Traffic Impact Assessment - Exploratory Works

Borumba Pumped Hydro Project

Prepared for: Queensland Hydro
16 October 2025
Client Reference No. BR-EX-ROD-TDS-RPT-00001.16

SMEC INTERNAL REF. 30032677

smec
an SJ company

SMEC simplifies the complex. We unlock the potential of our people to look at infrastructure differently, creating better outcomes for the future.

engineering positive change

Document Control

Document Type	Traffic Impact Assessment - Exploratory Works
Project Title	Borumba Pumped Hydro Project
Project Number	30032677
Document No	BR-EX-ROD-TDS-RPT-00001
OER No.	BR-OER-QHY-00110
File Location	https://surbanajurong.sharepoint.com/teams/30032677BorumbaDamPumpedStorageHydro-Engr&Env/Shared Documents/General/22 Engineering/Traffic/ExploratoryWorks/Rev16/BR-EX-ROD-TDS-RPT-00001.16.docx
Revision Number	16

Revision History

Revision No.	Date	Prepared By	Reviewed By	Approved for Issue By
A	6/02/2023	Dave Bekker	Anthony Burke (RPEQ – 20190)	Anna West
B	12/09/2022	Dave Bekker	Anthony Burke (RPEQ – 20190)	Anna West
0	25/01/2024	Dave Bekker	Anthony Burke (RPEQ – 20190)	Anna West
1	9/05/2024	Dave Bekker	Anthony Burke (RPEQ – 20190)	Anna West
2	10/05/2024	Dave Bekker	Anthony Burke (RPEQ – 20190)	Anna West
3	27/09/2024	Dave Bekker	Anthony Burke (RPEQ – 20190)	Anna West
4	3/10/2024	Dave Bekker	Anthony Burke (RPEQ – 20190)	Anna West
5	14/11/2024	Dave Bekker	Anthony Burke (RPEQ – 20190)	Anna West
6	19/11/2024	Dave Bekker	Anthony Burke (RPEQ – 20190)	Anna West
7	13/03/2025	Dave Bekker	Anthony Burke (RPEQ – 20190)	Anna West
8	25/03/2025	Dave Bekker	Anthony Burke (RPEQ – 20190)	Anna West
9	28/03/2025	Dave Bekker	Anthony Burke (RPEQ – 20190)	Anna West
10	23/04/2025	Dave Bekker	Anthony Burke (RPEQ – 20190)	Anna West
11	16/06/2025	Dave Bekker	Anthony Burke (RPEQ – 20190)	Anna West
12	19/06/2025	Dave Bekker	Anthony Burke (RPEQ – 20190)	Anna West
13	16/07/2025	Dave Bekker	Anthony Burke (RPEQ – 20190)	Anna West
14	7/10/2025	Dave Bekker	Anthony Burke (RPEQ – 20190)	Anna West
15	9/10/2025	Dave Bekker	Anthony Burke (RPEQ – 20190)	Anna West
16	16/10/2025	Dave Bekker	Anthony Burke (RPEQ – 20190)	Anna West

Issue Register

Distribution List	Date Issued	Number of Copies
Queensland Hydro	16/10/2025	01

SMEC Company Details

Approved by	Anna West
Address	Level 6, 480 St Pauls Terrace, Fortitude Valley, Qld, 4006
Phone	+61 07 3029 6724
Email	Anna.West@smec.com
Website	www.smec.com
Signature	

Important Notice

This report is provided solely for the purposes of a Traffic Impact Assessment for exploratory works for the Borumba Project. This report is provided pursuant to a Consultancy Agreement between SMEC Australia Pty Limited ("SMEC") and Queensland Hydro, under which SMEC undertook to perform a specific and limited task for Queensland Hydro. This report is strictly limited to the matters stated in it and subject to the various assumptions, qualifications, and limitations in it and does not apply by implication to other matters. SMEC makes no representation that the scope, assumptions, qualifications and exclusions set out in this report will be suitable or sufficient for other purposes nor that the content of the report covers all matters which you may regard as material for your purposes.

This report must be read as a whole. Any subsequent report must be read in conjunction with this report.

The report supersedes all previous draft or interim reports, whether written or presented orally, before the date of this report. This report has not and will not be updated for events or transactions occurring after the date of the report or any other matters which might have a material effect on its contents, or which come to light after the date of the report. SMEC is not obliged to inform you of any such event, transaction or matter nor to update the report for anything that occurs, or of which SMEC becomes aware, after the date of this report.

Unless expressly agreed otherwise in writing, SMEC does not accept a duty of care or any other legal responsibility whatsoever in relation to this report, or any related enquiries, advice or other work, nor does SMEC make any representation in connection with this report, to any person other than Queensland Hydro. Any other person who receives a draft or a copy of this report (or any part of it) or discusses it (or any part of it) or any related matter with SMEC, does so on the basis that he or she acknowledges and accepts that he or she may not rely on this report nor on any related information or advice given by SMEC for any purpose whatsoever.

Table of Abbreviations and Terminology

Abbreviations and Terminology

Abbreviation	Meaning
AADT	Average Annual Daily Traffic
ADT	Average Daily Traffic
AT	Active Transport
BAL	Basic Auxiliary Left turn
BAR	Basic Auxiliary Right turn
Borumba Project	Borumba Pumped Hydro Energy Storage Project
CHR	Channelised Right turn
CSEP	Community and Stakeholder Engagement Plan
DETSI	Department of the Environment, Tourism, Science and Innovation
EW	Exploratory Works
FEED	Front-End-Engineering Design
GRC	Gympie Regional Council
GTIA	TMR Guide to Traffic Impact Assessment
HQP	HQ Plantations
HV	Heavy Vehicle
IAP	Intelligent Access Program
LV	Light Vehicle
MW	Megawatt
OSOM	Over-Size / Over-Mass vehicles
PIA	Pavement Impact Assessment
PnR	Park and Ride
RFI	Request for Information
RMP	Road-use Management Plan
RSA	Road Safety Audit
SAMP	Social Assessment and Management Plan
SAR	Standard Axle Repetitions
SL	Simple Left Turn
SR	Simple Right Turn
QH SE&SP	Queensland Hydro Stakeholder Engagement and Social Performance team
SRC	Somerset Regional Council
TIA	Traffic Impact Assessment
TMP	Traffic Management Plan
TMR	Department of Transport and Main Roads
vph	vehicles per hour

Contents

Appendices

Figures

Tables

1. Introduction

1.1 Background Overview and Location

Queensland Hydro is the proponent of the Borumba Pumped Hydro Energy Storage (PHES) Project (the Borumba PHES Project), a 2,000 megawatt (MW), 48,000-megawatt hour (MWh), hydroelectric scheme to store, generate, and supply energy through a pumped hydroelectric structure linked to the existing Borumba Dam (Lake Borumba). It is located approximately 13 kilometres (km) southwest of the township of Imbil, 48 km southwest of Gympie, and 180 km northwest of Brisbane, within the Yabba Creek sub catchment of the Mary River Basin.

