40km/hr school zones) | 10,448, 2% HV (2021)[1] |

1 10-hour (5am to 10am and 2pm to 7pm) traffic survey volumes


**FIGURE 12: EDMONDSON STREET (SOURCE: *GOOGLE MAPS)***

***Pedestrian and Cyclist Facilities***

The following table provides a review of pedestrian and cyclist provisions along Edmondson Street, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 50: PEDESTRIAN AND CYCLIST FACILITIES – EDMONDSON STREET**

| Provisions | Comment |
|---|---|
| Are footpaths provided on one or both sides of the road? | Footpaths are generally provided along both sides of Edmondson Street |
| If yes, what is the width of the footpath(s)? | ~1.2m wide |
| Does the road currently form part of a Principal Cycle Network? | No |
| Are designated on-road cycle lanes provided? | No |
| Is the road designated as a Bicycle Awareness Zone (BAZ)? | No |

***Public Transport Facilities***

Details of public transport facilities and services operating along Edmondson Street, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 51 below.

**TABLE 51: PUBLIC TRANSPORT FACILITIES – EDMONDSON STREET**

| Bus stop ID | Direction | Services | Service frequency |
|---|---|---|---|
| Kildare Catholic College, Edmondson Street | Northbound | 921, 930, 931, 969 | Half hourly |
| | | S100, S103, S112, S122, S123, S124, S126, S129, S130, S134, S144, S148, S149, S150, S155, S159, SS162, S167, S171, S172, S173, S174, S179, S185, | One (1) service daily |

| | | | |
|---|---|---|---|
| | | S187, S188, S191, S196, S197, S199, S203, S210, S211, S215, S216, S243, S250 | |
| Edmondson Street opposite Kildare Catholic College | Southbound | 921, 930, 969 | Half hourly |
| | | S100, S103, S112, S122, S123, S124, S126, S129, S130, S134, S144, S148, S149, S150, S155, S159, SS162, S167, S171, S172, S173, S174, S179, S185, S187, S188, S191, S196, S197, S199, S203, S210, S211, S215, S216, S243, S250 | One (1) service daily |

***Parking Facilities***

Details of parking facilities along Edmondson Street, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 52 below.

**TABLE 52: PARKING FACILITIES – EDMONDSON STREET**

| Location | Parking | Time of day restriction |
|---|---|---|
| Edmondson Street | Kerbside parking south of Erin Street | School bus zones, 8am – 9:30am, 3:00pm – 4:00pm school days |

## Erin Street

***Traffic and Lane Configurations***

The following table details the typical traffic and lane configurations of Erin Street, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 53: TRAFFIC AND LANE CONFIGURATIONS – ERIN STREET**

| Road name | Road hierarchy | Road Configuration | Lane Configuration | Speed Limit | AADT |
|---|---|---|---|---|---|
| Erin Street | Local road | Two-lane, two-way | ~12m wide carriageway | 50km/hr | 476, 2% HV (2021)[1] |

1 No data available, volumes estimated as 10% Urana Street 10-hour with equivalent HV proportions


**FIGURE 13: ERIN STREET (SOURCE: *GOOGLE MAPS)***

***Pedestrian and Cyclist Facilities***

The following table provides a review of pedestrian and cyclist provisions along Erin Street, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 54: PEDESTRIAN AND CYCLIST FACILITIES – ERIN STREET**

| Provisions | Comment |
|---|---|
| Are footpaths provided on one or both sides of the road? | Footpaths are generally provided along both sides of Erin Street |
| If yes, what is the width of the footpath(s)? | ~1.2m wide |
| Does the road currently form part of a Principal Cycle Network? | No |
| Are designated on-road cycle lanes provided? | No |
| Is the road designated as a Bicycle Awareness Zone (BAZ)? | No |

***Public Transport Facilities***

Details of public transport facilities and services operating along Erin Street, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 55 below.

**TABLE 55: PUBLIC TRANSPORT FACILITIES – ERIN STREET**

| Bus stop ID | Direction | Services | Service frequency |
|---|---|---|---|
| There is no bus stops located along Erin Street, proximate the Wagga Wagga and Surrounds enhancement sites, however services operate along Mitchelmore Street | Eastbound and westbound | S138, S151, S155, S196 | One (1) service daily |

### *Parking Facilities*

Details of parking facilities along Erin Street, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 56 below.

**TABLE 56: PARKING FACILITIES – ERIN STREET**

| Location | Parking | Time of day restriction |
|---|---|---|
| Erin Street | Kerbside parking | No restrictions |

## McLeay Street

### *Traffic and Lane Configurations*

The following table details the typical traffic and lane configurations of MacLeay Street, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 57: TRAFFIC AND LANE CONFIGURATIONS – MACLEAY STREET**

| Road name | Road hierarchy | Road Configuration | Lane Configuration | Speed Limit | AADT |
|---|---|---|---|---|---|
| MacLeay Street | Local road | Two-lane, two-way | ~21m wide carriageway | 50km/hr | 3,230, 9% HV (2020)[1] |

1 No data available, volumes estimated as Railway Street with equivalent HV proportion


**FIGURE 14: MACLEAY STREET (SOURCE: *GOOGLE MAPS)***

### *Pedestrian and Cyclist Facilities*

The following table provides a review of pedestrian and cyclist provisions along Macleay Street, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 58: PEDESTRIAN AND CYCLIST FACILITIES – MACLEAY STREET**

| Provisions | Comment |
|---|---|
| Are footpaths provided on one or both sides of the road? | Footpaths are generally provided along both sides of MacLeay Street |
| If yes, what is the width of the footpath(s)? | ~1.2m wide |
| Does the road currently form part of a Principal Cycle Network? | No |
| Are designated on-road cycle lanes provided? | No |
| Is the road designated as a Bicycle Awareness Zone (BAZ)? | No |

### *Public Transport Facilities*

Details of public transport facilities and services operating along MacLeay Street, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 59below.

**TABLE 59: PUBLIC TRANSPORT FACILITIES – MACLEAY STREET**

| Bus stop ID | Direction | Services | Service frequency |
|---|---|---|---|
| Wagga Wagga High School, Macleay Street | Northbound | 930, 965, 969 | Hourly |
| | | S122, S123, S126, S129, S134, S138, S149, S155, S159, S160, S171, S179, S185, S187, S196, S199, S202, S203, S210, S216, S227, S248 | One (1) service daily |
| There are no public transport facilities located along the southbound carriageway | Southbound | 969 | Hourly |

### *Parking Facilities*

Details of parking facilities along MacLeay Street, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 60 below.

**TABLE 60: PARKING FACILITIES – MACLEAY STREET**

| Location | Parking | Time of day restriction |
|---|---|---|
| MacLeay Street | Kerbside parking | No restrictions |

## Railway Street

### *Traffic and Lane Configurations*

The following table details the typical traffic and lane configurations of Railway Street, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 61: TRAFFIC AND LANE CONFIGURATIONS – RAILWAY STREET**

| Road name | Road hierarchy | Road Configuration | Lane Configuration | Speed Limit | AADT |
|---|---|---|---|---|---|
| Railway Street | Local road | Two-lane, two-way | ~12m wide carriageway | 50km/hr | 3,230, 9% HV (2020)[1] |

1 Railway Street between Lake Albert Road and Beauty Point


**FIGURE 15: RAILWAY STREET (SOURCE: *GOOGLE MAPS)***

### *Pedestrian and Cyclist Facilities*

The following table provides a review of pedestrian and cyclist provisions along Railway Street, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 62: PEDESTRIAN AND CYCLIST FACILITIES – RAILWAY STREET**

| Provisions | Comment |
|---|---|
| Are footpaths provided on one or both sides of the road? | Footpaths are generally provided along both sides of Railway Street |
| If yes, what is the width of the footpath(s)? | ~1.2m wide |
| Does the road currently form part of a Principal Cycle Network? | No |
| Are designated on-road cycle lanes provided? | No |
| Is the road designated as a Bicycle Awareness Zone (BAZ)? | No |

### *Public Transport Facilities*

Details of public transport facilities and services operating along Railway Street, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 63 below.

**TABLE 63: PUBLIC TRANSPORT FACILITIES – RAILWAY STREET**

| Bus stop ID | Direction | Services | Service frequency |
|---|---|---|---|
| Railway Street at Collins Street | Westbound | 969 | Hourly |
| | | S103, S109, S121, S126, S130, S143, S148, S151, S155, S162, S163, S174, S188, S190 | One (1) service daily |

### *Parking Facilities*

Details of parking facilities along Railway Street, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 64 below.

**TABLE 64: PARKING FACILITIES – RAILWAY STREET**

| Location | Parking | Time of day restriction |
|---|---|---|
| Railway Street | Kerbside parking | Areas of restricted parking, 8:00am – 9:30am, 2:30pm – 4:00pm school days |

## Station Place

### *Traffic and Lane Configurations*

The following table details the typical traffic and lane configurations of Station Place, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 65: TRAFFIC AND LANE CONFIGURATIONS – STATION PLACE**

| Road name | Road hierarchy | Road Configuration | Lane Configuration | Speed Limit | AADT |
|---|---|---|---|---|---|
| Station Place | Local road | Two-lane, two-way | ~3.4m wide lanes | 50km/hr | 472, 3% HV (2021)[1] |

1 No data available, volumes estimated as Smollett Street, Albury 10-hour with equivalent HV proportion


**FIGURE 16: STATION PLACE (SOURCE: *GOOGLE MAPS)***

***Pedestrian and Cyclist Facilities***

The following table provides a review of pedestrian and cyclist provisions along Station Place, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 66: PEDESTRIAN AND CYCLIST FACILITIES – STATION PLACE**

| Provisions | Comment |
|---|---|
| Are footpaths provided on one or both sides of the road? | Footpaths are generally provided along both sides of Railway Street between Edward Street and the carpark loop. A footpath is provided along one side of Station Place around the carpark loop. |
| If yes, what is the width of the footpath(s)? | ~1.2m to 3.5m wide. |
| Does the road currently form part of a Principal Cycle Network? | No |
| Are designated on-road cycle lanes provided? | No |
| Is the road designated as a Bicycle Awareness Zone (BAZ)? | No |

***Public Transport Facilities***

Details of public transport facilities and services operating along Station Place, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 67 below.

**TABLE 67: PUBLIC TRANSPORT FACILITIES – STATION PLACE**

| Bus stop ID | Direction | Services | Service frequency |
|---|---|---|---|
| Wagga Wagga Station | - | 998 | One (1) service daily |

In addition to the above, a number of coach services operate from Wagga Wagga Station.

### *Parking Facilities*

Details of parking facilities along Station Place, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 68 below.

**TABLE 68: PARKING FACILITIES – STATION PLACE**

| Location | Parking | Time of day restriction |
|---|---|---|
| Station Place | Short-term kerbside parking: 10 spaces | 1P (one-hour parking) on Station Place |
| | Public station off-street carpark: 47 spaces (including two (2) disabled parking spaces) | Unsigned |
| | Access to private off-street local business parking: quantity unknown | Unknown |
| | Long-distance coach parking: three (3) spaces | Unsigned |
| | Taxi zone: one (1) space | Unsigned |

## Lake Albert Road

### *Traffic and Lane Configurations*

The following table details the typical traffic and lane configurations of Lake Albert Road, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 69: TRAFFIC AND LANE CONFIGURATIONS – LAKE ALBERT ROAD**

| Road name | Road hierarchy | Road Configuration | Lane Configuration | Speed Limit | AADT |
|---|---|---|---|---|---|
| Lake Albert Road | Local road | Two-lane, two-way | ~3.3m wide lanes | 60km/hr | 14,477, 5% HV (2020)[1] |

1 Lake Albert Road between Hammond Avenue and Railway Street


**FIGURE 17: LAKE ALBERT ROAD (SOURCE: *GOOGLE MAPS)***

***Pedestrian and Cyclist Facilities***

The following table provides a review of pedestrian and cyclist provisions along Lake Albert Road, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 70: PEDESTRIAN AND CYCLIST FACILITIES – LAKE ALBERT ROAD**

| Provisions | Comment |
|---|---|
| Are footpaths provided on one or both sides of the road? | Footpaths are generally provided along both sides of Railway Street between Edward Street and the carpark loop. A footpath is provided along one side of Station Place around the carpark loop. |
| If yes, what is the width of the footpath(s)? | ~1.2m to 2m wide. |
| Does the road currently form part of a Principal Cycle Network? | No |
| Are designated on-road cycle lanes provided? | Yes |
| Is the road designated as a Bicycle Awareness Zone (BAZ)? | No |

### *Public Transport Facilities*

Details of public transport facilities and services operating along Lake Albert Road, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 71 below.

**TABLE 71: PUBLIC TRANSPORT FACILITIES – LAKE ALBERT ROAD**

| Bus stop ID | Direction | Services | Service frequency |
|---|---|---|---|
| Lake Albert Road after Hammond Avenue | Southbound | 960, 965 | Hourly |
| | | S102, S123, S174 | One (1) service daily |
| Lake Albert Road at Railway Street | Northbound | 960, 969 | Hourly |
| | | S117, S181 | One (1) service daily |

### *Parking Facilities*

Details of parking facilities along Lake Albert Road, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 72 below.

**TABLE 72: PARKING FACILITIES – LAKE ALBERT ROAD**

| Location | Parking | Time of day restriction |
|---|---|---|
| Station Place | No parking | - |

## Mitchelmore Street

### *Traffic and Lane Configurations*

The following table details the typical traffic and lane configurations of Mitchelmore Street, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 73: TRAFFIC AND LANE CONFIGURATIONS – MITCHELMORE STREET**

| Road name | Road hierarchy | Road Configuration | Lane Configuration | Speed Limit | AADT |
|---|---|---|---|---|---|
| Mitchelmore Street | Local road | Two-lane, two-way | ~3.1m wide lanes | 50km/hr (40km/hr school zones) | 8,044, 1% HV (2021)[1] |

1 10-hour (5am to 10am and 2pm to 7pm) traffic survey volumes


**FIGURE 18: MITCHELMORE STREET (SOURCE: *GOOGLE MAPS*)**

***Pedestrian and Cyclist Facilities***

The following table provides a review of pedestrian and cyclist provisions along Mitchelmore Street, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 74: PEDESTRIAN AND CYCLIST FACILITIES – MITCHELMORE STREET**

| Provisions | Comment |
|---|---|
| Are footpaths provided on one or both sides of the road? | Footpaths are generally provided along both sides of Mitchelmore Street |
| If yes, what is the width of the footpath(s)? | ~1.2m wide |
| Does the road currently form part of a Principal Cycle Network? | No |
| Are designated on-road cycle lanes provided? | No |
| Is the road designated as a Bicycle Awareness Zone (BAZ)? | No |

### *Public Transport Facilities*

Details of public transport facilities and services operating along Mitchelmore Street, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 75 below.

**TABLE 75: PUBLIC TRANSPORT FACILITIES – MITCHELMORE STREET**

| Bus stop ID | Direction | Services | Service frequency |
|---|---|---|---|
| There is no bus stops located along Mitchelmore Street, proximate the Wagga Wagga and Surrounds enhancement sites, however services operate along Mitchelmore Street | Northbound and southbound | 921, 930, 969 | Half hourly |

### *Parking Facilities*

Details of parking facilities along Mitchelmore Street, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 76 below.

**TABLE 76: PARKING FACILITIES – MITCHELMORE STREET**

| Location | Parking | Time of day restriction |
|---|---|---|
| Edmondson Street | Kerbside parking | No restrictions |

## Urana Street

### *Traffic and Lane Configurations*

The following table details the typical traffic and lane configurations of Urana Street, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 77: TRAFFIC AND LANE CONFIGURATIONS – URANA STREET**

| Road name | Road hierarchy | Road Configuration | Lane Configuration | Speed Limit | AADT |
|---|---|---|---|---|---|
| Urana Street | Local road | Two-lane, two-way | ~8.3m wide carriageway | 50km/hr | 4,758, 1% HV (2021)[1] |

1 10-hour (5am to 10am and 2pm to 7pm) traffic survey volumes


**FIGURE 19: URANA STREET (SOURCE: *GOOGLE MAPS)***

***Pedestrian and Cyclist Facilities***

The following table provides a review of pedestrian and cyclist provisions along Urana Street, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 78: PEDESTRIAN AND CYCLIST FACILITIES – URANA STREET**

| Provisions | Comment |
|---|---|
| Are footpaths provided on one or both sides of the road? | Footpaths are generally provided along both sides of Railway Street between Edward Street and the carpark loop. A footpath is provided along one side of Station Place around the carpark loop. |
| If yes, what is the width of the footpath(s)? | ~1.2m |
| Does the road currently form part of a Principal Cycle Network? | No |
| Are designated on-road cycle lanes provided? | No |
| Is the road designated as a Bicycle Awareness Zone (BAZ)? | No |

### *Public Transport Facilities*

Details of public transport facilities and services operating along Urana Street, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 79 below.

**TABLE 79: PUBLIC TRANSPORT FACILITIES – URANA STREET**

| Bus stop ID | Direction | Services | Service frequency |
|---|---|---|---|
| There are no public transport facilities, nor do any public transport services operate along Urana Street. | | | |

### *Parking Facilities*

Details of parking facilities along Urana Street, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 80 below.

**TABLE 80: PARKING FACILITIES – URANA STREET**

| Location | Parking | Time of day restriction |
|---|---|---|
| Urana Street | Kerbside parking east of Peacock Drive | No restrictions |

## Docker Street / Bourke Street

### *Traffic and Lane Configurations*

The following table details the typical traffic and lane configurations of Docker Street / Bourke Street, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 81: TRAFFIC AND LANE CONFIGURATIONS – DOCKER STREET / BOURKE STREET**

| Road name | Road hierarchy | Road Configuration | Lane Configuration | Speed Limit | AADT |
|---|---|---|---|---|---|
| Docker Street / Bourke Street | Local road | Two-lane, two-way | ~3.3m wide lanes | 50km/hr | 8,957, 2% HV (2021)[1] |

1 10-hour (5am to 10am and 2pm to 7pm) traffic survey volumes


**FIGURE 20: DOCKER STREET / BOURKE STREET (SOURCE: *GOOGLE MAPS)***

***Pedestrian and Cyclist Facilities***

The following table provides a review of pedestrian and cyclist provisions along Docker Street / Bourke Street, proximate the Wagga Wagga and Surrounds enhancement sites.

**TABLE 82: PEDESTRIAN AND CYCLIST FACILITIES – DOCKER STREET / BOURKE STREET**

| Provisions | Comment |
|---|---|
| Are footpaths provided on one or both sides of the road? | Footpaths are generally provided along both sides of Docker Street / Bourke Street |
| If yes, what is the width of the footpath(s)? | ~1.2m wide |
| Does the road currently form part of a Principal Cycle Network? | No |
| Are designated on-road cycle lanes provided? | No |
| Is the road designated as a Bicycle Awareness Zone (BAZ)? | No |

***Public Transport Facilities***

Details of public transport facilities and services operating along Docker Street / Bourke Street, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 83 below.

**TABLE 83: PUBLIC TRANSPORT FACILITIES – DOCKER STREET / BOURKE STREET**

| Bus stop ID | Direction | Services | Service frequency |
|---|---|---|---|
| Docker Street at Hardy Street | Northbound | 961, 962 | Half hourly |
| | | S125, S133, S140, S200 | One (1) service daily |
| Docker Street opposite Meurant Avenue | Southbound | 931, 961, 963 | Half hourly |
| | | S116, S127, S130, S136, S161 | One (1) service daily |

***Parking Facilities***

Details of parking facilities along Docker Street / Bourke Street, proximate the Wagga Wagga and Surrounds enhancement sites is detailed in Table 84 below.

**TABLE 84: PARKING FACILITIES – DOCKER STREET / BOURKE STREET**

| Location | Parking | Time of day restriction |
|---|---|---|
| Docker Street / Bourke Street | Kerbside parking west of Edmondson Street | 2P (two-hour parking) adjacent Wagga Wagga Base Hospital – 8:30am – 6pm Monday to Friday; 8:30am – 12:30pm |

## 2.3.2 Key Intersections

### Overview

The following table provides an overview of key intersections proximate the Wagga Wagga and Surrounds enhancement sites proposed to support the Stage A construction activities.

**TABLE 85: KEY INTERSECTIONS – WAGGA WAGGA AND SURROUNDS ENHANCEMENT SITE**

| Intersection number | Intersection | Control |
|---|---|---|
| 1 | Edward Street / Murray Street | Traffic signals |
| 2 | Edward Street / Fox Street | Traffic signals |
| 3 | Edward Street / Best Street | Traffic signals |
| 4 | Edward Street / Station Place / Bayliss Street | Traffic signals |
| 5 | Edward Street / Lake Albert Road | Traffic signals |
| 6 | Lake Albert Road / Railway Street | Traffic signals |
| 7 | Mitchelmore Street / Urana Street | Priority-controlled (roundabout) |
| 8 | Urana Street / Bourke Street | Priority-controlled (roundabout) |
| 9 | Edward Street / Docker Street | Traffic signals |


**FIGURE 21: KEY INTERSECTIONS LOCATION – WAGGA WAGGA AND SURROUNDS**

## Edward Street / Murray Street

### *Background Traffic Volumes*

Background traffic volumes at the Edward Street / Murray Street intersection have been obtained from 12-hour traffic surveys undertaken by *Matrix Traffic and Transport Data* on Thursday 8th June 2023. The morning (AM) and afternoon (PM) peak periods for the intersection was determined to be between 10:45am – 11:45am and between 3:15pm – 4:15pm. Recorded traffic volumes during the peak period are presented in Table 86.

**TABLE 86: BACKGROUND TRAFFIC VOLUMES - EDWARD STREET / MURRAY STREET**

| Intersection approach | AM peak volume (10:45am – 11:45m) | PM peak volume (3:15pm – 4:15pm) | Daily Volumes |
|---|---|---|---|
| **Edward Street (west)** | | | |
| Left (onto Murray Street) | 25 | 27 | 296 |
| Through (onto Edward Street) | 645 | 659 | 6,711 |
| Right (onto Murray Street) | 9 | 6 | 84 |
| **Murray Street (south)** | | | |
| Left (onto Edward Street) | 22 | 31 | 224 |
| Through (onto Murray Street) | 30 | 41 | 320 |
| Right (onto Edward Street) | 36 | 53 | 403 |
| **Edward Street (east)** | | | |
| Left (onto Murray Street) | 12 | 29 | 181 |
| Through (onto Edward Street) | 684 | 729 | 7,013 |

| Intersection approach | AM peak volume (10:45am – 11:45m) | PM peak volume (3:15pm – 4:15pm) | Daily Volumes |
|---|---|---|---|
| Right (onto Murray Street) | 30 | 33 | 39 |
| **Murray Street (north)** | | | |
| Left (onto Edward Street) | 27 | 26 | 294 |
| Through (onto Murray Street) | 25 | 54 | 327 |
| Right (onto Edward Street) | 27 | 24 | 293 |

### Edward Street / Fox Street

***Background Traffic Volumes***

No data is available for the Edward Street / Fox Street intersection.

### Edward Street / Best Street

***Background Traffic Volumes***

Background traffic volumes at the Edward Street / Best Street intersection have been obtained from 12-hour traffic surveys undertaken by *Matrix Traffic and Transport Data* on Thursday 8th June 2023. The morning (AM) and afternoon (PM) peak periods for the intersection was determined to be between 8:15am – 9:15am and between 3:15pm – 4:15pm. Recorded traffic volumes during the peak period are presented in Table 87.

**TABLE 87: BACKGROUND TRAFFIC VOLUMES - EDWARD STREET / BEST STREET**

| Intersection approach | AM peak volume (8:00am – 9:00am) | PM peak volume (3:30pm – 4:30pm) | Daily Volumes |
|---|---|---|---|
| **Edward Street (west)** | | | |
| Left (onto Best Street) | 80 | 79 | 752 |
| Through (onto Edward Street) | 495 | 644 | 6,440 |
| Right (onto Best Street) | 68 | 49 | 530 |
| **Best Street (north)** | | | |
| Left (onto Edward Street) | 30 | 39 | 368 |
| Through (onto Best Street) | 233 | 317 | 2,859 |
| Right (onto Edward Street) | 82 | 142 | 1,333 |
| **Edward Highway (east)** | | | |
| Left (onto Best Street) | 67 | 151 | 1,102 |
| Through (onto Edward Street) | 476 | 608 | 6,019 |
| Right (onto Best Street) | 48 | 54 | 547 |

| Intersection approach | AM peak volume (8:00am – 9:00am) | PM peak volume (3:30pm – 4:30pm) | Daily Volumes |
|---|---|---|---|
| **Best Street (south)** | | | |
| Left (onto Edward Street) | 178 | 129 | 883 |
| Through (onto Best Street) | 441 | 317 | 2,631 |
| Right (onto Edward Street) | 184 | 167 | 1,282 |

***Background Intersection Performance***

An intersection delay and LOS analysis was completed by WSP as part of Appendix D *Addendum to Technical Paper 1: Traffic and Transport.* The LOS criteria adopted for assessing intersection performance is shown below.

**TABLE 88: LEVEL OF SERVICE CRITERIA**

| Level of service | Average delay per vehicle (secs/veh) |
|---|---|
| A | <14 |
| B | 15 to 28 |
| C | 29 to 42 |
| D | 53 to 56 |
| E | 57 to 70 |

The results of the WSP assessment are presented below for the "2024 Base" scenarios (AM peak, midday peak and PM peak).

**TABLE 89: INTERSECTION DELAY AND LOS ANALYSIS – EDWARD STREET / BEST STREET**

| Intersection | 2024 Base (AM Peak) | | 2024 Base (Midday Peak) | | 2024 Base (PM Peak) | |
|---|---|---|---|---|---|---|
| | Delay (sec.) | LOS | Delay (sec.) | LOS | Delay (sec.) | LOS |
| Edward Street / Best Street | 43 | D | 34 | C | 52 | D |

## Edward Street / Station Place / Bayliss Street

***Background Traffic Volumes***

Background traffic volumes at the Edward Street / Station Place / Bayliss Street intersection have been obtained from 12-hour traffic surveys undertaken by *Matrix Traffic and Transport Data* on Thursday 8th June 2023. The morning (AM) and afternoon (PM) peak periods for the intersection was determined to be between 11:00am – 12:00pm and between 3:15pm – 4:15pm. Recorded traffic volumes during the peak period are presented in Table 90.

**TABLE 90: BACKGROUND TRAFFIC VOLUMES – EDWARD STREET / STATION PLACE / BAYLISS STREET**

| Intersection approach | AM peak volume (11:00am – 12:00pm) | PM peak volume (3:15pm – 4:15pm) | Daily Volumes |
|---|---|---|---|
| **Edward Street (west)** | | | |
| Left (onto Bayliss Street) | 173 | 145 | 1,364 |

| Intersection approach | AM peak volume (11:00am – 12:00pm) | PM peak volume (3:15pm – 4:15pm) | Daily Volumes |
|---|---|---|---|
| Through (onto Edward Street) | 576 | 673 | 6,350 |
| Right (onto Station Place) | 53 | 104 | 705 |
| **Bayliss Street (north)** | | | |
| Left (onto Edward Street) | 118 | 83 | 976 |
| Through (onto Station Place) | 26 | 30 | 237 |
| Right (onto Edward Street) | 149 | 118 | 1,266 |
| **Edward Street (east)** | | | |
| Left (onto Station Place) | 15 | 29 | 215 |
| Through (onto Edward Street) | 560 | 627 | 5,935 |
| Right (onto Bayliss Street) | 48 | 50 | 612 |
| **Station Place (south)** | | | |
| Left (onto Edward Street) | 47 | 96 | 590 |
| Through (onto Bayliss Street) | 30 | 38 | 272 |
| Right (onto Edward Street) | 26 | 63 | 400 |

***Background Intersection Performance***

An intersection delay and LOS analysis was completed by WSP as part of Appendix D *Addendum to Technical Paper 1: Traffic and Transport.* The LOS criteria adopted for assessing intersection performance is shown below.

**TABLE 91: LEVEL OF SERVICE CRITERIA**

| Level of service | Average delay per vehicle (secs/veh) |
|---|---|
| A | <14 |
| B | 15 to 28 |
| C | 29 to 42 |
| D | 53 to 56 |
| E | 57 to 70 |

The results of the WSP assessment are presented below for the "2024 Base" scenarios (AM peak, midday peak and PM peak).

**TABLE 92: INTERSECTION DELAY AND LOS ANALYSIS – EDWARD STREET / STATION PLACE / BAYLISS STREET**

| Intersection | 2024 Base (AM Peak) | | 2024 Base (Midday Peak) | | 2024 Base (PM Peak) | |
|---|---|---|---|---|---|---|
| | Delay (sec.) | LOS | Delay (sec.) | LOS | Delay (sec.) | LOS |
| Edward Street / Station Place / Bayliss Street | 31 | C | 24 | B | 27 | B |

## Edward Street / Lake Albert Road

### *Background Traffic Volumes*

Background traffic volumes at the Edward Street / Lake Albert Road intersection have been obtained from 12-hour traffic surveys undertaken by *Matrix Traffic and Transport Data* on Thursday 8th June 2023. The morning (AM) and afternoon (PM) peak periods for the intersection was determined to be between 8:15am – 9:15pm and between 4:30pm – 5:30pm. Recorded traffic volumes during the peak period are presented in Table 93.

**TABLE 93: BACKGROUND TRAFFIC VOLUMES – EDWARD STREET / LAKE ALBERT ROAD**

| Intersection approach | AM peak volume (8:15am – 9:15am) | PM peak volume (4:30pm – 5:30pm) | Daily Volumes |
|---|---|---|---|
| **Edward Street (west)** | | | |
| Left (onto Lake Albert Road (north)) | 5 | 21 | 236 |
| Through (onto Edward Street) | 318 | 393 | 4,505 |
| Right (onto Lake Albert Road (south)) | 68 | 211 | 1,398 |
| **Lake Albert Road (north)** | | | |
| Left (onto Edward Street) | 291 | 595 | 4,623 |
| Through (onto Lake Albert Road (south)) | 170 | 552 | 3,414 |
| Right (onto Edward Street) | 26 | 33 | 416 |
| **Edward Street (east)** | | | |
| Left (onto Lake Albert Road (south)) | 104 | 168 | 1,122 |
| Through (onto Edward Street) | 463 | 536 | 5,209 |
| Right (onto Lake Albert Road (north)) | 464 | 501 | 4,455 |
| **Lake Albert Road (south)** | | | |
| Left (onto Edward Street) | 146 | 134 | 1,305 |
| Through (onto Lake Albert Road (north)) | 662 | 372 | 4,435 |
| Right (onto Edward Street) | 158 | 129 | 1,412 |

### *Background Intersection Performance*

An intersection delay and LOS analysis was completed by WSP as part of Appendix D *Addendum to Technical Paper 1: Traffic and Transport.* The LOS criteria adopted for assessing intersection performance is shown below.

**TABLE 94: LEVEL OF SERVICE CRITERIA**

| Level of service | Average delay per vehicle (secs/veh) |
|---|---|
| A | <14 |
| B | 15 to 28 |
| C | 29 to 42 |
| D | 53 to 56 |
| E | 57 to 70 |

The results of the WSP assessment are presented below for the "2024 Base" scenarios (AM peak, midday peak and PM peak).

**TABLE 95: INTERSECTION DELAY AND LOS ANALYSIS – EDWARD STREET / LAKE ALBERT ROAD**

| Intersection | 2024 Base (AM Peak) | | 2024 Base (Midday Peak) | | 2024 Base (PM Peak) | |
|---|---|---|---|---|---|---|
| | Delay (sec.) | LOS | Delay (sec.) | LOS | Delay (sec.) | LOS |
| Edward Street / Lake Albert Road | 66 | E | 55 | D | 84 | F |

## Lake Albert Road / Railway Street

### *Background Traffic Volumes*

Background traffic volumes at the Lake Albert Road / Railway Street intersection have been obtained from 12-hour traffic surveys undertaken by *Matrix Traffic and Transport Data* on Thursday 8th June 2023. The morning (AM) and afternoon (PM) peak periods for the intersection was determined to be between 8:15am – 9:15pm and between 4:30pm – 5:30pm. Recorded traffic volumes during the peak period are presented in Table 96.

**TABLE 96: BACKGROUND TRAFFIC VOLUMES – LAKE ALBERT ROAD / RAILWAY STREET**

| Intersection approach | AM peak volume (8:15am – 9:15am) | PM peak volume (4:30pm – 5:30pm) | Daily Volumes |
|---|---|---|---|
| **Edward Street (west)** | | | |
| Left (onto Lake Albert Road (north)) | 5 | 21 | 236 |
| Through (onto Edward Street) | 318 | 393 | 4,505 |
| Right (onto Lake Albert Road (south)) | 68 | 211 | 1,398 |
| **Lake Albert Road (north)** | | | |
| Left (onto Edward Street) | 291 | 595 | 4,623 |
| Through (onto Lake Albert Road (south)) | 170 | 552 | 3,414 |

| Intersection approach | AM peak volume (8:15am – 9:15am) | PM peak volume (4:30pm – 5:30pm) | Daily Volumes |
|---|---|---|---|
| Right (onto Edward Street) | 26 | 33 | 416 |
| **Edward Street (east)** | | | |
| Left (onto Lake Albert Road (south)) | 104 | 168 | 1,122 |
| Through (onto Edward Street) | 463 | 536 | 5,209 |
| Right (onto Lake Albert Road (north)) | 464 | 501 | 4,455 |
| **Lake Albert Road (south)** | | | |
| Left (onto Edward Street) | 146 | 134 | 1,305 |
| Through (onto Lake Albert Road (north)) | 662 | 372 | 4,435 |
| Right (onto Edward Street) | 158 | 129 | 1,412 |

***Background Intersection Performance***

An intersection delay and LOS analysis was completed by WSP as part of Appendix D *Addendum to Technical Paper 1: Traffic and Transport.* The LOS criteria adopted for assessing intersection performance is shown below.

**TABLE 97: LEVEL OF SERVICE CRITERIA**

| Level of service | Average delay per vehicle (secs/veh) |
|---|---|
| A | <14 |
| B | 15 to 28 |
| C | 29 to 42 |
| D | 53 to 56 |
| E | 57 to 70 |

The results of the WSP assessment are presented below for the "2024 Base" scenarios (AM peak, midday peak and PM peak).

**TABLE 98: INTERSECTION DELAY AND LOS ANALYSIS - LAKE ALBERT ROAD / RAILWAY STREET**

| Intersection | 2024 Base (AM Peak) | | 2024 Base (Midday Peak) | | 2024 Base (PM Peak) | |
|---|---|---|---|---|---|---|
| | Delay (sec.) | LOS | Delay (sec.) | LOS | Delay (sec.) | LOS |
| Edward Street / Lake Albert Road | 66 | E | 55 | D | 84 | F |

## Mitchelmore Street / Urana Street

### *Background Traffic Volumes*

Background traffic volumes at the Mitchelmore Street / Urana Street intersection have been obtained from 12-hour traffic surveys undertaken by *Matrix Traffic and Transport Data* on Thursday 8th June 2023. The morning (AM) and afternoon (PM) peak periods for the intersection was determined to be between 8:15am – 9:15pm and between 4:30pm – 5:30pm. Recorded traffic volumes during the peak period are presented in Table 99.

**TABLE 99: BACKGROUND TRAFFIC VOLUMES - MITCHELMORE STREET / URANA STREET**

| Intersection approach | AM peak volume (8:15am – 9:15am) | PM peak volume (4:30pm – 5:30pm) | Daily Volumes |
|---|---|---|---|
| **Urana Street (west)** | | | |
| Left (onto Mitchelmore Street)) | 64 | 54 | 532 |
| Through (onto Urana Street) | 232 | 212 | 1,905 |
| Right (onto Mitchelmore Street) | 22 | 60 | 310 |
| **Mitchelmore Street (north)** | | | |
| Left (onto Urana Street) | 40 | 34 | 300 |
| Through (onto Mitchelmore Street) | 179 | 433 | 2,525 |
| Right (onto Urana Street) | 89 | 94 | 607 |
| **Urana Street (east)** | | | |
| Left (onto Mitchelmore Street) | 44 | 56 | 376 |
| Through (onto Urana Street) | 333 | 251 | 2,173 |
| Right (onto Mitchelmore Street) | 82 | 37 | 407 |
| **Mitchelmore Street (south)** | | | |
| Left (onto Urana Street) | 60 | 23 | 347 |
| Through (onto Mitchelmore Street) | 372 | 200 | 2,258 |
| Right (onto Urana Street) | 109 | 57 | 647 |

### *Background Intersection Performance*

An intersection delay and LOS analysis was completed by WSP as part of Appendix D *Addendum to Technical Paper 1: Traffic and Transport.* The LOS criteria adopted for assessing intersection performance is shown below.

**TABLE 100: LEVEL OF SERVICE CRITERIA**

| Level of service | Average delay per vehicle (secs/veh) |
|---|---|
| A | <14 |
| B | 15 to 28 |
| C | 29 to 42 |
| D | 53 to 56 |
| E | 57 to 70 |

The results of the WSP assessment are presented below for the "2024 Base" scenarios (AM peak, midday peak and PM peak).

**TABLE 101: INTERSECTION DELAY AND LOS ANALYSIS - MITCHELMORE STREET / URANA STREET**

| Intersection | 2024 Base (AM Peak) | | 2024 Base (Midday Peak) | | 2024 Base (PM Peak) | |
|---|---|---|---|---|---|---|
| | Delay (sec.) | LOS | Delay (sec.) | LOS | Delay (sec.) | LOS |
| Mitchelmore Street / Urana Street | 3 | A | 3 | A | 3 | A |

## Urana Street / Bourke Street

### *Background Traffic Volumes*

Background traffic volumes at the Urana Street / Bourke Street intersection have been obtained from 12-hour traffic surveys undertaken by *Matrix Traffic and Transport Data* on Thursday 8th June 2023. The morning (AM) and afternoon (PM) peak periods for the intersection was determined to be between 8:00am – 9:00pm and between 3:00pm – 4:00pm. Recorded traffic volumes during the peak period are presented in Table 102.

**TABLE 102: BACKGROUND TRAFFIC VOLUMES – URANA STREET / BOURKE STREET**

| Intersection approach | AM peak volume (8:15am – 9:15am) | PM peak volume (4:30pm – 5:30pm) | Daily Volumes |
|---|---|---|---|
| **Urana Street (west)** | | | |
| Left (onto Bourke Street)) | 224 | 177 | 1,708 |
| Through (onto Urana Street) | 198 | 191 | 1,602 |
| Right (onto Bourke Street) | 12 | 21 | 138 |
| U-turn (onto Urana Street) | 0 | 0 | 7 |
| **Bourke Street (north)** | | | |
| Left (onto Urana Street) | 51 | 121 | 833 |

| Intersection approach | AM peak volume (8:15am – 9:15am) | PM peak volume (4:30pm – 5:30pm) | Daily Volumes |
|---|---|---|---|
| Through (onto Bourke Street) | 199 | 464 | 3,308 |
| Right (onto Urana Street) | 82 | 141 | 1,159 |
| U-turn (onto Bourke Street) | 22 | 40 | 261 |
| **Urana Street (east)** | | | |
| Left (onto Bourke Street) | 26 | 37 | 341 |
| Through (onto Urana Street) | 183 | 159 | 1,417 |
| Right (onto Bourke Street) | 221 | 128 | 1,313 |
| U-turn (onto Urana Street) | 1 | 0 | 2 |
| **Bourke Street (south)** | | | |
| Left (onto Urana Street) | 51 | 30 | 201 |
| Through (onto Bourke Street) | 687 | 420 | 4,146 |
| Right (onto Urana Street) | 32 | 56 | 311 |
| U-turn (onto Bourke Street) | 3 | 1 | 19 |

***Background Intersection Performance***

An intersection delay and LOS analysis was completed by WSP as part of Appendix D *Addendum to Technical Paper 1: Traffic and Transport.* The LOS criteria adopted for assessing intersection performance is shown below.

**TABLE 103: LEVEL OF SERVICE CRITERIA**

| Level of service | Average delay per vehicle (secs/veh) |
|---|---|
| A | <14 |
| B | 15 to 28 |
| C | 29 to 42 |
| D | 53 to 56 |
| E | 57 to 70 |

The results of the WSP assessment are presented below for the “2024 Base” scenarios (AM peak, midday peak and PM peak).

**TABLE 104: INTERSECTION DELAY AND LOS ANALYSIS – URANA STREET / BOURKE STREET**

| Intersection | 2024 Base (AM Peak) | | 2024 Base (Midday Peak) | | 2024 Base (PM Peak) | |
|---|---|---|---|---|---|---|
| | Delay (sec.) | LOS | Delay (sec.) | LOS | Delay (sec.) | LOS |
| Mitchelmore Street / Urana Street | 11 | A | 3 | A | 4 | A |

## Edward Street / Docker Street

***Background Traffic Volumes***

Background traffic volumes at the Docker Street / Edward Street intersection have been obtained from 12-hour traffic surveys undertaken by *Matrix Traffic and Transport Data* on Thursday 8th June 2023. The morning (AM) and afternoon (PM) peak periods for the intersection was determined to be between 8:15am – 9:15pm and between 3:15pm – 4:15pm. Recorded traffic volumes during the peak period are presented in Table 105.

**TABLE 105: BACKGROUND TRAFFIC VOLUMES – EDWARD STREET / DOCKER STREET**

| Intersection approach | AM peak volume (8:15am – 9:15am) | PM peak volume (3:15pm – 4:15pm) | Daily Volumes |
|---|---|---|---|
| **Edward Street (west)** | | | |
| Left (onto Docker Street)) | 218 | 147 | 1,621 |
| Through (onto Edward Street) | 473 | 469 | 5,369 |
| Right (onto Docker Street) | 150 | 106 | 1,027 |
| **Docker Street (north)** | | | |
| Left (onto Edward Street) | 40 | 30 | 401 |
| Through (onto Docker Street) | 237 | 371 | 3,160 |
| Right (onto Edward Street) | 167 | 273 | 2,512 |
| **Edward Street (east)** | | | |
| Left (onto Docker Street) | 105 | 115 | 1,422 |
| Through (onto Edward Street) | 450 | 659 | 5,870 |
| Right (onto Docker Street) | 57 | 78 | 699 |
| **Docker Street (south)** | | | |
| Left (onto Edward Street) | 71 | 106 | 728 |
| Through (onto Docker Street) | 483 | 417 | 3,851 |
| Right (onto Edward Street) | 178 | 238 | 2,067 |

***Background Intersection Performance***

An intersection delay and LOS analysis was completed by WSP as part of Appendix D *Addendum to Technical Paper 1: Traffic and Transport.* The LOS criteria adopted for assessing intersection performance is shown below.

**TABLE 106: LEVEL OF SERVICE CRITERIA**

| Level of service | Average delay per vehicle (secs/veh) |
|---|---|
| A | <14 |
| B | 15 to 28 |
| C | 29 to 42 |
| D | 53 to 56 |
| E | 57 to 70 |

The results of the WSP assessment are presented below for the "2024 Base" scenarios (AM peak, midday peak and PM peak).

**TABLE 107: INTERSECTION DELAY AND LOS ANALYSIS – EDWARD STREET / DOCKER STREET**

| Intersection | 2024 Base (AM Peak) | | 2024 Base (Midday Peak) | | 2024 Base (PM Peak) | |
|---|---|---|---|---|---|---|
| | Delay (sec.) | LOS | Delay (sec.) | LOS | Delay (sec.) | LOS |
| Docker Street / Edward Street | 75 | F | 35 | C | 55 | D |

# 3 PROPOSED ARRANGEMENTS

## 3.1 Pearson Street Bridge Enhancement Site

### 3.1.1 Site Location

The Pearson Street Bridge enhancement site encompasses areas within the rail corridor bound by Fernleigh Road, Glenfield Road / Pearson Street, Urana Street and Cheshire Street.

### 3.1.2 Works Required

The Stage A scope of work at the Pearson Street Bridge enhancement site comprise of the following:

- Site establishment including establishment of site compound on Urana Street, adjacent the rail corridor, and construction of site accesses from Urana Street and Cheshire Street.
- Watermain relocation works.
- High pressure gas main relocation works.

### 3.1.3 Timing and Duration

The proposed arrangements are planned to be implemented from early February 2025 and remain in operation until late August 2025.

### 3.1.4 Drawings

There will be no long-term changes to the existing conditions on the roads in the vicinity of the Pearson Street Bridge enhancement site resulting from the Stage A works

A list of expected short-term traffic guidance schemes expected to facilitate the works as detailed within Section 3.1.14 are provided in Appendix A.

### 3.1.5 Operating Conditions

There will be no long-term changes to the existing conditions on the roads in the vicinity of the Pearson Street Bridge enhancement site resulting from the Stage A works.

Temporary speed limit reductions and/or short-term traffic control (intermittent stops) may be implemented along Cheshire Street and/or Urana Street to facilitate the safe and efficient movement of construction heavy vehicles (refer to Section 3.1.14).

### 3.1.6 Construction Traffic

The peak volume of additional traffic generated by the Stage A works required to access the worksite is expected to be in the order of three (3) vehicles per hour, broken down as follows:

**TABLE 108: CONSTRUCTION TRAFFIC – PEARSON STREET BRIDGE ENHANCEMENT SITE**

| Scope | Light vehicles (vehicles per hour) | Heavy vehicles (vehicles per hour) |
|---|---|---|
| Site establishment | Two (2) | One (1) |
| Watermain relocation works | Two (2) | One (1) |
| High pressure gas main relocation works | Two (2) | One (1) |

For the Stage A works, a 12.5m single unit truck is expected to be the predominant type of vehicle accessing the worksite however, occasional use of larger vehicles will be required to facilitate the works. The scope of heavy vehicle requirements is detailed in Table 109 below.

**TABLE 109: CONSTRUCTION HEAVY VEHICLE REQUIREMENTS – PEARSON STREET BRIDGE ENHANCEMENT SITE**

| Site access | Vehicle type | Scope | Frequency |
|---|---|---|---|
| Gate P1 – Existing access off Cheshire Street | 12.5m single unit truck | Delivery of smaller items of plant and materials under traffic control | Daily |
| | 19.0m truck and dog | Delivery of ballast and other large material under traffic control | ≤ one (1) per week |
| | 19.0m semi-trailer | Delivery of large plant items under traffic control | ≤ one (1) per week |
| Gate P2 – Existing access off Urana Street | 12.5m single unit truck | Delivery of smaller items of plant and materials | Daily |
| | 19.0m truck and dog | Delivery of ballast and other large material | ≤ one (1) per week |

### 3.1.7 Site Access

#### Overview

Access to the Pearson Street Bridge enhancement site will be via existing access points located on Cheshire Street and Urana Street. A summary of permitted movements and methods of control at site access locations is provided below in Table 110, with further details provided in subsequent sections of this report.

**TABLE 110: SITE ACCESS DETAILS – PEARSON STREET BRIDGE ENHANCEMENT SITE**

| Access | Site Entry/Exit | Vehicle type | Permitted Movements | Control |
|---|---|---|---|---|
| Gate P1 – Existing access off Cheshire Street | Entry and exit | Up 12.5m single unit truck | Right in, left out | Traffic control – refer to Section 3.1.15 |
| | | 19.0m truck and dog | | |
| | | 19.0m semi-trailer | | |
| Gate P2 – Existing access off Urana Street | Entry and exit | Up 12.5m single unit truck | Left in, right out | Give way |
| | | 19.0m truck and dog | | |

Where larger vehicle types are required to access the site, further assessment will be undertaken to determine the suitability of site access controls.

#### Gate P1 – Cheshire Street at Pearson Street

Located on Cheshire Street, Gate P1 is an existing access that will provide access to the Pearson Street Bridge enhancement site.

**FIGURE 22: GATE P1 – CHESHIRE STREET**

Details of permitted movements and methods of control at Gate P1 is summarised below in Table 111.