Queensland Hydro owns/manages approximately 2,360 ha of land southwest of Lake Borumba, secured in the 1980s for a potential future PHES site. As such, most of the properties impacted by the Borumba PHES Project are either held by Queensland Government departments or Queensland Government-owned corporations.

The Borumba PHES Project includes two phases:

- Exploratory works – geological investigations to inform the development of the Borumba PHES Project and supporting infrastructure and activities required to support these investigations.
- Main works – the PHES Project, including the power infrastructure (powerhouse, water and access tunnels), an upper reservoir, and a lower reservoir (Lake Borumba).

The purpose of the exploratory works is to undertake and facilitate critical geological technical investigations to confirm the suitability of the Borumba PHES Project location and design. Investigations are particularly required in areas where key subsurface Borumba PHES Project infrastructure will be constructed due to the limited technical geological information currently available posing considerable project risk.

The exploratory works are being delivered in stages (i.e. not all works will occur at the same time), with some early works having commenced, and comprise:

- Exploratory tunnel infrastructure – comprising a portal pad, staging pad, explosives store (magazine) and associated access tracks, and exploratory tunnels.
- Geotechnical investigations (including early investigations) – comprising test pits, boreholes (deep and shallow, including some being converted to groundwater monitoring bores), and geophysics.
- Spoil disposal – two dedicated areas (tunnel spoil disposal area and Kingaham spoil disposal area) for the storage and management of excess material from exploratory tunnelling, geotechnical drilling and construction activities, as well as stockpiling of stripped topsoil.
- Site access (including early works and supporting works) – activities associated with:
  - maintenance of and minor upgrades to Bella Creek Road, Borgan Road, Sunday Creek Road and Yielo Road
  - construction of new access tracks, and upgrades to existing tracks, including waterway crossings, to enable access to geotechnical investigation sites, spoil disposal areas, and supporting infrastructure
  - the realignment of a section of Bella Creek Road, referred to as the Kingaham Creek bypass.
- Other supporting infrastructure (including early works and supporting works) – establishment of temporary workers' accommodation camps, temporary water infrastructure, a civil construction compound (laydown area), security and access control facilities, temporary facilities for site personnel (e.g. demountables for offices, ablutions and crib shed), signage, drainage and scour protection, and telecommunication facilities.
- Works to support planning and environmental approvals, including compliance activities (e.g. cadastral surveys and cultural heritage assessments).

Except for the Kingaham Creek bypass, the exploratory works infrastructure is largely temporary in nature. Should the main works not proceed, the exploratory works infrastructure will be removed and impacted areas will be remediated where appropriate. Some access tracks will remain for property access and management.

The exploratory works do not include activities associated with routine management of Queensland Hydro land (such as fire breaks, property fencing, access track maintenance, and any other similar activities). However, these activities are ongoing and will occur during the exploratory works period.

The Borumba PHES Project is located within Gympie Regional Council (GRC) and Somerset Regional Council (SRC) local government areas, approximately 13km southwest of the township of Imbil as shown on Figure 1-1. Access to the lower main Project site is from Imbil via Yabba Creek Road, Bella Creek Road and Borgan Road and access to the upper site is via Kilcoy Murgon Road, Sunday Creek Road and Yielo Road. Access to the main Project areas will be facilitated through use of existing roads as well as construction of new access roads within the site.

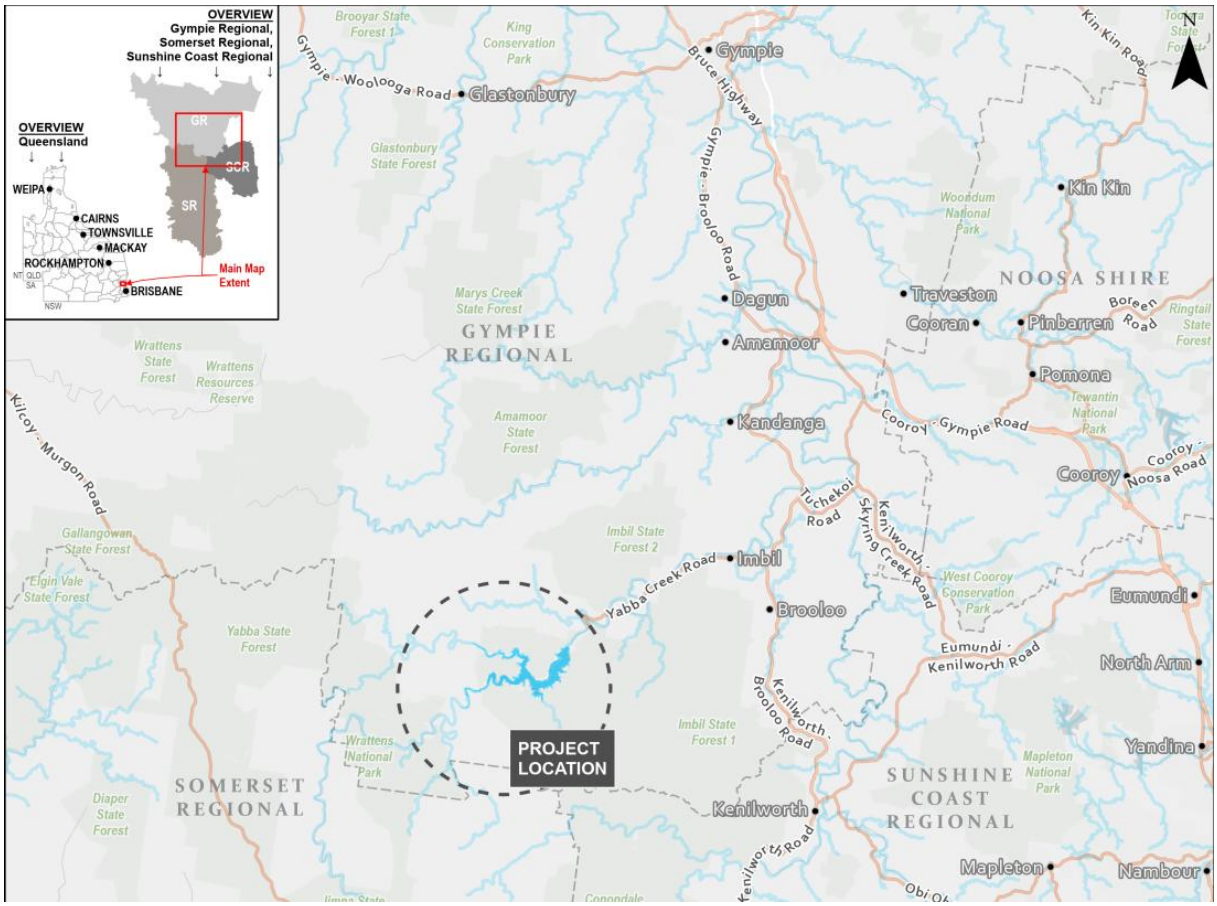


Figure 1–1: Project Locality

1.2 Project Background and History

The Borumba PHES Project and facility will play a significant role in Queensland's future electricity network, by providing the grid with network stability and security. The Project's storage capability will allow increased penetration of intermittent renewables and retirement of the current fossil fuelled generation fleet.

A Reference Project for the Front-End-Engineering Design (FEED) studies was developed by SMEC, which builds upon several earlier concept studies which were also undertaken by SMEC in 2019 and 2020. The Reference Project characteristics are for Borumba Dam to have a 2,000 MW (nominal station generation capacity) and 24 hours of storage. The Reference Project utilises the existing Borumba Reservoir as the lower reservoir and will require an increase to the water level and associated volume, which is proposed through the construction of a new upper reservoir.

1.3 Project Work Phases

The Project has two (2) significant phases in the construction lifecycle: Exploratory Works and Main Works. The bulk of the construction occurs in the Main Works with three elements and work locations: new dam, main site and upper site as indicated in Figure 1–2.

The **Main Works** comprises of the following:

- A new Upper Reservoir and associated dams / saddle dams and infrastructure (Upper Site)
- Hydropower scheme including upper and lower inlet/outlet structures, power waterway, powerhouse and associated tunnels and access roads (Main Site)
- New lower Borumba Dam, saddle dams and infrastructure (New Dam).

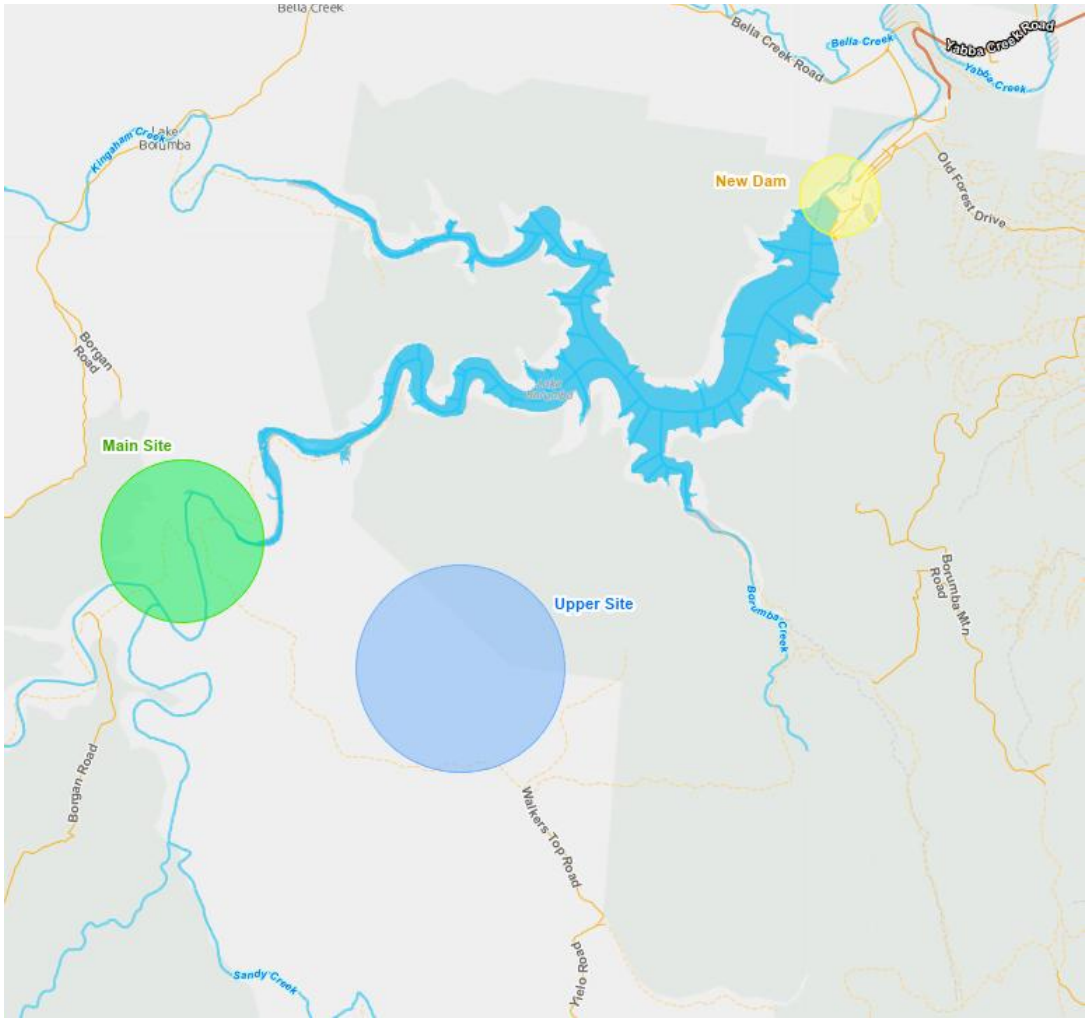


Figure 1–2: Project elements surrounding Borumba Dam

The **Exploratory Works,** covered by this report, consist of portal pad preparation, tunnel drilling and geotechnical investigations to provide information on the conditions along the locations of the key potential Project infrastructure. Construction of items such as temporary camps, temporary water infrastructure and road upgrades are also required to support the exploratory works. These works aim to improve the Project's engineering design for increased understanding of ground conditions and reduce a range of engineering, environmental, and financial risks.

1.4 Purpose of this Report

The purpose of this report is to document the traffic impact assessment (TIA) for **Exploratory Works package only** in accordance with the Department of Transport and Main Roads (TMR) Guide to Traffic Impact Assessment, and as required by the Office of the Coordinator-General in association with works under the September 2024 Works Regulation.