**TABLE 111: SITE ACCESS DETAILS – GATE P1**

| Access | Site Entry/Exit | Vehicle type | Permitted Movements | Control |
|---|---|---|---|---|
| Gate P1 – Existing access off Cheshire Street | Entry and exit | Up 12.5m single unit truck | Right in, left out | Traffic control |
| | | 19.0m truck and dog | | |
| | | 19.0m semi-trailer | | |

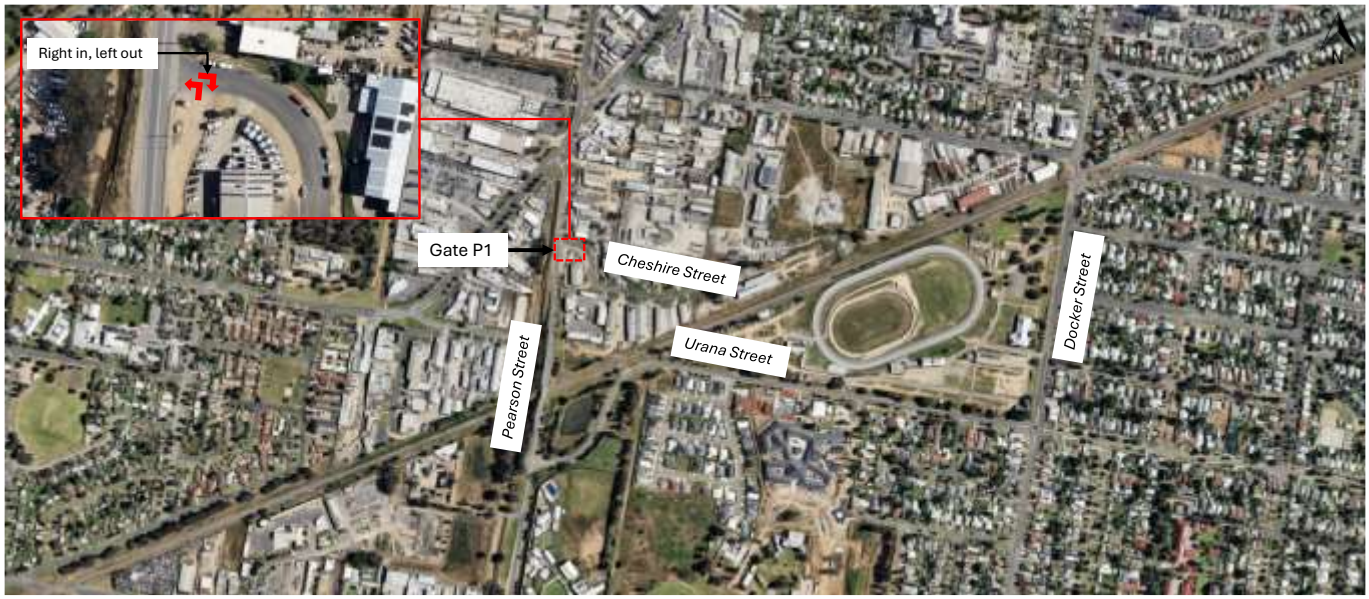



**FIGURE 23: SITE ACCESS DETAILS – GATE P1**

As detailed in Table 111, construction vehicles will access Gate P1 under traffic control. To minimise any potential impacts to the road network, the movement of construction vehicles will be scheduled outside of network peak traffic hours where possible, with traffic control implementations subject to the times permitted under the Road Occupancy License (ROL) issued by the relevant authority.

### Gate P2 – Urana Street ~270m east of Pearson Street / Glenfield Street / Urana Street intersection

Located on Urana Street approximately 270m east of the Pearson Street / Glenfield Street / Urana Street intersection, Gate P2 is an existing access that will provide access to the Pearson Street Bridge enhancement site.


**FIGURE 24: GATE P2 – URANA STREET**

Details of permitted movements and methods of control at Gate P2 is summarised below in Table 112.

**TABLE 112: SITE ACCESS DETAILS – GATE P2**

| Access | Site Entry/Exit | Largest Permitted Vehicle | Permitted Movements | Control |
|---|---|---|---|---|
| Gate P2 – Existing access off Urana Street | Entry and exit | Up 12.5m single unit truck<br>19.0m truck and dog | Left in, right out | Give way |

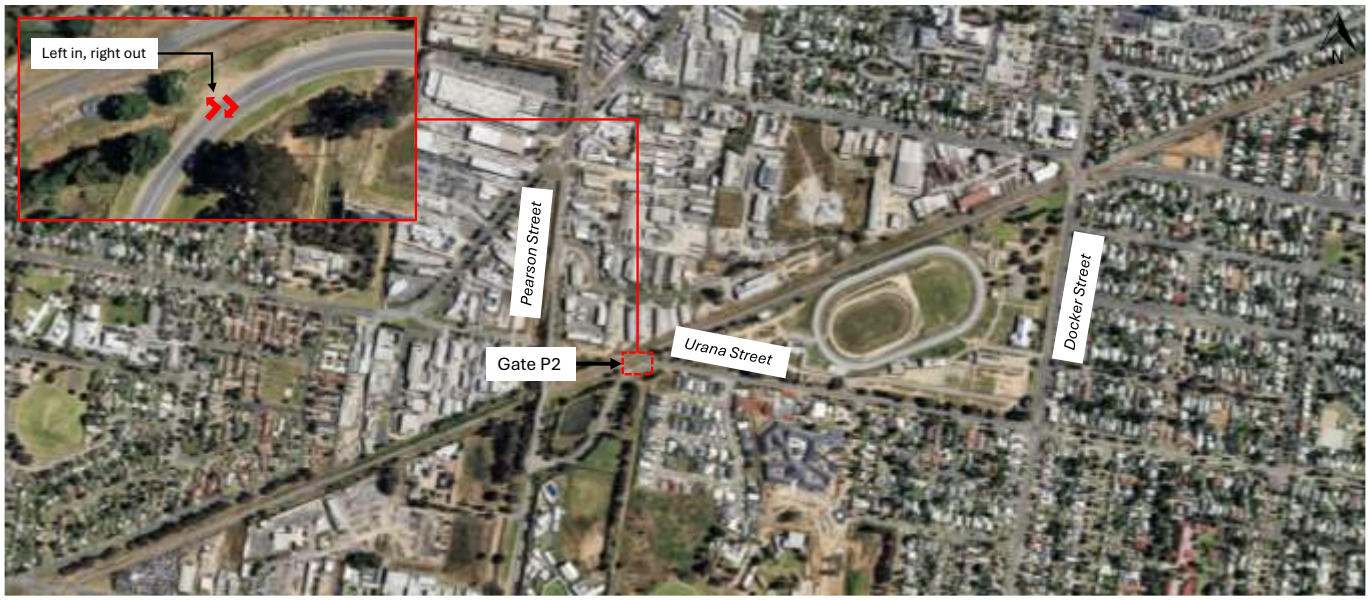



**FIGURE 25: SITE ACCESS DETAILS – GATE P2**

To ensure the safety of construction vehicles entering and exiting via the Gate P2, an assessment has been undertaken for determining controls for managing truck movements where auxiliary lanes are not provided (existing access point), depending on traffic volumes, sight distance, number of truck movements and traffic speed. This assessment aims to adopt the methodology presented within Section 5.2.3.3 of TfNSW's *Technical Manual – Traffic control at work sites* and is presented below.

**TABLE 113: SITE ACCESS ASSESSMENT CRITERIA – GATE P2**

| Site Access Assessment | |
|---|---|
| **Location:** | Urana Street approximately 270m east of Pearson Street / Glenfield Street / Urana Street intersection |
| **AADT:** | 4,758 |
| **Speed limit:** | 50km/hr |
| **Number of truck movements per shift:** | Less than 20 |
| **Dimension D:** | 50m (2D = 100m) |
| **Available sight distance** | Greater than 2D |


**FIGURE 26: EASTBOUND VIEW APPROACHING GATE P2 (~100M FROM ACCESS POINT)**


**FIGURE 27: WESTBOUND VIEW APPROACHING GATE P2 (~100M FROM ACCESS POINT)**

As available sight distance approaching Gate P2 is greater than 2D (100m), an assessment has been undertaken using Table 5-7 of TfNSW's *Technical Manual – Traffic control at work sites* has been undertaken and is detailed in Table 114 below.

**TABLE 114: GATE P2 – PROVIDING FOR TRUCK MOVEMENTS WHERE SIGHT DISTANCE IS GREATER THAN 2D (TABLE 5-7 OF TFNSW'S *TECHNICAL MANUAL – TRAFFIC CONTROL AT WORK SITES)***

| ADT | 300 – 1,500 | | More than 1,500 | |
|---|---|---|---|---|
| **Number of truck movements per shift** | Less than or equal to 20 | Greater than 20 | Less than or equal to 20 | Greater than 20 |
| **Traffic control required** | | Yes | Yes Note 1* | Yes Note 2* |
| **VMP required** | | Yes | | Yes |
| **Warning signs required during shifts** | | Yes | | Yes |

Note 1: Where approach speed is greater than 95km/hr

Note 2: If acceleration and deceleration cannot occur on shoulders

No controls are warranted at Gate P2 to facilitate the safe and efficient movement of construction vehicles into and out of the access, and as such access will operate under a typical "Give way" arrangement. Notwithstanding this, traffic control may be implemented to facilitate alternative movements at the access (i.e., reverse into or out of the site) – refer to Section 3.1.14.

### 3.1.8 Construction Vehicle Access Routes

Construction heavy vehicles will access the worksite via the routes identified within Environmental Approval Documentation, with the routes detailed below in Table 115.

**TABLE 115: CONSTRUCTION VEHICLE ACCESS ROUTES – PEARSON STREET BRIDGE ENHANCEMENT SITE**

| Site Access | Direction | Access Route | Largest suitable vehicle type |
|---|---|---|---|
| Gate P1 | Inbound | Edward Street, left/right turn onto Pearson Street, through onto Dobney Avenue, left turn onto Pearson Street, left turn onto Cheshire Street. | Up to 19.0m semi-trailer[1] |
| | Outbound | Cheshire Street, right turn onto Pearson Street, right turn onto Dobney Avenue, through onto Pearson Street, left/right turn onto Edward Street. | |
| Gate P2 | Inbound | Edward Street, left/right turn onto Pearson Street, through onto Dobney Avenue, left turn onto Pearson Street, left turn onto Urana Street. | Up to 19.0m truck and dog |
| | Outbound | Urana Street, left turn onto Pearson Street, right turn onto Dobney Avenue, through onto Pearson Street, left/right turn onto Edward Street. | |

1. Traffic control is required to facilitate access manoeuvres into and out of Gate P1 – refer to Section 3.3.14

These access routes are depicted in Figure 28 and Figure 29.


FIGURE 28: CONSTRUCTION VEHILCE ACCESS ROUTES – GATE P1


FIGURE 29: CONSTRUCTION VEHILCE ACCESS ROUTES – GATE P2

As a measure of monitoring any impacts to road infrastructure along construction vehicle access routes, road dilapidation surveys will be undertaken prior to the use of an identified route.

A swept path analysis has also been undertaken for key movements along the construction vehicle access routes, demonstrating the ability for construction vehicle to safely manoeuvre along the identified routes, and is detailed in Section 4.3. Where larger vehicle types are required to access the site, further assessment will be undertaken to determine the suitability of identified access routes.

### 3.1.9 Impact on Traffic Flow

#### Key Roads

To evaluate the impact of the Stage A works on key roads, an assessment of road (mid-block) performance has been undertaken in relation to Level of Service (LOS) for the key road links with and without traffic generated by the Stage A works. The assessment has been carried out using a combination of peak hour background traffic volumes, in conjunction with expected peak hour construction traffic volumes to determine an operating LOS for key road links for both the “without construction traffic” and “with construction traffic” scenarios.

Road link LOS for key road links have been determined using Table 4.4 from the *Guide to Traffic Generating Developments (RTA 2002)*, which has been replicated below.

**TABLE 116: LINK LOS ADAPTED FROM THE *GUIDE TO TRAFFIC GENERATING DEVELOPMENT (2002) TABLE 4.4***

| LOS | One lane per direction (veh/hr) | Two lanes per direction (veh/hr) |
|---|---|---|
| LOS A | 200 | 900 |
| LOS B | 380 | 1,400 |
| LOS C | 600 | 1,800 |
| LOS D | 900 | 2,200 |
| LOS E | More than 900 | 2,800 |

While it is recognised that TfNSW's *Guide to Transport Impact Assessment* has superseded the *Guide to Traffic Generating Developments*, the process of assessment is considered appropriate in quantifying potential impacts to traffic flow and the road network resulting from the Stage A works. It is also noted that this approach is consistent with the Link LOS assessment undertaken within *Technical Paper 1: Traffic and Transport* and its addendums.

The link LOS assessment for the Pearson Street Bridge enhancement site is shown in Table 117 and Table 118 below. It should be noted that to determine future year background traffic demands (2025), an annual growth rate of 2% (compounding) has been applied to the recorded background traffic volumes (refer to Section 2)

**TABLE 117: AM PEAK LINK LOS ASSESSMENT – PEARSON STREET BRIDGE**

| Road link | No. of lanes (per direction) | Direction | AM Background volume (one way) | Without construction traffic LOS | Construction volume (one way) | Total volume | Percent increase in volumes | With project LOS |
|---|---|---|---|---|---|---|---|---|
| Edward Street/ Sturt Highway at Pearson Street | 2 | Eastbound | 550 | A | 3 | 553 | 0.6% | A |
| | | Westbound | 478 | A | | 481 | 0.6% | A |
| Pearson Street at Edward Street | 2 | Northbound | 995 | B | | 998 | 0.3% | B |
| | | Southbound | 613 | A | | 616 | 0.5% | A |
| Cheshire Street at Pearson Street[1,2] | 1 | Eastbound | 49 | A | | 52 | 6.1% | A |
| | | Westbound | 49 | A | | 52 | 6.1% | A |
| Urana Street at Pearson Street | 1 | Eastbound | 478 | C | | 481 | 0.6% | C |
| | | Westbound | 314 | B | | 317 | 1% | B |

1: Peak hour volume not available, assumed 10% of AADT

2: Two-way data not available, assumed 50/50 traffic split during peak hours

TABLE 118: PM PEAK LINK LOS ASSESSMENT – PEARSON STREET BRIDGE

| Road name | No. of lanes (per direction) | Direction | PM Background volume (one way) | Without construction traffic LOS | Construction volume (one way) | Total volume | Percent increase in volumes | With project LOS |
|---|---|---|---|---|---|---|---|---|
| Edward Street/ Sturt Highway at Pearson Street | 2 | Eastbound | 403 | A | 3 | 406 | 0.7% | A |
| | | Westbound | 828 | A | | 831 | 0.4% | A |
| Pearson Street at Edward Street | 2 | Northbound | 807 | A | | 810 | 0.4% | A |
| | | Southbound | 703 | A | | 706 | 0.4% | A |
| Cheshire Street[1,2] | 1 | Eastbound | 49 | A | | 52 | 6.1% | A |
| | | Westbound | 49 | A | | 52 | 6.1% | A |
| Urana Street at Pearson Street | 1 | Eastbound | 358 | B | | 361 | 0.8% | B |
| | | Westbound | 392 | C | | 395 | 0.8% | C |

1: Peak hour volume not available, assumed 10% of AADT

2: Two-way data not available, assumed 50/50 traffic split during peak hours

The link LOS assessment for the Pearson Street Bridge enhancement site shows that with construction traffic, there is no change is LOS from the "without construction traffic scenario" during the AM and PM peak periods. As a result, no significant impact to road operation or performance are expected to result from the traffic generated by the Stage A works. As such, mitigations are not considered warranted as a result of the Stage A works.

### Key Intersections

To evaluate the impact of the Stage A works on key intersections, a first principles assessment has been undertaken. To undertake this assessment, consideration has been given to the volume of construction traffic associated with the Stage A works within the Pearson Street Bridge enhancement site.

As detailed within Section 3.1.6, a peak of three (3) construction vehicles per hour (one (1) vehicle every 20 minutes) is expected to be generated during the Stage A works. At signalised intersections, and assuming a maximum cycle time of 120 seconds at an intersection (worst-case), it is reasonably expected the Stage A works could generate up to one (1) additional vehicle at the intersection per cycle.

Considering this, the impact of one (1) additional vehicle per cycle is not expected to significantly impact the operation of keys intersections surrounding the Pearson Street Bridge enhancement site.

## 3.1.10 Impact on Public Transport

### Public Transport Operations

There is not expected to be any impact upon public transport operations is expected during this stage of work.

### Access to Public Transport

There will be no change or impact to public transport access during this stage of work.

## 3.1.11 Impact on Pedestrians and Cyclists

There will be no change to or impact to pedestrian and cyclist facilities or access during this stage of work.

### 3.1.12 Access for Businesses and Residents

There will be no change to or impact to access for businesses and/or residents during this stage of work.

### 3.1.13 Changes to Kerbside Management

There will be no changes to kerbside allocations during this stage of work.

### 3.1.14 Works Requiring Short Term Traffic Control

#### Overview

The Stage A works are generally confined to the rail corridor and as such do not involve works be constructed under traffic. Temporary speed limit reductions and/or short-term traffic control (intermittent stops) may be implemented to manage site entry and exit movements as required for construction heavy vehicles.

**TABLE 119: SHORT-TERM TRAFFIC CONTROL REQUIREMENTS – PEARSON STREET BRIDGE**

| Location | Activity | Traffic control | Duration | Timing | Expected impacts |
|---|---|---|---|---|---|
| Gate P1 – Cheshire Street at Pearson Street | Site access manoeuvres | Hold and release / intermittent stop | 5 months | Subject to the times permitted under the appropriate approval issued by the relevant authority | Minor delays to traffic travelling along Pearson Street and Cheshire Street |

## 3.2 Cassidy Parade Pedestrian Bridge Enhancement Site

### 3.2.1 Site Location

The Cassidy Parade Pedestrian Bridge enhancement site encompasses areas within the rail corridor bound by Brookong Avenue and Cassidy Parade.

### 3.2.2 Works Required

The Stage A scope of work at the Cassidy Parade Pedestrian Bridge enhancement site comprise of the following:

- Site establishment.
- High pressure gas main protection within the rail corridor.

### 3.2.3 Timing and Duration

The proposed arrangements are planned to be implemented from early February 2025 and remain in operation until late August 2025.

### 3.2.4 Drawings

There will be no long-term changes to the existing conditions on the roads in the vicinity of the Cassidy Parade Pedestrian Bridge enhancement site resulting from the Stage A works

A list of expected short-term traffic guidance schemes expected to facilitate the works as detailed within Section 3.1.14 are provided in Appendix A.

### 3.2.5 Operating Conditions

There will be no long-term changes to the existing conditions on the roads in the vicinity of the Cassidy Parade Pedestrian Bridge enhancement site resulting from the Stage A works.

Temporary speed limit reductions and/or short-term traffic control may be implemented along key roads to facilitate the safe and efficient movement of construction heavy vehicles and/or works outside of the rail corridor (refer to Section 3.2.14).

### 3.2.6 Construction Traffic

The peak volume of additional traffic generated by the Stage A works required to access the worksite is expected to be in the order of three (3) vehicles per hour, broken down as follows:

**TABLE 120: CONSTRUCTION TRAFFIC – CASSIDY PARADE PEDESTRIAN BRIDGE ENHANCEMENT SITE**

| Scope | Light vehicles (vehicles per hour) | Heavy vehicles (vehicles per hour) |
|---|---|---|
| Site establishment | Two (2) | One (1) |
| High pressure gas protection works | Two (2) | One (1) |

For the Stage A works, a 12.5m single unit truck is expected to be the predominant type of vehicle accessing the worksite however, occasional use of larger vehicles will be required to facilitate the works. The scope of heavy vehicle requirements is detailed in Table 121 below.

**TABLE 121: CONSTRUCTION HEAVY VEHICLE REQUIREMENTS – CASSIDY PARADE PEDESTRIAN BRIDGE ENAHNCEMENT SITE**

| Site access | Vehicle type | Scope | Frequency |
|---|---|---|---|
| Gate C1 – Existing access to Telstra Yard on Brookong Avenue | 12.5m single unit truck | Delivery of smaller items of plant and materials | Daily |
| | 19.0m truck and dog | Delivery of ballast and other large material | ≤ one (1) per week |
| Gate C2 – New access on Fox Street at Donnelly Street | 12.5m single unit truck | Delivery of smaller items of plant and materials | Daily |
| | 19.0m truck and dog | Delivery of ballast and other large material | ≤ one (1) per week |

### 3.2.7 Site Access

#### Overview

Access to the Cassidy Street Pedestrian Bridge enhancement site will be via existing access points located on Brookong Avenue and Fox Street. A summary of permitted movements and methods of control at site access locations is provided below in Table 122, with further details provided in subsequent sections of this report.

**TABLE 122: SITE ACCESS DETAILS – CASSIDY PARADE PEDESTRIAN BRIDGE ENHANCEMENT SITE**

| Access | Site Entry/Exit | Vehicle type | Permitted Movements | Control |
|---|---|---|---|---|
| Gate C1 – Existing access to Telstra Yard on Brookong Avenue | Entry and exit | Up to 12.5m single unit truck | Right in, left out | Give way |
| | | 19.0m truck and dog | | |
| Gate C2 – New access on Fox Street at Donnelly Street | Entry and exit | Up to 12.5m single unit truck | Right in, left out | Give way |
| | | 19.0m truck and dog | | |

#### Gate C1 – Existing access to Telstra Yard on Brookong Avenue

Located on Brookong Avenue, Gate C1 is an existing access that will provide access to the Cassidy Parade Pedestrian Bridge enhancement site.

**FIGURE 30: GATE C1 – BROOKONG AVENUE**

Details of permitted movements and methods of control at Gate C1 is summarised below in Table 123.

**TABLE 123: SITE ACCESS DETAILS – GATE C1**

| Access | Site Entry/Exit | Largest Permitted Vehicle | Permitted Movements | Control |
|---|---|---|---|---|
| Gate C1 – Existing access to Telstra Yard on Brookong Avenue | Entry and exit | Up to 12.5m single unit truck<br>19.0m truck and dog | Right in, left out | Give way |


**FIGURE 31: SITE ACCESS DETAILS – GATE C1**

To ensure the safety of construction vehicles entering and exiting via the Gate C1, an assessment has been undertaken for determining controls for managing truck movements where auxiliary lanes are not provided (existing access point), depending on traffic volumes, sight distance, number of truck movements and traffic speed. This assessment aims to adopt the methodology presented within Section 5.2.3.3 of TfNSW's *Technical Manual – Traffic control at work sites* and is presented below.

**TABLE 124: SITE ACCESS ASSESSMENT CRITERIA – GATE C1**

| Site Access Assessment | |
|---|---|
| **Location:** | Brookong Avenue |
| **AADT:** | 1,215 |
| **Speed limit:** | 50km/hr |
| **Number of truck movements per shift:** | Less than 20 |
| **Dimension D:** | 50m (2D = 100m) |
| **Available sight distance** | Greater than 2D |


**FIGURE 32: SOUTHBOUND VIEW APPROACHING GATE C1 (~100M FROM ACCESS POINT)**


**FIGURE 33: WESTBOUND VIEW APPROACHING GATE C1 (~100M FROM ACCESS POINT)**

As available sight distance approaching Gate C1 is greater than 2D (100m), an assessment has been undertaken using Table 5-7 of TfNSW's *Technical Manual – Traffic control at work sites* has been undertaken and is detailed in Table 125 below.

**TABLE 125: GATE C1 – PROVIDING FOR TRUCK MOVEMENTS WHERE SIGHT DISTANCE IS GREATER THAN 2D (TABLE 5-7 OF TFNSW'S *TECHNICAL MANUAL – TRAFFIC CONTROL AT WORK SITES*)**

| ADT | 300 – 1,500 | | More than 1,500 | |
|---|---|---|---|---|
| **Number of truck movements per shift** | Less than or equal to 20 | Greater than 20 | Less than or equal to 20 | Greater than 20 |
| **Traffic control required** | | Yes | Yes Note 1* | Yes Note 2* |
| **VMP required** | | Yes | | Yes |
| **Warning signs required during shifts** | | Yes | | Yes |

Note 1: Where approach speed is greater than 95km/hr

Note 2: If acceleration and deceleration cannot occur on shoulders

No controls are warranted at Gate C1 to facilitate the safe and efficient movement of construction vehicles into and out of the access, and as such access will operate under a typical "Give way" arrangement. Notwithstanding this, traffic control may be implemented to facilitate alternative movements at the access (i.e., reverse into or out of the site) – refer to Section 3.2.14.

### Gate C2 – New Access on Fox Street at Donnelly Street

Located on Fox Street at Donnelly Avenue, Gate C2 is an existing access that will provide access to the Cassidy Parade Pedestrian Bridge enhancement site.

**FIGURE 34: GATE C2 – FOX STREET**

Details of permitted movements and methods of control at Gate C2 is summarised below in Table 126.

**TABLE 126: SITE ACCESS DETAILS – GATE C2**

| Access | Site Entry/Exit | Largest Permitted Vehicle | Permitted Movements | Control |
|---|---|---|---|---|
| Gate C2 – New access on Fox Street at Donnelly Avenue | Entry and exit | Up to 12.5m single unit truck<br>19.0m truck and dog | Right in, left out | Give way |


**FIGURE 35: SITE ACCESS DETAILS – GATE C2**

To ensure the safety of construction vehicles entering and exiting via the Gate C2, an assessment has been undertaken for determining controls for managing truck movements where auxiliary lanes are not provided (existing access point), depending on traffic volumes, sight distance, number of truck movements and traffic speed. This assessment aims to adopt the methodology presented within Section 5.2.3.3 of TfNSW's *Technical Manual – Traffic control at work sites* and is presented below.

**TABLE 127: SITE ACCESS ASSESSMENT CRITERIA – GATE C2**

| Site Access Assessment | |
|---|---|
| **Location:** | Fox Street at Donnelly Avenue |
| **AADT:** | 332 |
| **Speed limit:** | 50km/hr |
| **Number of truck movements per shift:** | Less than 20 |
| **Dimension D:** | 50m (2D = 100m) |
| **Available sight distance** | Greater than 2D |


**FIGURE 36: VIEW APPROACHING GATE C2 (~100M FROM ACCESS POINT)**

As available sight distance approaching Gate C2 is greater than 2D (100m), an assessment has been undertaken using Table 5-7 of TfNSW's *Technical Manual – Traffic control at work sites* has been undertaken and is detailed in Table 130 below.

**TABLE 128: GATE C2 – PROVIDING FOR TRUCK MOVEMENTS WHERE SIGHT DISTANCE IS GREATER THAN 2D (TABLE 5-7 OF TFNSW'S *TECHNICAL MANUAL – TRAFFIC CONTROL AT WORK SITES)***

| ADT | 300 – 1,500 | More than 1,500 | | |
|---|---|---|---|---|
| **Number of truck movements per shift** | Less than or equal to 20 | Greater than 20 | Less than or equal to 20 | Greater than 20 |
| **Traffic control required** | | Yes | Yes Note 1* | Yes Note 2* |
| **VMP required** | | Yes | | Yes |
| **Warning signs required during shifts** | | Yes | | Yes |

Note 1: Where approach speed is greater than 95km/hr

Note 2: If acceleration and deceleration cannot occur on shoulders

No controls are warranted at Gate C2 to facilitate the safe and efficient movement of construction vehicles into and out of the access, and as such access will operate under a typical "Give way" arrangement. Notwithstanding this, traffic control may be implemented to facilitate alternative movements at the access (i.e., reverse into or out of the site) – refer to Section 3.2.14.

### 3.2.8 Construction Vehicle Access Routes

Construction heavy vehicles will access the worksite via the routes identified within Environmental Approval Documentation, with the routes detailed below in Table 129.

**TABLE 129: CONSTRUCTION VEHICLE ACCESS ROUTES – CASSIDY PARADE PEDESTRIAN BRIDGE ENHANCMEMENT SITE**

| Site Access | Direction | Access Route | Largest suitable vehicle type |
|---|---|---|---|
| Gate C1 | Inbound | Edward Street, left/right turn onto Murray Street, left turn onto Brookong Avenue. | Up to 19.0m truck and dog |
| | Outbound | Brookong Avenue, right turn onto Murray Street, left/right turn onto Edward Street. | |
| Gate C2 | Inbound | Edward Street, left/right turn onto Fox Street. | Up to 19.0m truck and dog |
| | Outbound | Fox Street, left/right turn onto Edward Street. | |

These access routes are depicted in Figure 37 and Figure 38.


**FIGURE 37: CONSTRUCTION VEHICLE ACCESS ROUTES – GATE C1**


**FIGURE 38: CONSTRUCTION VEHICLE ACCESS ROUTES – GATE C2**

As a measure of monitoring any impacts to road infrastructure along construction vehicle access routes, road dilapidation surveys will be undertaken prior to the use of an identified route.

A swept path analysis has also been undertaken for key movements along the construction vehicle access routes, demonstrating the ability for construction vehicle to safely manoeuvre along the identified routes, and is detailed in Section 4.3. Where larger vehicle types are required to access the site, further assessment will be undertaken to determine the suitability of identified access routes.

### 3.2.9 Impact on Traffic Flow

#### Key Roads

To evaluate the impact of the Stage A works on key roads, an assessment of road (mid-block) performance has been undertaken in relation to Level of Service (LOS) for the key road links with and without traffic generated by the Stage A works. The assessment has been carried out using a combination of peak hour background traffic volumes, in conjunction with expected peak hour construction traffic volumes to determine an operating LOS for key road links for both the "without construction traffic" and "with construction traffic" scenarios.

Road link LOS for key road links have been determined using Table 4.4 from the *Guide to Traffic Generating Developments (RTA 2002)*, which has been replicated below.

**TABLE 130: LINK LOS ADAPTED FROM THE *GUIDE TO TRAFFIC GENERATING DEVELOPMENT (2002) TABLE 4.4***

| LOS | One lane per direction (veh/hr) | Two lanes per direction (veh/hr) |
|---|---|---|
| LOS A | 200 | 900 |
| LOS B | 380 | 1,400 |
| LOS C | 600 | 1,800 |
| LOS D | 900 | 2,200 |
| LOS E | More than 900 | 2,800 |

While it is recognised that TfNSW's *Guide to Transport Impact Assessment* has superseded the *Guide to Traffic Generating Developments*, the process of assessment is considered appropriate in quantifying potential impacts to traffic flow and the road network resulting from the Stage A works. It is also noted that this approach is consistent with the Link LOS assessment undertaken within *Technical Paper 1: Traffic and Transport* and its addendums.

The link LOS assessment for the Cassidy Parade Pedestrian Bridge enhancement site is shown in Table 131 and Table 132. It should be noted that to determine future year background traffic demands (2025), an annual growth rate of 2% (compounding) has been applied to the recorded background traffic volumes (refer to Section 2).

**TABLE 131: AM PEAK LINK LOS ASSESSMENT – CASSIDY PARADE PEDESTRIAN BRIDGE**

| Road link | No. of lanes (per direction) | Direction | AM Background volume (one way) | Without construction traffic LOS | Construction volume (one way) | Total volume | Percent increase in volumes | With project LOS |
|---|---|---|---|---|---|---|---|---|
| Murray Street at Edward Street | 1 | Northbound | 88 | A | 3 | 91 | 3.4% | A |
| | | Southbound | 46 | A | | 49 | 6.5% | A |
| Brookong Avenue at Edward Street | 1 | Northbound | 34 | A | | 37 | 8.8% | A |
| | | Southbound | 68 | A | | 71 | 4.4% | A |
| Fox Street at Edward Street[1, 2] | 1 | Northbound | 17 | A | | 20 | 17.7% | A |
| | | Southbound | 17 | A | | 20 | 17.7% | A |

1: Peak hour volume not available, assumed 10% of AADT

2: Two-way data not available, assumed 50/50 traffic split during peak hours

**TABLE 132: PM PEAK LINK LOS ASSESSMENT – CASSIDY PARADE PEDESTRIAN BRIDGE**

| Road link | No. of lanes (per direction) | Direction | PM Background volume (one way) | Without construction traffic LOS | Construction volume (one way) | Total volume | Percent increase in volumes | With project LOS |
|---|---|---|---|---|---|---|---|---|
| Murray Street at Edward Street | 1 | Northbound | 125 | A | 3 | 128 | 2.4% | A |
| | | Southbound | 89 | A | | 92 | 3.4% | A |
| Brookong Avenue at Edward Street | 1 | Northbound | 60 | A | | 63 | 5% | A |
| | | Southbound | 101 | A | | 104 | 3% | A |
| Fox Street at Edward Street[1, 2] | 1 | Northbound | 17 | A | | 20 | 17.7% | A |
| | | Southbound | 17 | A | | 20 | 17.7% | A |

1: Peak hour volume not available, assumed 10% of AADT

2: Two-way data not available, assumed 50/50 traffic split during peak hours

The link LOS assessment for the Cassidy Parade Pedestrian Bridge enhancement site shows that with construction traffic, there is expected change is LOS from the “without construction traffic scenario” during the AM and PM peak periods. As a result, no significant impact to road operation or performance are expected to result from the traffic generated by the Stage A works. As such, mitigations are not considered warranted as a result of the Stage A works.

### Key Intersections

To evaluate the impact of the Stage A works on key intersections, a first principles assessment has been undertaken. To undertake this assessment, consideration has been given to the volume of construction traffic associated with the Stage A works within the Cassidy Parade Pedestrian Bridge enhancement site.

As detailed within Section 3.1.6, a peak of three (3) construction vehicles per hour (one (1) vehicle every 20 minutes) is expected to be generated during the Stage A works. At signalised intersections, and assuming a maximum cycle time of 120 seconds at an intersection (worst-case), it is reasonably expected the Stage A works could generate up to one (1) additional vehicle at the intersection per cycle.

Considering this, the impact of one (1) additional vehicle per cycle is not expected to significantly impact the operation of keys intersections surrounding the Cassidy Parade Pedestrian Bridge enhancement site.

## 3.2.10 Impact on Public Transport

### Public Transport Operations

There is not expected to be any impact upon public transport operations is expected during this stage of work.

### Access to Public Transport

There will be no change or impact to public transport access during this stage of work.

## 3.2.11 Impact on Pedestrians and Cyclists

There will be no change to or impact to pedestrian and cyclist facilities or access during this stage of work.

## 3.2.12 Access for Businesses and Residents

There will be no change to or impact to access for businesses and/or residents during this stage of work.

## 3.2.13 Changes to Kerbside Management

There will be no changes to kerbside allocations during this stage of work.

## 3.2.14 Works Requiring Short Term Traffic Control

### Overview

The Stage A works are generally confined to the rail corridor and as such do not involve works be constructed under traffic. Temporary speed limit reductions and/or short-term traffic control (intermittent stops) may be implemented to manage site entry and exit movements as required for construction heavy vehicles.

**TABLE 133: SHORT-TERM TRAFFIC CONTROL REQUIREMENTS – CASSIDY PARADE PEDESTRIAN BRIDGE**

| Location | Activity | Traffic control | Duration | Timing | Expected impacts |
|---|---|---|---|---|---|
| Gate C1 – Existing access on Brookong Avenue | Site access manoeuvres | Hold and release / intermittent stop | 5 months | Subject to the times permitted under the appropriate approval issued by the relevant authority | Minor delays to traffic travelling along Brookong Avenue. |
| Gate C2 – New access on Fox Street at Donnelly Avenue | Site access manoeuvres | Hold and release / intermittent stop | 5 months | Subject to the times permitted under the appropriate approval issued by the relevant authority | Minor delays to traffic travelling along Fox Street. |

## 3.3 Edmondson Street Bridge Enhancement Site

### 3.3.1 Site Location

The Edmondson Street Bridge enhancement site encompasses areas within the rail corridor bound by Donnelly Avenue and Railway Street.

### 3.3.2 Works Required

The Stage A scope of work at the Edmondson Street Bridge enhancement site comprise of the following:

- Establishment of site compounds on the northern and southern sides of rail corridor from Station Place and Railway Street.
- Clearing and grubbing on the northern and southern sides of the rail corridor as well as the western side of Edmondson Street.
- Gas under bore of the rail corridor and Edmondson Street.
- Installation of new power poles and stringing conductors on the western side of Edmondson Street for the 66KV overhead power relocation.
- Installation of gas (HDD) along MacLeay Street and Erin Street and across Edmondson Street.

### 3.3.3 Timing and Duration

The proposed arrangements are planned to be implemented from early February 2025 and remain in operation until late August 2025.

### 3.3.4 Drawings

There will be no long-term changes to the existing conditions on the roads in the vicinity of the Pearson Street Bridge enhancement site resulting from the Stage A works

A list of expected short-term traffic guidance schemes expected to facilitate the works as detailed within Section 3.1.14 are provided in Appendix A

### 3.3.5 Operating Conditions

There will be no long-term changes to the existing conditions on the roads in the vicinity of the Edmondson Street Bridge enhancement site resulting from the Stage A works.

Temporary speed limit reductions and/or short-term traffic control may be implemented along key roads to facilitate the safe and efficient movement of construction heavy vehicles and/or works outside of the rail corridor (refer to Section 3.3.14).

### 3.3.6 Construction Traffic

The peak volume of additional traffic generated by the Stage A works required to access the worksite is expected to be in the order of six (6) vehicles per hour, broken down as follows:

**TABLE 134: CONSTRUCTION TRAFFIC – PEARSON STREET BRIDGE ENHANCEMENT SITE**

| Scope | Light vehicles (vehicles per hour) | Heavy vehicles (vehicles per hour) |
|---|---|---|
| Site establishment | Four (4) | Two (2) |
| Clearing and grubbing | Four (4) | Two (2) |
| Gas under bore works | Four (4) | Two (2) |
| Installation of gas main | Four (4) | Two (2) |
| Installation of new power poles | Four (4) | Two (2) |

For the Stage A works, a 12.5m single unit truck is expected to be the predominant type of vehicle accessing the worksite however, occasional use of larger vehicles will be required to facilitate the works. The scope of heavy vehicle requirements is detailed in Table 135 below.

**TABLE 135: CONSTRUCTION HEAVY VEHICLE REQUIREMENTS – EDMONDSON STREET BRIDGE ENHANCEMENT SITE**

| Site access | Vehicle type | Scope | Frequency |
|---|---|---|---|
| Gate E1 – Existing access on Donnelly Avenue | 12.5m single unit truck | Delivery of smaller items of plant and materials | Daily |
| | 19.0m semi-trailer | Delivery of poles and large plant items under traffic control | ≤ one (1) per week |
| Gate E2 – Existing access on Railway Street | 12.5m single unit truck | Delivery of smaller items of plant and materials | Daily |
| | 19.0m truck and dog | Delivery of ballast and other large material | ≤ one (1) per week |
| | 19.0m semi-trailer | Delivery of poles and large plant items under traffic control | ≤ one (1) per week |
| Gate E3 – Existing access on Station Place | 12.5m single unit truck | Delivery of smaller items of plant and materials | Daily |
| | 19.0m truck and dog | Delivery of ballast and other large material | ≤ one (1) per week |
| | 19.0m semi-trailer | Delivery of poles and large plant items under traffic control | ≤ one (1) per week |

## 3.3.7 Site Access

### Overview

Access to the worksite will be via existing access points located on Donnelly Avenue and Railway Street. A summary of permitted movements and methods of control at site access locations is provided below in Table 122, with further details provided in subsequent sections of this report.

**TABLE 136: SITE ACCESS DETAILS – EDMONDSTON STREET BRIDGE ENHANCEMENT SITE**

| Access | Site Entry/Exit | Vehicle type | Permitted Movements | Control |
|---|---|---|---|---|
| Gate E1 – Existing access off Donnelly Avenue | Entry and exit | Up to 12.5m single unit truck | Right in, right out | Give way |
| | | 19.0m semi-trailer | Traffic control – refer to Section 3.3.15 | |
| Gate E2 – Existing access off Railway Street | Entry and exit | Up to 12.5m single unit truck | Left/right in, left/right out | Give way |
| | | 19.0m truck and dog | | |
| | | 19.0m semi-trailer | Traffic control – refer to Section 3.3.15 | |
| Gate E3 – Existing access to Multicultural Council of Wagga Wagga car parking off Station Place | Entry and exit | Up to 12.5m single unit truck | Left in, left out | Give way |
| | | 19.0m truck and dog | | |
| | | 19.0m semi-trailer | Traffic control – refer to Section 3.3.15 | |

## Gate E1 – Existing access on Donnelly Avenue

Located on Donnelly Avenue, Gate E1 is an existing access that will provide access to the Edmondson Street Bridge enhancement site.

**FIGURE 39: GATE E1 – DONNELLY AVENUE**

Details of permitted movements and methods of control at Gate E1 is summarised below in Table 137.

**TABLE 137: SITE ACCESS DETAILS – GATE E1**

| Access | Site Entry/Exit | Vehicle type | Permitted Movements | Control |
|---|---|---|---|---|
| Gate E1 – Existing access off Donnelly Avenue | Entry and exit | Up to 12.5m single unit truck | Right in, right out | Give way |
| | | 19.0m semi-trailer | Traffic control – refer to Section 3.3.15 | |


**FIGURE 40: SITE ACCESS DETAILS – GATE E1**

Noting that traffic control will be required to facilitate access for a 19.0m semi-trailer via Gate E1, an assessment has been undertaken for determining controls for managing movements for vehicle combinations up to and including a 12.5m single unit truck, where auxiliary lanes are not provided (existing access point), depending on traffic volumes, sight distance, number of truck movements and traffic speed. This assessment aims to adopt the methodology presented within Section 5.2.3.3 of TfNSW's *Technical Manual – Traffic control at work sites* and is presented below.

**TABLE 138: SITE ACCESS ASSESSMENT CRITERIA – GATE E1**

| Site Access Assessment | |
|---|---|
| **Location:** | Donnelly Avenue |
| **AADT:** | No data available - assume between 300 - 1500 |
| **Speed limit:** | 50km/hr |
| **Number of truck movements per shift:** | Less than 20 |
| **Dimension D:** | 50m (2D = 100m) |
| **Available sight distance** | Greater than 2D |


**FIGURE 41: VIEW APPROACHING GATE E1 (~100M FROM ACCESS POINT)**

As available sight distance approaching Gate E1 is greater than 2D (100m), an assessment has been undertaken using Table 5-7 of TfNSW's *Technical Manual – Traffic control at work sites* has been undertaken and is detailed in Table 139 below.

**TABLE 139: GATE E1 – PROVIDING FOR TRUCK MOVEMENTS WHERE SIGHT DISTANCE IS GREATER THAN 2D (TABLE 5-7 OF TFNSW'S *TECHNICAL MANUAL – TRAFFIC CONTROL AT WORK SITES*)**

| ADT | 300 – 1,500 | | More than 1,500 | |
|---|---|---|---|---|
| **Number of truck movements per shift** | Less than or equal to 20 | Greater than 20 | Less than or equal to 20 | Greater than 20 |
| **Traffic control required** | | Yes | Yes Note 1* | Yes Note 2* |
| **VMP required** | | Yes | | Yes |
| **Warning signs required during shifts** | | Yes | | Yes |

Note 1: Where approach speed is greater than 95km/hr

Note 2: If acceleration and deceleration cannot occur on shoulders

No controls are warranted at Gate E1 to facilitate the safe and efficient movement of construction vehicles into and out of the access, and as such access will operate under a typical "Give way" arrangement. Notwithstanding this, traffic control may be implemented to facilitate alternative movements at the access (i.e., reverse into or out of the site) – refer to Section 3.3.14.

### Gate E2 – Existing access on Railway Street

Located on Railway Street, Gate E2 is an existing access that will provide access to the Edmondson Street Bridge enhancement site.


**FIGURE 42: GATE E2 – RAILWAY STREET**

Details of permitted movements and methods of control at Gate E2 is summarised below in Table 137.

**TABLE 140: SITE ACCESS DETAILS – GATE E2**

| Access | Site Entry/Exit | Largest Permitted Vehicle | Permitted Movements | Control |
|---|---|---|---|---|
| Gate E2 – Existing access off Railway Street | Entry and exit | Up to 12.5m single unit truck | Left/right in, left/right out | Give way |
| | | 19.0m truck and dog | | |
| | | 19.0m semi-trailer | Traffic control – refer to Section 3.3.15 | |


**FIGURE 43: SITE ACCESS DETAILS – GATE E2**

Noting that traffic control will be required to facilitate access for a 19.0m semi-trailer via Gate E2, an assessment has been undertaken for determining controls for managing movements for vehicle combinations up to and including a 12.5m single unit truck, where auxiliary lanes are not provided (existing access point), depending on traffic volumes, sight distance, number of truck movements and traffic speed. This assessment aims to adopt the methodology presented within Section 5.2.3.3 of TfNSW's *Technical Manual – Traffic control at work sites* and is presented below.

**TABLE 141: SITE ACCESS ASSESSMENT CRITERIA – GATE E2**

| Site Access Assessment | |
|---|---|
| **Location:** | Railway Street |
| **AADT:** | 3,230 |
| **Speed limit:** | 50km/hr |
| **Number of truck movements per shift:** | Less than 20 |
| **Dimension D:** | 50m (2D = 100m) |
| **Available sight distance** | Greater than 2D |


**FIGURE 44: NORTHBOUND VIEW APPROACHING GATE E2 (~100M FROM ACCESS POINT)**


**FIGURE 45: WESTBOUND VIEW APPROACHING GATE E2 (~100M FROM ACCESS POINT)**

As available sight distance approaching Gate E2 is greater than 2D (100m), an assessment has been undertaken using Table 5-7 of TfNSW's *Technical Manual – Traffic control at work sites* has been undertaken and is detailed in Table 142 below.

**TABLE 142: GATE E2 – PROVIDING FOR TRUCK MOVEMENTS WHERE SIGHT DISTANCE IS GREATER THAN 2D (TABLE 5-7 OF TFNSW'S *TECHNICAL MANUAL – TRAFFIC CONTROL AT WORK SITES)***

| ADT | 300 – 1,500 | | More than 1,500 | |
|---|---|---|---|---|
| **Number of truck movements per shift** | Less than or equal to 20 | Greater than 20 | Less than or equal to 20 | Greater than 20 |
| **Traffic control required** | | Yes | Yes Note 1* | Yes Note 2* |
| **VMP required** | | Yes | | Yes |
| **Warning signs required during shifts** | | Yes | | Yes |

Note 1: Where approach speed is greater than 95km/hr

Note 2: If acceleration and deceleration cannot occur on shoulders

No controls are warranted at Gate E2 to facilitate the safe and efficient movement of construction vehicles into and out of the access, and as such access will operate under a typical "Give way" arrangement. Notwithstanding this, traffic control may be implemented to facilitate alternative movements at the access (i.e., reverse into or out of the site) – refer to Section 3.3.14.

### Gate E3 – Existing access on Station Place

Located on Station Place, Gate E3 is an existing access that will provide access to the Edmondson Street Bridge enhancement site.

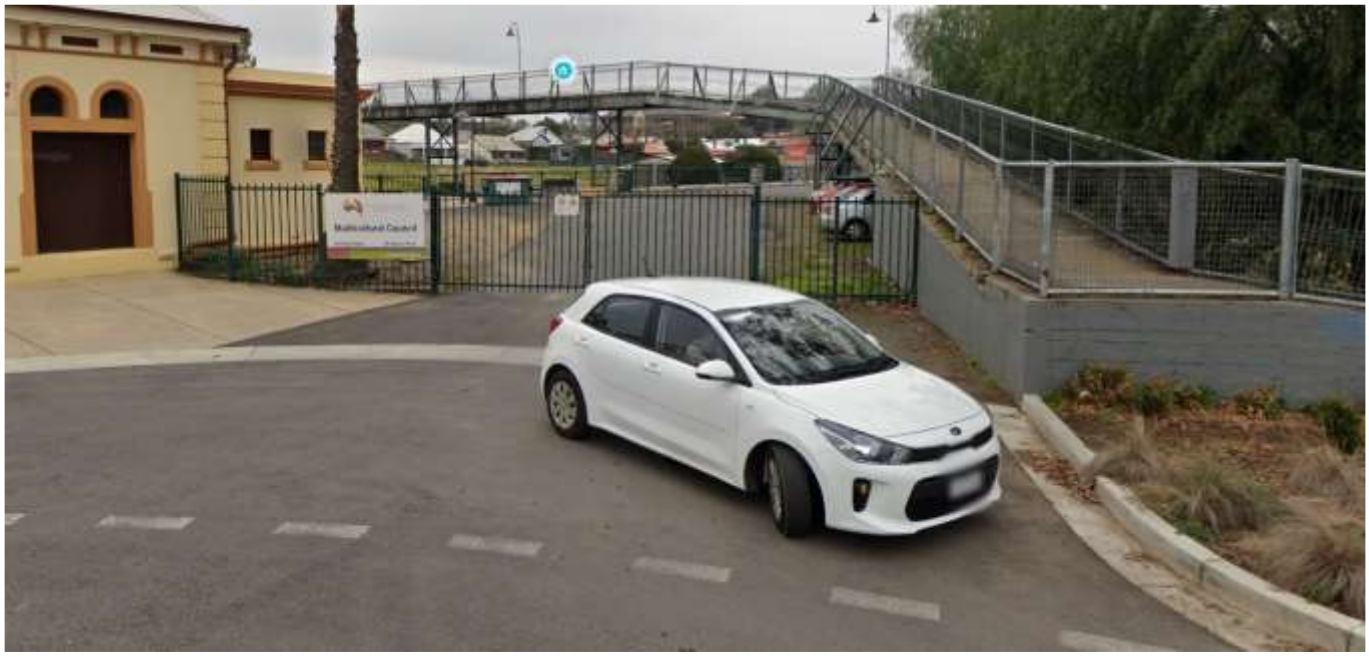


**FIGURE 46: GATE E3 – STATION PLACE**

Details of permitted movements and methods of control at Gate E3 is summarised below in Table 143.

**TABLE 143: SITE ACCESS DETAILS – GATE E3**

| Access | Site Entry/Exit | Largest Permitted Vehicle | Permitted Movements | Control |
|---|---|---|---|---|
| Gate E3 – Existing access to Multicultural Council of Wagga Wagga car parking off Station Place | Entry and exit | Up to 12.5m single unit truck | Left in, left out | Give way |
| | | 19.0m truck and dog | | |
| | | 19.0m semi-trailer | Traffic control – refer to Section 3.3.15 | |


**FIGURE 47: SITE ACCESS DETAILS – GATE E3**

Noting that traffic control will be required to facilitate access for a 19.0m semi-trailer via Gate E3, an assessment has been undertaken for determining controls for managing movements for vehicle combinations up to and including a 12.5m single unit truck, where auxiliary lanes are not provided (existing access point), depending on traffic volumes, sight distance, number of truck movements and traffic speed. This assessment aims to adopt the methodology presented within Section 5.2.3.3 of TfNSW's *Technical Manual – Traffic control at work sites* and is presented below.

**TABLE 144: SITE ACCESS ASSESSMENT CRITERIA – GATE E3**

| Site Access Assessment | |
|---|---|
| **Location:** | Station Place |
| **AADT:** | 472 |
| **Speed limit:** | 50km/hr |
| **Number of truck movements per shift:** | Less than 20 |
| **Dimension D:** | 50m (2D = 100m) |
| **Available sight distance** | Greater than 2D |

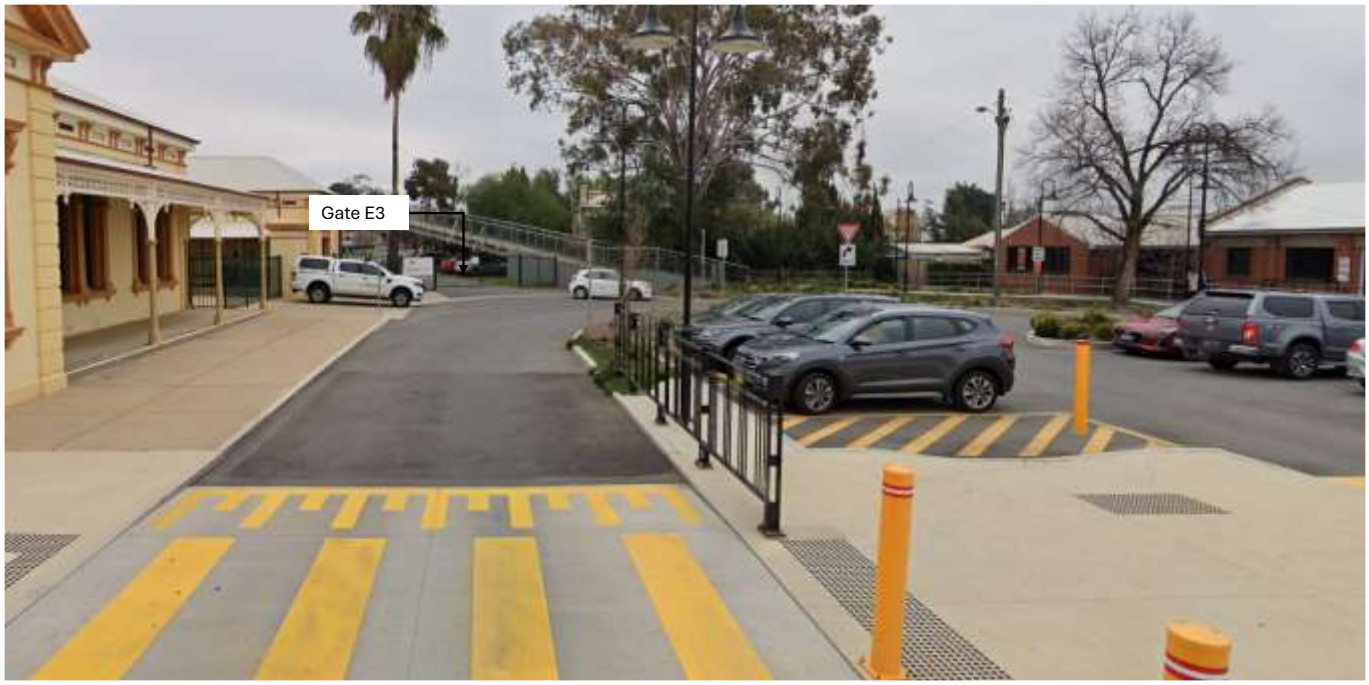



**FIGURE 48: VIEW APPROACHING GATE E3**

As available sight distance approaching Gate E3 is greater than 2D (100m), an assessment has been undertaken using Table 5-7 of TfNSW's *Technical Manual – Traffic control at work sites* has been undertaken and is detailed in Table 145 below.

**TABLE 145: GATE E3 – PROVIDING FOR TRUCK MOVEMENTS WHERE SIGHT DISTANCE IS GREATER THAN 2D (TABLE 5-7 OF TFNSW'S *TECHNICAL MANUAL – TRAFFIC CONTROL AT WORK SITES*)**

| ADT | 300 – 1,500 | More than 1,500 | | |
|---|---|---|---|---|
| **Number of truck movements per shift** | Less than or equal to 20 | Greater than 20 | Less than or equal to 20 | Greater than 20 |
| **Traffic control required** | | Yes | Yes Note 1* | Yes Note 2* |
| **VMP required** | | Yes | | Yes |
| **Warning signs required during shifts** | | Yes | | Yes |

Note 1: Where approach speed is greater than 95km/hr

Note 2: If acceleration and deceleration cannot occur on shoulders

No controls are warranted at Gate E3 to facilitate the safe and efficient movement of construction vehicles into and out of the access, and as such access will operate under a typical "Give way" arrangement. Notwithstanding this, traffic control may be implemented to facilitate alternative movements at the access (i.e., reverse into or out of the site) – refer to Section 3.3.14.

### 3.3.8 Construction Vehicle Access Routes

Construction heavy vehicles will access the worksite via the routes identified within Environmental Approval Documentation, with the routes detailed in Table 146 below.

**TABLE 146: CONSTRUCTION VEHICLE ACCESS ROUTES – EDMONDSON STREET BRIDGE ENHANCEMENT SITE**

| Site Access | Direction | Access Route | Largest suitable vehicle type |
|---|---|---|---|
| Gate E1 | Inbound | Edward Street, left/right turn onto Fox Street, straight onto Donnelly Avenue | Up to 12.5m single unit truck |
| | Outbound | Donnelly Avenue, straight onto Little Best Street, right turn onto Edward Street | Up to 12.5m single unit truck |
| | | Donnelly Avenue, straight onto Little Best Street, left turn onto Edward Street | Up to 8.8m service vehicle |
| Gate E2 | Inbound | Edward Street, right turn onto Edmondson Street, left turn onto Erin Street, left turn onto MacLeay Street, left turn onto Railway Street. | Up to 19.0m semi-trailer |
| | | Edward Street, left turn onto Edmondson Street, left turn onto Erin Street, left turn onto MacLeay Street, left turn onto Railway Street. | Up to 12.5 single unit truck |
| | Outbound | Railway Street, right turn onto MacLeay Street, right turn onto Erin Street, right turn onto Edmondson Street, left turn onto Edward Street | Up to 8.8m service vehicle |
| | | Railway Street, right turn onto MacLeay Street, right turn onto Erin Street, right turn onto Edmondson Street, right turn onto Edward Street | Up to 19.0m semi-trailer |
| | Inbound (alternative) | Edward Street, right turn onto Lake Albert Road, right turn onto Railway Street. | Up to 19.0m semi-trailer |
| | | Edward Street, left turn onto Lake Albert Road, right turn onto Railway Street. | Up to 19.0m truck and dog |
| | Outbound (alternative) | Railway Street, left turn onto Lake Albert Road, left turn onto Edward Street. | Up to 19.0m truck and dog |
| | | Railway Street, left turn onto Lake Albert Road, right turn onto Edward Street. | Up to 19.0m semi-trailer |
| Gate E3 | Inbound | Edward Street, left/right turn onto Station Place, Straight onto Station Place loop. | Up to 19.0m truck and dog |
| | Outbound | Station Place loop, straight onto Station Place, right turn onto Edward Street. | |

These access routes are depicted in Figure 49, Figure 50 and Figure 51.


FIGURE 49: CONSTRUCTION VEHICLE ACCESS ROUTES – GATE E1


FIGURE 50: CONSTRUCTION VEHICLE ACCESS ROUTES – GATE E2


**FIGURE 51: CONSTRUCTION VEHICLE ACCESS ROUTES – GATE E3**

As a measure of monitoring any impacts to road infrastructure along construction vehicle access routes, road dilapidation surveys will be undertaken prior to the use of an identified route.

A swept path analysis has also been undertaken for key movements along the construction vehicle access routes, demonstrating the ability for construction vehicle to safely manoeuvre along the identified routes, and is detailed in Section 4.3. Where larger vehicle types are required to access the site, further assessment will be undertaken to determine the suitability of identified access routes.

## 3.3.9 Impact on Traffic Flow

### Key Roads

To evaluate the impact of the Stage A works on key roads, an assessment of road (mid-block) performance has been undertaken in relation to Level of Service (LOS) for the key road links with and without traffic generated by the Stage A works. The assessment has been carried out using a combination of peak hour background traffic volumes, in conjunction with expected peak hour construction traffic volumes to determine an operating LOS for key road links for both the "without construction traffic" and "with construction traffic" scenarios.

Road link LOS for key road links have been determined using Table 4.4 from the *Guide to Traffic Generating Developments (RTA 2002)*, which has been replicated below.

**TABLE 147: LINK LOS ADAPTED FROM THE *GUIDE TO TRAFFIC GENERATING DEVELOPMENT (2002) TABLE 4.4***

| LOS | One lane per direction (veh/hr) | Two lanes per direction (veh/hr) |
|---|---|---|
| LOS A | 200 | 900 |
| LOS B | 380 | 1,400 |
| LOS C | 600 | 1,800 |
| LOS D | 900 | 2,200 |
| LOS E | More than 900 | 2,800 |

While it is recognised that TfNSW's *Guide to Transport Impact Assessment* has superseded the *Guide to Traffic Generating Developments*, the process of assessment is considered appropriate in quantifying potential impacts to traffic flow and the road network resulting from the Stage A works. It is also noted that this approach is consistent with the Link LOS assessment undertaken within *Technical Paper 1: Traffic and Transport* and its addendums.

The link LOS assessment for the Edmondson Street Bridge enhancement site is shown in Table 148 and Table 149. It should be noted that to determine future year background traffic demands (2025), an annual growth rate of 2% (compounding) has been applied to the recorded background traffic volumes (refer to Section 2).

**TABLE 148: AM PEAK LINK LOS ASSESSMENT – EDMONDSON STREET BRIDGE**

| Road link | No. of lanes (per direction) | Direction | AM Background volume (one way) | Without construction traffic LOS | Construction volume (one way) | Total volume | Percent increase in volumes | With project LOS |
|---|---|---|---|---|---|---|---|---|
| Fox Street at Edward Street[1, 2] | 1 | Northbound | 17 | A | 6 | 23 | 35.3% | A |
| | | Southbound | 17 | A | | 23 | 35.3% | A |
| Edmondson Street at Edward Street | 2 | Northbound | 835 | A | | 844[3] | 1.1% | A |
| | | Southbound | 383 | A | | 392[3] | 2.4% | A |
| Erin Street[1, 2] | 1 | Eastbound | 24 | A | | 30 | 25% | A |
| | | Westbound | 24 | A | | 30 | 25% | A |
| MacLeay Street[1, 2] | 1 | Northbound | 162 | A | | 168 | 3.7% | A |
| | | Southbound | 162 | A | | 168 | 3.7% | A |
| Railway Street at Albert Lake Road | 1 | Eastbound | 264 | B | | 272 | 2.3% | B |
| | | Westbound | 187 | A | | 193 | 3.2% | A |
| Albert Lake Road at Edward Street | 2 | Northbound | 924 | B | | 930 | 0.7% | B |
| | | Southbound | 378 | A | | 384 | 1.6% | A |
| Station Place at Edward Street | 1 | Northbound | 107 | A | | 113 | 5.6% | A |
| | | Southbound | 98 | A | | 104 | 6.1% | A |

1: Peak hour volume not available, assumed 10% of AADT

2: Two-way data not available, assumed 50/50 traffic split during peak hours

3: Considers cumulative volumes associated with the Cassidy Parade Pedestrian Bridge enhancement site

**TABLE 149: PM PEAK LINK LOS ASSESSMENT – EDMONDSON STREET BRIDGE**

| Road link | No. of lanes (per direction) | Direction | PM Background volume (one way) | Without construction traffic LOS | Construction volume (one way) | Total volume | Percent increase in volumes | With project LOS |
|---|---|---|---|---|---|---|---|---|
| Fox Street at Edward Street[1, 2] | 1 | Northbound | 17 | A | 6 | 23 | 35.3% | A |
| | | Southbound | 17 | A | | 23 | 35.3% | A |
| Edmondson Street at Edward Street | 2 | Northbound | 638 | A | | 647[3] | 1.4% | A |
| | | Southbound | 538 | A | | 547[3] | 1.1% | A |
| Erin Street[1, 2] | 1 | Eastbound | 24 | A | | 30 | 25% | A |
| | | Westbound | 24 | A | | 30 | 25% | A |
| MacLeay Street[1, 2] | 1 | Northbound | 162 | A | | 168 | 3.7% | A |
| | | Southbound | 162 | A | | 168 | 3.7% | A |
| Railway Street at Albert Lake Road | 1 | Eastbound | 187 | A | | 193 | 3.2% | A |
| | | Westbound | 190 | A | | 196 | 3.2% | A |
| Albert Lake Road at Edward Street | 2 | Northbound | 677 | A | | 673 | 0.9% | A |
| | | Southbound | 1,011 | B | | 1,017 | 0.6% | B |
| Station Place at Edward Street | 1 | Northbound | 205 | B | | 211 | 2.9% | B |
| | | Southbound | 170 | A | | 176 | 3.5% | A |

1: Peak hour volume not available, assumed 10% of AADT

2: Two-way data not available, assumed 50/50 traffic split during peak hours

3: Considers cumulative volumes associated with the Cassidy Parade Pedestrian Bridge enhancement site

The link LOS assessment for the Edmondson Street Pedestrian Bridge enhancement site shows that with construction traffic, there is expected change is LOS from the "without construction traffic scenario" during the AM and PM peak periods. As a result, no significant impact to road operation or performance are expected to result from the traffic generated by the Stage A works. As such, mitigations are not considered warranted as a result of the Stage A works.

### Key Intersections

To evaluate the impact of the Stage A works on key intersections, a first principles assessment has been undertaken. To undertake this assessment, consideration has been given to the volume of construction traffic associated with the Stage A works within the Edmondson Street Bridge enhancement site.

As detailed within Section 3.1.6, a peak of six (6) construction vehicles per hour (one (1) vehicle every 10 minutes) is expected to be generated during the Stage A works. At signalised intersections, and assuming a maximum cycle time of 120 seconds at an intersection, it is reasonably expected the Stage A works could generate up to one (1) additional vehicle at the intersection per cycle.

Considering this, the impact of one (1) additional vehicle per cycle is not expected to significantly impact the operation of keys intersections surrounding the Edmondson Street Bridge enhancement site.

### 3.3.10 Impact on Public Transport

#### Public Transport Operations

There is not expected to be any impact upon public transport operations is expected during this stage of work.

#### Access to Public Transport

There will be no change or impact to public transport access during this stage of work.

### 3.3.11 Impact on Pedestrians and Cyclists

There will be no change to or impact to pedestrian and cyclist facilities or access during this stage of work.

### 3.3.12 Access for Businesses and Residents

There will be no change to or impact to access for businesses and/or residents during this stage of work.

### 3.3.13 Changes to Kerbside Management

The removal of on-street carparking along Donnelly Avenue and Little Best Street is proposed to facilitate the movement of construction vehicles travelling between Edward Street and Gate C2. The removal of any car parking will be subject to approval by the relevant authority.

### 3.3.14 Works Requiring Short Term Traffic Control

#### Overview

In addition to works within the rail corridor, Stage A works at the Edmondson Street Bridge enhancement site will require short-term traffic control to facilitate site access manoeuvres, high pressure gas works, medium pressure gas works and electrical works. Expected details of these works are provided below.

**TABLE 150: SHORT-TERM TRAFFIC CONTROL REQUIREMENTS – EDMONDSON STREET BRIDGE**

| Location | Activity | Traffic control | Duration | Timing | Expected impacts |
|---|---|---|---|---|---|
| Gate E1 – Existing access on Donnelly Avenue | Site access manoeuvres | Hold and release / intermittent stop | Five (5) months | Subject to the times permitted under the appropriate approval issued by the relevant authority | Minor delays to traffic travelling along Donnelly Avenue. |
| Gate E2 – Existing access on Railway Street | Site access manoeuvres | Hold and release / intermittent stop | Five (5) months | | Minor delays to traffic travelling along Railway Street. |
| Gate E3 – Existing access on Station Place | Site access manoeuvres | Hold and release / intermittent stop | Five (5) months | | Minor delays to traffic travelling along Station Place |
| Donnelly Avenue / Little Best Street | High pressure gas works (HDD, pipe string and install) | Half road closure | Two (2) months | | Removal of parking along Donnelly Avenue |
| | | Full road closure | | | See below |
| Railway Street | Medium pressure gas works (HDD, pipe string and install) | Half road closure / shuttle flow | Two (2) months | | Minor delays to traffic travelling along Railway Street |

| Location | Activity | Traffic control | Duration | Timing | Expected impacts |
|---|---|---|---|---|---|
| MacLeay Street | | Shoulder closure | | | Removal of parking along MacLeay Street |
| Erin Street | | Shoulder closure | | | Removal of car parking along Erin Street |
| | | Half road closure / shuttle flow | | | Minor delays to traffic travelling along Erin Street |
| Edmondson Street | | Lane closure(s) / contraflow | | | Minor delays to traffic travelling along Erin Street |
| Donnelly Avenue / Little Best Street | Electrical works (cable stringing and pole install) | Full road closure | Five (5) shifts | | See below |
| Edmondson Street | | | | | See below |
| Edward Street | | Hold and release / intermittent stops | | | Minor delays to traffic travelling along Edward Street |
| | | Lane closure(s) | | | |

## Donnelly Avenue / Little Best Street Closure

***Overview***

As detailed in Table 150, high pressure gas works (HDD, pipe strong and install) and electrical works (cable stringing and pole install) are proposed to be facilitated through the closure of Donnelly Avenue and Little Best Street.

***Impact on Traffic Flow***

As part of the closure of Donnelly Avenue and Little Best Street, traffic will be detoured via Fox Street and Edward Street.


**FIGURE 52: DONNELLY AVENUE / LITTLE BEST STREET ROAD CLOSURE**

A high-level review of the redistribution of traffic along the detour route associated with the full closure of Donnelly Avenue and Little Best Street is detailed below.

**TABLE 151: DETOUR ROUTE REVIEW – DONNELLY AVENUE / LITTLE BEST STREET**

| Origin | Destination | Route | Travel time (Google Maps) | Detoured Route | Travel time (Google Maps) |
|---|---|---|---|---|---|
| Donnelly Avenue | Edward Street / Best Street | Donnelly Avenue, straight onto Little Best Street, straight onto Best Street, left/right turn onto Edward Street | 2 minutes (260m) | Fox Street, right turn onto Edward Street. | 2 minutes (240m) |

Based on the above, the closure of Donnelly Avenue and Little Best Street is not expected to result in any adverse conditions.

***Impact on Public Transport***

Donnelly Avenue and Little Best Street do not form part of any public transport routes, and therefore the works are not expected to result in any disruptions to existing services.

***Impact on Pedestrians and Cyclists***

The closure of Donnelly Avenue and Little Best Street is not expected to impact upon existing active transport provisions.

***Access for Businesses and Residents***

To minimise disruption to local residents located along Donnelly Avenue and Little Best Street, local access will be maintained through the road closure.

***Changes to Kerbside Management***

The closure of Donnelly Avenue and Little Best Street will result in the removal of car parking along these roads while works are undertaken. The removal of car parking shall be subject to approval by the relevant authority/

## Edmondson Street Closure

***Overview***

As detailed in Table 150, electrical works (cable stringing and pole install) are proposed to be facilitated through the closure of Edmondson Street between Edward Street and Coleman Street.

Impact on Traffic Flow

As part of the closure of Edmondson Street, traffic will be detoured either via:

- **Detour route 'A'**: Urana Street (at Mitchelmore Street), MacLeay Street, Railway Street, Lake Albert Road and Edward Street (not suitable for heavy vehicles)
- **Detour route 'B'**: Urana Street (at Mitchelmore Street), Bourke Street, Docker Street and Edward Street (suitable for heavy vehicles – refer to Section 4.3).


**FIGURE 53: EDMONDSON STREET ROAD CLOSURE**

A high-level review of the redistribution of traffic along the detour route associated with the full closure of Edmondson Street is detailed below.

**TABLE 152: DETOUR ROUTE REVIEW – EDMONDSON STREET**

| Origin | Destination | Route | Travel time (Google Maps) | Detoured Route | Travel time (Google Maps) |
|---|---|---|---|---|---|
| Mitchelmore Street at Urana Street | Edward Street / Best Street / Edmondson Street | Mitchelmore Street, straight onto Edmondson Street, left/right turn onto Edward Street | 4 minutes (1.2km) | Mitchelmore Street, right turn onto Urana Street, left turn onto MacLeay Street, right turn onto Railway Street, left turn onto Lake Albert Road, left turn onto Edward Street. | 8 minutes (3.6km) |
| | | | | Mitchelmore Street, left turn onto Urana Street, right turn onto | 7 minutes (2.8km) |

| | | | | | |
|---|---|---|---|---|---|
| | | | | Bourke Street, straight onto Docker Street, right turn onto Edward Street. | |

Based on the above, the closure of Edmondson Street is expected to result in delays up to four (4) minutes. To ensure that impacts on traffic flow associated with the closure are minimised, the closure will be implemented at times subject to the approval by the relevant authority.

***Impact on Public Transport***

It is anticipated that the closure of Edmondson Street will be implemented after the last service and removed prior the first service the following morning. Consultation will be undertaken with TfNSW should the timing of the closure impact upon the operation of existing services.

***Impact on Pedestrians and Cyclists***

The closure of Edmondson Street is not expected to impact upon existing active transport provisions.

***Access for Businesses and Residents***

The closure of Edmondson Street is not expected to impact upon the ability persons to access businesses or local residencies.

***Changes to Kerbside Management***

The closure of Edmondson Street is not expected to require any changes to kerbside allocations.

# 4 ROAD SAFETY ASSESSMENT OF CONSTRUCTION VEHICLE ACCESS ROUTES

## 4.1 Background

The approach to the assessment of construction vehicle access routes from a road safety perspective is to provide a safe road environment aligning with the Safe System. The Safe System is usually considered in terms of key interacting 'pillars':

- Safe roads
- Safe speeds
- Safe vehicles
- Safe people.

Road Safety Assessments have been undertaken at locations along the Construction Access Routes where the use of lower order roads (i.e., local roads), not forming part of a pre-approved heavy vehicle network (i.e. B-double) are proposed. The Road Safety Assessments evaluate any potential impacts associated with the use of roads along the designated access routes by construction heavy vehicles and align with the Safe System by:

- A crash history analysis to understand crashes and risks
  - A review of historical crash data provides a way to look at factors contributing to the likelihood or consequence of crashes.
- A turn path analysis
  - By undertaking turn path analysis, the mobility of construction vehicles can be evaluated, and potential risks associated with introducing construction vehicles is able to be attained.
- A risk assessment in the road safety context (comparing the current level of risk (i.e., current traffic) with the proposed level of risk (i.e., current traffic plus construction traffic)).
  - A risk assessment based on network road design attributes supplemented by crash data considering potential safety or transport issues.

The analysis has been undertaken to consider:

- Urana Street between Pearson Street and Mitchelmore Street.
- Murray Street between Edward Street and Brookong Avenue
- Brookong Avenue between Murray Street and the site access.
- Donnelly Avenue between Fox Street and Little Best Street.
- Little Best Street between Donnelly Avenue and Best Street.
- Edmondson Street / Best Street between Edward Street and Erin Street.
- Erin Street between Edmondson Street and MacLeay Street.
- MacLeay Street between Erin Street and Railway Street.
- Railway Street.
- Station Place.
- Docker Street / Bourke Street between Edward Street and Urana Street).

## 4.2 Crash History

### 4.2.1 Background

While it is recognised that as part of *Technical Paper 1 – Traffic and Transport* a crash analysis was undertaken, limited findings were presented, with the following observations made:

- Pearson Street Bridge enhancement site:
  - Edward Street / Pearson Street (key road links and intersection) – crash cluster at intersection
  - Pearson Street / Dobney Avenue (key road links and intersection) – crash cluster at intersection
  - Edward Street (key road link) – one fatal crash in 2018.
- Cassidy Parade pedestrian bridge / Edmondson Street bridge enhancement sites:
  - Sturt Highway / Edward Street (key road link) – a higher concentration than surrounding areas
  - Docker Street (key road link) – a higher concentration than surrounding areas
  - Sturt Highway / Edward Street / Docker Street (key intersection) – a higher concentration than surrounding areas
  - Coleman Street (key road link) – one fatal crash occurring in 2017.

Unlike the initial analysis undertaken, this analysis has been conducted to identify predominant crash types and any crash patterns or trends along particular sections of construction vehicle access routes and identify contributing factors and discuss potential countermeasures where required. The analysis comprises the following steps:

- The first step of the analysis involves obtaining electronically the detail of each of the recorded crashes that occurred within the bounds of the construction vehicle access routes. Crash data used in this assessment has been sourced from the *Transport for NSW, Interactive Crash Statistics (https://www.transport.nsw.gov.au/roadsafety/statistics/interactive-crash-statistics).*
- Next, to identify whether a particular location has a potential crash problem, an initial analysis of crash frequency has been undertaken (i.e., number of crashes) with respect to the lower limiting threshold values (i.e., locations with three (3) or more recorded crashes) is first undertaken. Where the number of crashes at a particular location exceeds the lower limiting threshold, a further desktop analysis has been undertaken to identify predominant crash types (i.e., rear-end, head-on etc.) and common crash characteristics (i.e., time-of-day, day/night/duck etc. of the occurrence of all the recorded crashes). Through the identification and summation of predominant crash types at a particular location, comparison against crash-specific threshold values is undertaken to determine whether further analysis of crash causation is required, and investigation of countermeasures.

**TABLE 153: CRASH HISTORY THRESHOLDS**

| Type of location and criteria | Number of towaway and casualty crashes in five (5) years | | | | | | |
|---|---|---|---|---|---|---|---|
| | Pedestrian | Intersection | Rear-end, overtaking, vehicle turning | Right-turn-against, oncoming | Off-road lost control, head-on | Manoeuvring | Lower limiting threshold (further analysis required) |
| Cross-intersection (not signalised or roundabout | | 3 | 5 | 5 | | | **3** |
| Non-signalised intersection (not roundabout or cross-intersection) | | 4 | 5 | 5 | | | **4** |
| Signalised intersection | | 5 | 9 | 5 | | | **5** |
| Roundabout | | 5 | 5 | | | | **5** |
| Rural intersection ("Give Way" or "Stop" control) | | 3 | 4 | 4 | | 3 | **3** |
| Urban mid-block location | | | 3 | 3 | 3 | 4 | **3** |
| Rural mid-block location | | | 3 | 3 | 3 | | **3** |
| Mid-block location with a pedestrian | 3 | | | | | | **3** |

| Type of location and criteria | Number of towaway and casualty crashes in five (5) years | | | | | | |
|---|---|---|---|---|---|---|---|
| | Pedestrian | Intersection | Rear-end, overtaking, vehicle turning | Right-turn-against, oncoming | Off-road lost control, head-on | Manoeuvring | Lower limiting threshold (further analysis required) |
| crash problem | | | | | | | |

Notes:

Threshold numbers are representative of high-volume roads, with some non-injury crashes report (*Austroads Guide to Road Safety, Part 2: Safe Roads – Table 4.1)*

Urban = 80km/hr or lower, rural = over 80km/hr

'Mid-block' means a length of road between intersections

For intersection locations, include crashes within 30m (urban) or 100m (rural)\.

## 4.2.2 Crash Analysis

### Urana Street (between Pearson Street and MacLeay Street)

The figure below shows the location of crashes along the section of Urana Street, between Pearson Street and McLeay Street, recorded between the period from 2019 to 2023


**FIGURE 54: CRASH LOCATIONS ALONG URANA STREET BETWEEN PEARSON STREET AND MCLEAY STREET FROM 2019 TO 2023**

From the available data, 10 crashes were recorded along or proximate to Urana Street:

- One (1) crash proximate to the Glenfield Road / Urana Street roundabout
  - Non-casualty (towaway)
- Three (3) crashes proximate to the Urana Street / Bourke Street roundabout
  - One (1) non-casualty (towaway)
  - One (1) moderate injury
  - One (1) serious injury
- One (1) crash on Urana Street between Halloran Street and Heath Street
  - Non-casualty (towaway)
- Three (3) crashes proximate to the Urana Street / Heath Street intersection:
  - Two (1) non-casualties (towaway)
  - One (1) serious injury
- One (1) crash proximate to the Urana Street / Mitchelmore Street roundabout

    - Non-casualty (towaway)
- One (1) crash proximate to the Urana Street / MacLeay Street roundabout:
    - Moderate injury.

It is noted that the number of crashes recorded at the Urana Street / Heath Street intersection exceed the lower limiting threshold for a non-signalised cross-intersection. A further analysis of crash types (RUM) is provided below.

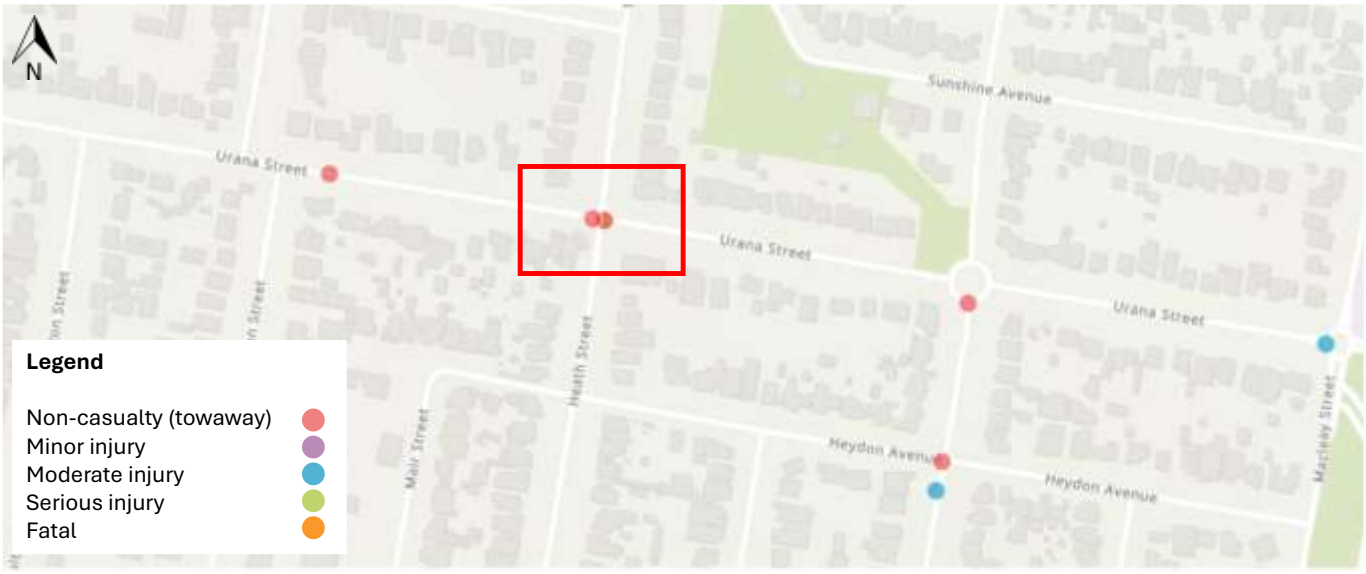



**FIGURE 55: CRASH LOCATIONS AT THE URANA STREET / HEATH STREET INTERSECTION**

**TABLE 154: DETAILS OF CRASHES AT THE URANA STREET / HEATH STREET INTERSECTION**

| Reporting year | Degree of crash | RUM – code | RUM – description | Type of location | Natural lighting |
|---|---|---|---|---|---|
| 2019 | Non-casualty (towaway) | 10 | Cross traffic | X-intersection | Daylight |
| 2019 | Serious injury | 10 | Cross traffic | X-intersection | Dusk |
| 2021 | Non-casualty (towaway) | 10 | Cross traffic | X-intersection | Daylight |

The information presented in the above table shows that the predominant crash type in the period from 2019 to 2023 involved vehicles from the adjacent direction (RUM code 10), whereby all three (3) recorded crashes at the Urana Street / Heath Street roundabout exhibited this crash type.

These types of crashes can be caused by several factors including:

- Restricted sight distance
- High approach speeds
- 'See through' effect on a minor road approach
- Obscured control sign, control lines or signal lanterns
- The presence of the intersection is not otherwise evident (at time of day)
- Traffic volumes too high for "Give Way" or "Stop" controls (inadequate gaps).

Countermeasures for these types of crashes typically include checking sight distance available and where practical, clear obstructions (including parked vehicles) to provide the appropriate standard of sight distance. An assessment of available sight distance at the intersection has been undertaken using *Google Maps* below.

**TABLE 155: SIGHT DISTANCE CHECKS AT THE URANA STREET / HEATH STREET INTERSECTION**

| Approach | | Approach sight distance | | Safe intersection sight distance | | Minimum gap sight distance | |
|---|---|---|---|---|---|---|---|
| | Posted speed | Requirement | Available | Requirement | Available | Requirement | Available |
| Urana Street (eastbound) | 50km/hr | N/A | | 123m | Greater than 123m | 55m | Greater than 55m |
| Urana Street (westbound) | | | | | Greater than 123m | | Greater than 55m |
| Heath Street (northbound) | | 73m | Greater than 73m | N/A | | 69m | Greater than 69m |
| Trevor Street (southbound) | | | Greater than 73m | | | | Greater than 69m |

As detailed in above table, sight distance at the intersection appears to be adequate. Other countermeasures include checking visibility of traffic control devices (i.e., "Give Way" signs and line marking) and installation of appropriate warning signs and devices. An assessment of these and other typical countermeasures applicable to this location is provided below.

**TABLE 156: TRAFFIC CONTROL VISIBILITY CHECKS AT THE URANA STREET / HEATH STREET INTERSECTION**

| Countermeasure | Comment |
|---|---|
| Check day and night visibility of traffic control devices and consider renewing, duplicating, delineating or enlarging the device. | Traffic control devices appear to be visible to approaching traffic. |
| Consider the installation of appropriate warning signs and devices. | Provisions of "Give Way Ahead" signs on side roads and/or "Cross Road" signs on Urana Street. |
| Where a high frequency of night crashes is involved, consider adding or amending street lighting. | Crashes predominantly were recorded to occur during daylight hours. |
| Consider installation of channelisation such as median islands to support control devices on side road approaches, wide median treatments (where appropriate) and staggered intersection treatments in rural areas. | Median islands appear present on the Heath Street and Trevor Street approaches |

With reference to the above table consideration should be given to the installation of appropriate warning signs and devices to the identified crashes.

### Murray Street (between Edward Street and Brookong Avenue)

The figure below shows the location of crashes along the section of Urana Street, between Pearson Street and McLeay Street, recorded between the period from 2019 to 2023


**FIGURE 56: CRASH LOCATIONS ALONG MURRAY STREET BETWEEN EDWARD STREET AND BROOKONG AVENUE FROM 2019 TO 2023**

From the available data, seven (7) crashes were recorded along or proximate to Murray Street:

- Five (5) crashes proximate to the Edward Street / Murray Street intersection
  - Two (2) non-casualties (towaway)
  - Two (2) moderate injuries
  - One (1) serious injury
- One (1) crash proximate to the Murray Street / Salmon Street intersection
  - Serious injury
- One (1) crash on Murray Street between Brookong Avenue and Yathong Street
  - Non-casualty (towaway).

It is noted that the number of crashes recorded at the Edward Street / Murray Street intersection exceed the lower limiting threshold for a non-signalised cross-intersection. A further analysis of crash types (RUM) is provided below.

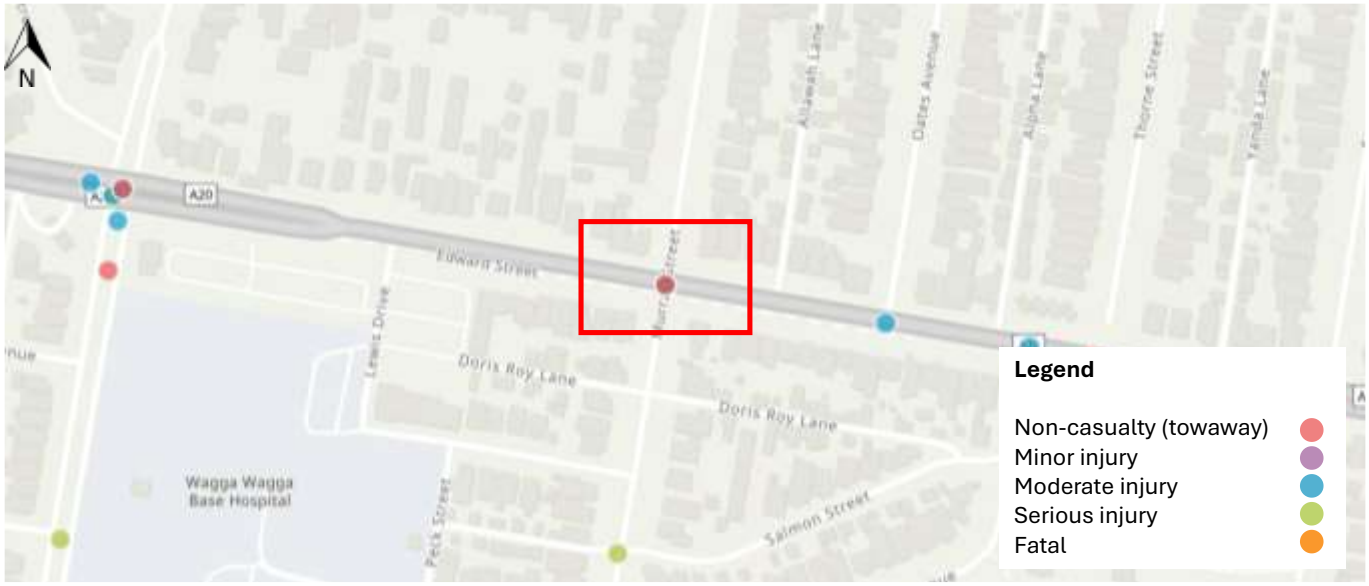



**FIGURE 57: CRASH LOCATIONS AT THE EDWARD STREET / MURRAY STREET INTERSECTION**

**TABLE 157: DETAILS OF CRASHES AT THE EDWARD STREET / MURRAY STREET INTERSECTION**

| Reporting year | Degree of crash | RUM – code | RUM – description | Type of location | Natural lighting |
|---|---|---|---|---|---|
| 2019 | Moderate injury | 10 | Cross traffic | X-intersection | Daylight |
| 2022 | Serious injury | 21 | Right through | X-intersection | Daylight |
| 2022 | Non-casualty (towaway) | 10 | Cross traffic | X-intersection | Daylight |
| 2022 | Non-casualty (towaway) | 10 | Cross traffic | X-intersection | Daylight |
| 2022 | Moderate injury | 21 | Right through | X-intersection | Daylight |

The information presented in the above table shows that the predominant crash type in the period from 2019 to 2023 involved vehicles from the adjacent direction (RUM code 10), whereby three (3) recorded crashes at the Edward Street / Murray Street intersection exhibited this crash type. It is however noted that all recorded crashes occurred prior to the upgrade of the Edward Street / Murray Street intersection to be signalised in 2023.

### Brookong Avenue (between Murray Street and the site access)

The figure below shows the location of crashes along Brookong Avenue, between Murray Street and the site access recorded between the period from 2019 to 2023.


**FIGURE 58: CRASH LOCATIONS ALONG BROOKONG AVENUE BETWEEN MURRAY STREET AND THE SITE ACCESS FROM 2019 TO 2023**

From the available data, no crashes were recorded along Brookong Avenue the period between 2019 and 2023.

## Donnelly Avenue (between Fox Street and Little Best Street)

The figure below shows the location of crashes along Donnelly Avenue, between Fox Street and Little Best Street, recorded between the period from 2019 to 2023.


**FIGURE 59: CRASH LOCATIONS ALONG DONNELLY AVENUE BETWEEN FOX STREET AND LITTLE BEST STREET FROM 2019 TO 2023**

From the available data, no crashes were recorded along Cassidy Parade during the period between 2019 and 2023.

### Little Best Street (between Donnelly Avenue and Best Street)

The figure below shows the location of crashes along Little Best Street, between Donnelly Avenue and Best Street, recorded between the period from 2019 to 2023.


**FIGURE 60: CRASH LOCATIONS ALONG LITTLE BEST STREET BETWEEN DONNELLY AVENUE AND BEST STREET FROM 2019 TO 2023**

From the available data, no crashes were recorded along Little Best Street during the period between 2019 and 2023.

### Edmondson Street / Best Street (between Edward Street and Erin Street

The figure below shows the location of crashes along Edmondson Street / Best Street, between Edward Street and Erin Street recorded between the period from 2019 to 2023.

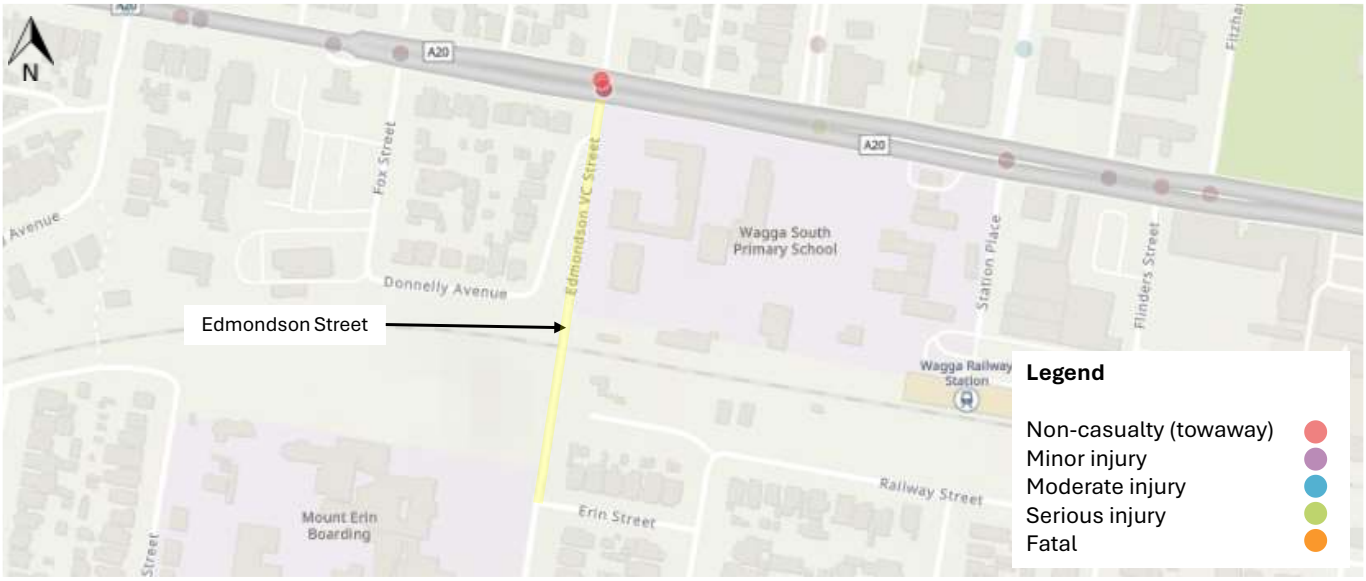



**FIGURE 61: CRASH LOCATIONS ALONG EDMONDSON STREET BETWEEN EDWARD STREET AND ERIN STREET FROM 2019 TO 2023**

From the available data, four (4) crashes were recorded along or proximate to Edmondson Street:

- Four (4) crashes proximate to the Edward Street / Edmondson Street / Best Street intersection
  - Three (3) non-casualties (towaway)
  - One (1) moderate injury.

With respect to the identified thresholds, the occurrence of four (4) crashes on Edmondson Street is not considered to not present any trends or patterns warranting further investigation.

### Erin Street (between Edmondson Street and MacLeay Street)

The figure below shows the location of crashes along Erin Street, between Edmondson Street and Macleay Street, recorded between the period from 2019 to 2023.


**FIGURE 62: CRASH LOCATIONS ALONG ERIN STREET BETWEEN EDMONDSON STREET AND MACLEAY STREET FROM 2019 TO 2023**

From the available data, no crashes were recorded along Erin Street during the period between 2019 and 2023.

### MacLeay Street (between Erin Street and Railway Street)

The figure below shows the location of crashes along MacLeay Street, between Erin Street and Railway Street, recorded between the period from 2019 to 2023.


**FIGURE 63: CRASH LOCATIONS ALONG MACLEAY STREET BETWEEN ERIN STREET AND RAILWAY STREET FROM 2019 TO 2023**

From the available data, no crashes were recorded along MacLeay Street during the period between 2019 and 2023.

## Railway Street

The figure below shows the location of crashes along Railway Street, recorded between the period from 2019 to 2023.


**FIGURE 64: CRASH LOCATIONS ALONG RAILWAY STREET**

From the available data, no crashes were recorded along Railway Street during the period between 2019 and 2023.

## Station Place

The figure below shows the location of crashes along Station Place, recorded between the period from 2019 to 2023.


**FIGURE 65: CRASH LOCATIONS ALONG STATION PLACE FROM 2019 TO 2023**

From the available data, three (3) crashes were recorded along or proximate to Station Place:

- Three (3) crashes proximate to the Edward Street / Station Place intersection
  - One (1) non-casualty (towaway)
  - One (1) minor injury
  - One (1) moderate injury.

With respect to the identified thresholds, the occurrence of three (3) crashes on Station Place is not considered to not present any trends or patterns warranting further investigation.

## Docker Street / Bourke Street (between Edward Street and Urana Street)

The figure below shows the location of crashes along the section of Docker Street / Bourke Street, between Edward Street and Urana Street, recorded between the period from 2019 to 2023.