1.4.1 Assumptions and Limitations

The following are assumptions and limitations associated with this assessment:

- This TIA does not consider the Main Works which will be address in a separate TIA. Should any works packages overlap with the Main Works, the cumulative impacts will be covered by the Main Works TIA.
- Some of the trips considered in the assessment are one-off trips that only occur on one day. To take a conservative approach, it has been assumed that all the one-off trips in each month occur on the same day, as to get the highest possible trip generation for that month.
- At the time of this assessment, the potential bus pick-up and drop-off location/s or Park and Ride (PnR) facility for the workers has not been confirmed. Each contractor will be responsible for their own PnR facility. An estimation of trips towards a single hypothetical PnR facility has been undertaken, however, these are to be reviewed, and impacts addressed within a separate TIA (or this TIA is to be updated) once a facility (or facilities) are chosen.
- As further details emerge about the project and the scope is updated, this TIA is updated to reflect the changes. There have been numerous previous revisions and if the project scope or timing changes in the future, this report will be updated or combined into the Main Works TIA.

1.4.2 Study area

Figure 1–3 presents a high-level overview of the study area, and the associated road network assessed as part of this report. This road network can be considered in two parts: northern approach and southern approach:

- **Northern Approach** – provides access to the Main Site from Yabba Creek Road and Bella Creek Road via a network of connecting routes linking with the Bruce Highway and surrounding towns, such as Gympie, Kandanga, and Imbil.
- **Southern Approach** – provides access via Kilcoy to the Upper Site via Kilcoy Murgon Road, Sunday Creek Road and Yielo Road.

The extent of the study area was determined by the outer limit of a 5% increase in traffic due to the project. Further key intersections were also included as part of the routes to the site.

Refer to Section 3 for the detailed review of the associated road networks.

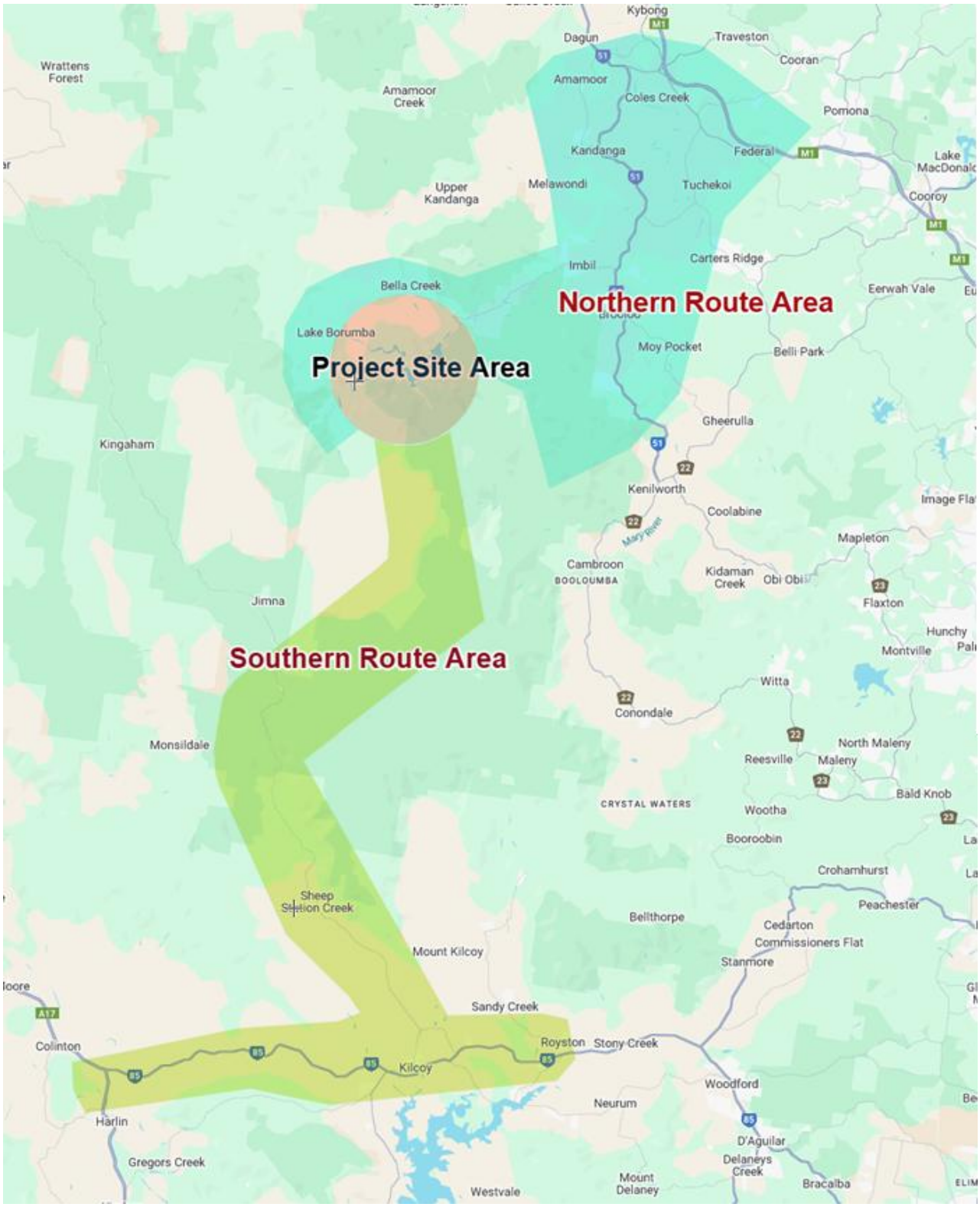


Figure 1–3: Traffic study area and associated road network areas

2. Environment

2.1 Land use

As illustrated in Figure 2–1, the dominant land use surround Borumba Dam and the surrounding road network is Rural and Environmental Management and Conservation.

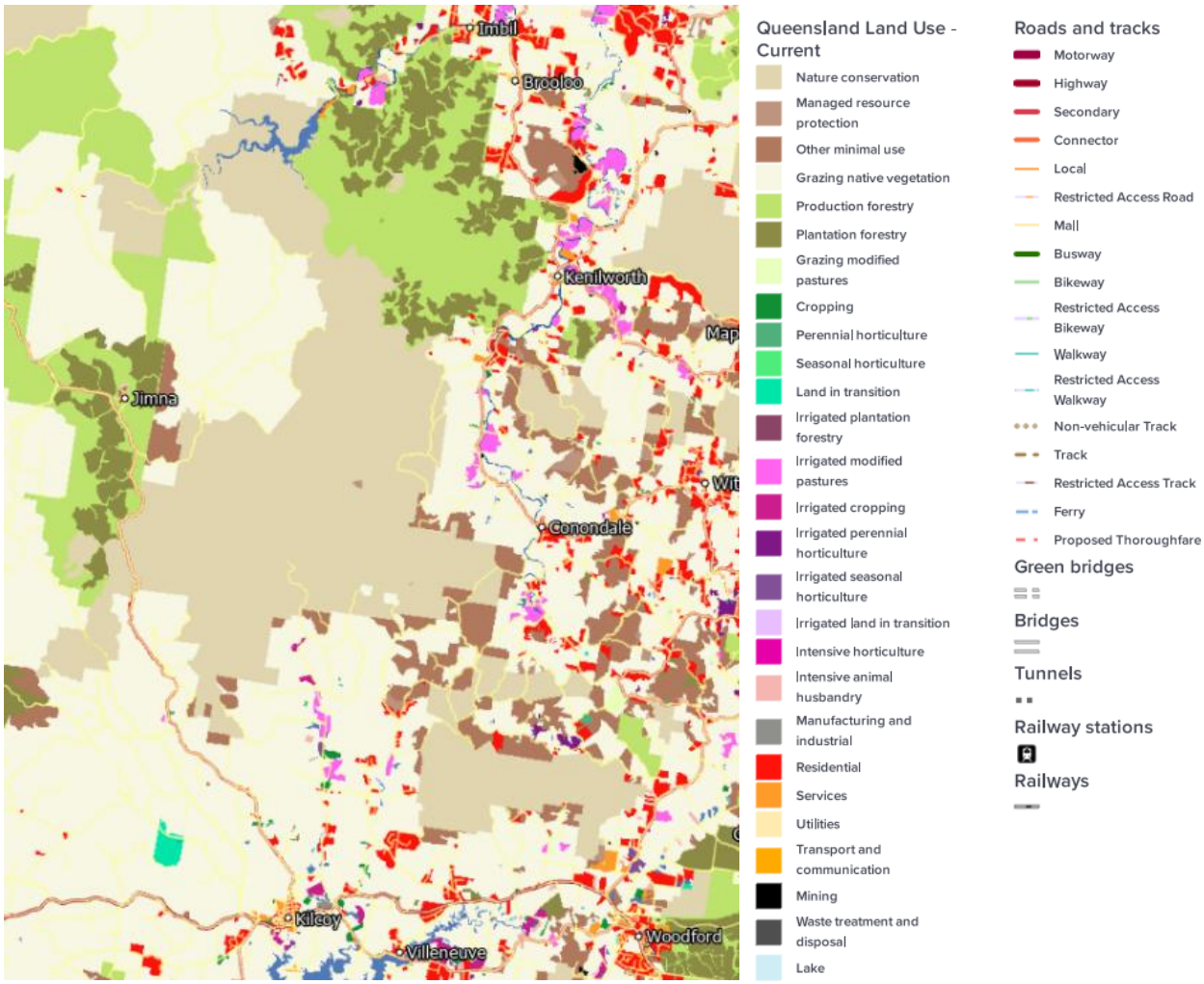


Figure 2–1: Surrounding Land Uses (*Queensland Globe, 2024*)

2.1.1 Northern corridor – Imbil

The town of Imbil is located on the eastern approach with Yabba Creek Road being the main street through the town. According to 2021 census data Imbil (and the immediate surrounding area) has a population of approximately 1,071 residents and 525 dwellings. All traffic approaching from the northern road network will be travel along Yabba Creek Road and through Imbil (refer to Figure 2–2).

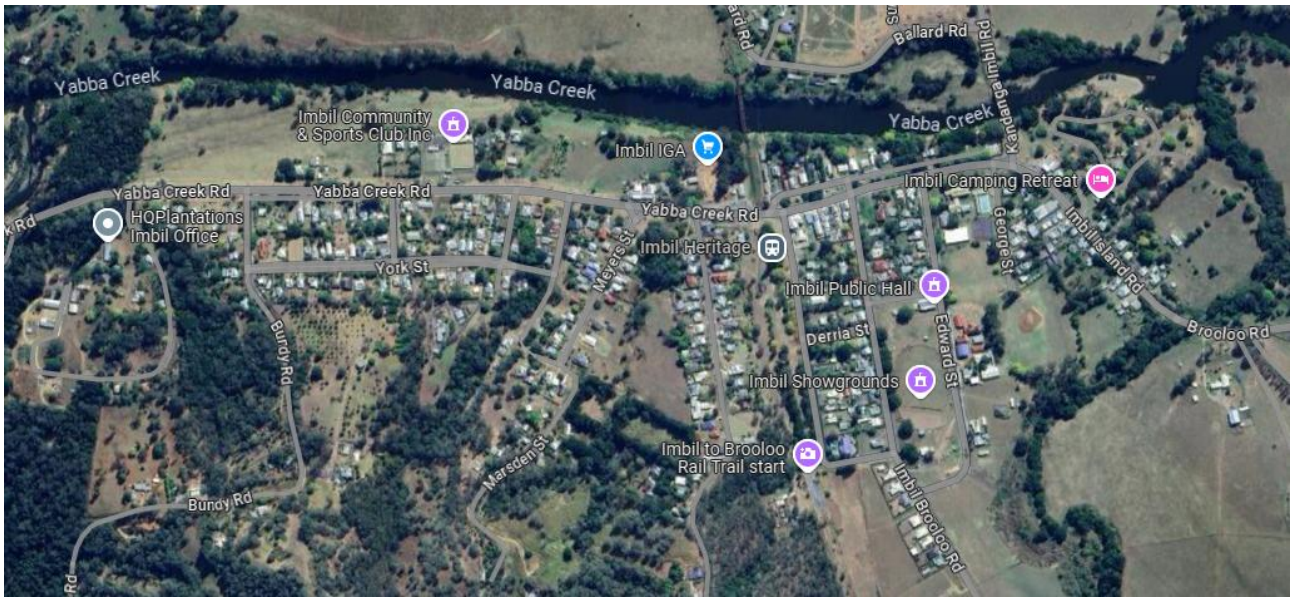


Figure 2–2: Imbil township (Source: Google Maps)

2.1.2 Southern corridor – Kilcoy

The town of Kilcoy is located south of Kilcoy Murgon Road. The main street in town is the D'Aguilar Highway running east to west. According to 2021 census Kilcoy (and the immediate surrounding area) has a population of approximately 1,716 residents and 655 dwellings. All traffic approaching from the southern road network will be travelling along Kilcoy Murgon Road, Sunday Creek Road, and Yielo Road (refer to Figure 2–3).