**FIGURE 66: CRASH LOCATIONS ALONG DOCKER STREET / BOURKE STREET BETWEEN EDWARD STREET AND URANA STREET FROM 2019 TO 2023**

From the available data, 15 crashes were recorded along or proximate to Docker Street / Bourke Street:

- Eight (8) crashes proximate to the Edward Street / Docker Street intersection
  - Three (3) non-casualties (towaway)
  - Four (4) moderate injuries
  - One (1) serious injury.
- One (1) crash on Docker Street between the Edward Street and Gormly Avenue
  - One (1) non-casualty (towaway)
- One (1) crash at the Docker Street / Hardy Avenue intersection
  - One (1) serious injury
- Two (2) crashes at the Docker Street / Brookong Avenue intersection
  - One (1) minor / other injury
  - One (1) moderate injury.
- Two (2) crashes at the Docker Street / Meurant Avenue intersection
  - One (1) non-casualty (towaway)
  - One (1) moderate injury
- One (1) crash at the Docker Street / Chaston Street intersection
  - One (1) non-casualty (towaway).
- Three (3) crashes proximate to the Bourke Street / Urana Street roundabout
  - One (1) non-casualty (towaway)
  - One (1) moderate injury
  - One (1) serious injury.

It is noted that the number of crashes recorded at the Edward Street / Docker Street intersection exceed the lower limiting threshold for a signalised intersection. A further analysis of crash types (RUM) is provided below.

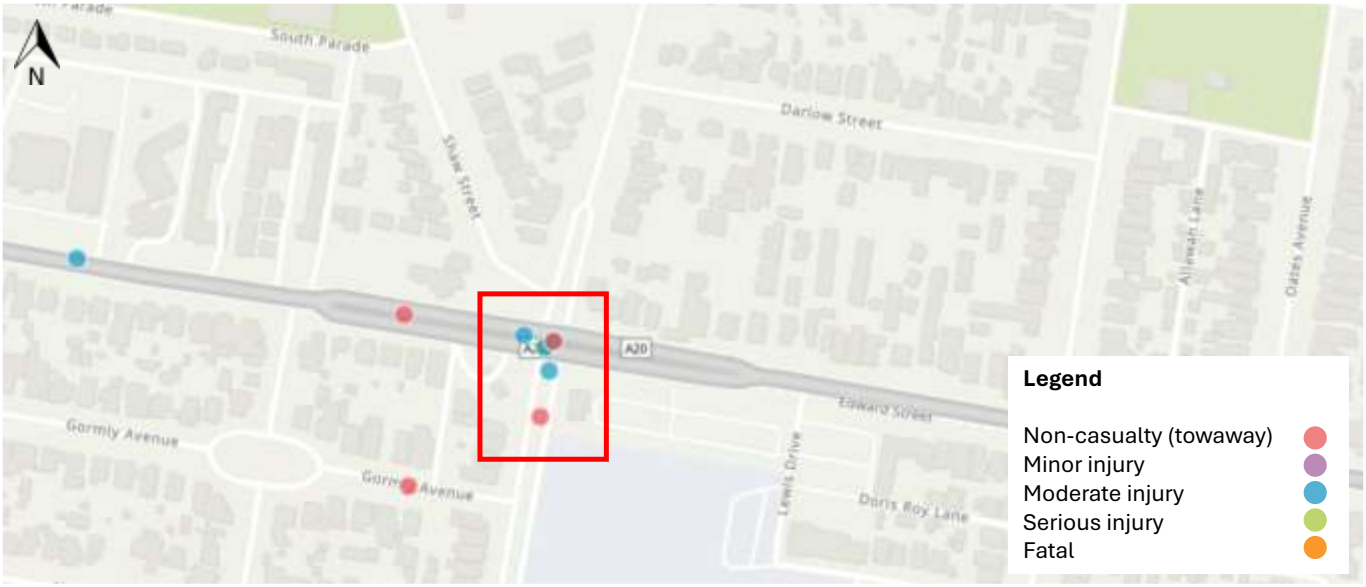



**FIGURE 67: CRASH LOCATIONS AT THE EDWARD STREET / DOCKER STREET INTERSECTION**

**TABLE 158: DETAILS OF CRASHES AT THE EDWARD STREET / DOCKER STREET INTERSECTION**

| Reporting year | Degree of crash | RUM – code | RUM – description | Type of location | Natural lighting |
|---|---|---|---|---|---|
| 2019 | Moderate injury | 30 | Rear end | Divided road | Daylight |
| 2019 | Non-casualty (towaway) | 21 | Right through | X-intersection (signalised) | Daylight |
| 2020 | Non-casualty (towaway) | 10 | Cross traffic | X-intersection (signalised) | Daylight |
| 2021 | Non-casualty (towaway) | 21 | Right through | X-intersection (signalised) | Daylight |
| 2022 | Moderate injury | 30 | Rear end | X-intersection (signalised) | Daylight |
| 2022 | Moderate injury | 30 | Rear end | X-intersection (signalised) | Darkness |
| 2023 | Moderate injury | 30 | Rear end | X-intersection (signalised) | Daylight |
| 2023 | Serious injury | 10 | Cross traffic | X-intersection (signalised) | Daylight |

Of the eight (8) recorded crashes at the Edward Street / Docker Street intersection:

- Two (2) crashes were recorded to be right-through in nature.
- Two (2) crashes were recorded to be cross-traffic in nature.
- Four (4) crashes were recorded to be rear-end in nature.

The occurrence of these types of crashes on Docker Street does not warrant further investigation, with respect to the crash-specific threshold values presented in the table above.

## 4.3 Swept Path Analysis

To ensure that construction vehicles can safely manoeuvre along the identified construction routes, a review of vehicle movements at intersections has been undertaken. A summary of identified construction routes to be utilised by construction vehicles throughout the Stage A works is provided in Table 159 below.

**TABLE 159: CONSTRUCTION ACCESS ROUTES**

| Enhancement site / detour route | Access route number | Access route |
|---|---|---|
| Pearson Street Bridge | PI1 | Edward Street, left/right turn onto Pearson Street, through onto Dobney Avenue, left turn onto Pearson Street, left turn onto Cheshire Street. |
| | PO1 | Cheshire Street, right turn onto Pearson Street, right turn onto Dobney Avenue, through onto Pearson Street, left/right turn onto Edward Street. |
| | PI1 | Edward Street, left/right turn onto Pearson Street, through onto Dobney Avenue, left turn onto Pearson Street, left turn onto Urana Street. |
| | PO2 | Urana Street, left turn onto Pearson Street, right turn onto Dobney Avenue, through onto Pearson Street, left/right turn onto Edward Street. |
| Cassidy Parade Pedestrian Bridge | CI1 | Edward Street, left/right turn onto Murray Street, left turn onto Brookong Avenue. |
| | CO1 | Brookong Avenue, right turn onto Murray Street, left/right turn onto Edward Street. |
| | CI2 | Edward Street, left/right turn onto Fox Street. |
| | CO2 | Fox Street, left/right turn onto Edward Street. |
| Edmondson Street Bridge | EI1 | Edward Street, left/right turn onto Fox Street, straight onto Donnelly Avenue |
| | EO1 | Donnelly Avenue, straight onto Little Best Street, left turn onto Edward Street |
| | EI2 | Edward Street, left/right turn onto Edmondson Street, left turn onto Erin Street, left turn onto MacLeay Street, left turn onto Railway Street. |
| | EO2 | Railway Street, right turn onto MacLeay Street, right turn onto Erin Street, right turn onto Edmondson Street, left/right turn onto Edward Street |
| | EI3 | Edward Street, left/right turn onto Lake Albert Road, right turn onto Railway Street. |
| | EO3 | Railway Street, left turn onto Lake Albert Road, left/right turn onto Edward Street. |

| Enhancement site / detour route | Access route number | Access route |
|---|---|---|
| | EI4 | Edward Street, left/right turn onto Station Place, Straight onto Station Place loop. |
| | EO4 | Station Place loop, straight onto Station Place, right turn onto Edward Street. |
| Edmondson Street Bridge closure | ECN1 | Mitchelmore Street (northbound), left turn onto Urana Street, right turn onto Bourke Street, left/right turn onto Edward Street. |
| | ECS1 | Edward Street, left onto Bourke Street, left onto Urana Street, right onto Mitchelmore Street. |

Along each of these construction routes, key movements at intersections were identified. An initial assessment undertaken by WSP, detailed within Appendix D of the *Addendum Assessment to Technical Paper 1: Traffic and Transport* determining whether:

- There was evidence of heavy vehicles performing the manoeuvre
- The manoeuvre formed part of a pre-approved heavy vehicle route (i.e., B-double).

Where it was evaluated that there was insufficient evidence of heavy vehicles performing a manoeuvre and/or the manoeuvre did not form part of a pre-approved route heavy vehicle route, an intersection impact assessment (swept path analysis) was conducted. For those movements associated with the identified Stage A construction vehicle access routes, a summary of the assessment undertaken by WSP is provided in Table 160.

With reference to the initial assessment undertaken by WSP and the expected vehicle combinations proposed to facilitate the Stage A works detailed in Section 3.1.6, 3.2.6 and 3.3.6, a further assessment has been undertaken to identify locations where a further analysis may be required to demonstrate the ability for construction vehicles to safely perform the necessary manoeuvres.

**TABLE 160: INTERSECTION IMPACT ASSESSMENT**

| Enhancement site | Access route | Movement | Previous assessment undertaken by WSP | Further assessment required |
|---|---|---|---|---|
| Pearson Street Bridge | PI1 | Edward Street right turn onto Pearson Street | Intersection is currently approved as a 19m B-double route (TfNSW Restricted Vehicle Access Map); thus, assumption is that articulated trucks can sufficiently move through this intersection | While the approach taken by WSP is recognised for the movement of combinations up to and including a 19.0m truck and dog, the manoeuvre is proposed to be occasionally undertaken by a 19.0m semi-trailer to facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 19.0m semi-trailer, demonstrating the ability for the vehicle to manoeuvre – refer to drawing *MR-A2I-WW-SPA-001 Sheet 1 of* 35 provided in Appendix C |
| | | Edward Street left turn onto Pearson Street | Intersection is currently approved as a 19m B-double route (TfNSW Restricted Vehicle Access Map); thus, assumption is that articulated trucks can sufficiently move through this intersection | While the approach taken by WSP is recognised for the movement of combinations up to and including a 19.0m truck and dog, the manoeuvre is proposed to be occasionally undertaken by a 19.0m semi-trailer to facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 19.0m semi-trailer, demonstrating the ability for the vehicle to manoeuvre – refer to drawing *MR-A2I-WW-SPA-001 Sheet 2 of* 35 provided in Appendix C. |
| | | Pearson Street straight onto Dobney Avenue | - | The manoeuvre is proposed to be occasionally undertaken by a 19.0m semi-trailer to facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 19.0m semi-trailer, demonstrating the ability for the vehicle to manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 3 of* 35 provided in Appendix C. |
| | | Dobney Avenue left turn onto Pearson Street | - | The manoeuvre is proposed to be occasionally undertaken by a 19.0m semi-trailer to facilitate the Stage A works. As such, a swept path analysis has |

| Enhancement site | Access route | Movement | Previous assessment undertaken by WSP | Further assessment required |
|---|---|---|---|---|
| | | | | been undertaken for a 19.0m semi-trailer, demonstrating the ability for the vehicle to manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 4 of* 35 provided in Appendix C. |
| | | Pearson Street left turn onto Cheshire Street | Intersection is currently approved as a 19m B-double route (TfNSW Restricted Vehicle Access Map); thus, assumption is that articulated trucks can sufficiently move through this intersection | This manoeuvre will be performed under traffic control |
| | PO1 | Cheshire Street right turn onto Pearson Street | Intersection is currently approved as a 19m B-double route (TfNSW Restricted Vehicle Access Map); thus, assumption is that articulated trucks can sufficiently move through this intersection | This manoeuvre will be performed under traffic control |
| | | Pearson Street right turn onto Dobney Avenue | - | The manoeuvre is proposed to be occasionally undertaken by a 19.0m semi-trailer to facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 19.0m semi-trailer, demonstrating the ability for the vehicle to manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 5 of* 35 provided in Appendix C. |
| | | Dobney Avenue straight onto Pearson Street | - | The manoeuvre is proposed to be occasionally undertaken by a 19.0m semi-trailer to facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 19.0m semi-trailer, demonstrating the ability for the vehicle to manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 6 of* 35 provided in Appendix C. |
| | | Pearson Street left turn onto Edward Street | Intersection is currently approved as a 19m B-double route (TfNSW Restricted Vehicle Access | While the approach taken by WSP is recognised for the movement of combinations up to and including a 19.0m truck and dog, the manoeuvre is |

| Enhancement site | Access route | Movement | Previous assessment undertaken by WSP | Further assessment required |
|---|---|---|---|---|
| | | | Map); thus, assumption is that articulated trucks can sufficiently move through this intersection | proposed to be occasionally undertaken by a 19.0m semi-trailer to facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 19.0m semi-trailer, demonstrating the ability for the vehicle to manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 7 of* 35 provided in Appendix C. |
| | | Pearson Street right turn onto Edward Street | Intersection is currently approved as a 19m B-double route (TfNSW Restricted Vehicle Access Map); thus, assumption is that articulated trucks can sufficiently move through this intersection | While the approach taken by WSP is recognised for the movement of combinations up to and including a 19.0m truck and dog, the manoeuvre is proposed to be occasionally undertaken by a 19.0m semi-trailer to facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 19.0m semi-trailer, demonstrating the ability for the vehicle to manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 8 of* 35 provided in Appendix C. |
| | PI2 | Pearson Street left turn onto Urana Street | Main road intersection suggesting sufficient access for articulated vehicles to use roundabout. | The manoeuvre is proposed to be undertaken by a 12.5 single unit truck, and occasionally by a 19.0m truck and dog to facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 12.5m single unit truck and 19.0m truck and dog, demonstrating the ability for a vehicle to perform the manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 9 of* 35 and *Sheet 11 of 35* provided in Appendix C. |
| | PO2 | Urana Street right turn onto Pearson Street. | Main road intersection suggesting sufficient access for articulated vehicles to use roundabout. | The manoeuvre is proposed to be undertaken by a 12.5 single unit truck, and occasionally by a 19.0m truck and dog to facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 12.5m single unit truck and 19.0m truck and |

| Enhancement site | Access route | Movement | Previous assessment undertaken by WSP | Further assessment required |
|---|---|---|---|---|
| | | | | dog, demonstrating the ability for a vehicle to perform the manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 10 of* 35 and *Sheet 12 of 35* provided in Appendix C. |
| Cassidy Parade Pedestrian Bridge | CI1 | Edward Street right turn onto Murray Street | - | The manoeuvre is proposed to be undertaken by a 12.5 single unit truck, and occasionally by a 19.0m truck and dog to facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 12.5m single unit truck and 19.0m truck and dog, demonstrating the ability for a vehicle to perform the manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 13 of* 35 and *Sheet 15 of 35* provided in Appendix C. |
| | | Edward Street left turn onto Murray Street | - | The manoeuvre is proposed to be undertaken by a 12.5 single unit truck, and occasionally by a 19.0m truck and dog to facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 12.5m single unit truck and 19.0m truck and dog, demonstrating the ability for a vehicle to perform the manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 14 of* 35 and *Sheet 16 of 35* provided in Appendix C. |
| | | Murray Street left turn onto Brookong Avenue | - | The manoeuvre is proposed to be undertaken by a 12.5 single unit truck, and occasionally by a 19.0m truck and dog to facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 12.5m single unit truck and 19.0m truck and dog, demonstrating the ability for a vehicle to perform the manoeuvre - refer to drawing *MR-A2I-* |

| Enhancement site | Access route | Movement | Previous assessment undertaken by WSP | Further assessment required |
|---|---|---|---|---|
| | | | | *WW-SPA-001 Sheet 17 of* 35 and *Sheet 19 of 35* provided in Appendix C. |
| | CO1 | Brookong Avenue right turn onto Murray Street | - | The manoeuvre is proposed to be undertaken by a 12.5 single unit truck, and occasionally by a 19.0m truck and dog to facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 12.5m single unit truck and 19.0m truck and dog, demonstrating the ability for a vehicle to perform the manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 18 of* 35 and *Sheet 20 of 35* provided in Appendix C. |
| | | Murray Street right turn onto Edward Street | - | The manoeuvre is proposed to be undertaken by a 12.5 single unit truck, and occasionally by a 19.0m truck and dog to facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 12.5m single unit truck and 19.0m truck and dog, demonstrating the ability for a vehicle to perform the manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 21 of* 35 and *Sheet 23 of 35* provided in Appendix C. |
| | | Murray Street left turn onto Edward Street | - | The manoeuvre is proposed to be undertaken by a 12.5 single unit truck, and occasionally by a 19.0m truck and dog to facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 12.5m single unit truck and 19.0m truck and dog, demonstrating the ability for a vehicle to perform the manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 22 of* 35 and *Sheet 24 of 35* provided in Appendix C. |

| Enhancement site | Access route | Movement | Previous assessment undertaken by WSP | Further assessment required |
|---|---|---|---|---|
| | CI2 | Edward Street left/right turn onto Fox Street | Intersection is currently approved as a 19m B-double route (TfNSW Restricted Vehicle Access Map); thus, assumption is that articulated trucks can sufficiently move through this intersection | Vehicles larger than a 19.0m truck and dog are not proposed to travel along access route CI2. As such, the assessment undertaken by WSP has been adopted. |
| | CO2 | Fox Street left/right turn onto Edward Street | Intersection is currently approved as a 19m B-double route (TfNSW Restricted Vehicle Access Map); thus, assumption is that articulated trucks can sufficiently move through this intersection | Vehicles larger than a 19.0m truck and dog are not proposed to travel along access route CI2. As such, the assessment undertaken by WSP has been adopted. |
| Edmondson Street Bridge | EI1 | Edward Street left/right turn onto Fox Street | Intersection is currently approved as a 19m B-double route (TfNSW Restricted Vehicle Access Map); thus, assumption is that articulated trucks can sufficiently move through this intersection | Vehicles larger than a 19.0m truck and dog are not proposed to travel along access route CI2. As such, the assessment undertaken by WSP has been adopted. |
| | | Fox Street straight onto Donnelly Avenue | - | The manoeuvre is proposed to be undertaken by a 12.5m single unit truck to facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 12.5m single unit truck, demonstrating the ability for the vehicle to perform the manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 25 of* 35 provided in Appendix C. |
| | EO1 | Donnelly Avenue straight onto Little Best Street | - | The manoeuvre is proposed to be undertaken by a 12.5m single unit truck to facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 12.5m single unit truck, demonstrating the ability for the vehicle to perform the manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 25 of* 35 provided in Appendix C. |
| | | Best Street right turn onto Edward Street | Main road intersection suggesting sufficient access for articulated vehicles to use intersection. | The manoeuvre is proposed to be undertaken by a 12.5m single unit truck to facilitate the Stage A works. As such, a swept path analysis has been |

| Enhancement site | Access route | Movement | Previous assessment undertaken by WSP | Further assessment required |
|---|---|---|---|---|
| | | | | undertaken for a 12.5m single unit truck, demonstrating the ability for the vehicle to perform the manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 26 of* 35 provided in Appendix C. |
| | | Best Street left turn onto Edward Street | Main road intersection suggesting sufficient access for articulated vehicles to use intersection. | The manoeuvre is proposed to be undertaken by an 8.8m service vehicle to facilitate the Stage A works. As such, a swept path analysis has been undertaken for an 8.8m service vehicle, demonstrating the ability for the vehicle to perform the manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 27 of* 35 provided in Appendix C. |
| | EI2 | Edward Street right turn onto Best Street / Edmondson Street | Main road intersection suggesting sufficient access for articulated vehicles to use intersection. | The manoeuvre is proposed to be occasionally undertaken by a 19.0m semi-trailer to facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 19.0m semi-trailer, demonstrating the ability for the vehicle to perform the manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 28 of* 35 provided in Appendix C. |
| | | Edmondson Street left turn onto Best Street / Edmondson Street | Main road intersection suggesting sufficient access for articulated vehicles to use intersection. | The manoeuvre is proposed to be undertaken by a 12.5m single unit truck to facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 12.5m semi-trailer, demonstrating the ability for the vehicle to perform the manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 29 of* 35 provided in Appendix C. |
| | | Edmondson Street left turn onto Erin Street | Drawing *2-0008-210-DCW-03-MD-001-Edmondson Sheet 3 of 6* prepared by WSP demonstrates the ability for a 19.0m truck and dog to perform the manoeuvre | While the previous assessment undertaken by WSP is recognised for the movement of combinations up to and including a 19.0m truck and dog, the manoeuvre is proposed to be occasionally undertaken by a 19.0m semi-trailer to |

| Enhancement site | Access route | Movement | Previous assessment undertaken by WSP | Further assessment required |
|---|---|---|---|---|
| | | | | facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 19.0m semi-trailer, demonstrating the ability for the vehicle to manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 30 of* 35 provided in Appendix C. |
| | | Erin Street left turn onto MacLeay Street | Drawing *2-0008-210-DCW-03-MD-001-Edmondson Sheet 5 of* 6 prepared by WSP demonstrates the ability for a 19.0m truck and dog to perform the manoeuvre | While the previous assessment undertaken by WSP is recognised for the movement of combinations up to and including a 19.0m truck and dog, the manoeuvre is proposed to be occasionally undertaken by a 19.0m semi-trailer to facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 19.0m semi-trailer, demonstrating the ability for the vehicle to manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 31 of* 35 provided in Appendix C. |
| | EO2 | MacLeay right turn onto Erin Street | Drawing *2-0008-210-DCW-03-MD-001-Edmondson Sheet 5 of* 6 prepared by WSP demonstrates the ability for a 19.0m truck and dog to perform the manoeuvre | While the previous assessment undertaken by WSP is recognised for the movement of combinations up to and including a 19.0m truck and dog, the manoeuvre is proposed to be occasionally undertaken by a 19.0m semi-trailer to facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 19.0m semi-trailer, demonstrating the ability for the vehicle to manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 31 of* 35 provided in Appendix C. |
| | | Erin Street right turn onto Edmondson Street | Drawing *2-0008-210-DCW-03-MD-001-Edmondson Sheet 3 of 6* prepared by WSP demonstrates the ability for a 19.0m truck and dog to perform the manoeuvre | While the previous assessment undertaken by WSP is recognised for the movement of combinations up to and including a 19.0m truck and dog, the manoeuvre is proposed to be occasionally undertaken by a 19.0m semi-trailer to facilitate the Stage A works. As such, a swept path |

| Enhancement site | Access route | Movement | Previous assessment undertaken by WSP | Further assessment required |
|---|---|---|---|---|
| | | | | analysis has been undertaken for a 19.0m semi-trailer, demonstrating the ability for the vehicle to manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 30 of* 35 provided in Appendix C. |
| | | Edmondson Street / Best Street right turn onto Edward Street | Main road intersection suggesting sufficient access for articulated vehicles to use intersection. | The manoeuvre is proposed to be occasionally undertaken by a 19.0m semi-trailer to facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 19.0m semi-trailer, demonstrating the ability for the vehicle to manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 32 of* 35 provided in Appendix C. |
| | EI3 | Edward Street right turn onto Lake Albert Road | Intersection is currently approved as a 19m B-double route (TfNSW Restricted Vehicle Access Map); thus, assumption is that articulated trucks can sufficiently move through this intersection | While the approach taken by WSP is recognised for the movement of combinations up to and including a 19.0m truck and dog, the manoeuvre is proposed to be occasionally undertaken by a 19.0m semi-trailer to facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 19.0m semi-trailer, demonstrating the ability for the vehicle to manoeuvre – refer to drawing *MR-A2I-WW-SPA-001 Sheet 33 of* 35 provided in Appendix C. |
| | | Edward Street left turn onto Lake Albert Road | Intersection is currently approved as a 19m B-double route (TfNSW Restricted Vehicle Access Map); thus, assumption is that articulated trucks can sufficiently move through this intersection | Vehicles larger than a 19.0m truck and dog are not proposed to undertake the manoeuvre. As such, the assessment undertaken by WSP has been adopted. |
| | | Lake Albert Road right turn onto Railway Street | Drawing 2-0008-210-DCW-03-MD-001-Wagga Station Sheet 4 of 4 prepared by WSP demonstrates the ability for a 19.0m truck and dog to perform the manoeuvre | While the previous assessment undertaken by WSP is recognised for the movement of combinations up to and including a 19.0m truck and dog, the manoeuvre is proposed to be occasionally undertaken by a 19.0m semi-trailer to |

| Enhancement site | Access route | Movement | Previous assessment undertaken by WSP | Further assessment required |
|---|---|---|---|---|
| | | | | facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 19.0m semi-trailer, demonstrating the ability for the vehicle to manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 34 of* 35 provided in Appendix C. |
| | EO3 | Railway Street left turn onto Lake Albert Road | Drawing 2-0008-210-DCW-03-MD-001-Wagga Station Sheet 4 of 4 prepared by WSP demonstrates the ability for a 19.0m truck and dog to perform the manoeuvre | While the previous assessment undertaken by WSP is recognised for the movement of combinations up to and including a 19.0m truck and dog, the manoeuvre is proposed to be occasionally undertaken by a 19.0m semi-trailer to facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 19.0m semi-trailer, demonstrating the ability for the vehicle to manoeuvre - refer to drawing *MR-A2I-WW-SPA-001 Sheet 34 of* 35 provided in Appendix C. |
| | | Lake Albert Road left turn onto Edward Street | Intersection is currently approved as a 19m B-double route (TfNSW Restricted Vehicle Access Map); thus, assumption is that articulated trucks can sufficiently move through this intersection | Vehicles larger than a 19.0m truck and dog are not proposed to undertake the manoeuvre. As such, the assessment undertaken by WSP has been adopted. |
| | | Lake Albert Road right turn onto Edward Street | Intersection is currently approved as a 19m B-double route (TfNSW Restricted Vehicle Access Map); thus, assumption is that articulated trucks can sufficiently move through this intersection | While the approach taken by WSP is recognised for the movement of combinations up to and including a 19.0m truck and dog, the manoeuvre is proposed to be occasionally undertaken by a 19.0m semi-trailer to facilitate the Stage A works. As such, a swept path analysis has been undertaken for a 19.0m semi-trailer, demonstrating the ability for the vehicle to manoeuvre – refer to drawing *MR-A2I-WW-SPA-001 Sheet 35 of* 35 provided in Appendix C. |

| Enhancement site | Access route | Movement | Previous assessment undertaken by WSP | Further assessment required |
|---|---|---|---|---|
| | EI4 | Edward Street left turn onto Station Place | Drawing *2-0008-210-DCW-03-MD-002-Wagga Station Sheet 1 of 1* prepared by WSP demonstrates the ability for a 12.5m single unit truck to perform the manoeuvre | Vehicles larger than a 19.0m truck and dog are not proposed undertaken the manoeuvre. As such, the assessment undertaken by WSP has been adopted. |
| | | Edward Street right turn onto Station Place | Drawing *2-0008-210-DCW-03-MD-002-Wagga Station Sheet 2 of 4* prepared by WSP demonstrates the ability for a 19.0m truck and dog to perform the manoeuvre | Vehicles larger than a 19.0m truck and dog are not proposed undertaken the manoeuvre. As such, the assessment undertaken by WSP has been adopted. |
| | EI4 / EO4 | Station Place loop | Drawing *2-0008-210-DCW-03-MD-001-Wagga Station Sheet 3 of 4* prepared by WSP demonstrates the ability for a 19.0m truck and dog to perform the manoeuvre | Vehicles larger than a 19.0m truck and dog are not proposed undertaken the manoeuvre. As such, the assessment undertaken by WSP has been adopted. |
| | EO4 | Station Place left turn onto Edward Street | Drawing *2-0008-210-DCW-03-MD-002-Edmondson Sheet 1 of 1* prepared by WSP demonstrates the ability for a 12.5m single unit truck to perform the manoeuvre | Vehicles larger than a 19.0m truck and dog are not proposed undertaken the manoeuvre. As such, the assessment undertaken by WSP has been adopted. |
| | | Station Place right turn onto Edward Street | Drawing *2-0008-210-DCW-03-MD-001-Wagga Station Sheet 1 of 4* prepared by WSP demonstrates the ability for a 19.0m truck and dog to perform the right turn manoeuvre onto Edward Street from Station Place | Vehicles larger than a 19.0m truck and dog are not proposed undertaken the manoeuvre. As such, the assessment undertaken by WSP has been adopted. |
| Edmondson Street Bridge Closure | ECN1 | Mitchelmore Street left turn onto Urana Street | - | A swept path analysis has been undertaken for a 19.0m semi-trailer demonstrating the ability for the vehicle to perform the manoeuvre – refer to drawing MR-A2I-WW-SPA-001 *Sheet 1 of 5* provided in Appendix C |

| Enhancement site | Access route | Movement | Previous assessment undertaken by WSP | Further assessment required |
|---|---|---|---|---|
| | | Urana Street right turn onto Bourke Street | - | A swept path analysis has been undertaken for a 19.0m semi-trailer demonstrating the ability for the vehicle to perform the manoeuvre - refer to drawing MR-A2I-WW-SPA-001 *Sheet 2 of 5* provided in Appendix C |
| | | Docker Street right turn onto Edward Street | - | A swept path analysis has been undertaken for a 19.0m semi-trailer demonstrating the ability for the vehicle to perform the manoeuvre - refer to drawing MR-A2I-WW-SPA-001 *Sheet 3 of 5* provided in Appendix C |
| | ECS1 | Edward Street right turn onto Docker Street | - | A swept path analysis has been undertaken for a 19.0m semi-trailer demonstrating the ability for the vehicle to perform the manoeuvre - refer to drawing MR-A2I-WW-SPA-001 *Sheet 4 of 5* provided in Appendix C |
| | | Edward Street left turn onto Docker Street | - | A swept path analysis has been undertaken for a 19.0m semi-trailer demonstrating the ability for the vehicle to perform the manoeuvre - refer to drawing MR-A2I-WW-SPA-001 *Sheet 5 of 5* provided in Appendix C |
| | | Bourke Street left turn onto Urana Street | - | A swept path analysis has been undertaken for a 19.0m semi-trailer demonstrating the ability for the vehicle to perform the manoeuvre - refer to drawing MR-A2I-WW-SPA-001 *Sheet 2 of 5* provided in Appendix C |
| | | Urana Street right turn onto Mitchelmore Street | - | A swept path analysis has been undertaken for a 19.0m semi-trailer demonstrating the ability for the vehicle to perform the manoeuvre - refer to |

| Enhancement site | Access route | Movement | Previous assessment undertaken by WSP | Further assessment required |
|---|---|---|---|---|
| | | | | drawing MR-A2I-WW-SPA-001 *Sheet 1 of 5* provided in Appendix C |

A review of each of movement at location where a further assessment (i.e., swept path analysis) has been undertaken is provided in Table 161 below.

**TABLE 161: SWEPT PATH ANALYSIS REVIEW**

| Movement | Vehicle type | Does vehicle remain lane correct | Does the vehicle (body / wheel path) overrun kerbs | Does the vehicle clearance remain clear of pedestrian standing areas / footpaths | Does the vehicle clearance remain clear of other obstructions (i.e. road furniture) |
|---|---|---|---|---|---|
| Edward Street left turn onto Pearson Street | 19.0m semi-trailer | No – refer to Table 162 | No | Yes | Yes |
| Edward Street right turn onto Pearson Street | 19.0m semi-trailer | No – refer to Table 162 | No | Yes | Yes |
| Pearson Street straight onto Dobney Avenue | 19.0m semi-trailer | No – refer to Table 162 | No | Yes | Yes |
| Dobney Avenue left turn onto Pearson Street | 19.0m semi-trailer | No – refer to Table 162 | No | Yes | Yes |
| Pearson Street right turn onto Dobney Avenue | 19.0m semi-trailer | No – refer to Table 162 | No | Yes | Yes |
| Dobney Avenue straight onto Pearson Street | 19.0m semi-trailer | No – refer to Table 162 | No | Yes | Yes |
| Pearson Street left turn onto Edward Street | 19.0m semi-trailer | No – refer to Table 162 | No | Yes | Yes |

| Movement | Vehicle type | Does vehicle remain lane correct | Does the vehicle (body / wheel path) overrun kerbs | Does the vehicle clearance remain clear of pedestrian standing areas / footpaths | Does the vehicle clearance remain clear of other obstructions (i.e. road furniture) |
|---|---|---|---|---|---|
| Pearson Street right turn onto Edward Street | 19.0m semi-trailer | No – refer to Table 162 | No | Yes | Yes |
| Pearson Street left turn onto Urana Street | 12.5m single unit truck | Yes | No | Yes | Yes |
| | 19.0m truck and dog | Yes | No | Yes | Yes |
| Urana Street right turn onto Pearson Street | 12.5m single unit truck | Yes | No | Yes | Yes |
| | 19.0m truck and dog | Yes | No | Yes | Yes |
| Edward Street right turn onto Murray Street | 12.5m single unit truck | Yes | No | Yes | Yes |
| | 19.0m truck and dog | Yes | No | Yes | Yes |
| Edward Street left turn onto Murray Street | 12.5m single unit truck | Yes | No | Yes | Yes |
| | 19.0m truck and dog | Yes | No | Yes | Yes |
| Murray Street left turn onto Brookong Avenue | 12.5m single unit truck | Yes | No | Yes | Yes |
| | 19.0m truck and dog | Yes | No | Yes | Yes |
| Brookong Avenue right turn onto Murray Street | 12.5m single unit truck | Yes | No | Yes | Yes |
| | 19.0m truck and dog | Yes | No | Yes | Yes |
| Murray Street right turn onto Edward Street | 12.5m single unit truck | Yes | No | Yes | Yes |
| | 19.0m truck and dog | Yes | No | Yes | Yes |

| Movement | Vehicle type | Does vehicle remain lane correct | Does the vehicle (body / wheel path) overrun kerbs | Does the vehicle clearance remain clear of pedestrian standing areas / footpaths | Does the vehicle clearance remain clear of other obstructions (i.e. road furniture) |
|---|---|---|---|---|---|
| Murray Street left turn onto Edward Street | 12.5m single unit truck | Yes | No | Yes | Yes |
| | 19.0m truck and dog | Yes | No | Yes | Yes |
| Fox Street onto Donnelly Avenue | 12.5m single unit truck | Yes | No | Yes | Yes |
| Donnelly Avenue onto Little Best Street | 12.5m single unit truck | Yes | No | Yes | Yes |
| Best Street right turn onto Edward Street | 12.5m single unit truck | Yes | No | Yes | Yes |
| | 19.0m semi-trailer | Yes | No | Yes | Yes |
| Best Street left turn onto Edward Street | 8.8m service vehicle | Yes | No | Yes | Yes |
| Edward Street right turn onto Edmondson Street | 19.0m semi-trailer | Yes | No | Yes | Yes |
| Edward Street left turn onto Edmondson Street | 12.5m single unit truck | Yes | No | Yes | Yes |
| Edmondson Street left turn onto Erin Street | 19.0m semi-trailer | No – refer to Table 162 | No | Yes | Yes |
| Erin Street left turn onto MacLeay Street | 19.0m semi-trailer | Yes | No | Yes | Yes |

| Movement | Vehicle type | Does vehicle remain lane correct | Does the vehicle (body / wheel path) overrun kerbs | Does the vehicle clearance remain clear of pedestrian standing areas / footpaths | Does the vehicle clearance remain clear of other obstructions (i.e. road furniture) |
|---|---|---|---|---|---|
| MacLeay Street right turn onto Erin Street | 19.0m semi-trailer | Yes | No | Yes | Yes |
| Erin Street right turn onto Edmondson Street | 19.0m semi-trailer | Yes | No | Yes | Yes |
| Edward Street right turn onto Lake Albert Road | 19.0m semi-trailer | Yes | No | Yes | Yes |
| Lake Albert Road right turn onto Railway Street | 19.0m semi-trailer | Yes | No | Yes | Yes |
| Railway Street left turn onto Lake Albert Road | 19.0m semi-trailer | Yes | No | Yes | Yes |
| Lake Albert Road right turn onto Edward Street | 19.0m semi-trailer | Yes | No | Yes | Yes |
| Mitchelmore Street left turn onto Urana Street | 19.0m semi-trailer | Yes | Yes – refer to Table 162 | Yes | Yes |
| Urana Street right turn onto Bourke Street | 19.0m semi-trailer | Yes | No | Yes | Yes |
| Docker Street right turn onto Edward Street | 19.0m semi-trailer | Yes | No | Yes | Yes |
| Edward Street right turn onto Docker Street | 19.0m semi-trailer | Yes | No | Yes | Yes |

| Movement | Vehicle type | Does vehicle remain lane correct | Does the vehicle (body / wheel path) overrun kerbs | Does the vehicle clearance remain clear of pedestrian standing areas / footpaths | Does the vehicle clearance remain clear of other obstructions (i.e. road furniture) |
|---|---|---|---|---|---|
| Edward Street left turn onto Docker Street | 19.0m semi-trailer | No – refer to Table 162 | No | Yes | Yes |
| Bourke Street left turn onto Urana Street | 19.0m semi-trailer | No – refer to Table 162 | No | Yes | Yes |
| Urana Street right turn onto Mitchelmore Street | 19.0m semi-trailer | Yes | Yes – refer to Table 162 | Yes | Yes |

The assessment detailed in Table 161, indicated that for several movements along the proposed construction vehicle access routes, a vehicle would either required the use of multiple lanes to perform the required manoeuvre or the vehicle would overrun kerbs. It should be noted that the assessment undertaken, all movements remained clear of obstructions (i.e., road furniture and signal infrastructure), and pedestrian standing areas and footpaths.

To ensure that the proposed manoeuvres can be undertaken safely, a further review has been undertaken and is detailed in Table 162 below.

**TABLE 162: TURNING MOVEMENTS REVIEW**

| Movement | Swept path review | Comment / mitigation |
|---|---|---|
| Edward Street left turn onto Pearson Street | The swept path analysis indicates that a 19.0m semi-trailer performing a left turn manoeuvre onto Pearson Street at the Edward Street / Pearson Street roundabout is required to use both lanes. | Under the Australian Road Rules, a heavy or long vehicle displaying a “Do Not Overtake Turning Vehicle” sign is allowed to use either or both lanes, if, necessary, to turn left or right safely. |
| Edward Street right turn onto Pearson Street | The swept path analysis indicates that a 19.0m semi-trailer performing a right turn manoeuvre onto Pearson Street at the Edward Street / Pearson Street roundabout is required to use both lanes. | Under the Australian Road Rules, a heavy or long vehicle displaying a “Do Not Overtake Turning Vehicle” sign is allowed to use either or both lanes, if, necessary, to turn left or right safely. |
| Pearson Street straight onto Dobney Avenue | The swept path analysis indicates that a 19.0m semi-trailer continuing straight onto Dobney Avenue at the Pearson Street / Dobney Avenue roundabout is required to use both lanes. | Under the Australian Road Rules, a heavy or long vehicle displaying a “Do Not Overtake Turning Vehicle” sign is allowed to use either or both lanes, if, necessary, to turn left or right safely. |
| Dobney Avenue left turn onto Pearson Street | The swept path analysis indicates that a 19.0m semi-trailer performing a left turn manoeuvre onto Pearson Street at the Dobney Avenue / Pearson Street roundabout is required to use both lanes. | Under the Australian Road Rules, a heavy or long vehicle displaying a “Do Not Overtake Turning Vehicle” sign is allowed to use either or both lanes, if, necessary, to turn left or right safely. |
| Pearson Street right turn onto Dobney Avenue | The swept path analysis indicates that a 19.0m semi-trailer performing a right turn manoeuvre onto Pearson Street at the Dobney Avenue / Pearson Street roundabout is required to use both lanes. | Under the Australian Road Rules, a heavy or long vehicle displaying a “Do Not Overtake Turning Vehicle” sign is allowed to use either or both lanes, if, necessary, to turn left or right safely. |
| Dobney Avenue straight onto Pearson Street | The swept path analysis indicates that a 19.0m semi-trailer continuing straight onto Pearson Street at the Pearson Street / Dobney Avenue roundabout is required to use both lanes. | Under the Australian Road Rules, a heavy or long vehicle displaying a “Do Not Overtake Turning Vehicle” sign is allowed to use either or both lanes, if, necessary, to turn left or right safely. |

| Movement | Swept path review | Comment / mitigation |
|---|---|---|
| Pearson Street left turn onto Edward Street | The swept path analysis indicates that a 19.0m semi-trailer performing a left turn manoeuvre onto Edward Street at the Edward Street / Pearson Street roundabout is required to use both lanes. | Under the Australian Road Rules, a heavy or long vehicle displaying a “Do Not Overtake Turning Vehicle” sign is allowed to use either or both lanes, if, necessary, to turn left or right safely. |
| Pearson Street right turn onto Edward Street | The swept path analysis indicates that a 19.0m semi-trailer performing a right turn manoeuvre onto Edward Street at the Edward Street / Pearson Street roundabout is required to use both lanes. | Under the Australian Road Rules, a heavy or long vehicle displaying a “Do Not Overtake Turning Vehicle” sign is allowed to use either or both lanes, if, necessary, to turn left or right safely. |
| Mitchelmore Street left turn onto Urana Street | The swept path analysis indicates that a 19.0m semi-trailer overruns the apron / kerb in the centre of the Mitchelmore Street / Urana Street roundabout | This manoeuvre has been analysed as part of the short-term closure of Edmondson Street and detour of traffic via Mitchelmore Street, Urana Street and Bourke Street / Docker Street (refer to Section 3.3.14).<br>At the Mitchelmore Street / Urana Street roundabout, a mountable apron / kerb is provided surrounding the centre island. Along the apron, there is evidence of vehicle mounting the apron / kerb to perform the necessary manoeuvres at the roundabout – refer to Figure 68. Given the apron is clear of pedestrian facilities and obstructions, use of the apron to perform the necessary manoeuvres is not considered to result in any adverse conditions. |
| Edward Street left turn onto Docker Street | The swept path analysis indicates that a 19.0m semi-trailer performing a left turn manoeuvre onto Docker Street is required to use both the kerbside and through lane. | This manoeuvre has been analysed as part of the short-term closure of Edmondson Street and detour of traffic via Mitchelmore Street, Urana Street and Bourke Street / Docker Street (refer to Section 3.3.14).<br>Under the Australian Road Rules, a heavy or long vehicle displaying a “Do Not Overtake Turning Vehicle” sign is allowed to use either or both lanes, if, necessary, to turn left or right safely. |
| Bourke Street left turn onto Urana Street | The swept path analysis indicates that a 19.0m semi-trailer performing a left turn manoeuvre onto Urana Street at the Bourke Street / Urana Street roundabout is required to use both lanes. | This manoeuvre has been analysed as part of the short-term closure of Edmondson Street and detour of traffic via Mitchelmore Street, Urana Street and Bourke Street / Docker Street (refer to Section 3.3.14<br>Under the Australian Road Rules, a heavy or long vehicle displaying a “Do Not Overtake Turning Vehicle” sign is allowed to use either or both lanes, if, necessary, to turn left or right safely. |
| Urana Street right turn onto Mitchelmore Street | The swept path analysis indicates that a 19.0m semi-trailer overruns the apron / kerb in the centre of the Mitchelmore Street / Urana Street roundabout | This manoeuvre has been analysed as part of the short-term closure of Edmondson Street and detour of traffic via Mitchelmore Street, Urana Street and Bourke Street / Docker Street (refer to Section 3.3.14).<br>At the Mitchelmore Street / Urana Street roundabout, a mountable apron / kerb is provided surrounding the centre island. Along the apron, there is evidence of vehicle mounting the apron / kerb to perform the |

| Movement | Swept path review | Comment / mitigation |
|---|---|---|
| | | necessary manoeuvres at the roundabout – refer to Figure 68. Given the apron is clear of pedestrian facilities and obstructions, use of the apron to perform the necessary manoeuvres is not considered to result in any adverse conditions. |


**FIGURE 68: MITCHELMORE STREET / URANA STREET – VEHICLE TRACKING**

## 4.4 Risk Assessment

A risk assessment has been undertaken to identify, evaluate, and to mitigate potential hazards associated with the introduction of construction heavy vehicle traffic linked to the Stage A works. Through this assessment, key hazards such as adverse conditions resulting from increased vehicle demands (i.e., congestion), road user safety and pedestrian safety have been analysed for both current (i.e. current operating conditions) and future (current with construction traffic) scenarios.

Identified risks have been considered using the risk scoring matrix shown in Table 163, with the risk assessment detailed in Table 164.

From the risk assessment, where a risk has been observed to have a “High” risk level, or where an increase in risk level has been observed, further consideration of mitigation measures has been undertaken to reduce the likelihood or consequence of the risk.

**TABLE 163: RISK ASSESSMENT SCORING MATRIX**

| | | Potential consequence | | | | |
|---|---|---|---|---|---|---|
| | | Property damage (1) | Minor injury (2) | Medical treatment (3) | Hospitalisation (4) | Fatality (5) |
| Potential Likelihood | Almost certain (5) (likely to occur more than once a year) | M | M | H | H | H |
| | Likely (4) (likely to occur approximately once a year) | M | M | M | H | H |
| | Moderate (3) (likely to occur 5 once every five years) | L | M | M | M | H |
| | Unlikely (2) (likely to occur approximately once every 5 – 10 years) | L | L | M | M | M |
| | Rare (1) (likely to occur with less frequency than once every 10 years) | L | L | L | M | M |

TABLE 164: RISK ASSESSMENT

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| **Urana Street** | | | | | | | | | | | | |
| 1 | Carriageway width is not suitable to accommodate the movements of vehicles, resulting in vehicles travelling within the opposing carriageway | 1 | 4 | M | 1 | 4 | M | - | - | - | - | Urana Street generally features 3.6m wide lanes with un-sealed shoulders. |
| 2 | Road performance is impacted by the addition of construction vehicles, resulting in adverse conditions:<br>• Urana Street | 1 | 3 | L | 1 | 3 | L | - | - | - | - | Section 3.1.9 shows that the road performance will not be significantly impacted by the additional of construction vehicles during the Stage A works |
| 3 | Intersection performance is impacted by the addition of construction vehicles, resulting in adverse | 1 | 3 | L | 1 | 3 | L | - | - | - | - | Section 3.1.9 shows that the road performance will not be significantly |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | conditions at intersections:<br>• Pearson Street / Urana Street<br>• Pearson Street / Dobney Avenue (south) | | | | | | | | | | | impacted by the additional of construction vehicles during the Stage A works |
| 4 | Vehicles are unable to safely perform turning manoeuvres at intersections, resulting in conflicts with other road users / damage to infrastructure at the intersection:<br>• Pearson Street / Urana Street | 1 | 3 | L | 1 | 3 | L | - | - | - | - | A swept path analysis has been undertaken to demonstrate the ability for construction vehicles to safely perform the necessary manoeuvres. |
| 5 | Kerbside parking narrows the road, restricts traffic flow and inhibits the ability to manoeuvre safely into and out of side streets. | 1 | 4 | M | 1 | 4 | M | - | - | - | - | - |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| 6 | Cyclists impacted by wind turbulence of passing vehicles. | 2 | 4 | M | 2 | 4 | M | - | - | - | - | - |
| 7 | Conflict between cyclists and vehicles where there isn't enough space to safely overtake | 1 | 4 | M | 1 | 4 | M | - | - | - | - | - |
| **Murray Street** | | | | | | | | | | | | |
| 8 | Carriageway width is not suitable to accommodate the movements of vehicles, resulting in vehicles travelling within the opposing carriageway | 1 | 4 | M | 1 | 4 | M | - | - | - | - | Murray Street generally features ~18.5m wide carriageway. |
| 9 | Road performance is impacted by the addition of construction vehicles, resulting in adverse conditions:<br>• Murray Street | 1 | 3 | L | 1 | 3 | L | - | - | - | - | Section 3.2.9 shows that the road performance will not be significantly impacted by the additional of construction vehicles during |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | | | | | | | | | | | | the Stage A works |
| | Intersection performance is impacted by the addition of construction vehicles, resulting in adverse conditions at intersections:<br>• Edward Street / Murray Street | 1 | 3 | L | 1 | 3 | L | - | - | - | - | Section 3.2.9 shows that the road performance will not be significantly impacted by the additional of construction vehicles during the Stage A works |
| | Vehicles are unable to safely perform turning manoeuvres at intersections, resulting in conflicts with other road users / damage to infrastructure at the intersection:<br>• Edward Street / Murray Street | 1 | 3 | L | 1 | 3 | L | - | - | - | - | A swept path analysis has been undertaken to demonstrate the ability for construction vehicles to safely perform the necessary manoeuvres. |
| | Kerbside parking narrows the road, restricts traffic flow | 1 | 4 | M | 1 | 4 | M | - | - | - | - | - |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | and inhibits the ability to manoeuvre safely into and out of side streets. | | | | | | | | | | | |
| | Cyclists impacted by wind turbulence of passing vehicles. | 2 | 4 | M | 2 | 4 | M | - | - | - | - | - |
| | Conflict between cyclists and vehicles where there isn't enough space to safely overtake | 1 | 4 | M | 1 | 4 | M | - | - | - | - | - |
| **Brookong Avenue** | | | | | | | | | | | | |
| | Carriageway width is not suitable to accommodate the movements of vehicles, resulting in vehicles travelling within the opposing carriageway | 1 | 4 | M | 1 | 4 | M | - | - | - | - | Murray Street generally features ~3.9m wide lanes |
| | Road performance is impacted by the addition of construction vehicles, | 1 | 3 | L | 1 | 3 | L | - | - | - | - | Section 3.2.9 shows that the road performance will not be |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | resulting in adverse conditions:<br>• Brookong Avenue | | | | | | | | | | | significantly impacted by the additional of construction vehicles during the Stage A works |
| | Intersection performance is impacted by the addition of construction vehicles, resulting in adverse conditions at intersections:<br>• Murray Street / Brookong Avenue | 1 | 3 | L | 1 | 3 | L | - | - | - | - | Section 3.2.9 shows that the road performance will not be significantly impacted by the additional of construction vehicles during the Stage A works |
| | Vehicles are unable to safely perform turning manoeuvres at intersections, resulting in conflicts with other road users / damage to infrastructure at the intersection: | 1 | 3 | L | 1 | 3 | L | - | - | - | - | A swept path analysis has been undertaken to demonstrate the ability for construction vehicles to safely perform |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | • Murray Street / Brookong Avenue | | | | | | | | | | | the necessary manoeuvres. |
| | Kerbside parking narrows the road, restricts traffic flow and inhibits the ability to manoeuvre safely into and out of side streets. | 1 | 4 | M | 1 | 4 | M | - | - | - | - | - |
| | Cyclists impacted by wind turbulence of passing vehicles. | 2 | 4 | M | 2 | 4 | M | - | - | - | - | - |
| | Conflict between cyclists and vehicles where there isn't enough space to safely overtake | 1 | 4 | M | 1 | 4 | M | - | - | - | - | - |
| **Fox Street** | | | | | | | | | | | | |
| | Carriageway width is not suitable to accommodate the movements of vehicles, resulting in vehicles travelling | 1 | 4 | M | 1 | 4 | M | - | - | - | - | Fox Street generally features a 17.9m wide carriageway. |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | within the opposing carriageway | | | | | | | | | | | |
| | Road performance is impacted by the addition of construction vehicles, resulting in adverse conditions:<br>• Fox Street | 1 | 3 | L | 1 | 3 | L | - | - | -0 | - | Section 3.2.9 shows that the road performance will not be significantly impacted by the additional of construction vehicles during the Stage A works |
| | Intersection performance is impacted by the addition of construction vehicles, resulting in adverse conditions at intersections:<br>• Edward Street / Fox Street | 1 | 3 | L | 1 | 3 | L | -- | - | - | - | Section 3.2.9 shows that the road performance will not be significantly impacted by the additional of construction vehicles during the Stage A works |
| | Vehicles are unable to safely perform turning manoeuvres at | 1 | 3 | L | 1 | 3 | L | - | - | - | - | Table 4.3 of *Appendix C, Addendum* |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | intersections, resulting in conflicts with other road users / damage to infrastructure at the intersection:<br>• Edward Street / Fox Street | | | | | | | | | | | *Assessment to Technical Paper 1: Traffic and Transport* notes that the intersection is currently approved as a 19m d-double route (TfNSW Restricted Vehicle Access Map), thus it is assumed that articulated trucks can sufficiently move through these intersections. |
| | Vehicles entering and exiting driveways are unrecognised by approaching drivers, resulting in rear-end collisions. | 2 | 3 | M | 2 | 3 | M | - | - | | - | Appropriate stopping sight distance appears to be achieved along Fox Street. |
| | Vehicles entering and exiting kerbside parking spaces resulting in rear-end | 2 | 3 | M | 2 | 3 | M | - | - | - | - | - |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | and side-swipe collisions | | | | | | | | | | | |
| | Kerbside parking narrows the road, restricts traffic flow and inhibits the ability to manoeuvre safely into and out of side streets. | 1 | 4 | M | 1 | 4 | M | - | - | - | - | Unmarked parking is provided along both sides of Fox Street, however available road width ~13m is able to be maintained. |
| | Cyclists impacted by wind turbulence of passing vehicles. | 2 | 4 | M | 2 | 4 | M | - | - | - | - | - |
| | Conflict between cyclists and vehicles where there isn't enough space to safely overtake | 1 | 4 | M | 1 | 4 | M | - | - | - | - | - |
| **Donnelly Avenue** | | | | | | | | | | | | |
| | Carriageway width is not suitable to accommodate the movements of vehicles, resulting in | 1 | 4 | M | 1 | 4 | M | - | - | - | - | - |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | vehicles travelling within the opposing carriageway | | | | | | | | | | | |
| | Road performance is impacted by the addition of construction vehicles, resulting in adverse conditions:<br>• Donnelly Avenue | 1 | 3 | L | 1 | 3 | L | - | - | - | - | Section 3.3.9 shows that the road performance will not be significantly impacted by the additional of construction vehicles during the Stage A works |
| | Intersection performance is impacted by the addition of construction vehicles, resulting in adverse conditions at intersections:<br>• Fox Street / Donnelly Avenue | 1 | 3 | L | 1 | 3 | L | - | - | -. | - | Section 3.3.9 shows that the road performance will not be significantly impacted by the additional of construction vehicles during the Stage A works |
| | Vehicles are unable to safely perform turning | 1 | 3 | L | 1 | 3 | L | - | - | - | - | A swept path analysis has |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | manoeuvres at intersections, resulting in conflicts with other road users / damage to infrastructure at the intersection:<br>• Fox Street / Donnelly Avenue<br>• Donnelly Avenue / Little Best Street | | | | | | | | | | | been undertaken to demonstrate the ability for construction vehicles to safely perform the necessary manoeuvres. |
| | Vehicles entering and exiting driveways are unrecognised by approaching drivers, resulting in rear-end collisions. | 2 | 3 | M | 2 | 3 | M | - | - | - | - | Appropriate stopping sight distance appears to be achieved along Donnelly Avenue. |
| | Vehicles entering and exiting kerbside parking spaces resulting in rear-end and side-swipe collisions | 2 | 3 | M | 2 | 3 | M | - | - | - | - | - |
| | Kerbside parking narrows the road, restricts traffic flow | 1 | 3 | L | 3 | 3 | M | On-street parking is proposed to be | 1 | 3 | L | - |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | and inhibits the ability to manoeuvre safely into and out of side streets. | | | | | | | removed to accommodate the swept path of a 12.5m single unit truck. | | | | |
| | Cyclists impacted by wind turbulence of passing vehicles. | 2 | 4 | M | 2 | 4 | M | - | - | - | - | - |
| | Conflict between cyclists and vehicles where there isn't enough space to safely overtake | 1 | 4 | M | 1 | 4 | M | - | - | - | - | - |
| **Little Best Street** | | | | | | | | | | | | |
| | Carriageway width is not suitable to accommodate the movements of vehicles, resulting in vehicles travelling within the opposing carriageway | 1 | 4 | M | 1 | 4 | M | - | - | - | - | - |
| | Road performance is impacted by the addition of | 1 | 3 | L | 1 | 3 | L | - | - | - | - | Section 3.3.9 shows that the road |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | construction vehicles, resulting in adverse conditions:<br>• Little Best Street | | | | | | | | | | | performance will not be significantly impacted by the additional of construction vehicles during the Stage A works |
| | Intersection performance is impacted by the addition of construction vehicles, resulting in adverse conditions at intersections:<br>• Donnelly Avenue / Little Best Street | 1 | 3 | L | 1 | 3 | L | - | - | - | - | Section 3.3.9 shows that the road performance will not be significantly impacted by the additional of construction vehicles during the Stage A works |
| | Vehicles are unable to safely perform turning manoeuvres at intersections, resulting in conflicts with other road users / damage to infrastructure at the intersection: | 1 | 3 | L | 1 | 2 | L | - | - | - | - | A swept path analysis has been undertaken to demonstrate the ability for construction vehicles to safely perform |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | • Donnelly Avenue / Little Best Street | | | | | | | | | | | the necessary manoeuvres. |
| | Vehicles entering and exiting driveways are unrecognised by approaching drivers, resulting in rear-end collisions. | 2 | 3 | M | 2 | 3 | M | - | - | - | - | Appropriate stopping sight distance appears to be achieved along Little Best Street. |
| | Vehicles entering and exiting kerbside parking spaces resulting in rear-end and side-swipe collisions | 2 | 3 | M | 2 | 3 | M | - | - | - | - | - |
| | Kerbside parking narrows the road, restricts traffic flow and inhibits the ability to manoeuvre safely into and out of side streets. | 1 | 3 | L | 3 | 3 | M | On-street parking is proposed to be removed to accommodate the swept path of a 12.5m single unit truck. | 1 | 3 | L | - |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | Cyclists impacted by wind turbulence of passing vehicles. | 2 | 4 | M | 2 | 4 | M | - | - | - | - | - |
| | Conflict between cyclists and vehicles where there isn't enough space to safely overtake | 1 | 4 | M | 1 | 4 | M | - | - | - | - | - |
| **Edmondson Street** | | | | | | | | | | | | |
| | Carriageway width is not suitable to accommodate the movements of vehicles, resulting in vehicles travelling within the opposing carriageway | 1 | 4 | M | 1 | 4 | M | - | - | - | - | Edmondson Street generally features 3.1m wide lanes with sealed shoulders. |
| | Road performance is impacted by the addition of construction vehicles, resulting in adverse conditions:<br>• Edmondson Street | 1 | 3 | L | 1 | 3 | L | - | - | - | - | Section 3.3.9 shows that the road performance will not be significantly impacted by the additional of construction vehicles during |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | | | | | | | | | | | | the Stage A works |
| | Intersection performance is impacted by the addition of construction vehicles, resulting in adverse conditions at intersections:<br>• Edmondson Street / Erin Street | 1 | 3 | L | 1 | 3 | L | - | - | - | - | Section 3.3.9 shows that the road performance will not be significantly impacted by the additional of construction vehicles during the Stage A works |
| | Vehicles are unable to safely perform turning manoeuvres at intersections, resulting in conflicts with other road users / damage to infrastructure at the intersection:<br>• Edward Street / Edmondson Street | 1 | 3 | L | 1 | 3 | L | - | - | - | - | A swept path analysis has been undertaken to demonstrate the ability for construction vehicles to safely perform the necessary manoeuvres. |
| | Vehicles entering and exiting driveways are unrecognised by | 2 | 3 | M | 2 | 3 | M | - | - | | - | Appropriate stopping sight distance |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | approaching drivers, resulting in rear-end collisions. | | | | | | | | | | | appears to be achieved along Edmondson Street. |
| | Vehicles entering and exiting kerbside parking spaces resulting in rear-end and side-swipe collisions | 2 | 3 | M | 2 | 3 | M | - | - | - | - | - |
| | Kerbside parking narrows the road, restricts traffic flow and inhibits the ability to manoeuvre safely into and out of side streets. | 1 | 4 | M | 1 | 4 | M | - | - | - | - | - |
| | Buses entering and exiting kerbside parking spaces resulting in rear-end and side-swipe collisions:<br>• Kildare Catholic College, Edmondson Street | 2 | 3 | M | 2 | 3 | M | - | - | - | - | Appropriate stopping sight distance appears to be achieved at bus stops for approaching road users. |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | • Edmondson Street opposite Kildare Catholic College. | | | | | | | | | | | |
| | Cyclists impacted by wind turbulence of passing vehicles. | 2 | 4 | M | 2 | 4 | M | - | - | - | - | - |
| | Conflict between cyclists and vehicles where there isn't enough space to safely overtake | 1 | 4 | M | 1 | 4 | M | - | - | - | - | - |
| **Erin Street** | | | | | | | | | | | | |
| | Carriageway width is not suitable to accommodate the movements of vehicles, resulting in vehicles travelling within the opposing carriageway | 1 | 4 | M | 1 | 4 | M | - | - | - | - | Erin Street generally features a 12m wide carriageway. |
| | Road performance is impacted by the addition of | 1 | 3 | L | 1 | 3 | L | - | - | - | - | Section 3.3.9 shows that the road |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | construction vehicles, resulting in adverse conditions:<br>• Erin Street | | | | | | | | | | | performance will not be significantly impacted by the additional of construction vehicles during the Stage A works |
| | Intersection performance is impacted by the addition of construction vehicles, resulting in adverse conditions at intersections:<br>• Edmondson Street / Erin Street<br>• Erin Street / MacLeay Street | 1 | 3 | L | 1 | 3 | L | - | - | - | - | Section 3.3.9 shows that the road performance will not be significantly impacted by the additional of construction vehicles during the Stage A works |
| | Vehicles are unable to safely perform turning manoeuvres at intersections, resulting in conflicts with other road users / damage | 1 | 3 | L | 1 | 3 | L | - | - | - | - | A swept path analysis has been undertaken to demonstrate the ability for |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | to infrastructure at the intersection:<br>• Edmondson Street / Erin Street | | | | | | | | | | | construction vehicles to safely perform the necessary manoeuvres. |
| | Vehicles entering and exiting driveways are unrecognised by approaching drivers, resulting in rear-end collisions. | 2 | 3 | M | 2 | 3 | M | - | - | - | - | Appropriate stopping sight distance appears to be achieved along Erin Street. |
| | Vehicles entering and exiting kerbside parking spaces resulting in rear-end and side-swipe collisions | 2 | 3 | M | 2 | 3 | M | - | - | - | - | - |
| | Kerbside parking narrows the road, restricts traffic flow and inhibits the ability to manoeuvre safely into and out of side streets. | 1 | 4 | M | 1 | 4 | M | - | - | - | - | - |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | Cyclists impacted by wind turbulence of passing vehicles. | 2 | 4 | M | 2 | 4 | M | - | - | - | - | - |
| | Conflict between cyclists and vehicles where there isn't enough space to safely overtake | 1 | 4 | M | 1 | 4 | M | - | - | - | - | - |
| **MacLeay Street** | | | | | | | | | | | | |
| | Carriageway width is not suitable to accommodate the movements of vehicles, resulting in vehicles travelling within the opposing carriageway | 1 | 4 | M | 1 | 4 | M | - | - | - | - | MacLeay Street generally features a 21m wide carriageway. |
| | Road performance is impacted by the addition of construction vehicles, resulting in adverse conditions:<br>• MacLeay Street | 1 | 3 | L | 1 | 3 | L | - | - | - | - | Section 3.3.9 shows that the road performance will not be significantly impacted by the additional of construction vehicles during |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | | | | | | | | | | | | the Stage A works |
| | Intersection performance is impacted by the addition of construction vehicles, resulting in adverse conditions at intersections:<br>• Erin Street / MacLeay Street<br>• MacLeay Street / Railway Street | 1 | 3 | L | 1 | 3 | L | - | - | - | - | Section 3.3.9 shows that the road performance will not be significantly impacted by the additional of construction vehicles during the Stage A works |
| | Vehicles are unable to safely perform turning manoeuvres at intersections, resulting in conflicts with other road users / damage to infrastructure at the intersection:<br>• Erin Street / MacLeay Street | 1 | 3 | L | 1 | 3 | L | - | - | - | - | A swept path analysis has been undertaken to demonstrate the ability for construction vehicles to safely perform the necessary manoeuvres. |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | Vehicles entering and exiting driveways are unrecognised by approaching drivers, resulting in rear-end collisions. | 2 | 3 | M | 2 | 3 | M | - | - | - | - | Appropriate stopping sight distance appears to be achieved along MacLeay Street. |
| | Vehicles entering and exiting kerbside parking spaces resulting in rear-end and side-swipe collisions | 2 | 3 | M | 2 | 3 | M | - | - | - | - | - |
| | Kerbside parking narrows the road, restricts traffic flow and inhibits the ability to manoeuvre safely into and out of side streets. | 1 | 4 | M | 1 | 4 | M | - | - | - | - | - |
| | Cyclists impacted by wind turbulence of passing vehicles. | 2 | 4 | M | 2 | 4 | M | - | - | - | - | - |
| | Conflict between cyclists and vehicles where there isn't | 1 | 4 | M | 1 | 4 | M | - | - | - | - | - |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | enough space to safely overtake | | | | | | | | | | | |
| **Railway Street** | | | | | | | | | | | | |
| | Carriageway width is not suitable to accommodate the movements of vehicles, resulting in vehicles travelling within the opposing carriageway | 1 | 4 | M | 1 | 4 | M | - | - | - | - | Railway Street generally features a 12m wide carriageway. |
| | Road performance is impacted by the addition of construction vehicles, resulting in adverse conditions:<br>• Railway Street | 1 | 3 | L | 1 | 3 | L | - | - | - | - | Section 3.3.9 shows that the road performance will not be significantly impacted by the additional of construction vehicles during the Stage A works |
| | Intersection performance is impacted by the addition of | 1 | 3 | L | 1 | 3 | L | - | - | - | - | Section 3.3.9 shows that the road performance |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | construction vehicles, resulting in adverse conditions at intersections:<br>• MacLeay Street / Railway Street | | | | | | | | | | | will not be significantly impacted by the additional of construction vehicles during the Stage A works |
| | Vehicles are unable to safely perform turning manoeuvres at intersections, resulting in conflicts with other road users / damage to infrastructure at the intersection:<br>• Lake Albert Road / Railway Street intersection | 1 | 3 | L | 1 | 3 | L | - | - | - | - | A swept path analysis has been undertaken to demonstrate the ability for construction vehicles to safely perform the necessary manoeuvres. |
| | Vehicles entering and exiting driveways are unrecognised by approaching drivers, resulting in rear-end collisions. | 2 | 3 | M | 2 | 3 | M | - | - | - | - | Appropriate stopping sight distance appears to be achieved along Railway Street. |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | Vehicles entering and exiting kerbside parking spaces resulting in rear-end and side-swipe collisions | 2 | 3 | M | 2 | 3 | M | - | - | - | - | - |
| | Kerbside parking narrows the road, restricts traffic flow and inhibits the ability to manoeuvre safely into and out of side streets. | 1 | 4 | M | 1 | 4 | M | - | - | - | - | - |
| | Cyclists impacted by wind turbulence of passing vehicles. | 2 | 4 | M | 2 | 4 | M | - | - | - | - | - |
| | Conflict between cyclists and vehicles where there isn't enough space to safely overtake | 1 | 4 | M | 1 | 4 | M | - | - | - | - | - |
| **Station Place** | | | | | | | | | | | | |
| | Carriageway width is not suitable to accommodate the movements of | 1 | 4 | M | 1 | 4 | M | - | - | - | - | Station Place generally features 3.4m wide lanes |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | vehicles, resulting in vehicles travelling within the opposing carriageway | | | | | | | | | | | |
| | Road performance is impacted by the addition of construction vehicles, resulting in adverse conditions:<br>• Station Place | 1 | 3 | L | 1 | 3 | L | - | - | - | - | Section 3.3.9 shows that the road performance will not be significantly impacted by the additional of construction vehicles during the Stage A works |
| | Intersection performance is impacted by the addition of construction vehicles, resulting in adverse conditions at intersections:<br>• Edward Street / Station Place | 1 | 3 | L | 1 | 3 | L | - | - | - | - | Section 3.3.9 shows that the road performance will not be significantly impacted by the additional of construction vehicles during the Stage A works |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | Vehicles are unable to safely perform turning manoeuvres at intersections, resulting in conflicts with other road users / damage to infrastructure at the intersection:<br>• Edward Street / Station Place | 1 | 3 | L | 1 | 3 | L | - | - | - | - | A swept path analysis has been undertaken by WSP to demonstrate the ability for construction vehicles to safely perform the necessary manoeuvres. |
| | Vehicles entering and exiting driveways are unrecognised by approaching drivers, resulting in rear-end collisions. | 2 | 3 | M | 2 | 3 | M | - | - | - | - | Appropriate stopping sight distance appears to be achieved along Railway Street. |
| | Vehicles entering and exiting kerbside parking spaces resulting in rear-end and side-swipe collisions | 2 | 3 | M | 2 | 3 | M | - | - | - | - | - |
| | Kerbside parking narrows the road, restricts traffic flow and inhibits the ability to manoeuvre safely | 1 | 4 | M | 1 | 4 | M | - | - | - | - | - |

| Project risks | | Current level of risk (current traffic) | | | Future level of risk (current traffic plus construction vehicles) | | | | Mitigation | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Likelihood | Consequence | Risk level | Likelihood | Consequence | Risk level | Mitigation | Likelihood | Consequence | Risk level | |
| | into and out of side streets. | | | | | | | | | | | |
| | Cyclists impacted by wind turbulence of passing vehicles. | 2 | 4 | M | 2 | 4 | M | - | - | - | - | - |
| | Conflict between cyclists and vehicles where there isn't enough space to safely overtake | 1 | 4 | M | 1 | 4 | M | - | - | - | - | - |

# 5 OPERATIONAL REQUIREMENTS

## 5.1 Temporary Road Safety Barriers and End Treatments

The use road safety barriers and end treatments will be in accordance with the approved products nominated within the TfNSW Accepted Road Safety Barrier Systems and Devices guidance.

## 5.2 Temporary Signage

The type, location and sizes of existing signage to be retained and/or removed and new signage to be installed during the operation of this TGS will be as per the drawings attached at Appendix A. These TGS are indicative documents and obtaining the relevant approval will occur outside the PTMP process.

## 5.3 Temporary Pavement Markings

There are no alterations to pavement markings required for this work.

## 5.4 Variable Message Signs

Variable message signs may be provided as part of the project's traffic management on the approach to the project works. Typically, VMS will be installed two (2) weeks prior to any changes to traffic conditions and/or to support short term high impact works.

The VMS shall be located:

- Where there is a kerb, the VMS should be positioned behind it.
- Where practical, located behind a suitable barrier and outside the barrier's deflection zone.
- Located where it does not interfere with pedestrians, cyclists, and other footpath users.
- Located where it does not affect adjoining street gap sight distances.

If no suitable location is available behind the kerb, located in a parking lane ensuring it does not encroach into the traffic lane and is adequately delineated.

# 6 COMMUNICATION AND COORDINATION

## 6.1 Traffic Communications

The Traffic Management Team and Stakeholder and Community Relations Team will work closely with each other to ensure there is a seamless approach to managing traffic communications. The PTMP is supported by the Stakeholder and Community Engagement Management Plan, where traffic communications and our approach to managing communications activities associated with traffic changes is described.

The Traffic Manager and Stakeholder and Community Relations Manager will collaborate to assess the impacts on users of the integrated transport network to ensure timely and accurate information is available for public consultations and notifications.

## 6.2 Traffic Management Construction Liaison Group

The TMCLG will be the forum for discussion of the effectiveness of the PTMP.

# APPENDICES

# APPENDIX A

## List of Expected Traffic Guidance Schemes

# List of Expected Traffic Guidance Schemes

| TGS # | Title | Comment |
|---|---|---|
| MR-A2I-WW-TGS-001 | Gate P1 – site access | |
| MR-A2I-WW-TGS-002 | Gate P2 – site access | |
| MR-A2I-WW-TGS-003 | Gate C1 – site access | |
| MR-A2I-WW-TGS-004 | Gate C2 – site access | |
| MR-A2I-WW-TGS-005 | Gate E1 – site access | |
| MR-A2I-WW-TGS-006 | Gate E2 – site access | |
| MR-A2I-WW-TGS-007 | Gate E3 – site access | |
| MR-A2I-WW-TGS-008 | Donnelly Avenue – half road closure | |
| MR-A2I-WW-TGS-009 | Donnelly Avenue – full road closure | |
| MR-A2I-WW-TGS-010 | Railway Street – half road closure / shuttle flow | |
| MR-A2I-WW-TGS-011 | MacLeay Street – shoulder closure | |
| MR-A2I-WW-TGS-012 | Erin Street – shoulder closure | |
| MR-A2I-WW-TGS-013 | Erin Street – half road closure / shuttle flow | |
| MR-A2I-WW-TGS-014 | Edmondson Street – lane closure | |
| MR-A2I-WW-TGS-015 | Edmondson Street – contraflow | |
| MR-A2I-WW-TGS-016 | Edmondson Street – full road closure | |
| MR-A2I-WW-TGS-017 | Edward Street – lane closure | |

# APPENDIX B

## WSP Swept Path Analysis

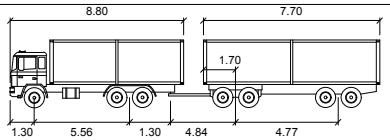
Client: ARTC
Project: Inland Rail - Albury to Illabo
Location: Wagga Wagga Precinct - Edmondson St Bridge
Sheet: 3 of 6



**Legend**

19m TRUCK & DOG CHECK VEHICLE - NORTHBOUND MOVEMENT

19m TRUCK & DOG CHECK VEHICLE - SOUTHBOUND MOVEMENT




Truck and Dog50T

meters

| | | | |
|---|---|---|---|
| First Unit Width | : 2.50 | Lock to Lock Time | : 6.0 |
| Trailer Width | : 2.50 | Steering Angle | : 39.9 |
| First Unit Track | : 2.50 | Articulating Angle | : 70.0 |
| Trailer Track | : 2.50 | | |

Plot Date: 27/06/23 - 09:14

## Construction Vehicle Route Swept Path Analysis

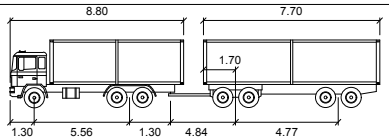
Client: ARTC
Project: Inland Rail - Albury to Illabo
Location: Wagga Wagga Precinct - Edmondson St Bridge
Sheet: 4 of 6



## Legend

19m TRUCK & DOG CHECK VEHICLE - NORTHBOUND MOVEMENT

19m TRUCK & DOG CHECK VEHICLE - SOUTHBOUND MOVEMENT




Truck and Dog50T

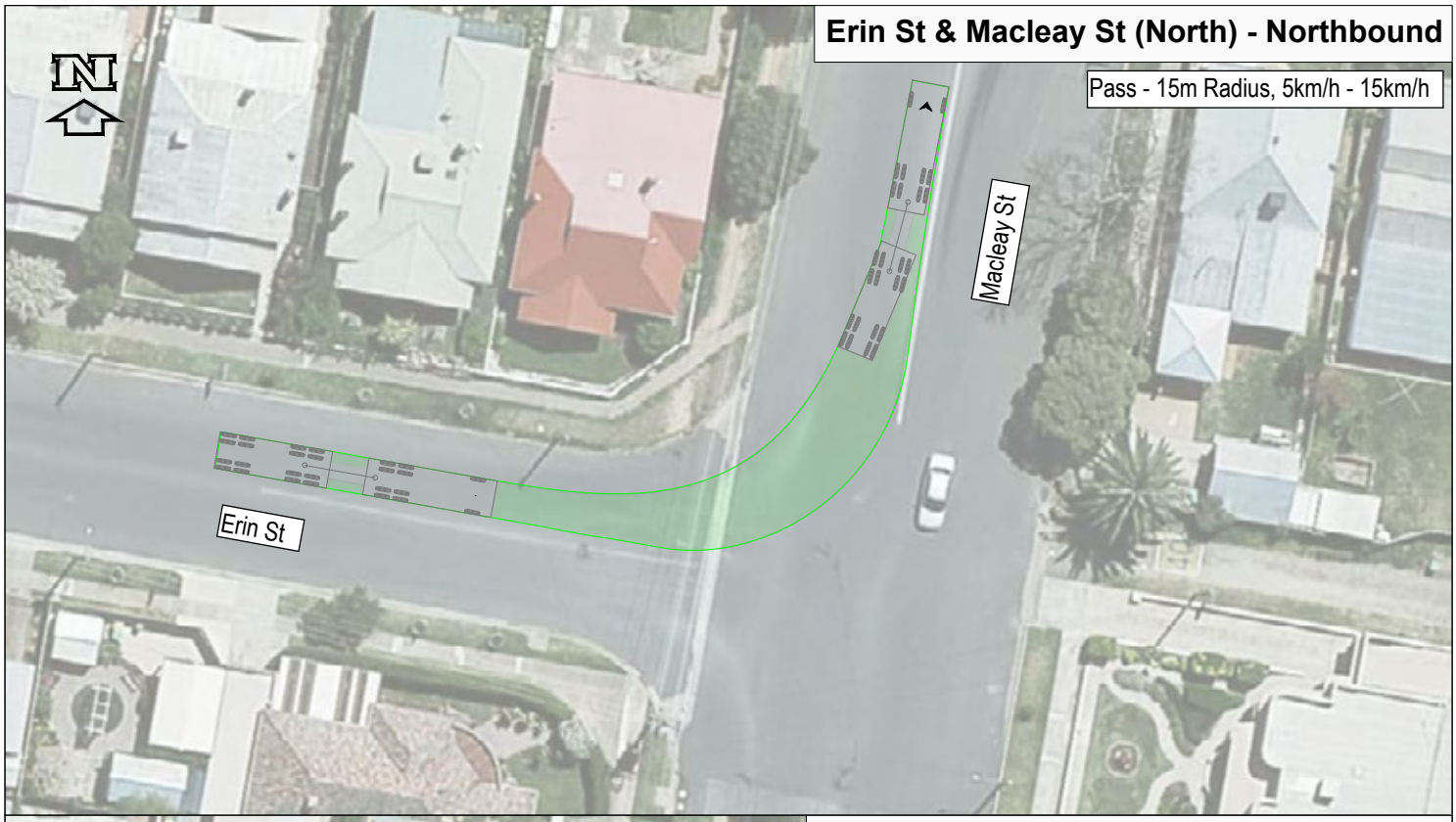
meters

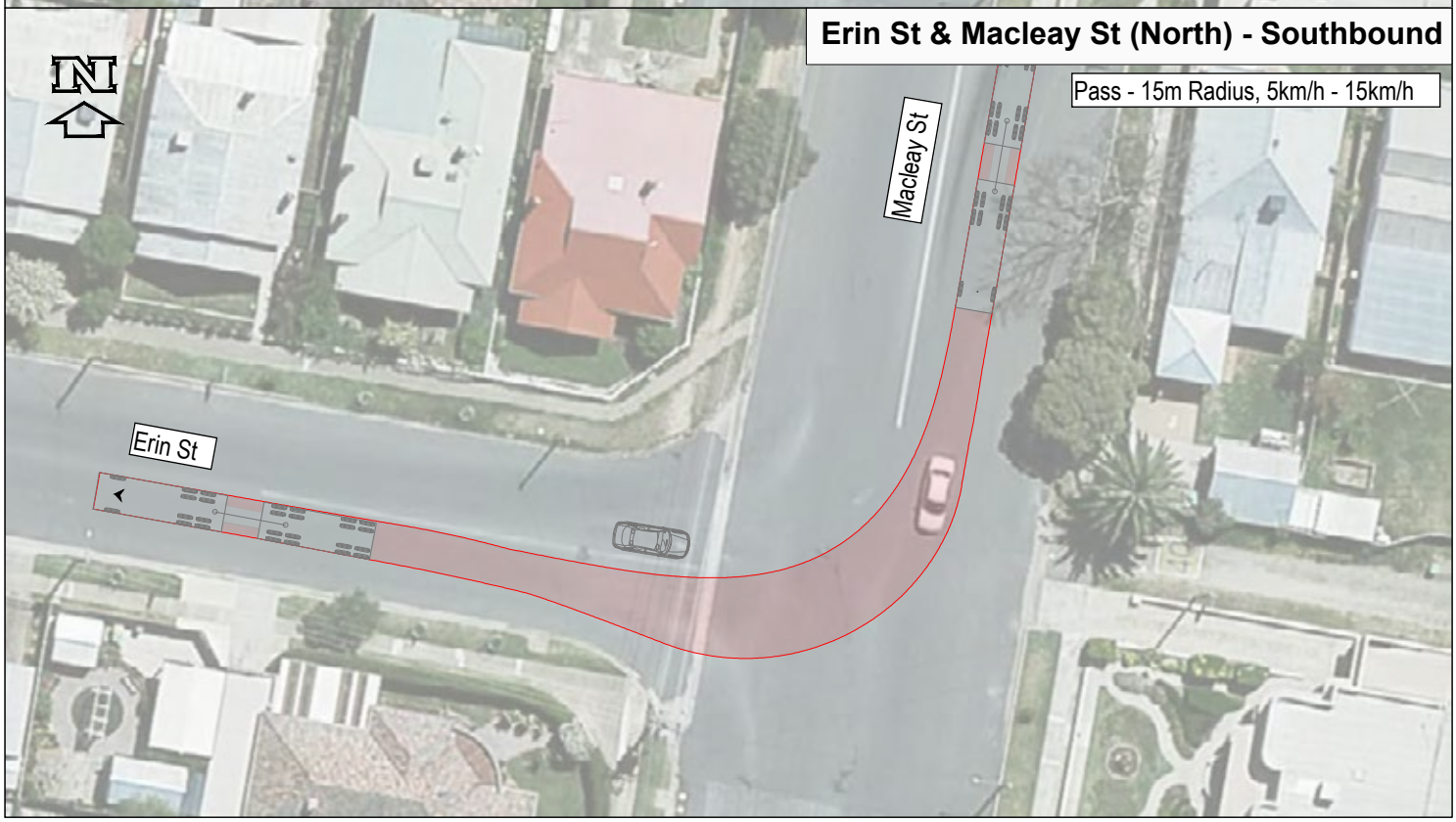
| | | | |
|---|---|---|---|
| First Unit Width | : 2.50 | Lock to Lock Time | : 6.0 |
| Trailer Width | : 2.50 | Steering Angle | : 39.9 |
| First Unit Track | : 2.50 | Articulating Angle | : 70.0 |
| Trailer Track | : 2.50 | | |

Plot Date: 27/06/23 - 09:14

# Construction Vehicle Route Swept Path Analysis

Client: ARTC
Project: Inland Rail - Albury to Illabo
Location: Wagga Wagga Precinct - Edmondson St Bridge
Sheet: 5 of 6

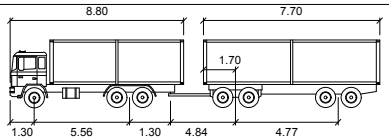



## Legend

19m TRUCK & DOG CHECK VEHICLE - NORTHBOUND MOVEMENT

19m TRUCK & DOG CHECK VEHICLE - SOUTHBOUND MOVEMENT




Truck and Dog50T

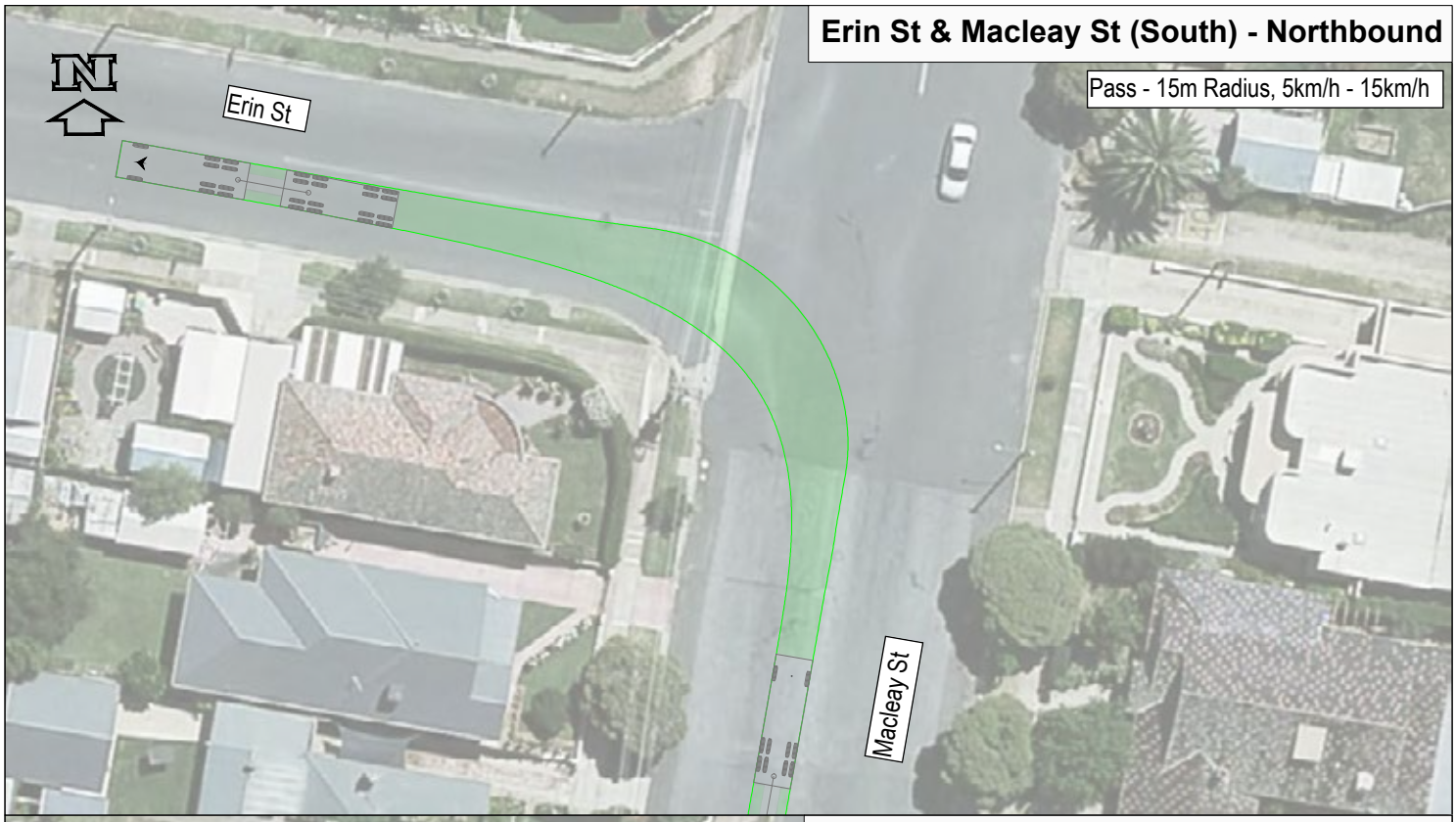
meters

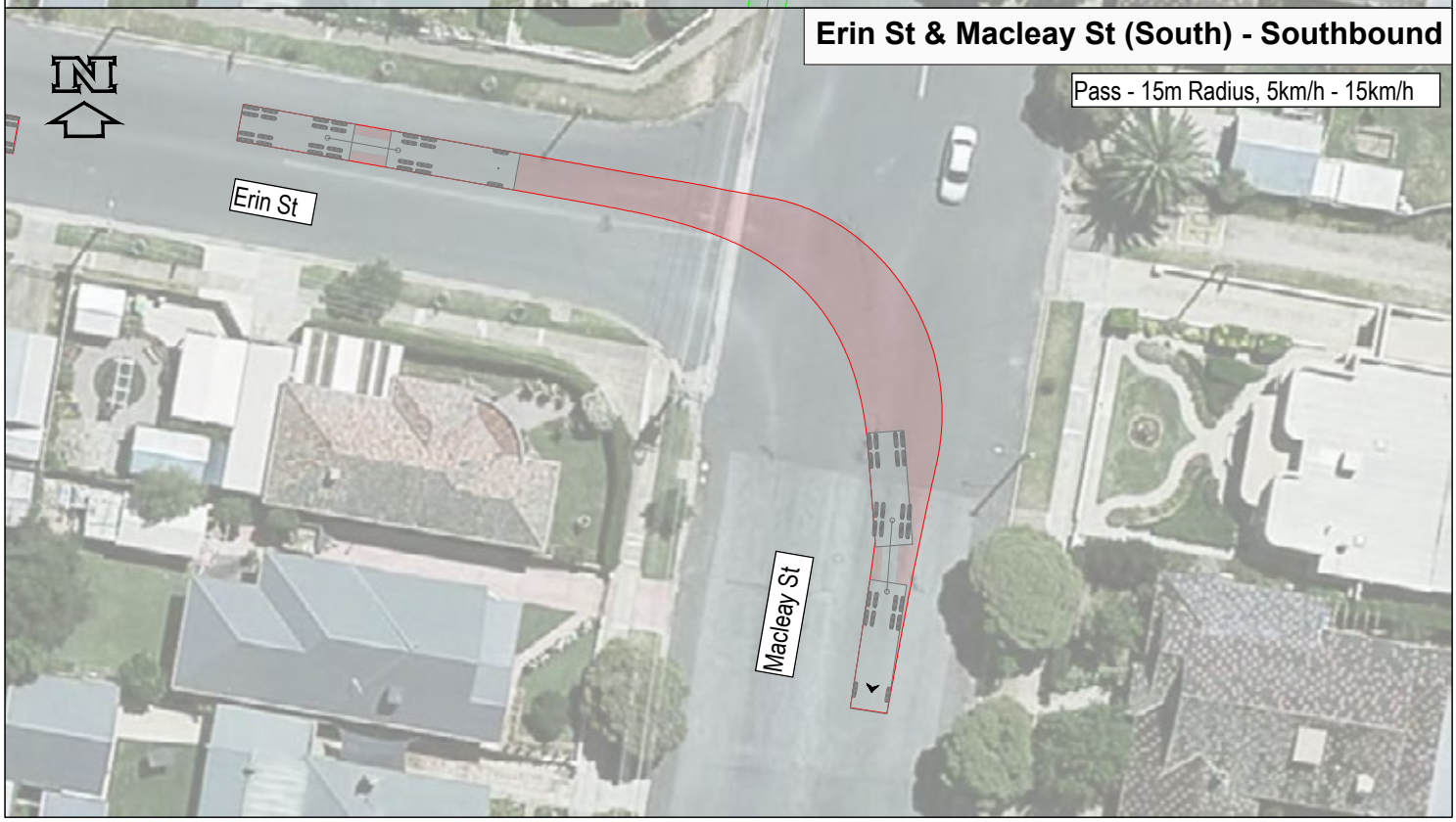
| | | | |
|---|---|---|---|
| First Unit Width | : 2.50 | Lock to Lock Time | : 6.0 |
| Trailer Width | : 2.50 | Steering Angle | : 39.9 |
| First Unit Track | : 2.50 | Articulating Angle | : 70.0 |
| Trailer Track | : 2.50 | | |

Plot Date: 27/06/23 - 09:14

# Construction Vehicle Route Swept Path Analysis

Client: ARTC
Project: Inland Rail - Albury to Illabo
Location: Wagga Wagga Precinct - Edmondson St Bridge
Sheet: 6 of 6

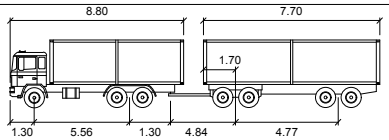



## Legend

19m TRUCK & DOG CHECK VEHICLE - NORTHBOUND MOVEMENT

19m TRUCK & DOG CHECK VEHICLE - SOUTHBOUND MOVEMENT




Truck and Dog50T

meters

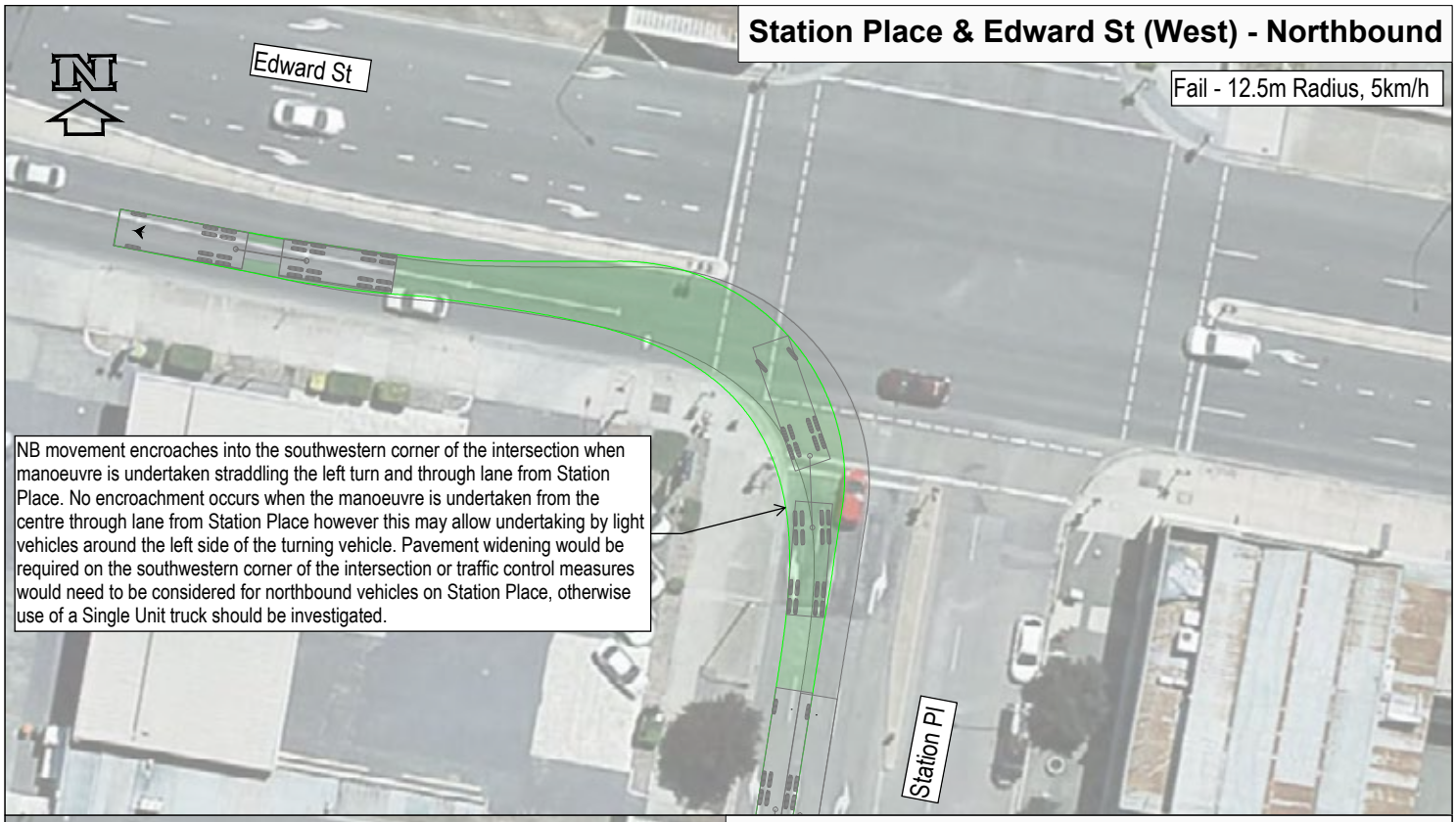
| | | | |
|---|---|---|---|
| First Unit Width | : 2.50 | Lock to Lock Time | : 6.0 |
| Trailer Width | : 2.50 | Steering Angle | : 39.9 |
| First Unit Track | : 2.50 | Articulating Angle | : 70.0 |
| Trailer Track | : 2.50 | | |