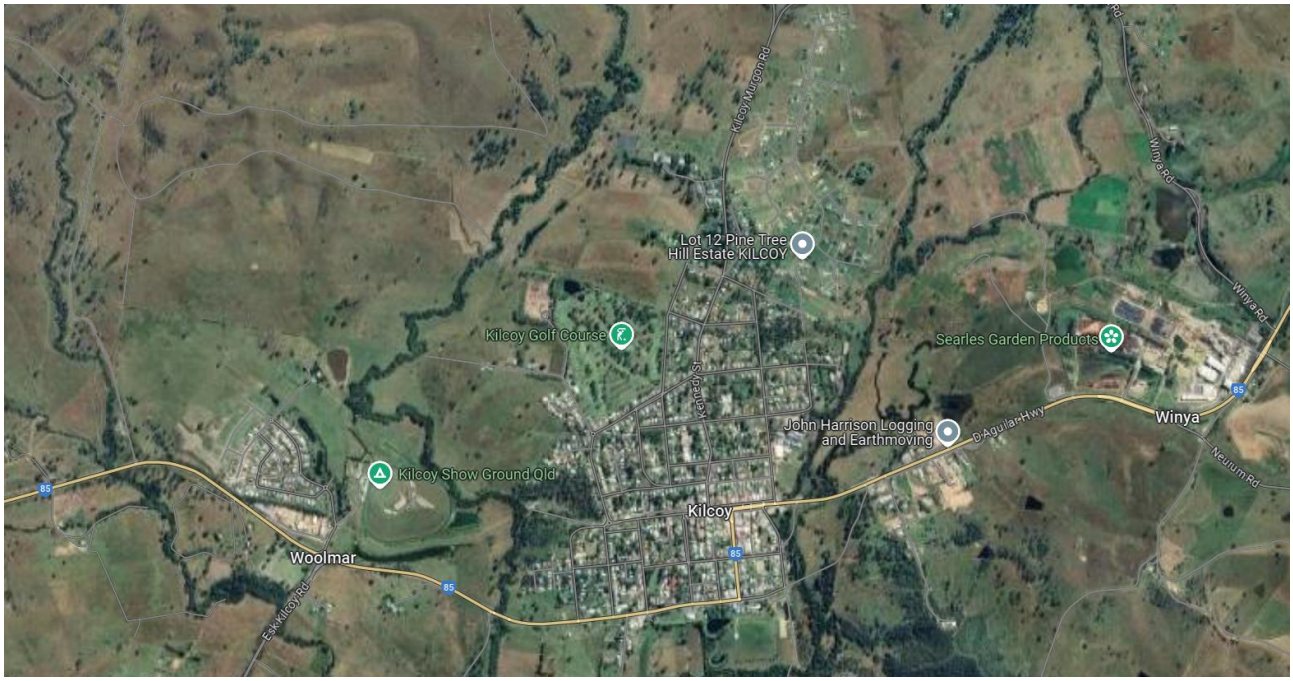


Figure 2–3: Kilcoy township (Source: Google Maps)

There is planning for the Kilcoy town centre to be upgraded in future with a "Kilcoy streetscape revitalisation". This has undergone community engagement throughout 2023. There is no known timeline for implementing these changes, however Queensland Hydro have committed funding towards kickstarting the project.

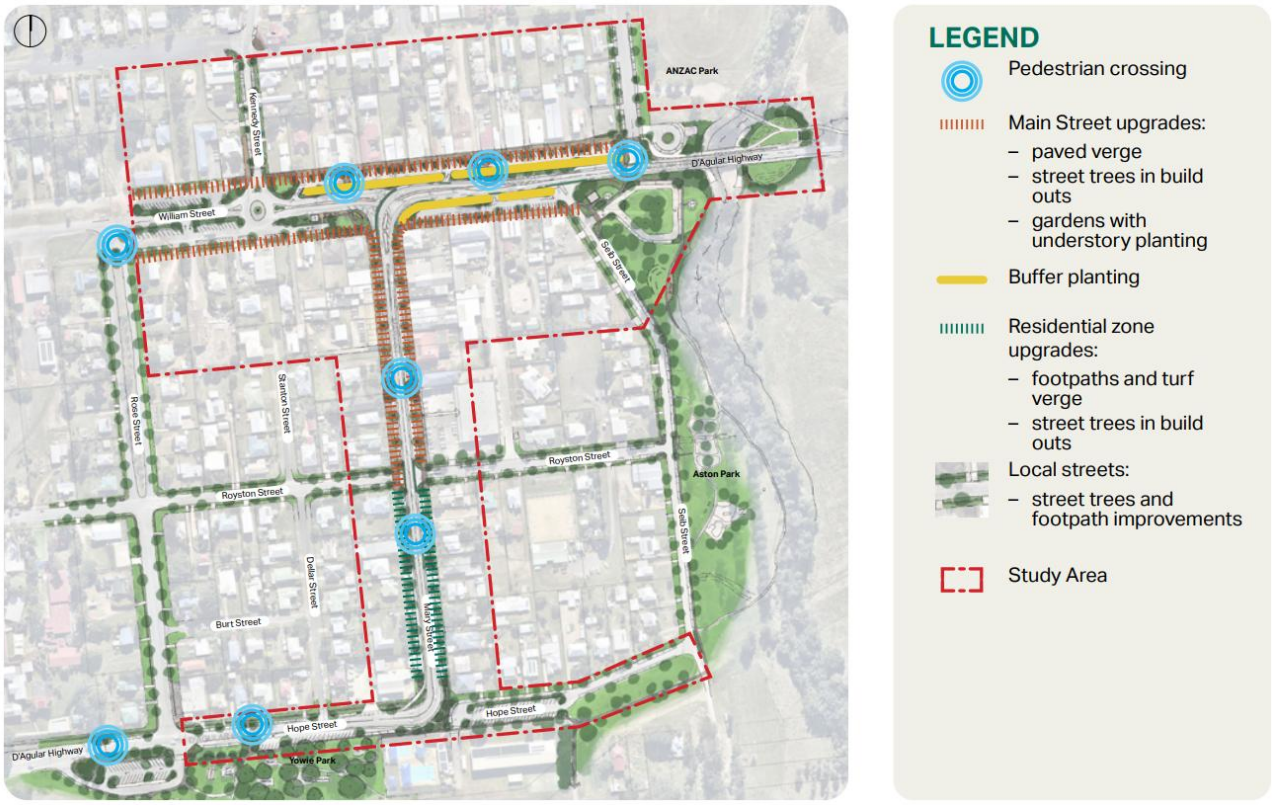


Figure 2–4: Kilcoy Streetscape Revitalisation – Draft Master Plan Snapshot

(Image source https://www.somerset.qld.gov.au/homepage/199/have-your-say---kilcoy-streetscape-revitalisation-Project)