Plot Date: 27/06/23 - 09:15

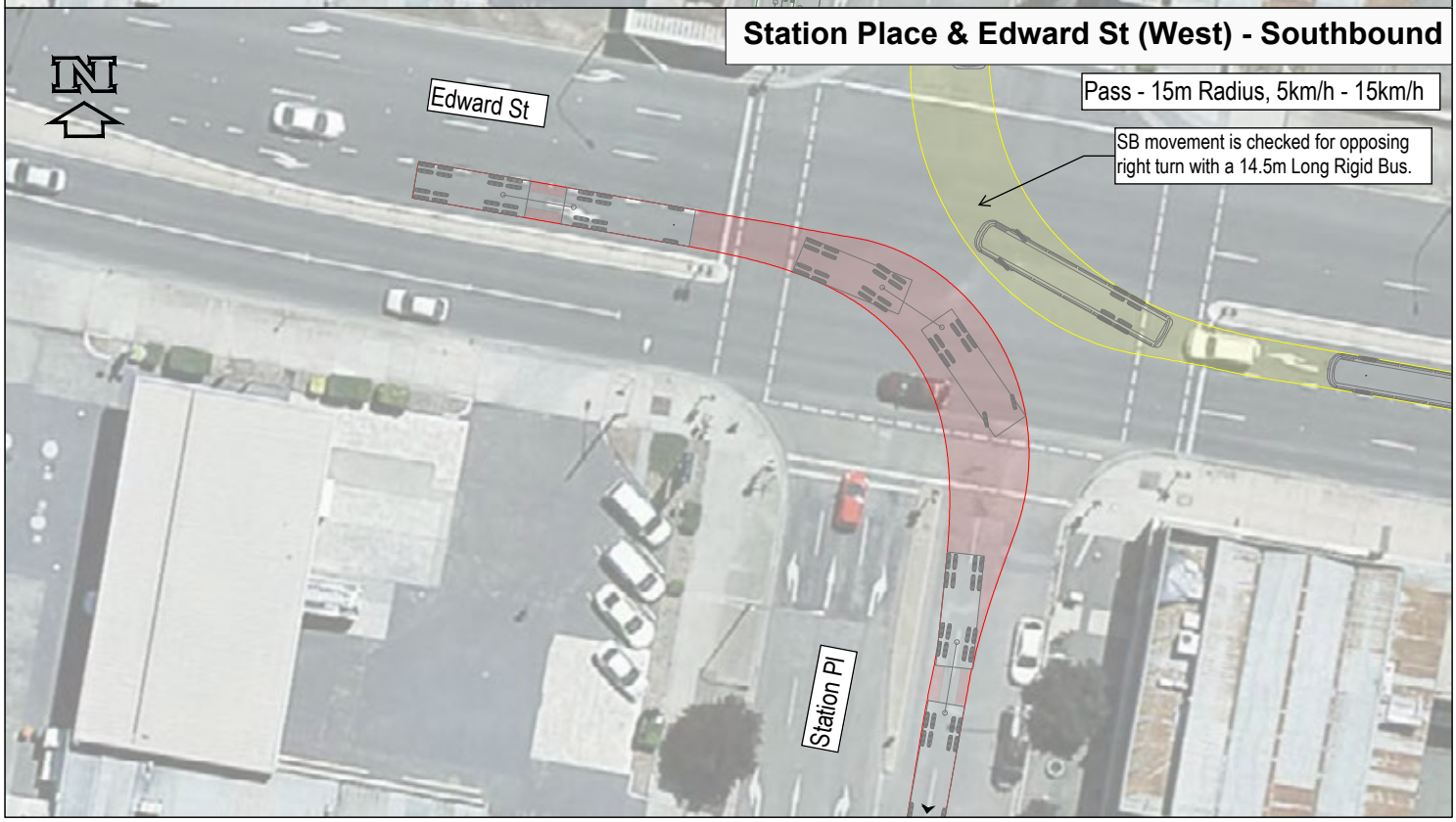
# Construction Vehicle Route Swept Path Analysis

Client: ARTC
Project: Inland Rail - Albury to Illabo
Location: Wagga Wagga Precinct - Wagga Station
Sheet: 1 of 4

## Station Place & Edward St (West) - Northbound

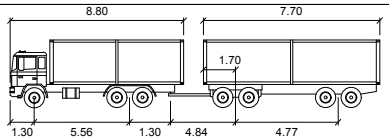



## Station Place & Edward St (West) - Southbound




### Legend

- 19m TRUCK & DOG CHECK VEHICLE - NORTHBOUND MOVEMENT
- 19m TRUCK & DOG CHECK VEHICLE - SOUTHBOUND MOVEMENT
- 19m TRUCK & DOG CHECK VEHICLE - WORST CASE MOVEMENT
- 14.5m LONG RIGID BUS CHECK VEHICLE - OPPOSING RIGHT TURN




Truck and Dog50T

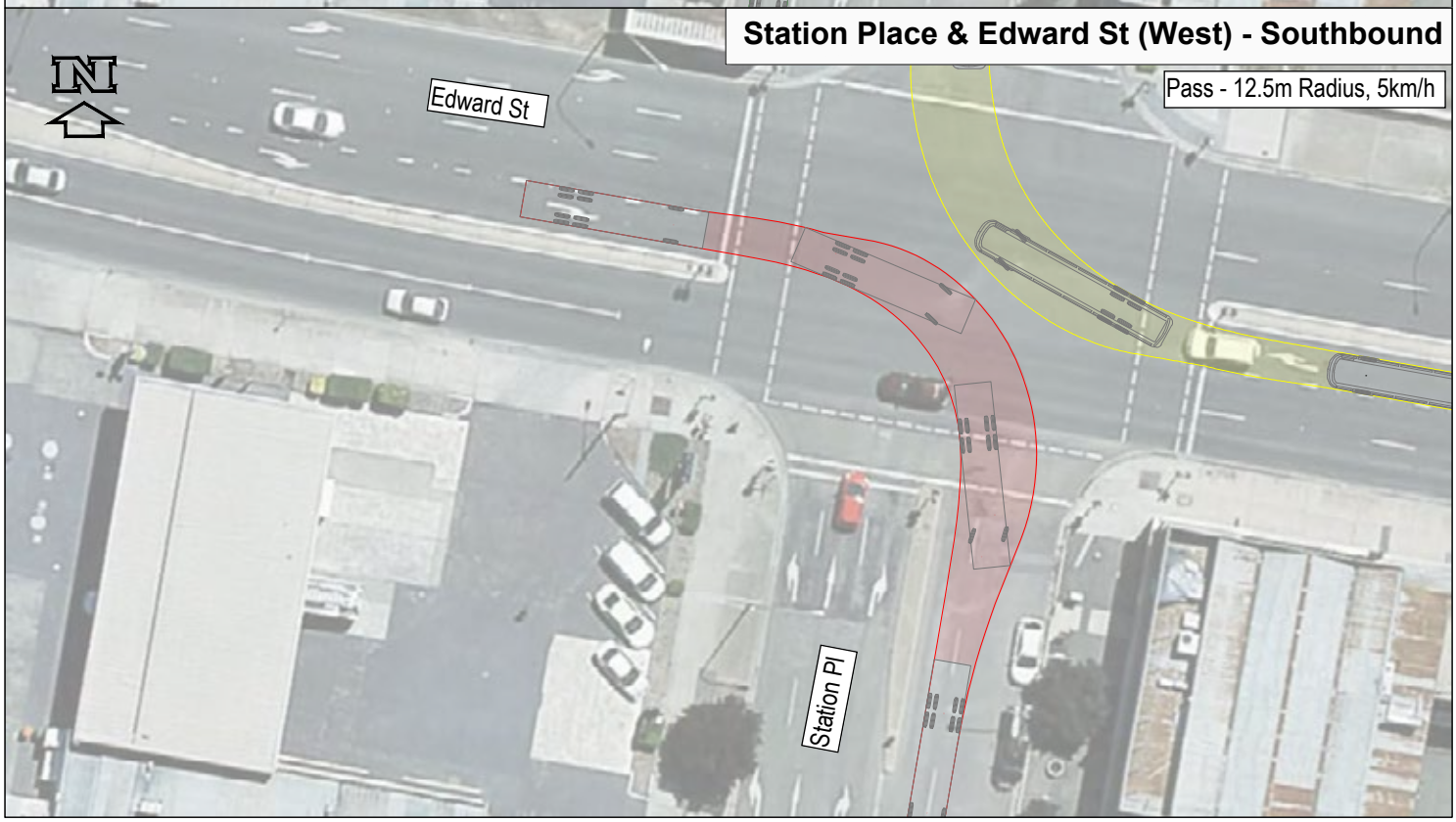
meters

| | | | |
|---|---|---|---|
| First Unit Width | : 2.50 | Lock to Lock Time | : 6.0 |
| Trailer Width | : 2.50 | Steering Angle | : 39.9 |
| First Unit Track | : 2.50 | Articulating Angle | : 70.0 |
| Trailer Track | : 2.50 | | |

Plot Date: 27/06/23 - 09:15

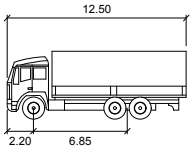
# Construction Vehicle Route Swept Path Analysis

Client: ARTC
Project: Inland Rail - Albury to Illabo
Location: Wagga Wagga Precinct - Wagga Station
Sheet: 1 of 1


**Legend**

- 12.5m SU TRUCK CHECK VEHICLE - NORTHBOUND MOVEMENT
- 12.5m SU TRUCK CHECK VEHICLE - SOUTHBOUND MOVEMENT
- 12.5m SU TRUCK CHECK VEHICLE - WORST CASE MOVEMENT
- 14.5m LONG RIGID BUS CHECK VEHICLE - OPPOSING RIGHT TURN



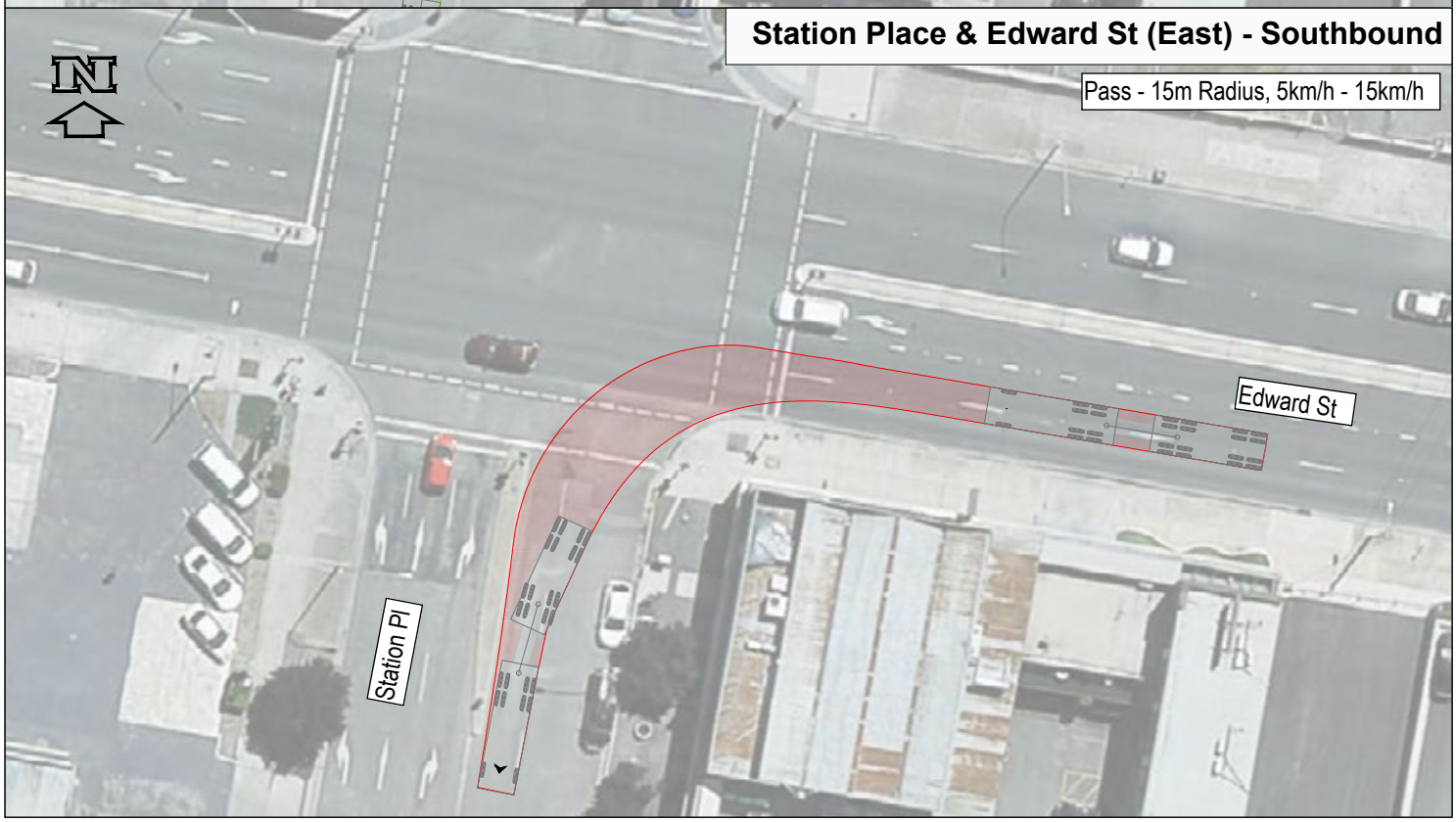

SU TRUCK

| | meters |
|---|---|
| Width | : 2.50 |
| Track | : 2.50 |
| Lock to Lock Time | : 6.0 |
| Steering Angle | : 36.6 |

Plot Date: 25/01/24 - 13:57

# Construction Vehicle Route Swept Path Analysis

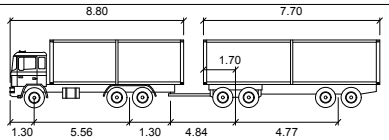
Client: ARTC
Project: Inland Rail - Albury to Illabo
Location: Wagga Wagga Precinct - Wagga Station
Sheet: 2 of 4


## Legend

19m TRUCK & DOG CHECK VEHICLE - NORTHBOUND MOVEMENT

19m TRUCK & DOG CHECK VEHICLE - SOUTHBOUND MOVEMENT




Truck and Dog50T

meters

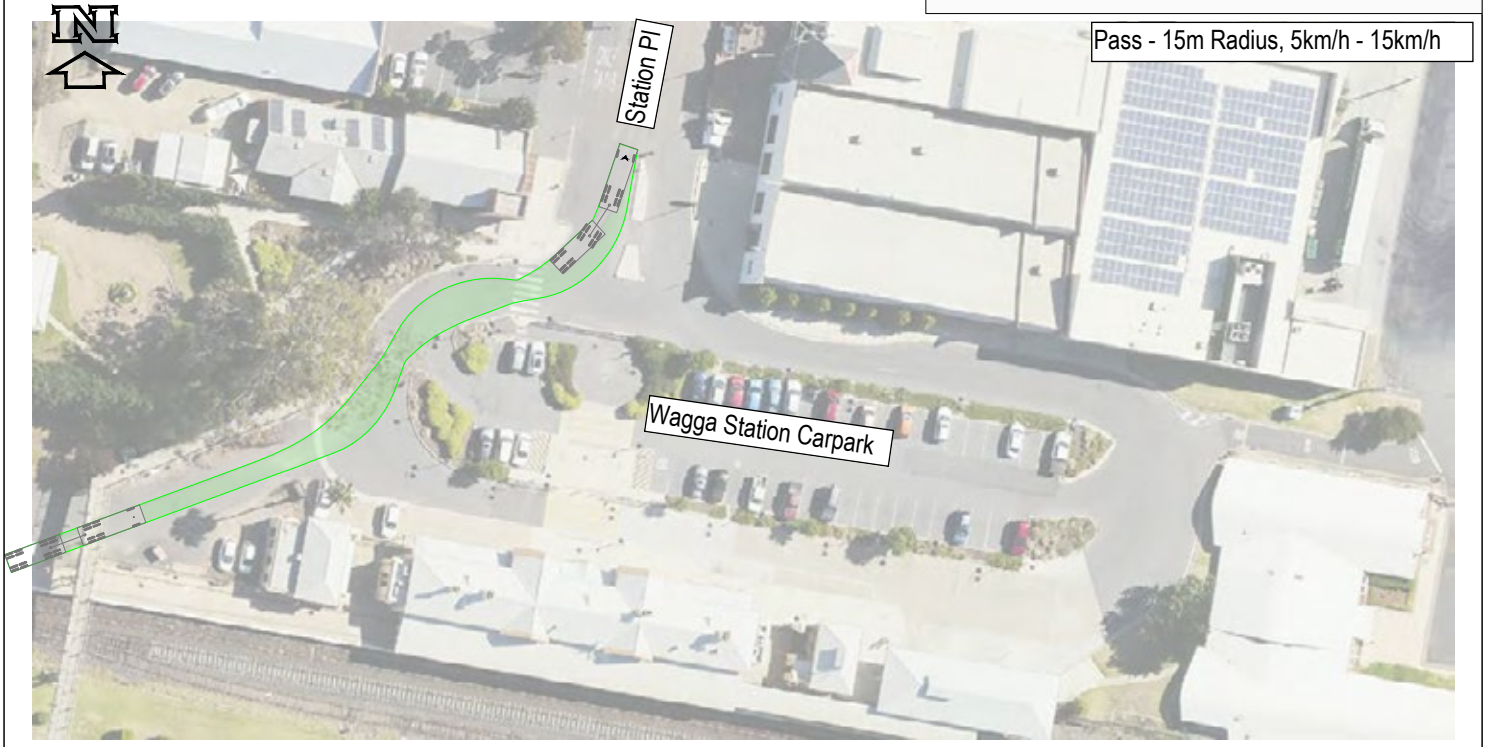
| | | | |
|---|---|---|---|
| First Unit Width | : 2.50 | Lock to Lock Time | : 6.0 |
| Trailer Width | : 2.50 | Steering Angle | : 39.9 |
| First Unit Track | : 2.50 | Articulating Angle | : 70.0 |
| Trailer Track | : 2.50 | | |

Plot Date: 27/06/23 - 09:15

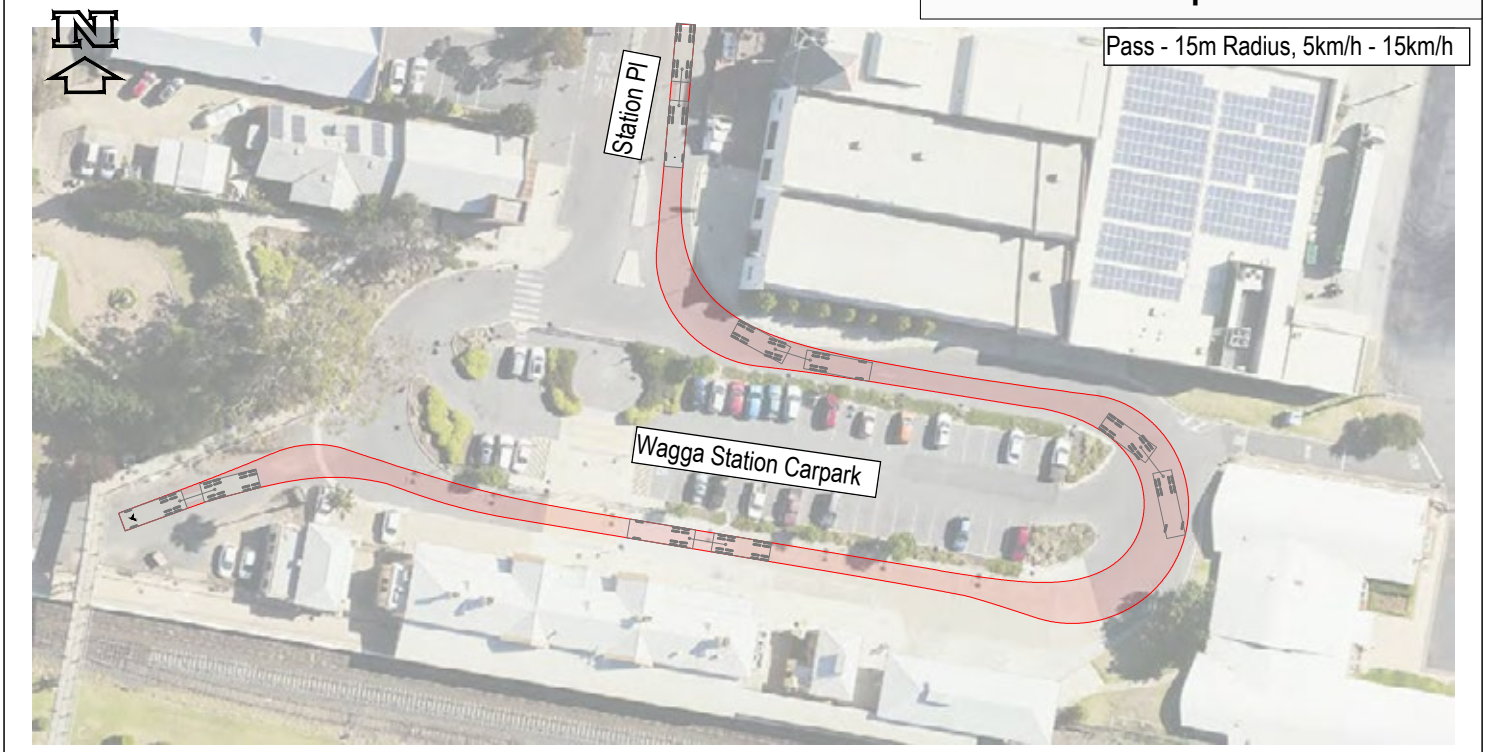
# Construction Vehicle Route Swept Path Analysis

Client: ARTC
Project: Inland Rail - Albury to Illabo
Location: Wagga Wagga Precinct - Wagga Station
Sheet: 3 of 4

## Station Place Carpark - Northbound



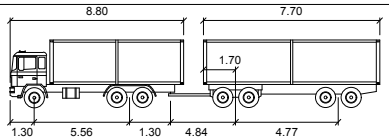

## Station Place Carpark - Southbound




### Legend

19m TRUCK & DOG CHECK VEHICLE - NORTHBOUND MOVEMENT

19m TRUCK & DOG CHECK VEHICLE - SOUTHBOUND MOVEMENT




Truck and Dog50T

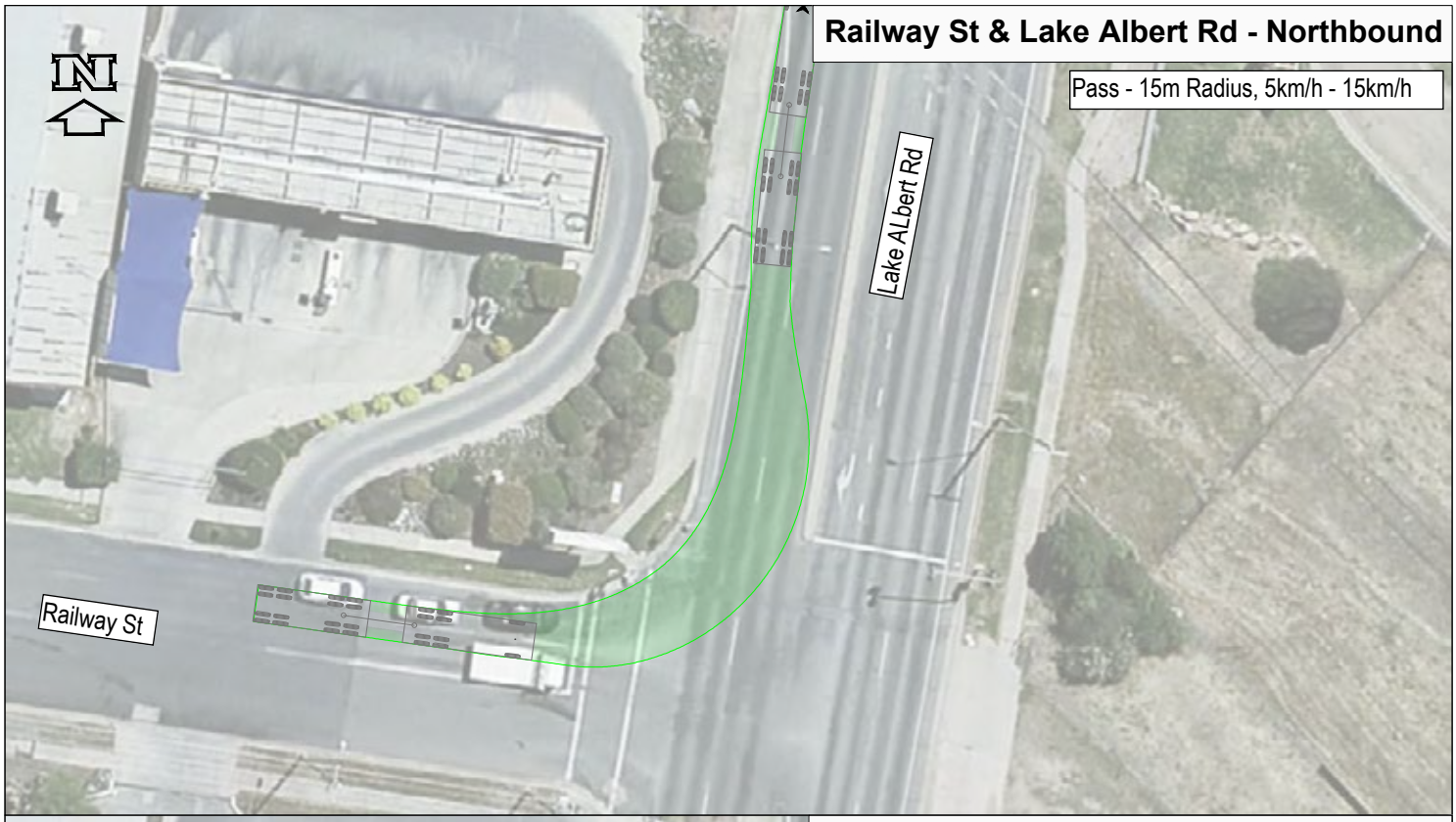
meters

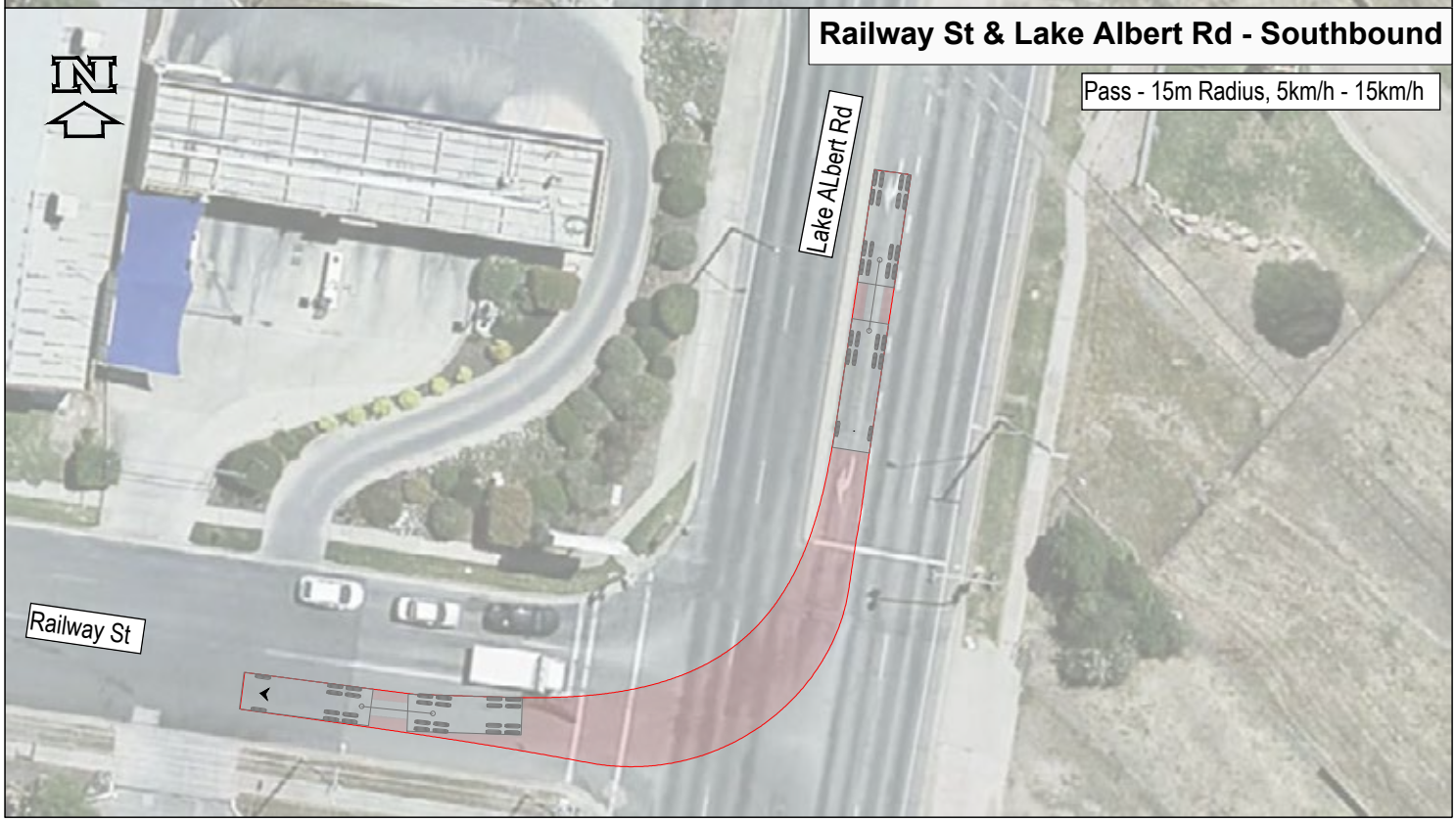
| | | | |
|---|---|---|---|
| First Unit Width | : 2.50 | Lock to Lock Time | : 6.0 |
| Trailer Width | : 2.50 | Steering Angle | : 39.9 |
| First Unit Track | : 2.50 | Articulating Angle | : 70.0 |
| Trailer Track | : 2.50 | | |

Plot Date: 27/06/23 - 09:15

# Construction Vehicle Route Swept Path Analysis

Client: ARTC
Project: Inland Rail - Albury to Illabo
Location: Wagga Wagga Precinct - Wagga Station
Sheet: 4 of 4

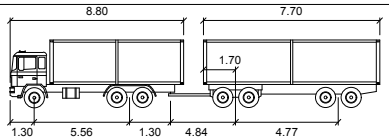



**Legend**

19m TRUCK & DOG CHECK VEHICLE - NORTHBOUND MOVEMENT

19m TRUCK & DOG CHECK VEHICLE - SOUTHBOUND MOVEMENT




Truck and Dog50T

meters

| | | | |
|---|---|---|---|
| First Unit Width | : 2.50 | Lock to Lock Time | : 6.0 |
| Trailer Width | : 2.50 | Steering Angle | : 39.9 |
| First Unit Track | : 2.50 | Articulating Angle | : 70.0 |
| Trailer Track | : 2.50 | | |

Plot Date: 27/06/23 - 09:15

# Construction Vehicle Route Swept Path Analysis

# APPENDIX C

## Further Swept Path Analysis

N

VEHICLE TO STRADDLE LANES ON APPROACH
TO EDWARD STREET / PEARSON STREET INTERSECTION

EDWARD STREET

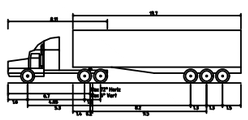
Prime mover and semi-trailer (19 m)

EDWARD STREET

VEHICLE CLEARANCE CLEAR OF OBSTRUCTIONS AND
PEDESTRIAN STANDING AREAS AND FOOTPATHS

PEARSON STREET

## VEHICLE PROFILE



Prime mover and semi-trailer (19 m)

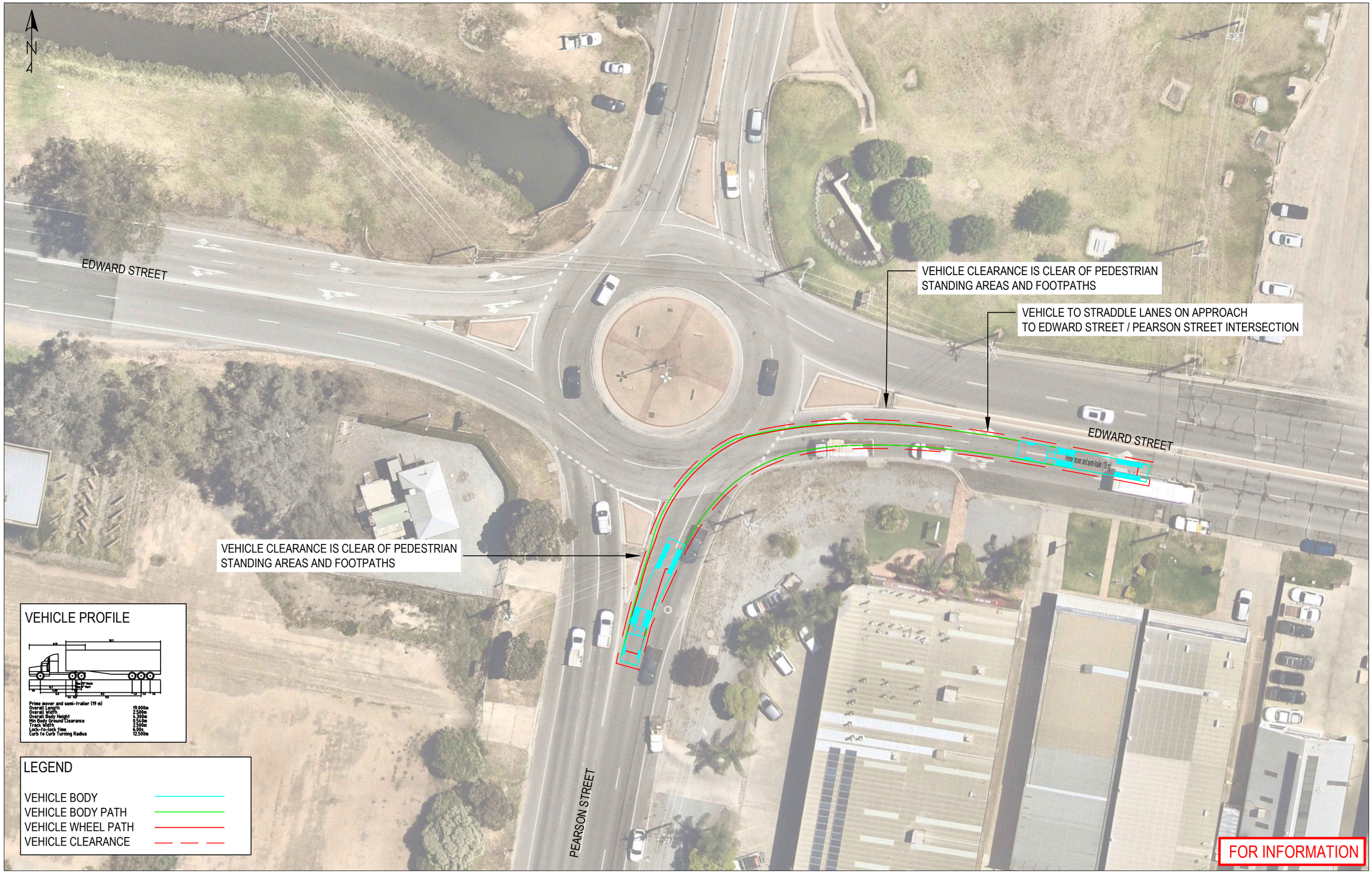
| | |
|---|---|
| Overall Length | 19.000m |
| Overall Width | 2.500m |
| Overall Body Height | 4.300m |
| Min Body Ground Clearance | 0.540m |
| Track Width | 2.500m |
| Lock-to-lock time | 6.00s |
| Curb to Curb Turning Radius | 12.500m |

## LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

FOR INFORMATION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | PLOT DATE / TIME | PLOT BY | CLIENT | PEARSON STREET BRIDGE ENHANCEMENT SITE<br>EDWARD STREET / PEARSON STREET<br>SWEPT PATH ANALYSIS<br>19.0m SEMI-TRAILER | A3 |
| | | | | - | - | - | - | | | |
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE / NAME / DATE | | |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | CASE TRAFFIC & TRANSPORT | DESIGNED J. BUNN 26.02.25<br>*** *** ***<br>*** *** ***<br>*** *** ***<br>*** *** ***<br>*** *** *** | PREPARED FOR<br>P. BILLINGHAM | -<br>- |
| | | | | | | CO-ORDINATE SYSTEM<br>MGA ZONE 55 | HEIGHT DATUM<br>- | | ISSUE STATUS<br>INITIAL REVISION | SHEET No.<br>1 / OF SHEET<br>35 / ISSUE<br>1 |

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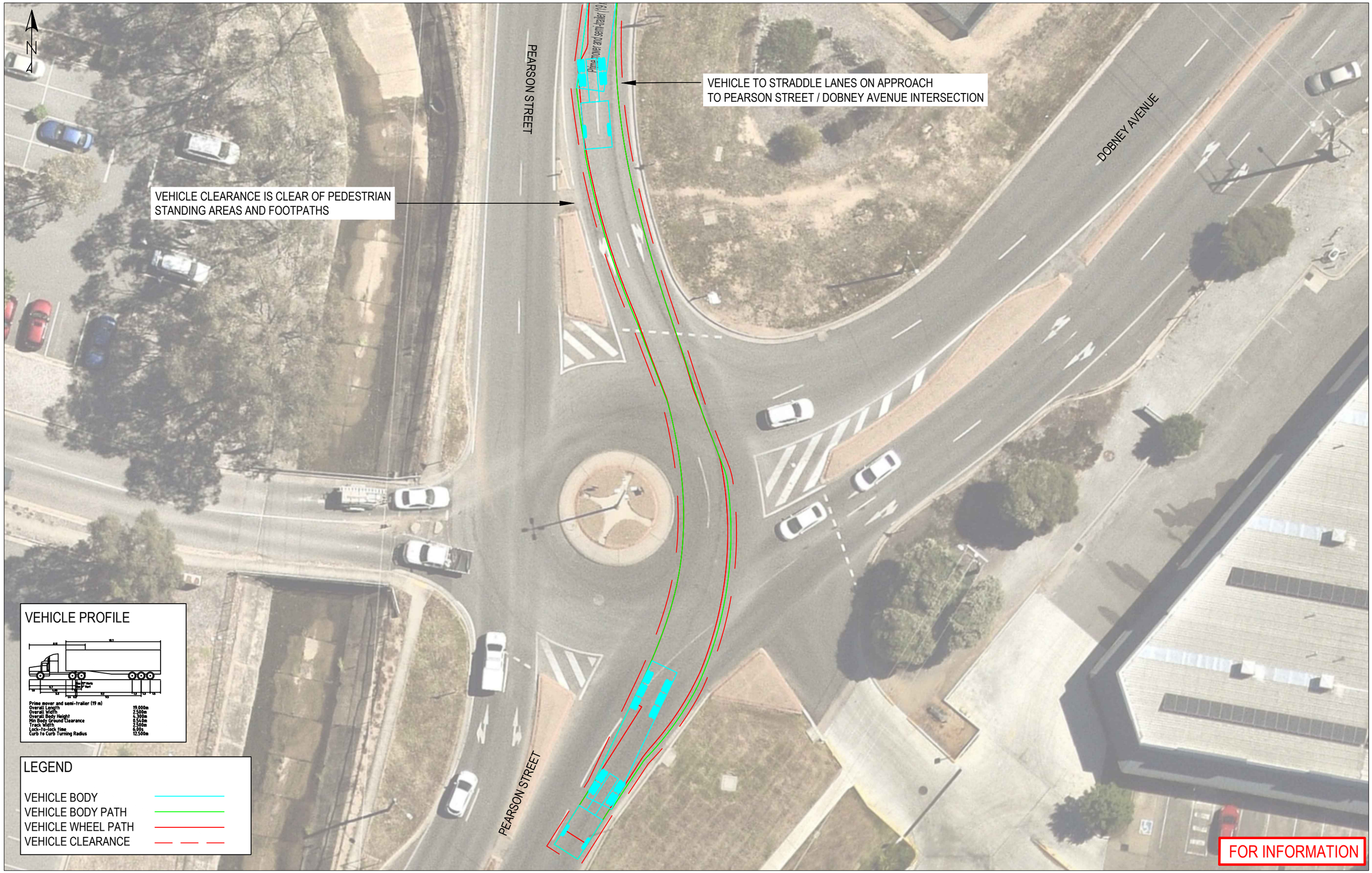
| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | | PLOT DATE / TIME | | PLOT BY | CLIENT | PEARSON STREET BRIDGE ENHANCEMENT SITE<br>EDWARD STREET / PEARSON STREET<br>SWEPT PATH ANALYSIS<br>19.0m SEMI-TRAILER | A3 |
| | | | | - | - | | - | | - | | | |
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE | NAME | DATE | PREPARED FOR | - |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | case TRAFFIC & TRANSPORT | DESIGNED | J. BUNN | 26.02.25 | P. BILLINGHAM | - |
| | | | | | | CO-ORDINATE SYSTEM MGA ZONE 55 | HEIGHT DATUM - | *** | *** | *** | ISSUE STATUS INITIAL REVISION | SHEET No. 2 / OF SHEET 35 / ISSUE 1 |

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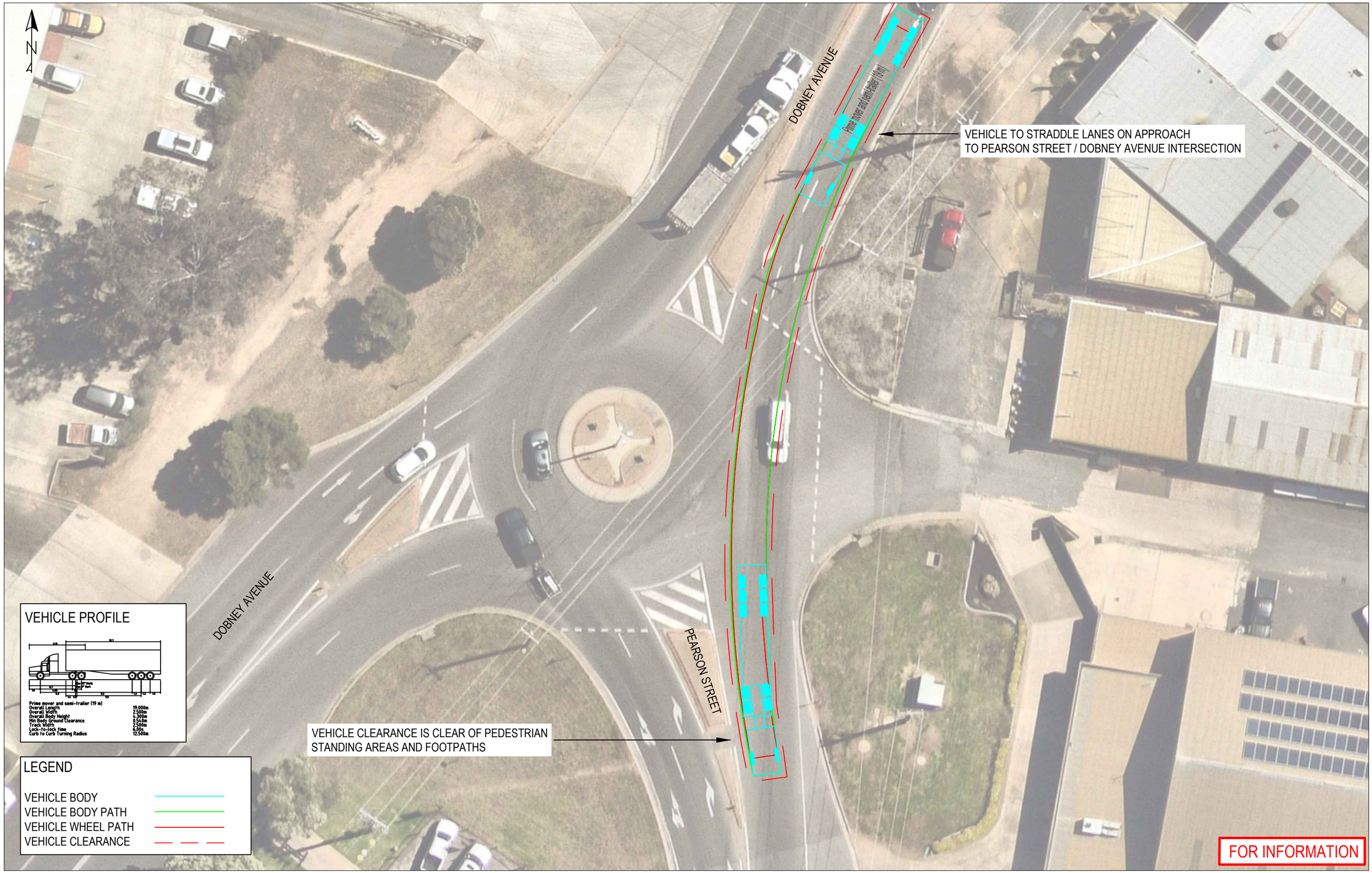
| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | | PLOT DATE / TIME | | PLOT BY | CLIENT | PEARSON STREET BRIDGE ENHANCEMENT SITE<br>PEARSON STREET / DOBNEY AVENUE<br>SWEPT PATH ANALYSIS<br>19.0m SEMI-TRAILER |
| | | | | - | - | | - | | - | | A3 |
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE | NAME | DATE | |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | CASE TRAFFIC & TRANSPORT | DESIGNED | J. BUNN | 26.02.25 | |
| | | | | | | | | *** | *** | *** | |
| | | | | | | | | *** | *** | *** | |
| | | | | | | | | *** | *** | *** | PREPARED FOR<br>P. BILLINGHAM |
| | | | | | | | | *** | *** | *** | |
| | | | | | | CO-ORDINATE SYSTEM<br>MGA ZONE 55 | HEIGHT DATUM<br>- | | | | - |
| | | | | | | | | | | | ISSUE STATUS<br>INITIAL REVISION / SHEET No.<br>3 / OF SHEET<br>35 / ISSUE<br>1 |

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| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | | PLOT DATE / TIME | | PLOT BY | CLIENT | PEARSON STREET BRIDGE ENHANCEMENT SITE<br>DOBNEY AVENUE / PEARSON STREET<br>SWEPT PATH ANALYSIS<br>19.0m SEMI-TRAILER |
| | | | | - | - | | - | | - | | A3 |
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| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | case TRAFFIC & TRANSPORT | DESIGNED | J. BUNN | 26.02.25 | |
| | | | | | | | | *** | *** | *** | |
| | | | | | | | | *** | *** | *** | |
| | | | | | | | | *** | *** | *** | PREPARED FOR<br>P. BILLINGHAM |
| | | | | | | | | *** | *** | *** | |
| | | | | | | | | *** | *** | *** | |
| | | | | | | CO-ORDINATE SYSTEM<br>MGA ZONE 55 | HEIGHT DATUM<br>- | | | | ISSUE STATUS<br>INITIAL REVISION<br>SHEET No.<br>4<br>OF SHEET<br>35<br>ISSUE<br>1 |


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| | | | | - | - | | - | - | | | |
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE / NAME / DATE | | | |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | CASE TRAFFIC & TRANSPORT | DESIGNED J. BUNN 26.02.25 | | | |
| | | | | | | | | *** *** *** | | | |
| | | | | | | | | *** *** *** | | | |
| | | | | | | | | *** *** *** | PREPARED FOR<br>P. BILLINGHAM | - | - |
| | | | | | | | | *** *** *** | | | |
| | | | | | | | | *** *** *** | | | |
| | | | | | | CO-ORDINATE SYSTEM<br>MGA ZONE 55 | HEIGHT DATUM<br>- | | | ISSUE STATUS<br>INITIAL REVISION | SHEET No.<br>5 | OF SHEET<br>35 | ISSUE<br>1 |

N

PEARSON STREET

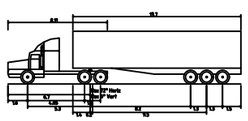
DOBNEY AVENUE

PEARSON STREET

Prime mover and semi-trailer (19 m)