2.1.3 Other Land Use Southern Corridor

Sunday Creek Road is also within SRC with low traffic volumes and no growth given its remote location (refer to Table 3–4). However, it is noted development application DA22670 (lodged: 13/07/2022) is currently under assessment on Lot 2 SP228062 Sunday Creek Road. The application seeks approval to host Temporary Entertainment Events for up to 25 days per year. No details are provided with the application regarding the number of patrons proposed or traffic volumes estimated. A Request for Information (RFI) has been issued by SRC to clarify this information and SRC have agreed to extend the RFI response period. Timeframes as to when the applicant will submit a response to the RFI are unknown. As a result, it is expected the traffic associated with the Exploratory Works will occur prior to the DA22670 commencing operations.

2.2 Public Transport

It is noted that project deliveries will be restricted during school pickup and drop off periods.

2.2.1 Translink routes

Translink bus routes have been reviewed and there is only one bus route within the study area, the 896 Kilcoy to Morayfield Shopping Centre. This route services Woodford, D'Aguilar Highway, Wamuran, and Caboolture. This service operates Monday to Saturday twice a day. The target commuter is primarily school children as it has aligned hours aligned with school hours during the weekdays.

2.2.2 Kilcoy school routes

In addition to the 896 Translink Route, there are seven school routes operated by Christensen's Bus and Coach. The route numbers are Route 909, 912, 914, 916, 917, 919 and 920. These services have designated routes and stops which travel along the D'Aguilar Highway and Kilcoy Murgon Road.

Stakeholders contact details:

- Christensen's Bus and Coach – 07 5497 1478
- Mount Kilcoy State School – 07 5498 1777
- Kilcoy State High School – 07 5422 4343
- Kilcoy State School – 07 5422 3333.

2.2.3 Imbil school routes

There are three operators of school bus services in the area:

- Karrabee Bus + Coach:
  - Karrabee Bus + Coach operates three services in the Imbil northern area with stop locations are shown in **Appendix A**. No maps of the school bus services are provided by Karrabee Bus + Coach.
- Polleys Coaches:
  - Polleys Coach operates one school bus service that connects to Imbil from the south, with service timetables and stop locations shown in **Appendix A**.
- Lorrain Creevey Bus Service:
  - Lorrain Creevey Bus Service operates on service in the Imbil area along Yabba Creek Road with bus timetables for AM and PM services shown in **Appendix A**.

It is noted from **Appendix A**, school buses only operate one service in the AM (typically between 7.15 - 8.45 AM) and one service in the PM (typically between 3:00 - 4.35 PM).

Stakeholders contact details:

- Karrabee Bus and Coach – 07 5484 3302 or 0438 843 195
- Polleys Coaches – 07 5480 4500
- Lorrain Creevey Bus Service – 0429 656 779.

2.2.4 Infrastructure

As seen in Figure 2–5, the school bus stops are typically informal with limited to no infrastructure and no formal parking. It is also expected the buses stop as close to the student's house or pickup point where safe to do so, this may not be an acknowledged bus stop location. Parents will typically park along the road shoulder and the student walks from the bus stop home. The volume of students using each stop is expected to be low and buses will pause at each stop only briefly.

Problems associated with each bus stop is highly contextual, depending on the volume of students, parents, and location of stop. As heavy vehicle (HV) movements are not planned to overlap the school bus times, and thus this is considered a low risk. However, during the Exploratory Works phase regular liaison should be undertaken with the bus operators and schools. The Road-use Management Plan (RMP) should still provide advice and recommendations for Project vehicles not to pass any stopped bus not fully of the road. If fully off the road, slow to a walking speed to pass as children may appear from behind the stopped bus.

Figure 2–6 show an example sign provide warning to drivers of being on a bus route and expected times of the services.