VEHICLE TO STRADDLE LANES ON APPROACH
TO PEARSON STREET / DOBNEY AVENUE INTERSECTION

## VEHICLE PROFILE



| Prime mover and semi-trailer (19 m) | |
|---|---|
| Overall Length | 19.000m |
| Overall Width | 2.500m |
| Overall Body Height | 4.300m |
| Min Body Ground Clearance | 0.540m |
| Track Width | 2.500m |
| Lock-to-lock time | 6.00s |
| Curb to Curb Turning Radius | 12.500m |

## LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

FOR INFORMATION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | | PLOT DATE / TIME | PLOT BY | CLIENT |
| | | | | - | - | | - | - | |
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | | |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | CASE TRAFFIC & TRANSPORT | | |
| | | | | | | CO-ORDINATE SYSTEM: MGA ZONE 55 | HEIGHT DATUM: - | | |

| TITLE | NAME | DATE |
|---|---|---|
| DESIGNED | J. BUNN | 26.02.25 |
| *** | *** | *** |
| *** | *** | *** |
| *** | *** | *** |
| *** | *** | *** |
| *** | *** | *** |

PREPARED FOR: P. BILLINGHAM

PEARSON STREET BRIDGE ENHANCEMENT SITE
PEARSON STREET / DOBNEY AVENUE
# SWEPT PATH ANALYSIS
## 19.0m SEMI-TRAILER

A3

-

-

| ISSUE STATUS | SHEET No. | OF SHEET | ISSUE |
|---|---|---|---|
| INITIAL REVISION | 6 | 35 | 1 |

EDWARD STREET

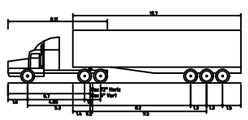
EDWARD STREET

PEARSON STREET

VEHICLE TO STRADDLE LANES ON APPROACH
TO EDWARD STREET / PEARSON STREET INTERSECTION

VEHICLE CLEARANCE IS CLEAR OF PEDESTRIAN
STANDING AREAS AND FOOTPATHS

## VEHICLE PROFILE



Prime mover and semi-trailer (19 m)

| | |
|---|---|
| Overall Length | 19.000m |
| Overall Width | 2.500m |
| Overall Body Height | 4.300m |
| Min Body Ground Clearance | 0.540m |
| Track Width | 2.500m |
| Lock-to-lock time | 6.00s |
| Curb to Curb Turning Radius | 12.500m |

## LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

FOR INFORMATION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | | PLOT DATE / TIME | PLOT BY | CLIENT |
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| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE | NAME | DATE |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | CASE TRAFFIC & TRANSPORT | DESIGNED | J. BUNN | 26.02.25 |
| | | | | | | | | *** | *** | *** |
| | | | | | | | | *** | *** | *** |
| | | | | | | | | *** | *** | *** |
| | | | | | | CO-ORDINATE SYSTEM: MGA ZONE 55 | HEIGHT DATUM: - | *** | *** | *** |
| | | | | | | | | *** | *** | *** |

PREPARED FOR
P. BILLINGHAM

PEARSON STREET BRIDGE ENHANCEMENT SITE
EDWARD STREET / PEARSON STREET
# SWEPT PATH ANALYSIS
19.0m SEMI-TRAILER

A3

-

-

| ISSUE STATUS | SHEET No. | OF SHEET | ISSUE |
|---|---|---|---|
| INITIAL REVISION | 7 | 35 | 1 |

EDWARD STREET

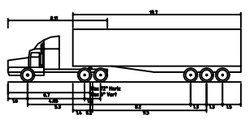
EDWARD STREET

PEARSON STREET

VEHICLE TO STRADDLE LANES ON APPROACH
TO EDWARD STREET / PEARSON STREET INTERSECTION

VEHICLE CLEARANCE IS CLEAR OF PEDESTRIAN
STANDING AREAS AND FOOTPATHS

## VEHICLE PROFILE



| Prime mover and semi-trailer (19 m) | |
|---|---|
| Overall Length | 19.000m |
| Overall Width | 2.500m |
| Overall Body Height | 4.300m |
| Min Body Ground Clearance | 0.540m |
| Track Width | 2.500m |
| Lock-to-lock time | 6.00s |
| Curb to Curb Turning Radius | 12.500m |

## LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

FOR INFORMATION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | | PLOT DATE / TIME | PLOT BY | CLIENT |
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| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | CASE TRAFFIC & TRANSPORT | DESIGNED | J. BUNN | 26.02.25 |
| | | | | | | | | *** | *** | *** |
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| | | | | | | | | *** | *** | *** |
| | | | | | | | | *** | *** | *** |
| | | | | | | | | *** | *** | *** |
| | | | | | | CO-ORDINATE SYSTEM: MGA ZONE 55 | HEIGHT DATUM: - | | | |

PREPARED FOR: P. BILLINGHAM

PEARSON STREET BRIDGE ENHANCEMENT SITE
EDWARD STREET / PEARSON STREET
# SWEPT PATH ANALYSIS
19.0m SEMI-TRAILER

A3

-

-

| ISSUE STATUS | SHEET No. | OF SHEET | ISSUE |
|---|---|---|---|
| INITIAL REVISION | 8 | 35 | 1 |


## VEHICLE PROFILE



| | |
|---|---|
| Single Unit Truck/Bus (12.5 m) | |
| Overall Length | 12.500m |
| Overall Width | 2.500m |
| Overall Body Height | 4.300m |
| Min Body Ground Clearance | 0.490m |
| Track Width | 2.500m |
| Lock-to-lock time | 6.00s |
| Curb to Curb Turning Radius | 12.500m |

## LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

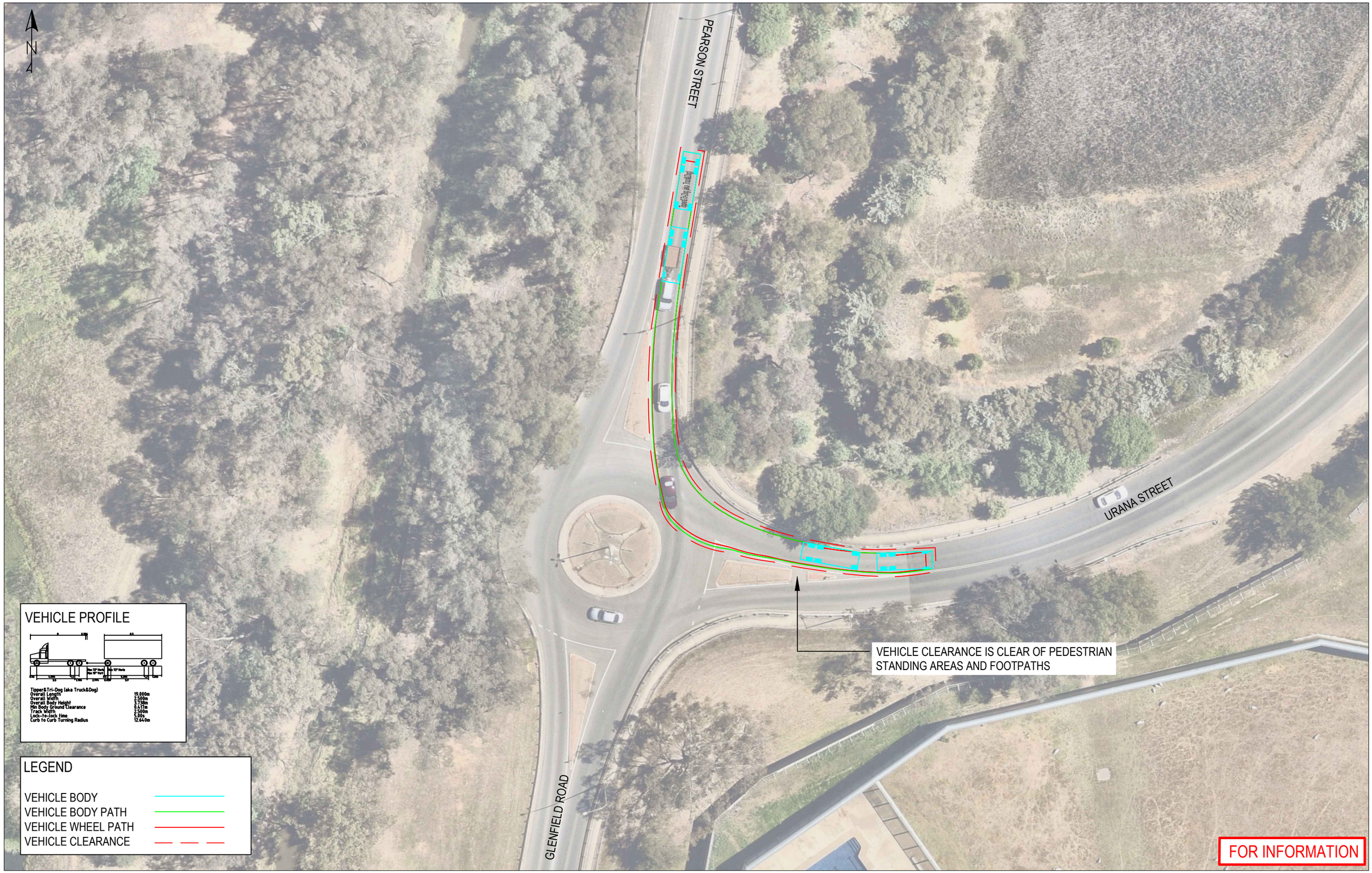
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | | PLOT DATE / TIME | PLOT BY | CLIENT |
| | | | | - | - | | - | - | |
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE / NAME / DATE | |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | case TRAFFIC & TRANSPORT | DESIGNED J. BUNN 26.02.25 | PREPARED FOR P. BILLINGHAM |
| | | | | | | CO-ORDINATE SYSTEM MGA ZONE 55 | HEIGHT DATUM - | | |

PEARSON STREET BRIDGE ENHANCEMENT SITE
PEARSON STREET / URANA STREET
SWEPT PATH ANALYSIS
12.5m SINGLE UNIT TRUCK

A3

| ISSUE STATUS | SHEET No. | OF SHEET | ISSUE |
|---|---|---|---|
| INITIAL REVISION | 9 | 35 | 1 |


| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | PLOT DATE / TIME | PLOT BY | CLIENT | PEARSON STREET BRIDGE ENHANCEMENT SITE<br>PEARSON STREET / URANA STREET<br>SWEPT PATH ANALYSIS<br>12.5m SINGLE UNIT TRUCK | A3 | |
| | | | | - | - | - | - | | | | |
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE | NAME | DATE | |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | CASE TRAFFIC & TRANSPORT | DESIGNED | J. BUNN | 26.02.25 | |
| | | | | | | | | *** | *** | *** | |
| | | | | | | | | *** | *** | *** | |
| | | | | | | | | *** | *** | *** | |
| | | | | | | | | *** | *** | *** | |
| | | | | | | CO-ORDINATE SYSTEM: MGA ZONE 55 | HEIGHT DATUM: - | | | | |
| | | | | | | | | PREPARED FOR: P. BILLINGHAM | | - | - |
| | | | | | | | | | ISSUE STATUS: INITIAL REVISION | SHEET No.: 10 | OF SHEET: 35 | ISSUE: 1 |




## VEHICLE PROFILE



| Tipper&Tri-Dog (aka Truck&Dog) | |
|---|---|
| Overall Length | 19.000m |
| Overall Width | 2.500m |
| Overall Body Height | 3.738m |
| Min Body Ground Clearance | 0.137m |
| Track Width | 2.500m |
| Lock-to-lock time | 5.00s |
| Curb to Curb Turning Radius | 12.64.0m |

## LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | | PLOT DATE / TIME | PLOT BY | CLIENT |
| | | | | - | - | | - | - | |
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE | NAME | DATE |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | CASE TRAFFIC & TRANSPORT | DESIGNED | J. BUNN | 26.02.25 |
| | | | | | | | | *** | *** | *** |
| | | | | | | | | *** | *** | *** |
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| | | | | | | CO-ORDINATE SYSTEM: MGA ZONE 55 | HEIGHT DATUM: - | | | |

PEARSON STREET BRIDGE ENHANCEMENT SITE
PEARSON STREET / URANA STREET
SWEPT PATH ANALYSIS
19.0m TRUCK & DOG

A3

PREPARED FOR: P. BILLINGHAM

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| ISSUE STATUS | SHEET No. | OF SHEET | ISSUE |
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| INITIAL REVISION | 11 | 35 | 1 |


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| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | PLOT DATE / TIME | PLOT BY | CLIENT | PEARSON STREET BRIDGE ENHANCEMENT SITE<br>PEARSON STREET / URANA STREET<br>SWEPT PATH ANALYSIS<br>19.0m TRUCK & DOG | A3 |
| | | | | - | - | - | - | | | |
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE / NAME / DATE | PREPARED FOR | | |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | CASE TRAFFIC & TRANSPORT | DESIGNED J. BUNN 26.02.25<br>*** *** ***<br>*** *** ***<br>*** *** ***<br>*** *** *** | P. BILLINGHAM | - | - |
| | | | | | | CO-ORDINATE SYSTEM: MGA ZONE 55 | HEIGHT DATUM: - | | | ISSUE STATUS: INITIAL REVISION | SHEET No.: 12 / OF SHEET: 35 / ISSUE: 1 |


## VEHICLE PROFILE



| Single Unit Truck/Bus (12.5 m) | |
|---|---|
| Overall Length | 12.500m |
| Overall Width | 2.500m |
| Overall Body Height | 4.300m |
| Min Body Ground Clearance | 0.630m |
| Track Width | 2.500m |
| Lock-to-lock time | 6.00s |
| Curb to Curb Turning Radius | 12.500m |

## LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

FOR INFORMATION

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| DRAWING FILE LOCATION / NAME | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | | PLOT DATE / TIME | PLOT BY |
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| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | CASE TRAFFIC & TRANSPORT |
| | | | | | | CO-ORDINATE SYSTEM: MGA ZONE 55 | HEIGHT DATUM: - |

| TITLE | NAME | DATE |
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| DESIGNED | J. BUNN | 26.02.25 |
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CLIENT

PREPARED FOR: P. BILLINGHAM

CASSIDY PARADE BRIDGE ENHANCEMENT SITE
EDWARD STREET / MURRAY STREET
# SWEPT PATH ANALYSIS
## 12.5m SINGLE UNIT TRUCK

A3

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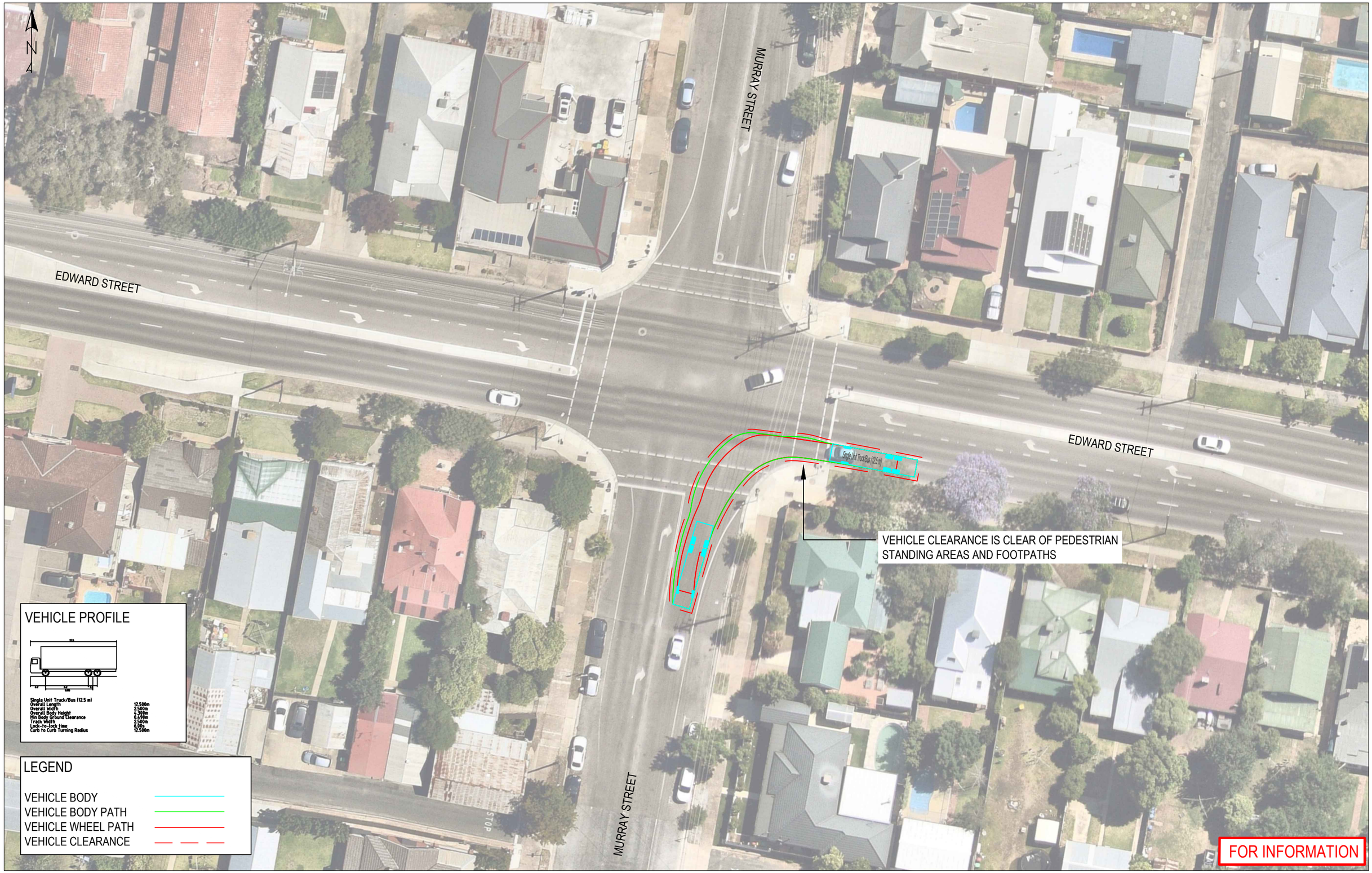
| ISSUE STATUS | SHEET No. | OF SHEET | ISSUE |
|---|---|---|---|
| INITIAL REVISION | 13 | 35 | 1 |

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| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | | PLOT DATE / TIME | | PLOT BY | CLIENT | CASSIDY PARADE BRIDGE ENHANCEMENT SITE<br>EDWARD STREET / MURRAY STREET<br>SWEPT PATH ANALYSIS<br>12.5m SINGLE UNIT TRUCK |
| | | | | - | - | | - | | - | | A3 |
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE | NAME | DATE | |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | CASE TRAFFIC & TRANSPORT | DESIGNED | J. BUNN | 26.02.25 | PREPARED FOR<br>P. BILLINGHAM |
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| | | | | | | | | *** | *** | *** | ISSUE STATUS: INITIAL REVISION; SHEET No.: 14; OF SHEET: 35; ISSUE: 1 |
| | | | | | | CO-ORDINATE SYSTEM: MGA ZONE 55; HEIGHT DATUM: - | | *** | *** | *** | |
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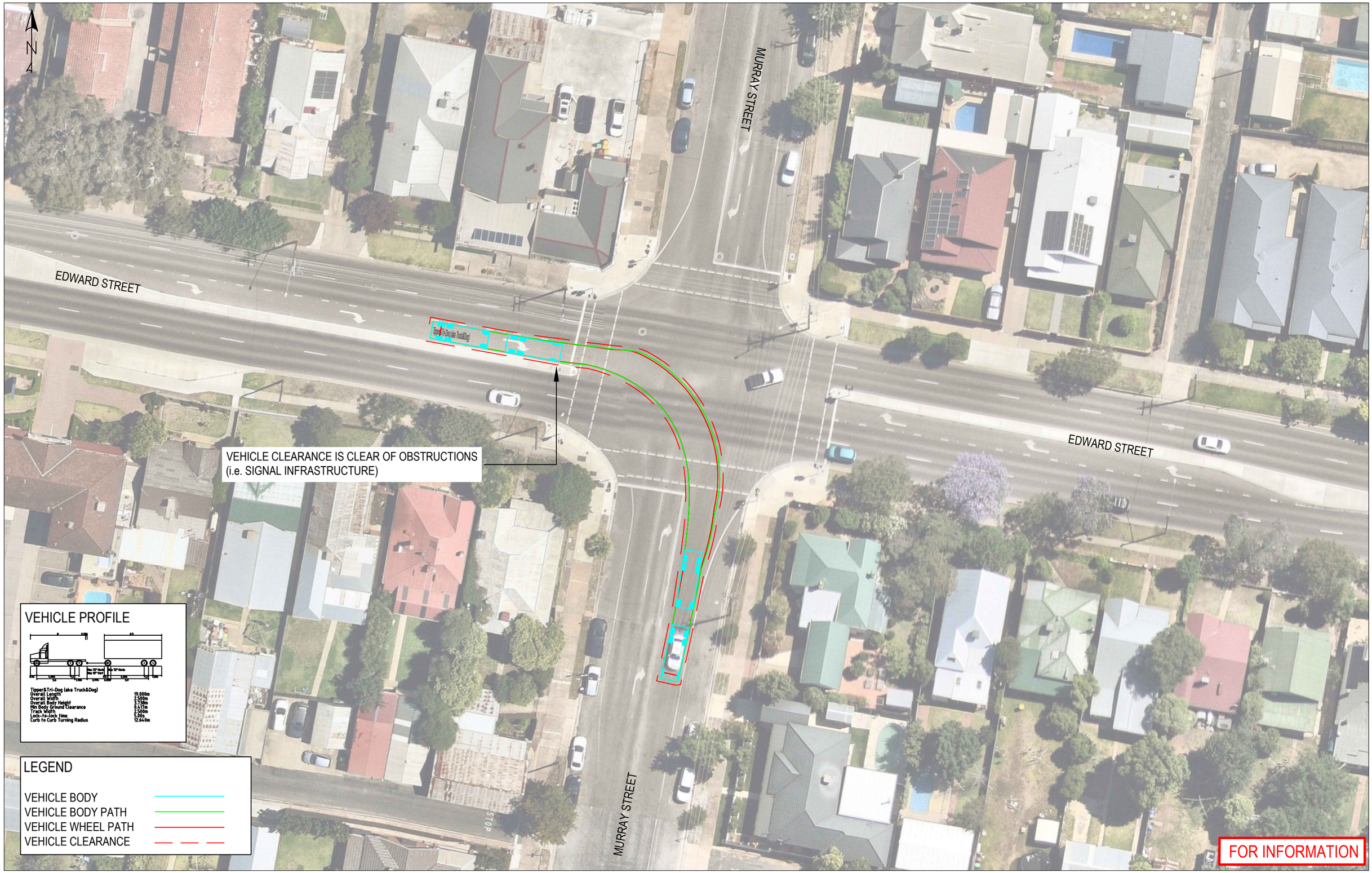


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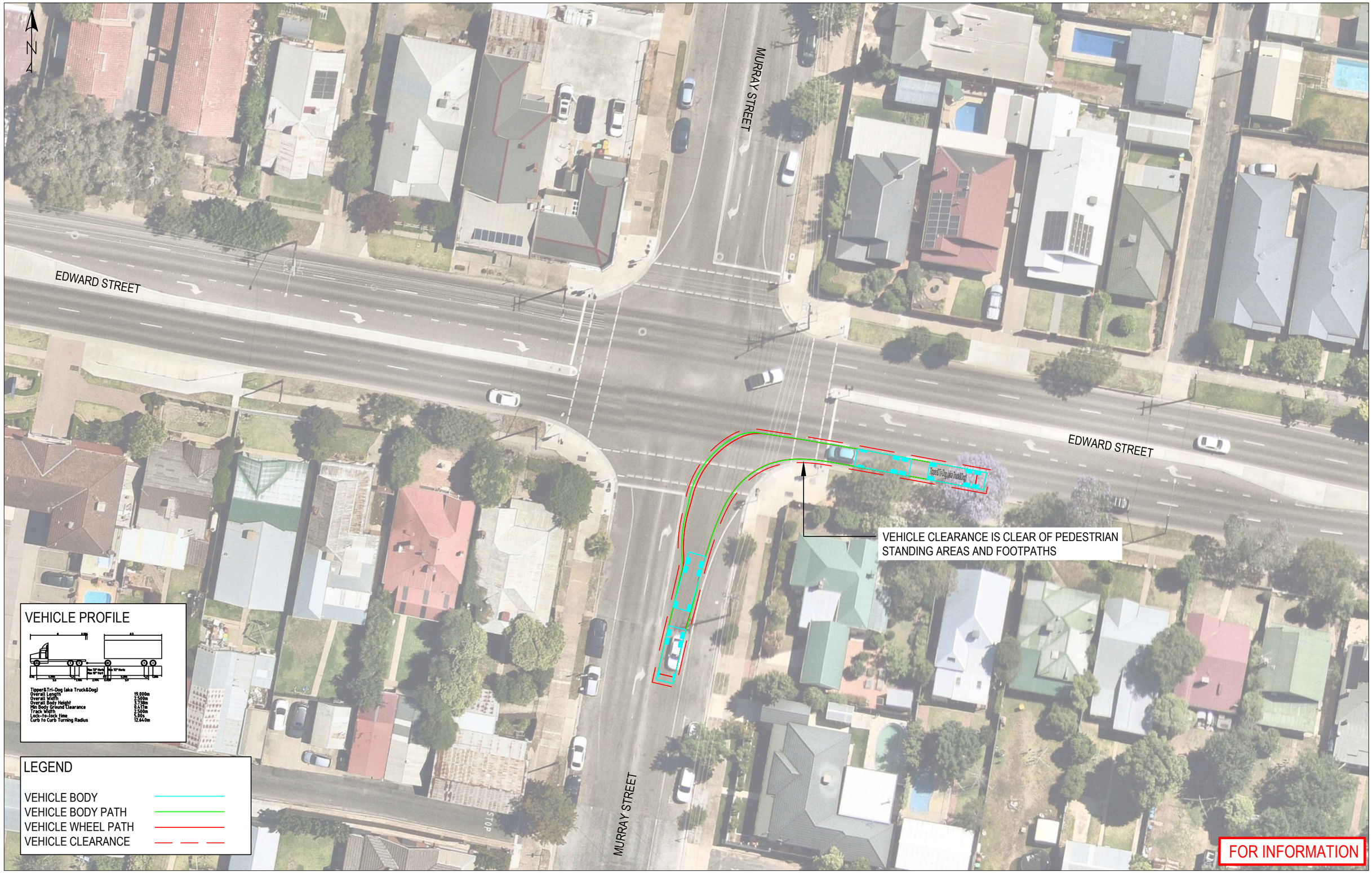
| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | | PLOT DATE / TIME | | PLOT BY | CLIENT | CASSIDY PARADE BRIDGE ENHANCEMENT SITE<br>EDWARD STREET / MURRAY STREET<br>SWEPT PATH ANALYSIS<br>19.0m TRUCK & DOG |
| | | | | - | - | | - | | - | | A3 |
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE | NAME | DATE | PREPARED FOR |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | CASE TRAFFIC & TRANSPORT | DESIGNED | J. BUNN | 26.02.25 | P. BILLINGHAM |
| | | | | | | | | *** | *** | *** | - |
| | | | | | | CO-ORDINATE SYSTEM: MGA ZONE 55 | HEIGHT DATUM: - | | | | ISSUE STATUS: INITIAL REVISION / SHEET No.: 15 / OF SHEET: 35 / ISSUE: 1 |

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| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | | PLOT DATE / TIME | | PLOT BY | CLIENT | CASSIDY PARADE BRIDGE ENHANCEMENT SITE<br>EDWARD STREET / MURRAY STREET<br>SWEPT PATH ANALYSIS<br>19.0m TRUCK & DOG |
| | | | | - | - | | - | | - | | A3 |
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE | NAME | DATE | |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | CASE TRAFFIC & TRANSPORT | DESIGNED | J. BUNN | 26.02.25 | |
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| | | | | | | CO-ORDINATE SYSTEM MGA ZONE 55 | HEIGHT DATUM - | | | | PREPARED FOR P. BILLINGHAM |
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| | | | | | | | | | | | ISSUE STATUS INITIAL REVISION / SHEET No. 16 / OF SHEET 35 / ISSUE 1 |


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|---|---|---|---|---|---|---|---|---|---|---|---|
| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | | PLOT DATE / TIME | | PLOT BY | CLIENT | CASSIDY PARADE BRIDGE ENHANCEMENT SITE<br>MURRAY STREET / BROOKONG AVENUE<br>SWEPT PATH ANALYSIS<br>12.5m SINGLE UNIT TRUCK |
| | | | | - | - | | - | | - | | A3 |
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE | NAME | DATE | PREPARED FOR |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | case TRAFFIC & TRANSPORT | DESIGNED | J. BUNN | 26.02.25 | P. BILLINGHAM |
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| | | | | | | CO-ORDINATE SYSTEM: MGA ZONE 55 | HEIGHT DATUM: - | | | | ISSUE STATUS: INITIAL REVISION / SHEET No.: 17 / OF SHEET: 35 / ISSUE: 1 |


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|---|---|---|---|---|---|---|---|---|---|---|---|
| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | PLOT DATE / TIME | PLOT BY | CLIENT | CASSIDY PARADE BRIDGE ENHANCEMENT SITE<br>MURRAY STREET / BROOKONG AVENUE<br>SWEPT PATH ANALYSIS<br>12.5m SINGLE UNIT TRUCK | A3 | |
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| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE | NAME | DATE | |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | case TRAFFIC & TRANSPORT | DESIGNED | J. BUNN | 26.02.25 | |
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| | | | | | | CO-ORDINATE SYSTEM<br>MGA ZONE 55 | HEIGHT DATUM<br>- | PREPARED FOR<br>P. BILLINGHAM | - | | - |
| | | | | | | | | | ISSUE STATUS<br>INITIAL REVISION | SHEET No.<br>18 | OF SHEET<br>35 | ISSUE<br>1 |


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| DRAWING FILE LOCATION / NAME | | DESIGN LOT CODE: - | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING: - | PLOT DATE / TIME: - | PLOT BY: - |
| EXTERNAL REFERENCE FILES | REV / DATE / AMENDMENT / REVISION DESCRIPTION: 1 26.02.25 INITIAL REVISION; 2 13.03.25 VEHILCE PROFILE UPDATED | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING: 0 5 10 Meters | DRAWINGS / DESIGN PREPARED BY: CASE TRAFFIC & TRANSPORT |
| | | | | CO-ORDINATE SYSTEM: MGA ZONE 55 | HEIGHT DATUM: - |

| TITLE | NAME | DATE |
|---|---|---|
| DESIGNED | J. BUNN | 26.02.25 |
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| *** | *** | *** |

CLIENT

PREPARED FOR: P. BILLINGHAM

CASSIDY PARADE BRIDGE ENHANCEMENT SITE
MURRAY STREET / BROOKONG AVENUE
# SWEPT PATH ANALYSIS
## 19.0m TRUCK & DOG

A3

-

| ISSUE STATUS | SHEET No. | OF SHEET | ISSUE |
|---|---|---|---|
| INITIAL REVISION | 19 | 35 | 1 |


## VEHICLE PROFILE



| Tipper&Tri-Dog (aka Truck&Dog) | |
|---|---|
| Overall Length | 19.000m |
| Overall Width | 2.500m |
| Overall Body Height | 3.738m |
| Min Body Ground Clearance | 0.417m |
| Track Width | 2.500m |
| Lock-to-Lock Time | 5.00s |
| Curb to Curb Turning Radius | 12.644m |

## LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

| DRAWING FILE LOCATION / NAME | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | PLOT DATE / TIME | PLOT BY | CLIENT | |
|---|---|---|---|---|---|---|
| | - | - | - | - | | CASSIDY PARADE BRIDGE ENHANCEMENT SITE<br>MURRAY STREET / BROOKONG AVENUE<br>SWEPT PATH ANALYSIS<br>19.0m TRUCK & DOG |

| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL |
|---|---|---|---|---|---|
| | 1 | 26.02.25 | INITIAL REVISION | | |
| | 2 | 13.02.25 | VEHICLE PROFILE UPDATED | | |

SCALES ON A3 SIZE DRAWING: 0 5 10 Meters

CO-ORDINATE SYSTEM: MGA ZONE 55 — HEIGHT DATUM: -

DRAWINGS / DESIGN PREPARED BY: case TRAFFIC & TRANSPORT

| | TITLE | NAME | DATE |
|---|---|---|---|
| | DESIGNED | J. BUNN | 26.02.25 |
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PREPARED FOR: P. BILLINGHAM

A3

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| ISSUE STATUS | SHEET No. | OF SHEET | ISSUE |
|---|---|---|---|
| INITIAL REVISION | 20 | 35 | 1 |


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| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE - | | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING - | | PLOT DATE / TIME - | PLOT BY - | CLIENT | CASSIDY PARADE BRIDGE ENHANCEMENT SITE<br>EDWARD STREET / MURRAY STREET<br>SWEPT PATH ANALYSIS<br>12.5m SINGLE UNIT TRUCK |
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE | NAME | DATE | A3 |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | case TRAFFIC & TRANSPORT | DESIGNED | J. BUNN | 26.02.25 | |
| | | | | | | CO-ORDINATE SYSTEM MGA ZONE 55 | HEIGHT DATUM - | *** | *** | *** | |
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| | | | | | | | | *** | *** | *** | PREPARED FOR P. BILLINGHAM |
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| | | | | | | | | | | | ISSUE STATUS INITIAL REVISION / SHEET No. 21 / OF SHEET 35 / ISSUE 1 |


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| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | | PLOT DATE / TIME | | PLOT BY | CLIENT | CASSIDY PARADE BRIDGE ENHANCEMENT SITE<br>EDWARD STREET / MURRAY STREET<br>SWEPT PATH ANALYSIS<br>12.5m SINGLE UNIT TRUCK |
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| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE | NAME | DATE | |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | CASE TRAFFIC & TRANSPORT | DESIGNED | J. BUNN | 26.02.25 | |
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| | | | | | | CO-ORDINATE SYSTEM: MGA ZONE 55 | HEIGHT DATUM: - | | | | PREPARED FOR: P. BILLINGHAM |
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| | | | | | | | | | | | ISSUE STATUS: INITIAL REVISION / SHEET No.: 22 / OF SHEET: 35 / ISSUE: 1 |


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| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | | PLOT DATE / TIME | | PLOT BY | CLIENT | CASSIDY PARADE BRIDGE ENHANCEMENT SITE<br>EDWARD STREET / MURRAY STREET<br>SWEPT PATH ANALYSIS<br>19.0m TRUCK & DOG |
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| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE | NAME | DATE | |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | case TRAFFIC & TRANSPORT | DESIGNED | J. BUNN | 26.02.25 | |
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| | | | | | | CO-ORDINATE SYSTEM<br>MGA ZONE 55 | HEIGHT DATUM<br>- | | | | PREPARED FOR<br>P. BILLINGHAM |
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| | | | | | | | | | | | ISSUE STATUS<br>INITIAL REVISION |
| | | | | | | | | | | | SHEET No.<br>23 |
| | | | | | | | | | | | OF SHEET<br>35 |
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| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | | PLOT DATE / TIME | | PLOT BY | CLIENT | CASSIDY PARADE BRIDGE ENHANCEMENT SITE<br>EDWARD STREET / MURRAY STREET<br>SWEPT PATH ANALYSIS<br>19.0m TRUCK & DOG |
| | | | | - | - | | - | | - | | A3 |
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE | NAME | DATE | |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 50 Meters | case TRAFFIC & TRANSPORT | DESIGNED | J. BUNN | 26.02.25 | |
| | | | | | | | | *** | *** | *** | PREPARED FOR<br>P. BILLINGHAM |
| | | | | | | | | *** | *** | *** | - |
| | | | | | | CO-ORDINATE SYSTEM<br>MGA ZONE 55 | HEIGHT DATUM<br>- | *** | *** | *** | ISSUE STATUS<br>INITIAL REVISION / SHEET No.<br>24 / OF SHEET<br>35 / ISSUE<br>1 |
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| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | | PLOT DATE / TIME | PLOT BY | CLIENT | CASSIDY PARADE BRIDGE ENHANCEMENT SITE<br>FOX STREET / DONNELLY AVENUE / LITTLE BEST STREET<br>SWEPT PATH ANALYSIS<br>12.5m SINGLE UNIT TRUCK | A3 |
| | | | | - | - | | - | - | | | |
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE | NAME | DATE | |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | CASE TRAFFIC & TRANSPORT | DESIGNED | J. BUNN | 26.02.25 | |
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| | | | | | | CO-ORDINATE SYSTEM: MGA ZONE 55 | HEIGHT DATUM: - | | | | |

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| P. BILLINGHAM | ISSUE STATUS | SHEET No. | OF SHEET | ISSUE |
| | INITIAL REVISION | 25 | 35 | 1 |


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| DRAWING FILE LOCATION / NAME | | | DESIGN LOT CODE: - | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING: - | PLOT DATE / TIME: - PLOT BY: - |
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL |
| | 1 | 26.02.25 | INITIAL REVISION | | |

SCALES ON A3 SIZE DRAWING: 0 5 10 Meters

CO-ORDINATE SYSTEM: MGA ZONE 55 HEIGHT DATUM: -

DRAWINGS / DESIGN PREPARED BY: CASE TRAFFIC & TRANSPORT

| TITLE | NAME | DATE |
|---|---|---|
| DESIGNED | J. BUNN | 26.02.25 |
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CLIENT

PREPARED FOR: P. BILLINGHAM

CASSIDY PARADE BRIDGE ENHANCEMENT SITE
EDWARD STREET / BEST STREET
SWEPT PATH ANALYSIS
12.5m SINGLE UNIT TRUCK

A3

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| ISSUE STATUS | SHEET No. | OF SHEET | ISSUE |
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| INITIAL REVISION | 26 | 35 | 1 |


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| DRAWING FILE LOCATION / NAME | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | PLOT DATE / TIME | PLOT BY |
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| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL |
|---|---|---|---|---|---|
| | 1 | 26.02.25 | INITIAL REVISION | | |

SCALES ON A3 SIZE DRAWING: 0 5 10 Meters

CO-ORDINATE SYSTEM: MGA ZONE 55 | HEIGHT DATUM: -

DRAWINGS / DESIGN PREPARED BY: CASE TRAFFIC & TRANSPORT

| TITLE | NAME | DATE |
|---|---|---|
| DESIGNED | J. BUNN | 26.02.25 |
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| *** | *** | *** |

CLIENT

PREPARED FOR: P. BILLINGHAM

CASSIDY PARADE BRIDGE ENHANCEMENT SITE
EDWARD STREET / BEST STREET
# SWEPT PATH ANALYSIS
## 8.8m SERVICE VEHICLE

A3

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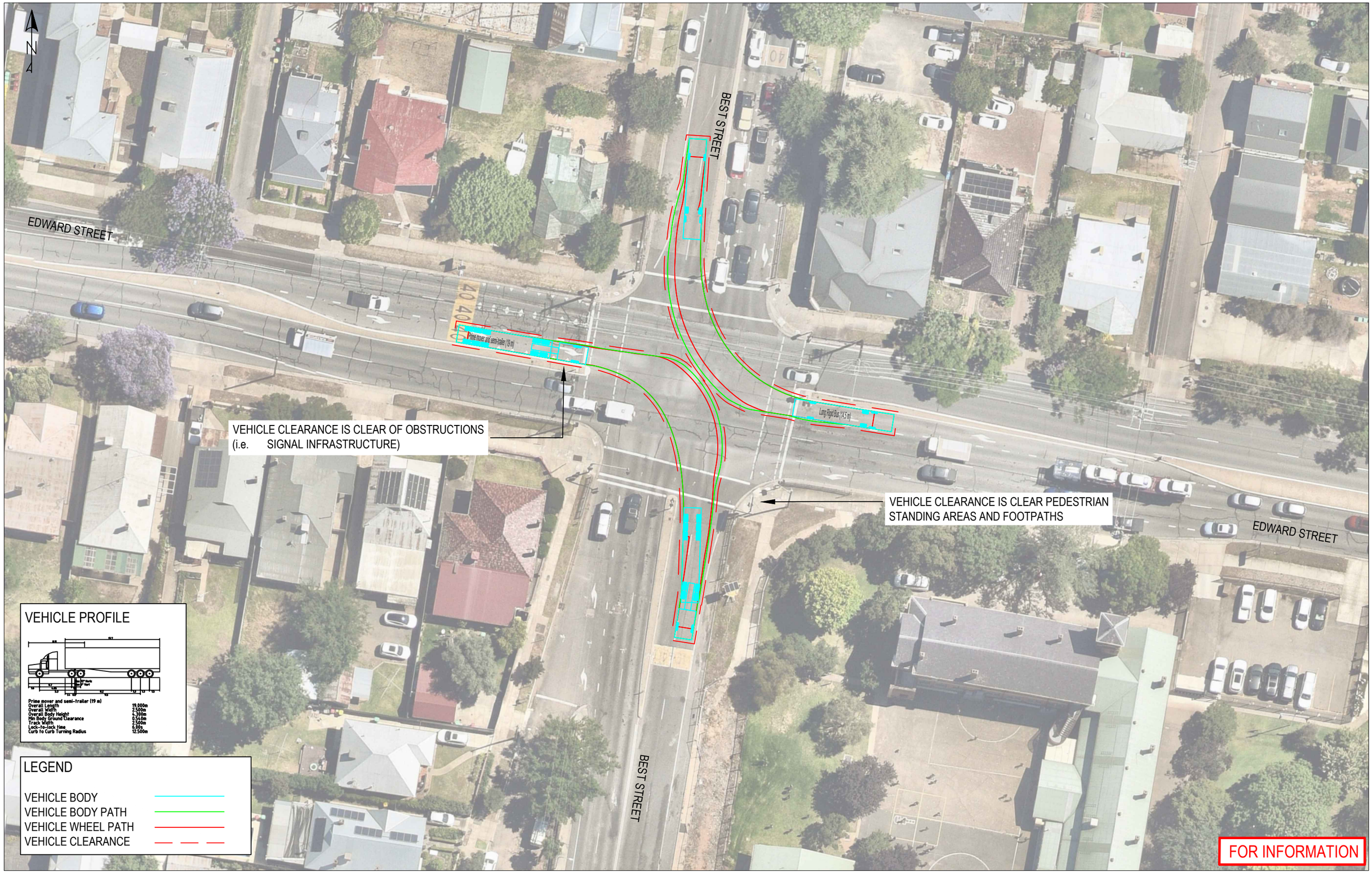
| ISSUE STATUS | SHEET No. | OF SHEET | ISSUE |
|---|---|---|---|
| INITIAL REVISION | 27 | 35 | 1 |

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| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | PLOT DATE / TIME | PLOT BY | CLIENT | EDMONDSON STREET ENHANCEMENT SITE<br>EDWARD STREET / BEST STREET<br>SWEPT PATH ANALYSIS<br>19.0m SEMI-TRAILER | A3 | |
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| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE / NAME / DATE | | | |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | case TRAFFIC & TRANSPORT | DESIGNED J. BUNN 26.02.25 | | | |
| | | | | | | CO-ORDINATE SYSTEM MGA ZONE 55 | HEIGHT DATUM - | PREPARED FOR P. BILLINGHAM | - | - | |
| | | | | | | | | ISSUE STATUS INITIAL REVISION | SHEET No. 28 | OF SHEET 35 | ISSUE 1 |


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|---|---|---|---|---|---|---|---|---|---|---|---|
| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | | PLOT DATE / TIME | | PLOT BY | CLIENT | EDMONDSON STREET BRIDGE ENHANCEMENT SITE<br>EDWARD STREET / BEST STREET<br>SWEPT PATH ANALYSIS<br>12.5m SINGLE UNIT TRUCK |
| | | | | - | - | | - | | - | | A3 |
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE | NAME | DATE | |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | CASE TRAFFIC & TRANSPORT | DESIGNED | J. BUNN | 26.02.25 | |
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| | | | | | | CO-ORDINATE SYSTEM: MGA ZONE 55 | HEIGHT DATUM: - | | | | PREPARED FOR: P. BILLINGHAM |
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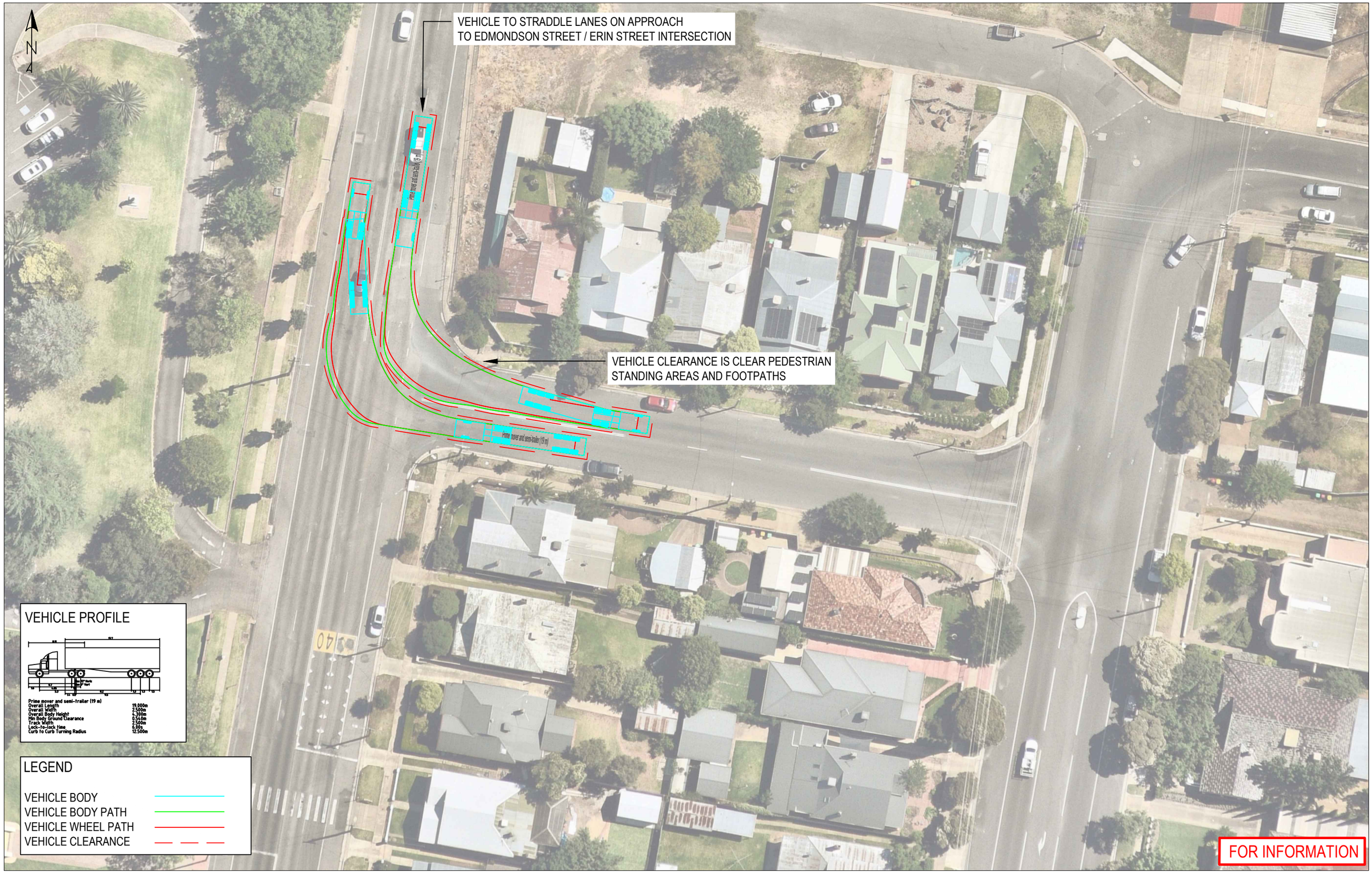


## VEHICLE PROFILE



Prime mover and semi-trailer (19 m)

| | |
|---|---|
| Overall Length | 19.000m |
| Overall Width | 2.500m |
| Overall Body Height | 4.300m |
| Min Body Ground Clearance | 0.544m |
| Track Width | 2.500m |
| Lock-to-lock time | 6.00s |
| Curb to Curb Turning Radius | 12.500m |

## LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

FOR INFORMATION

| | | | | | | | | | |
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| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | PLOT DATE / TIME | PLOT BY | CLIENT | A3 |
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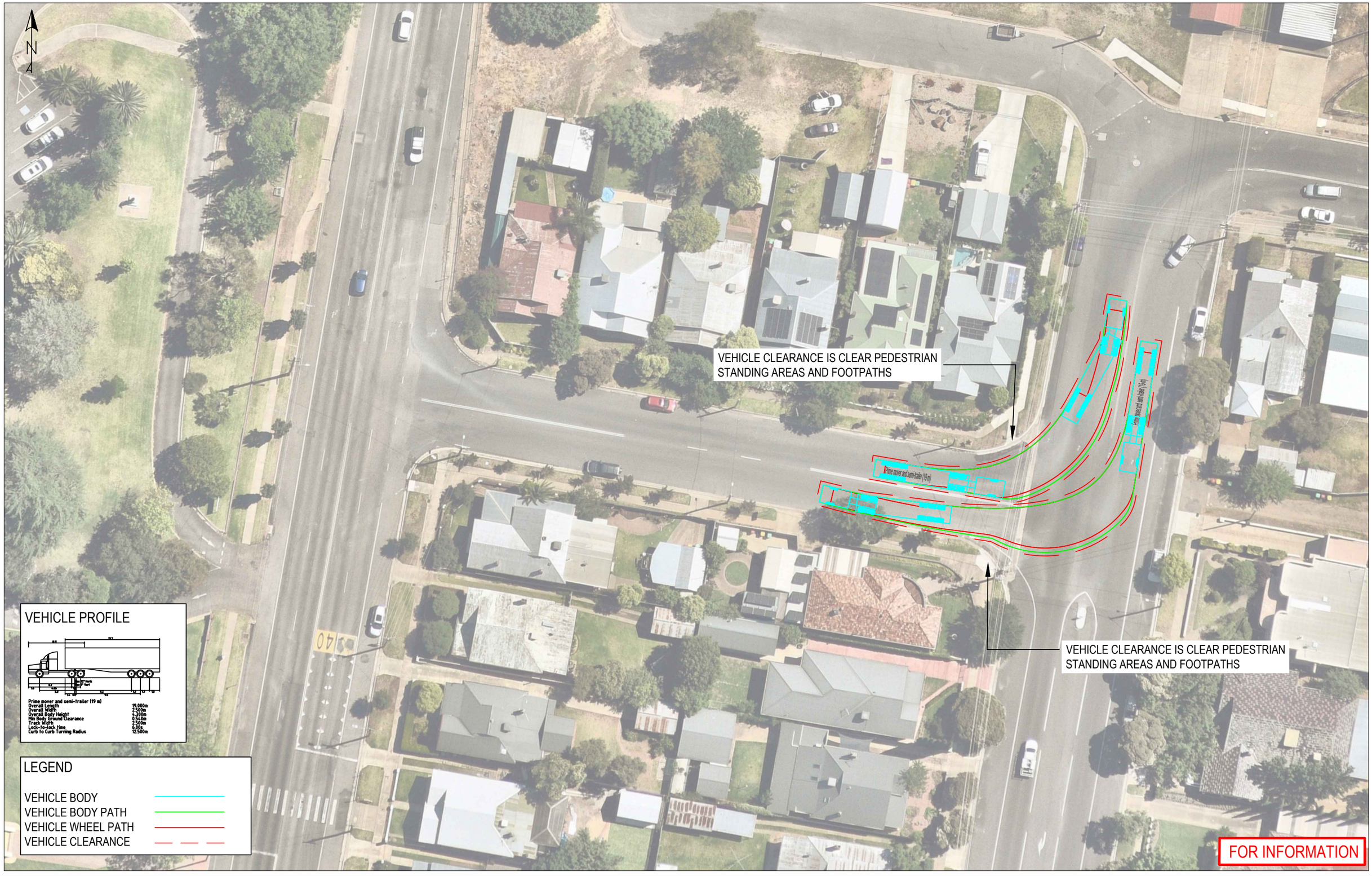
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE / NAME / DATE | EDMONDSON STREET BRIDGE ENHANCEMENT SITE<br>EDMONDSON STREET / ERIN STREET<br>SWEPT PATH ANALYSIS<br>19.0m SEMI-TRAILER |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | CASE TRAFFIC & TRANSPORT | DESIGNED J. BUNN 26.02.25<br>*** *** ***<br>*** *** ***<br>*** *** ***<br>*** *** ***<br>*** *** *** | PREPARED FOR<br>P. BILLINGHAM |
| | | | | | | CO-ORDINATE SYSTEM<br>MGA ZONE 55 | HEIGHT DATUM<br>- | | - / - |
| | | | | | | | | | ISSUE STATUS: INITIAL REVISION · SHEET No.: 30 · OF SHEET: 35 · ISSUE: 1 |




## VEHICLE PROFILE



| Prime mover and semi-trailer (19 m) | |
|---|---|
| Overall Length | 19.000m |
| Overall Width | 2.500m |
| Overall Body Height | 4.300m |
| Min Body Ground Clearance | 0.240m |
| Track Width | 2.560m |
| Lock-to-lock time | 6.00s |
| Curb to Curb Turning Radius | 12.500m |

## LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | | PLOT DATE / TIME | | PLOT BY | CLIENT | EDMONDSON STREET BRIDGE ENHANCEMENT SITE<br>ERIN STREET / MACLEAY STREET<br>SWEPT PATH ANALYSIS<br>19.0m SEMI-TRAILER | A3 |
| | | | | - | - | | - | | - | | | |
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE | NAME | DATE | PREPARED FOR | - | - |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 1 2 12 Meters | case TRAFFIC & TRANSPORT | DESIGNED | J. BUNN | 26.02.25 | P. BILLINGHAM | | |
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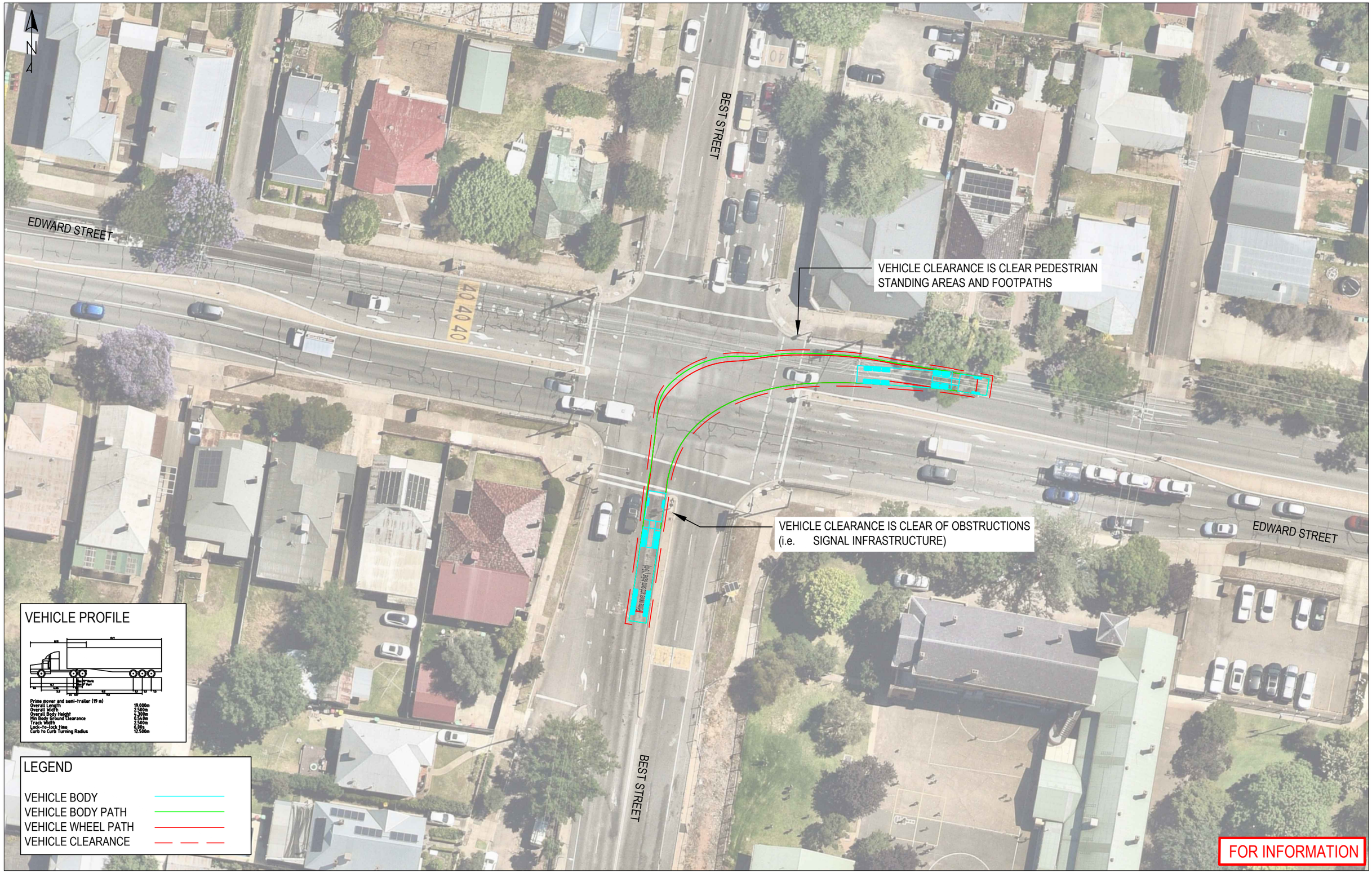
| | | | | | | CO-ORDINATE SYSTEM: MGA ZONE 55 | HEIGHT DATUM: - | | | | | ISSUE STATUS: INITIAL REVISION | SHEET No.: 31 / OF SHEET: 35 / ISSUE: 1 |

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| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | |
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| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL |
| | 1 | 26.02.25 | INITIAL REVISION | | |

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING: -

SCALES ON A3 SIZE DRAWING: 0 5 10 Meters

CO-ORDINATE SYSTEM: MGA ZONE 55 | HEIGHT DATUM: -

DRAWINGS / DESIGN PREPARED BY: CASE TRAFFIC & TRANSPORT

PLOT DATE / TIME: - | PLOT BY: -

| TITLE | NAME | DATE |
|---|---|---|
| DESIGNED | J. BUNN | 26.02.25 |
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CLIENT

PREPARED FOR: P. BILLINGHAM

EDMONDSON STREET BRIDGE ENHANCEMENT SITE
EDWARD STREET / BEST STREET
# SWEPT PATH ANALYSIS
## 19.0m SEMI-TRAILER

A3

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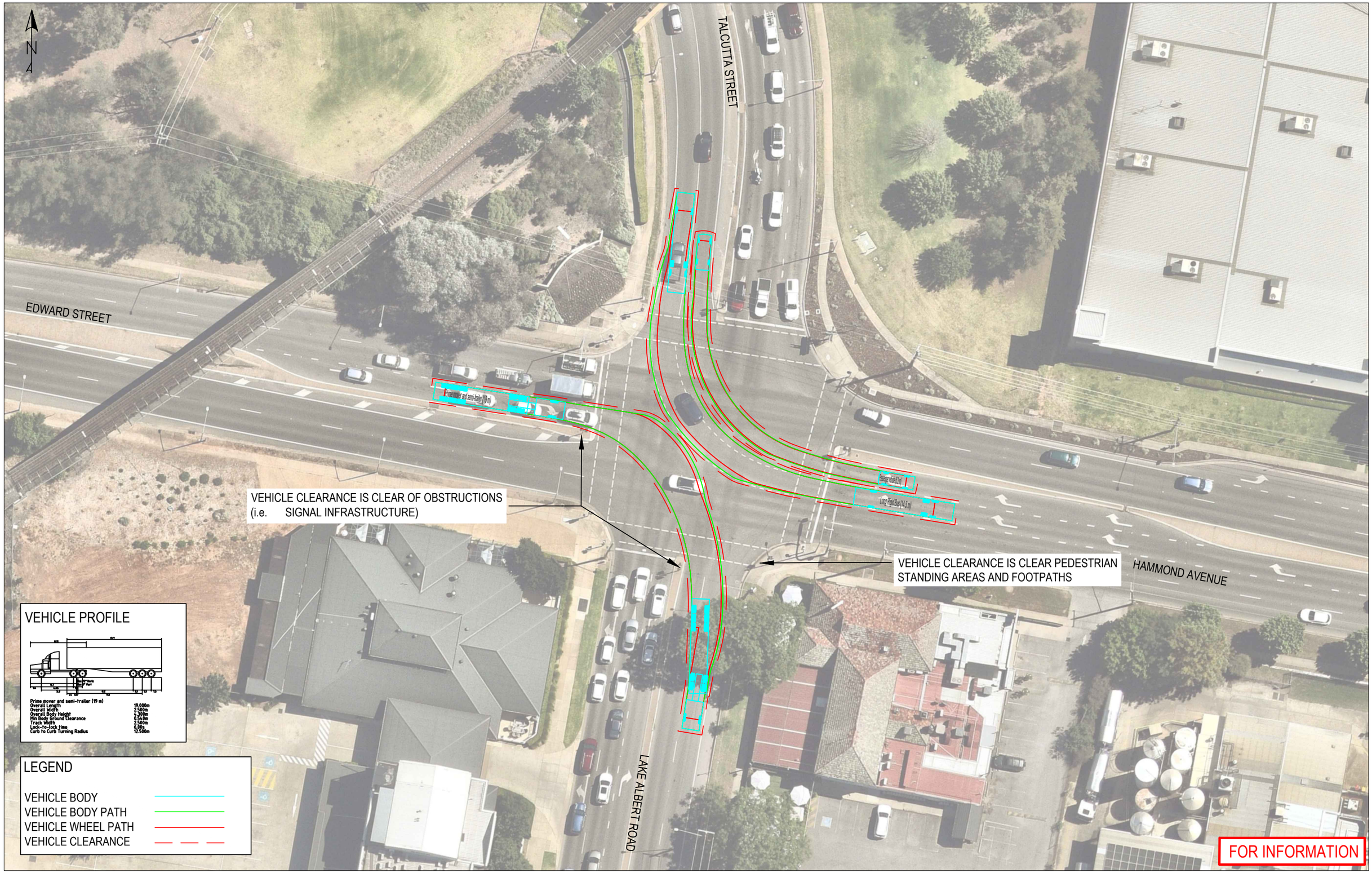
| ISSUE STATUS | SHEET No. | OF SHEET | ISSUE |
|---|---|---|---|
| INITIAL REVISION | 32 | 35 | 1 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | PLOT DATE / TIME | PLOT BY | CLIENT | EDMONDSON STREET BRIDGE ENHANCEMENT SITE<br>EDWARD STREET / LAKE ALBERT ROAD<br>SWEPT PATH ANALYSIS<br>19.0m SEMI-TRAILER | A3 | |
| | | | | - | - | - | - | | | | |
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE | NAME | DATE | |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | case TRAFFIC & TRANSPORT | DESIGNED | J. BUNN | 26.02.25 | |
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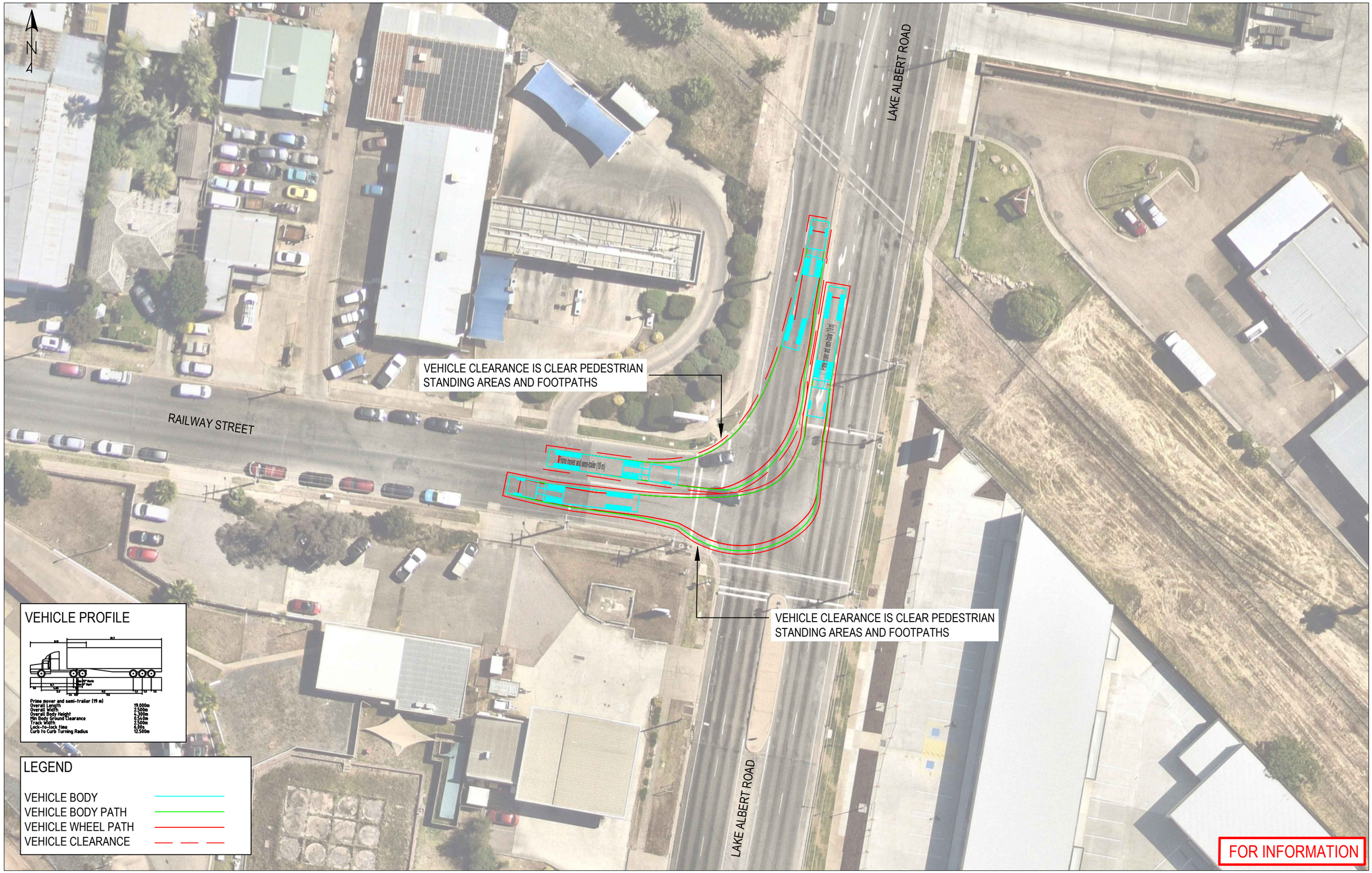
| | | | | | | CO-ORDINATE SYSTEM: MGA ZONE 55 | HEIGHT DATUM: - | PREPARED FOR: P. BILLINGHAM | | | |
| | | | | | | | | | | ISSUE STATUS: INITIAL REVISION | SHEET No.: 33 / OF SHEET: 35 / ISSUE: 1 |

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| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | PLOT DATE / TIME | | PLOT BY | CLIENT | EDMONDSON STREET BRIDGE ENHANCEMENT SITE<br>LAKE ALBERT ROAD / RAILWAY STREET<br>SWEPT PATH ANALYSIS<br>19.0m SEMI-TRAILER | A3 |
| | | | | - | - | - | | - | | | |
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE | NAME | DATE | |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | case TRAFFIC & TRANSPORT | DESIGNED | J. BUNN | 26.02.25 | |
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| | | | | | | CO-ORDINATE SYSTEM<br>MGA ZONE 55 | HEIGHT DATUM<br>- | | | | |

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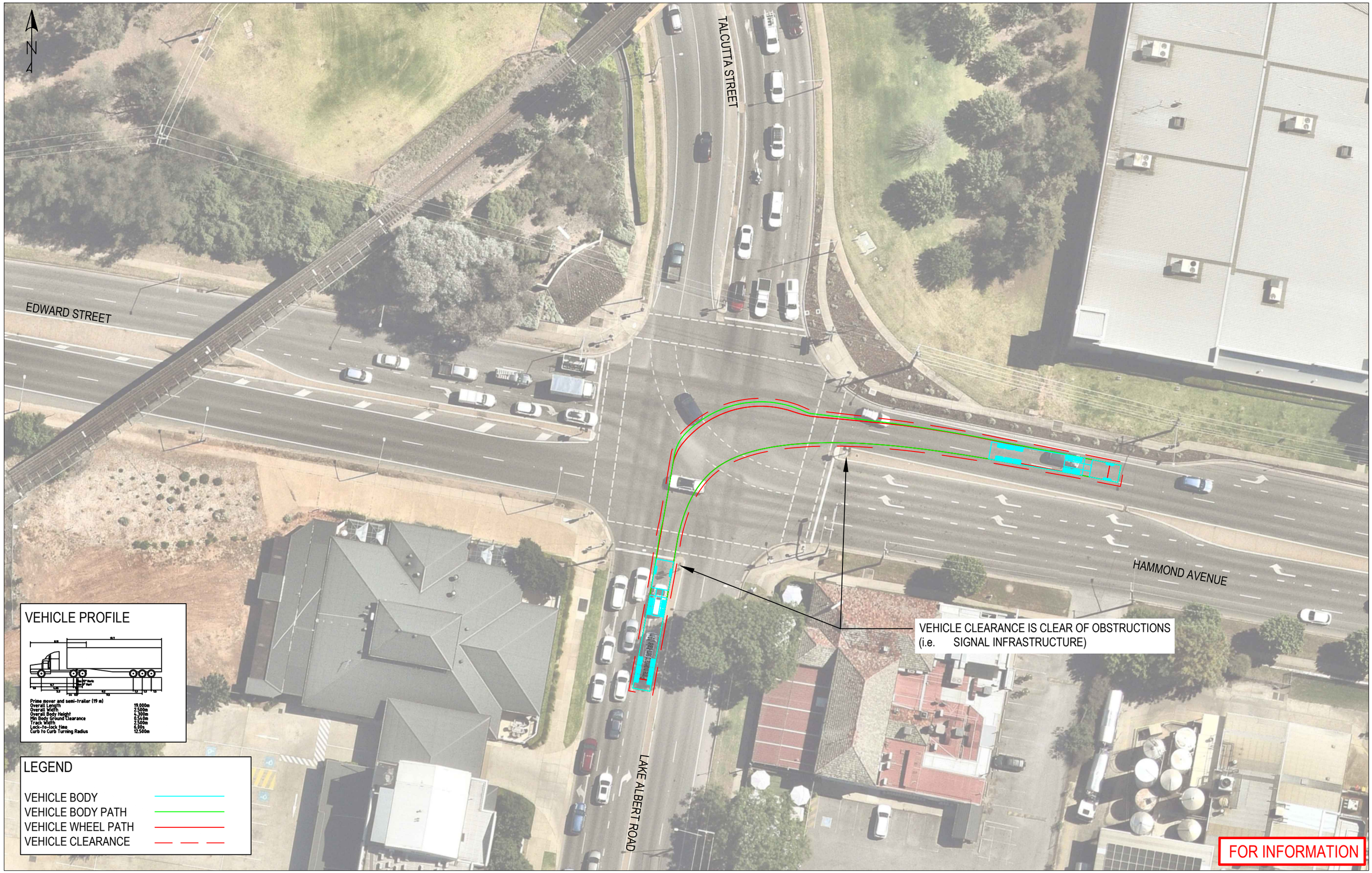
| P. BILLINGHAM | ISSUE STATUS | SHEET No. | OF SHEET | ISSUE |
| | INITIAL REVISION | 34 | 35 | 1 |

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| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | | PLOT DATE / TIME | | PLOT BY | CLIENT | EDMONDSON STREET BRIDGE ENHANCEMENT SITE<br>EDWARD STREET / LAKE ALBERT ROAD<br>SWEPT PATH ANALYSIS<br>19.0m SEMI-TRAILER |
| | | | | - | - | | - | | - | | A3 |
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE | NAME | DATE | |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | case TRAFFIC & TRANSPORT | DESIGNED | J. BUNN | 26.02.25 | |
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| | | | | | | CO-ORDINATE SYSTEM: MGA ZONE 55 | HEIGHT DATUM: - | | | | PREPARED FOR: P. BILLINGHAM |
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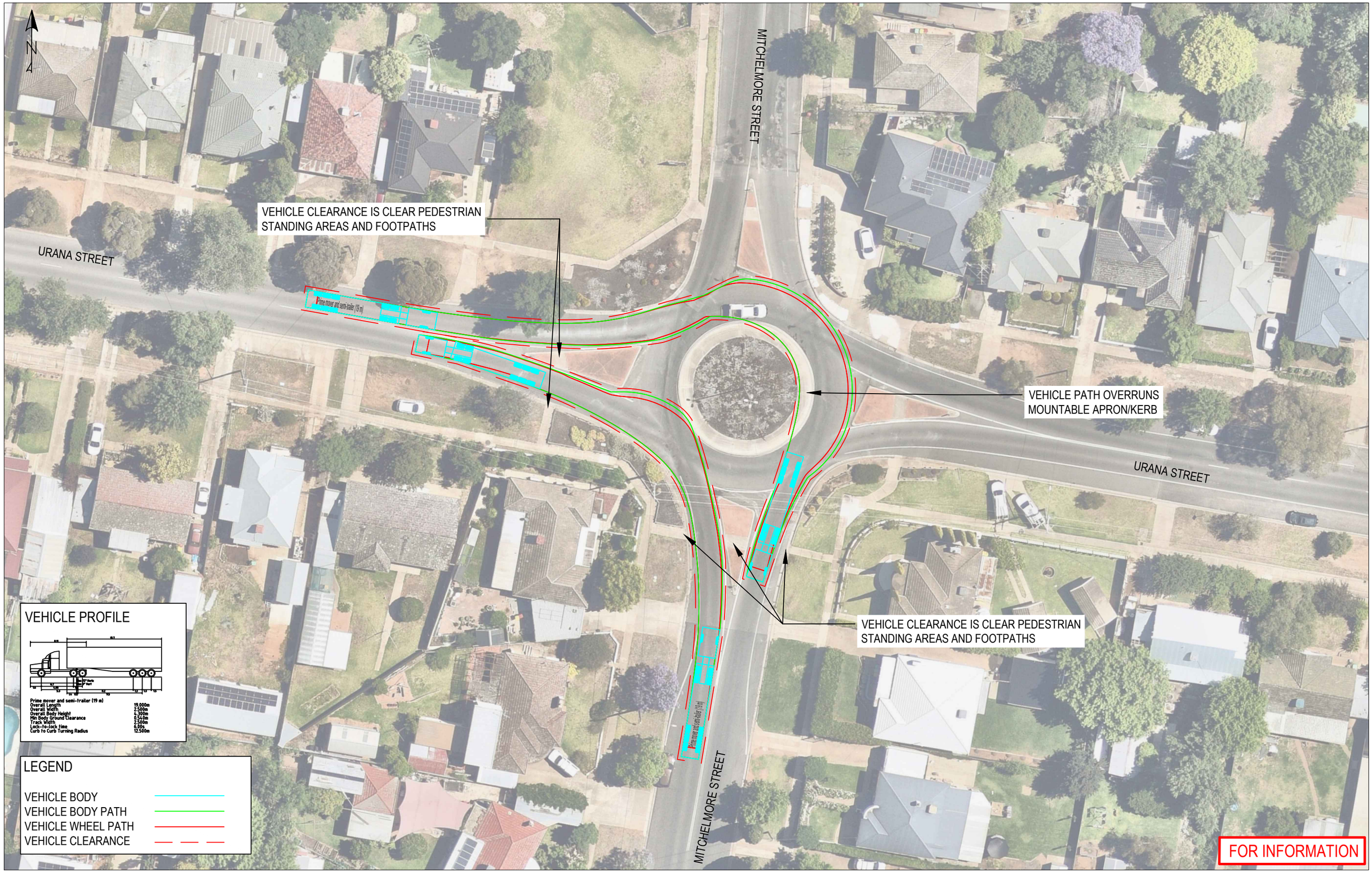


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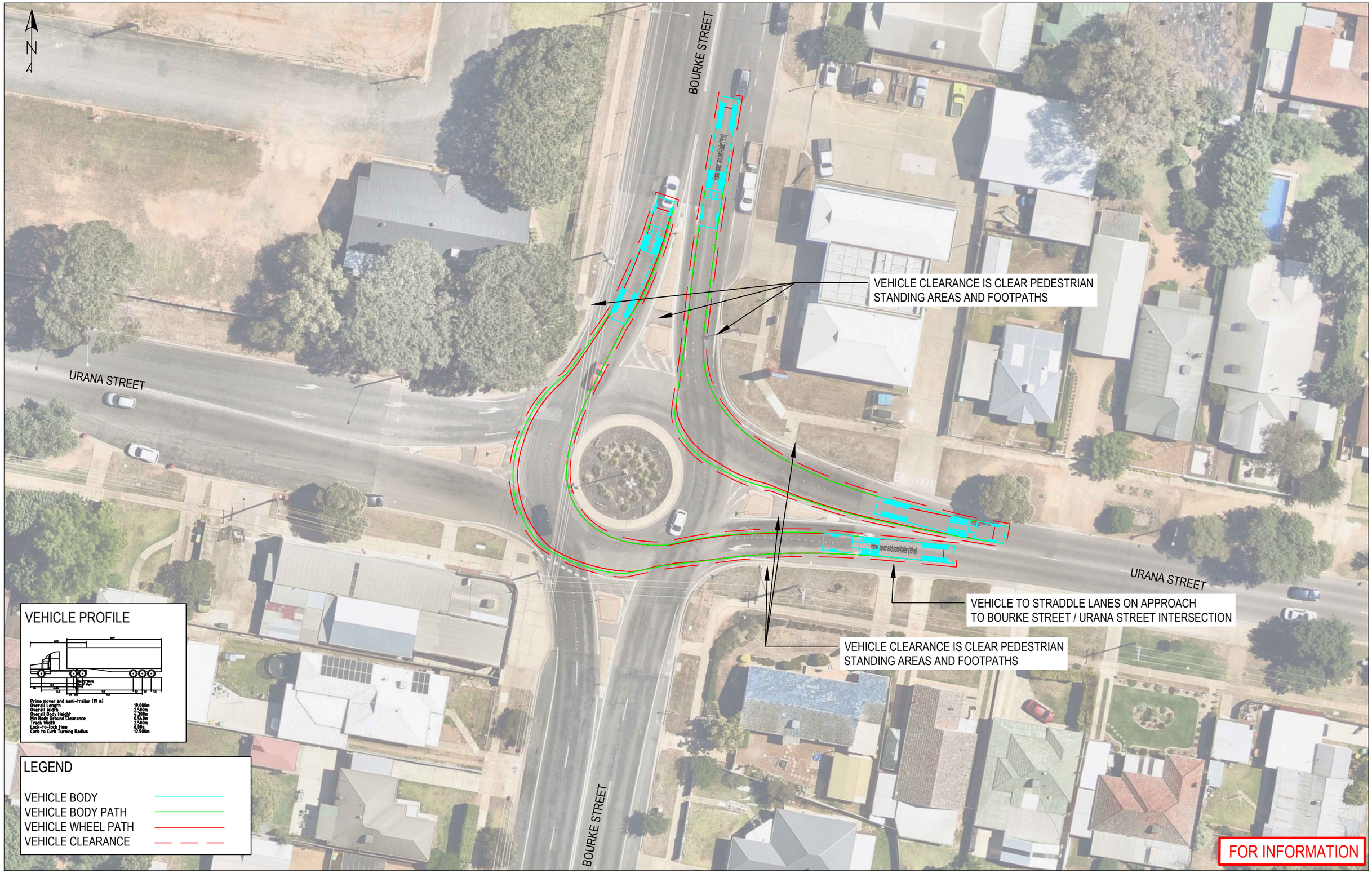
| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE - | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING - | PLOT DATE / TIME - | PLOT BY - | CLIENT | EDMONDSON STREET BRIDGE CLOSURE - DETOUR<br>MITCHELMORE STREET / URANA STREET<br>SWEPT PATH ANALYSIS<br>19.0m SEMI-TRAILER | A3 | |
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE / NAME / DATE | | | |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 6 12 Meters | case TRAFFIC & TRANSPORT | DESIGNED J. BUNN 26.02.25 | PREPARED FOR P. BILLINGHAM | - | - |
| | | | | | | CO-ORDINATE SYSTEM MGA ZONE 55 | HEIGHT DATUM - | | | ISSUE STATUS INITIAL REVISION | SHEET No. 1 / OF SHEET 5 / ISSUE 1 |

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| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | PLOT DATE / TIME | PLOT BY | CLIENT | EDMONDSON STREET BRIDGE CLOSURE - DETOUR<br>BOURKE STREET / URANA STREET<br>SWEPT PATH ANALYSIS<br>19.0m SEMI-TRAILER | A3 | |
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| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE | NAME | DATE | |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | case TRAFFIC & TRANSPORT | DESIGNED | J. BUNN | 26.02.25 | |
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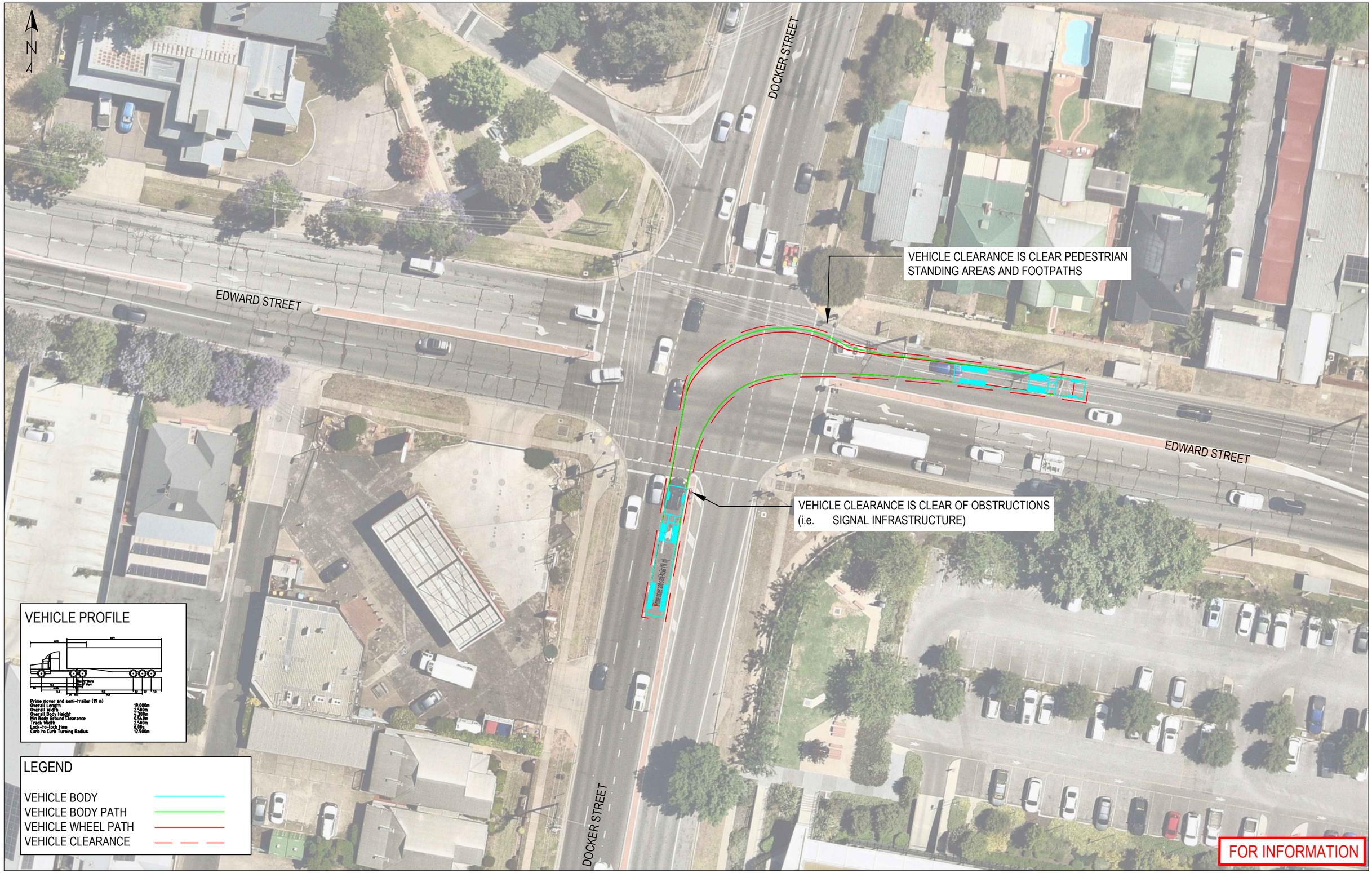
| | | | | | | CO-ORDINATE SYSTEM MGA ZONE 55 | HEIGHT DATUM - | PREPARED FOR P. BILLINGHAM | - | - | |
| | | | | | | | | | ISSUE STATUS INITIAL REVISION | SHEET No. 2 | OF SHEET 5 | ISSUE 1 |

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| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | PLOT DATE / TIME | PLOT BY | CLIENT | EDMONDSON STREET BRIDGE CLOSURE - DETOUR<br>EDWARD STREET / DOCKER STREET<br>SWEPT PATH ANALYSIS<br>19.0m SEMI-TRAILER | A3 |
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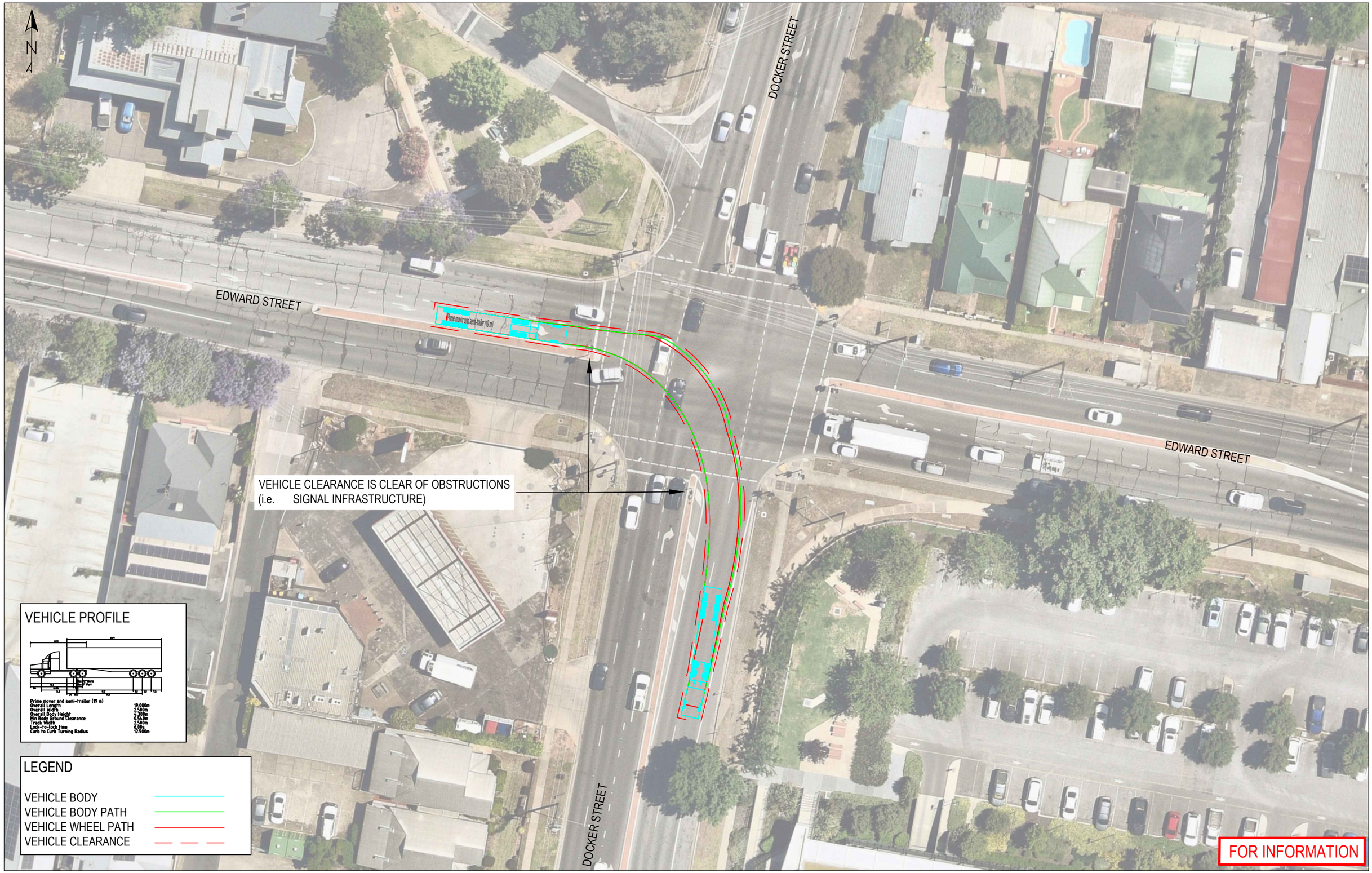
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE / NAME / DATE | | |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | CASE TRAFFIC & TRANSPORT | DESIGNED J. BUNN 26.02.25<br>*** *** ***<br>*** *** ***<br>*** *** ***<br>*** *** ***<br>*** *** *** | PREPARED FOR<br>P. BILLINGHAM | -<br>ISSUE STATUS: INITIAL REVISION / SHEET No.: 3 / OF SHEET: 5 / ISSUE: 1 |
| | | | | | | CO-ORDINATE SYSTEM: MGA ZONE 55 / HEIGHT DATUM: - | | | | |

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| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | | PLOT DATE / TIME | | PLOT BY | CLIENT | EDMONDSON STREET BRIDGE CLOSURE - DETOUR<br>EDWARD STREET / DOCKER STREET<br>SWEPT PATH ANALYSIS<br>19.0m SEMI-TRAILER |
| | | | | - | - | | - | | - | | A3 |
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE | NAME | DATE | |
| | 1 | 26.02.25 | INITIAL REVISION | | | 0 5 10 Meters | case TRAFFIC & TRANSPORT | DESIGNED | J. BUNN | 26.02.25 | PREPARED FOR<br>P. BILLINGHAM |
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| | | | | | | CO-ORDINATE SYSTEM<br>MGA ZONE 55 | HEIGHT DATUM<br>- | *** | *** | *** | |

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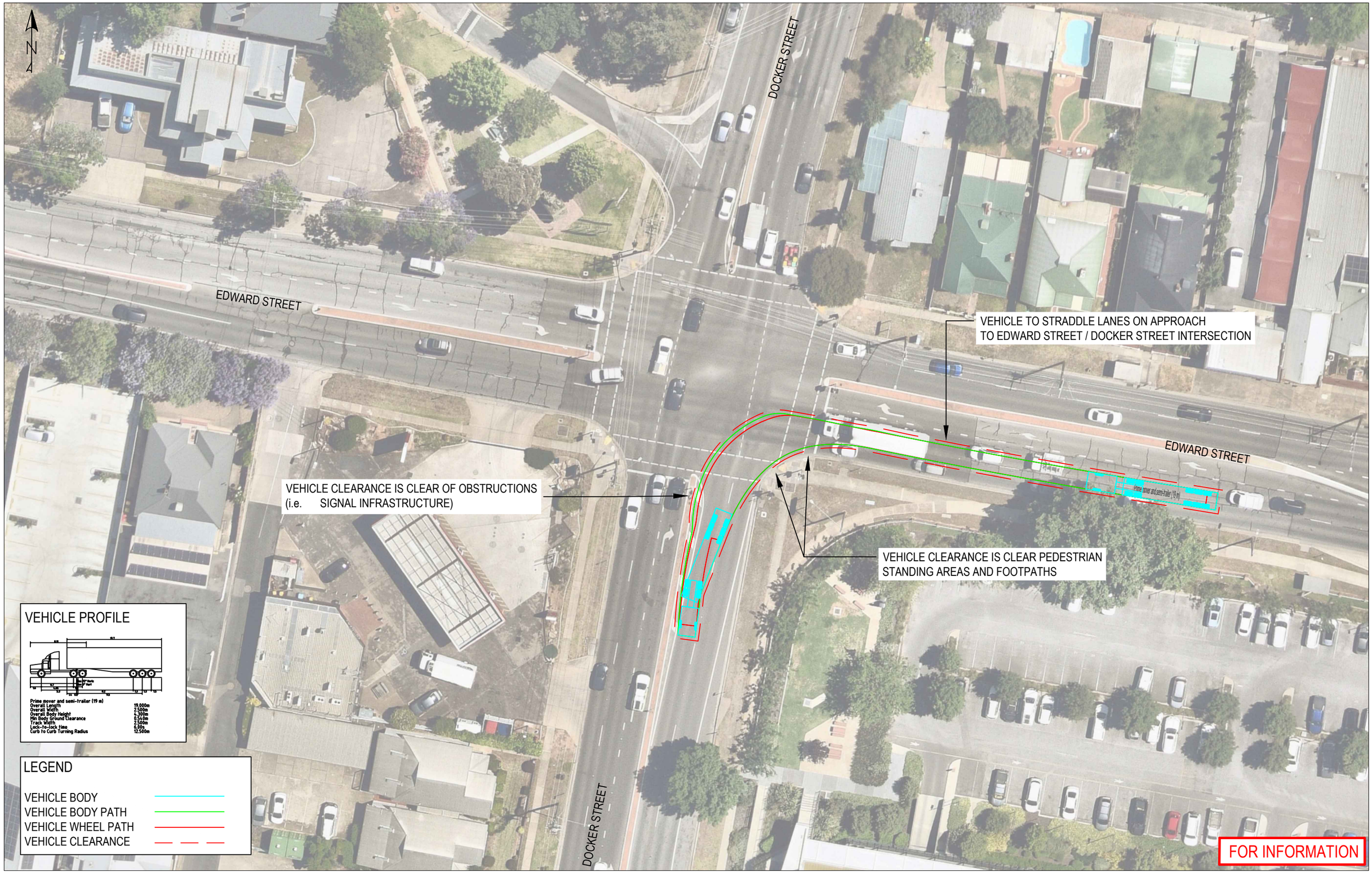
| ISSUE STATUS | SHEET No. | OF SHEET | ISSUE |
| INITIAL REVISION | 4 | 5 | 1 |

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| DRAWING FILE LOCATION / NAME | | | | DESIGN LOT CODE | DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING | | PLOT DATE / TIME | | PLOT BY | CLIENT | EDMONDSON STREET BRIDGE CLOSURE - DETOUR<br>EDWARD STREET / DOCKER STREET<br>SWEPT PATH ANALYSIS<br>19.0m SEMI-TRAILER |
| | | | | - | - | | - | | - | | A3 |
| EXTERNAL REFERENCE FILES | REV | DATE | AMENDMENT / REVISION DESCRIPTION | WVR No. | APPROVAL | SCALES ON A3 SIZE DRAWING | DRAWINGS / DESIGN PREPARED BY | TITLE | NAME | DATE | |
| | 1 | 26.02.25<br>13.03.25 | INITIAL REVISION<br>VEHICLE SWEPT PATH UPDATED | | | 0 5 10 Meters | case TRAFFIC & TRANSPORT | DESIGNED | J. BUNN | 26.02.25 | |
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| | | | | | | | | *** | *** | *** | PREPARED FOR<br>P. BILLINGHAM |
| | | | | | | CO-ORDINATE SYSTEM<br>MGA ZONE 55 | HEIGHT DATUM<br>- | *** | *** | *** | - |
| | | | | | | | | | | | ISSUE STATUS: INITIAL REVISION; SHEET No.: 4; OF SHEET: 5; ISSUE: 1 |

MARTINUS