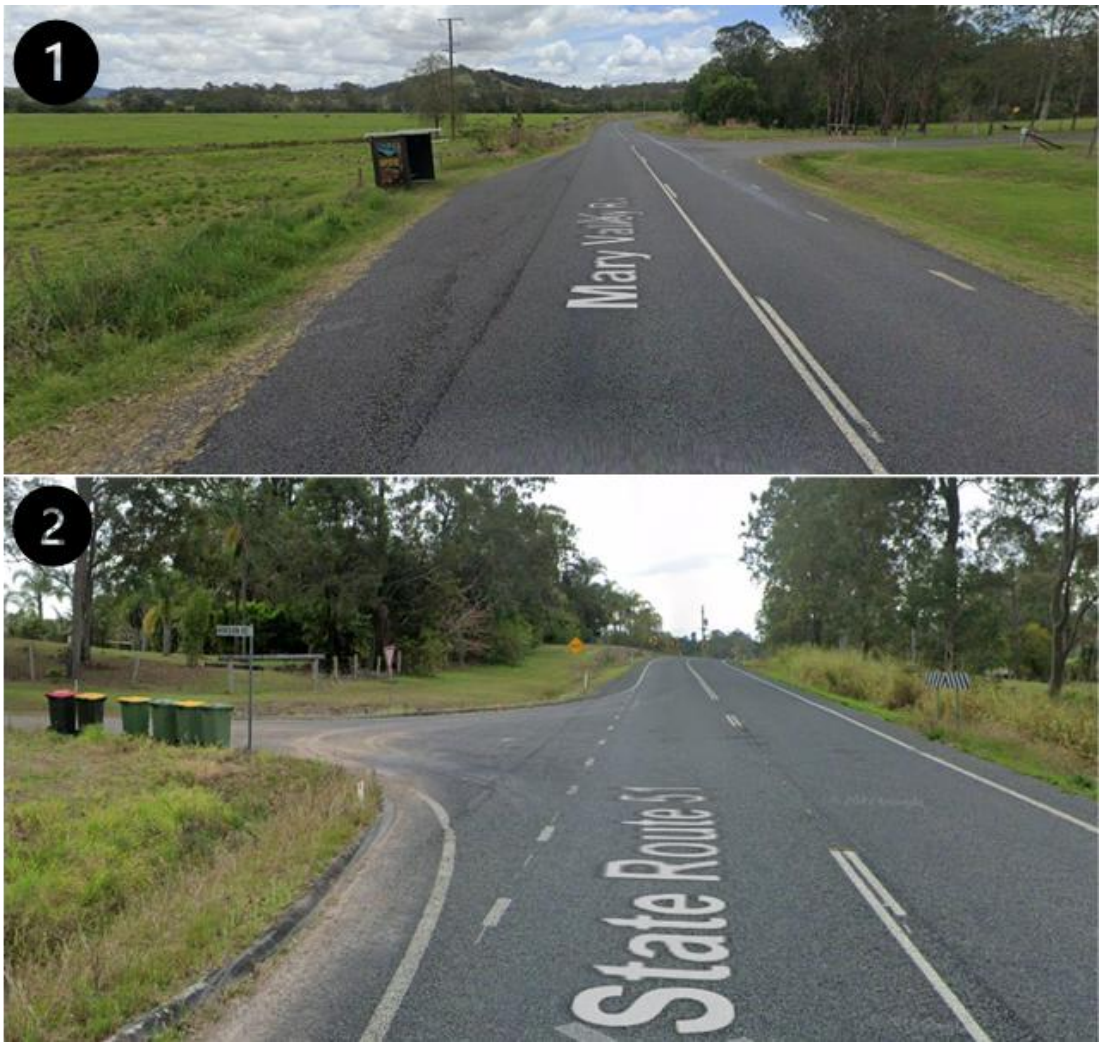


Figure 2–5: Typical condition of informal school bus stops (Source: Google Maps)

Figure 2–6: Signed school bus route on Yabba Creek Road at Yabba Creek Cross No6, northbound

2.3 Active Transport

2.3.1 Strava heat maps

While no survey data is available for active transport (AT), the sport application Strava can provide insight into popular recreation routes for walking, running, and cycling. Whilst the data is skewed towards individuals who use the app to record (predominantly) training/fitness journeys, relative popularity of routes become evident.

These popularity estimates are based on the number of trips recorded on Strava segments. This means the estimates are for one-way direction and for cyclists who record their ride on Strava. As can be expected, the town centres score much higher than rural roads.

Strava also indicates a high use of a mountain bike race route (Sunday Creek Classic) which occurs once a year. The course starts from Kenilworth and travels to Imbil via gravel roads. Imbil to Jimna via Bella Creek Road and Kilcoy Murgon Road. The course then follows Sunday Creek Road, through Charlie Moreland Camping Area and back to Kenilworth.

Based on Strava heat maps, the following observations are noted:

- The most popular AT recreational route is between Brooloo and Imbil, along the Mary Valley Rail Trail and Imbil Brooloo Road.
- Walking and jogging around Kenilworth has a relatively high demand and predominately along gravel roads. The popular routes are not along the expected HV routes to be used as part of exploratory works.
- Old Bruce Highway and Kenilworth Skyring Creek Road have the highest relative cyclists' volumes, with up to 20 cyclists per week (approximately).
- Tuchekoi Road and Mary Valley Road have the next highest volumes with up to 5 cyclists per week (approximately).

2.3.2 Imbil

The main road to / from the township of Imbil is Yabba Creek Road, which runs through the centre of the town. The majority of residents, shops, show grounds and Mary Valley State College are located on the southern side of Yabba Creek Road. However, several key shops and commercial business important to community life (IGA, Pharmacy, Café, library, hardware store) are also located on the north side of Yabba Creek Road. High demand on-street parallel parking is spread along Yabba Creek Road through the town centre.

As shown in Figure 2–8 and Figure 2–9, there are no existing pedestrian crossings across Yabba Creek Road in Imbil. Given the town centre is signed a 40km/h High Activity Zone with shops either side of Yabba Creek Road, consideration should be given to improved pedestrian crossing facilities across Yabba Creek Road.

TMR are investigating a pedestrian crossing for this area in the next 12-18 months. This will be a north / south connection across Yabba Creek Road, the exact location yet to be determined. Queensland Hydro is in discussion with TMR to bring this timeline forward.

Future investment into the Mary Valley Rail Trail could encourage higher use of the trail and general increase in cycling in the area. Phase 2 of the trail is proposed north of Imbil and would require crossing of Yabba Creek Road.

It is also noted that numerous seasonal sporting events occur in the area and should be considered when investigating opportunities.

Figure 2–7: Imbil town centre – aerial image (Source: MetroMap)

Figure 2–8: Imbil town centre – street view looking east from the rail line crossing (Source: Google Maps)

2.3.3 Kilcoy

Kilcoy is bisected by the two-way two-lane D'Aguilar Highway which forms the main street through the town, with a posted speed of 60km/h. Shops line both sides of D'Aguilar Highway making D'Aguilar Highway a key location for pedestrian activity within the town.

Pedestrian movement across the highway is a potential area of safety concern due to the location of crossing facilities and the width of the highway, however, no crashes have been recorded. Breaks in the median are provided to allow for pedestrians to cross the D'Aguilar Highway (refer to Figure 2–9). Future planning for Kilcoy is underway to provide improvements to these crossing points.

Figure 2–9: Kilcoy town centre – aerial image (Source Google Maps)

2.4 Equestrian trails

Stirling's Crossing Equestrian Complex is located at Yabba Creek Road and Derrier Road. There are several horse trails, such as Imbil state forest, Conondale national park, or forest trail between the Imbil showgrounds and the Stirling's Crossing Equestrian Complex. None of these have significant interaction with major roads. Though events held throughout the year will attract additional traffic.

Mount Allan Shared Trail in Imbil State Forest and Conondale National Park Access are accessed from Charlie Moreland day-use area and the camping grounds. This site is accessed by vehicle on Sunday Creek Road.

For trails near Imbil showgrounds, parking is available on Diggings Road or take Western Creek Road. These trails connect to forestry roads, without much vehicular traffic once on the trails. There is a connection between the Stirling's Crossing Equestrian Complex uses forestry trails primarily with no vehicular traffic, however there are short sections of Derrier Road which may be used. These sections are sufficiently wide though to allow for ample space for horseback.

3. Existing Road Network

The Project site is accessed from two directions and two distinct road network areas that are defined as per Figure 1–3.

Proposed route selection for heavy vehicles (HVs) and light vehicles (LVs) was undertaken in early discussions with Queensland Hydro. Due to various constraints on certain roads, the HV routes indicated in Figure 3–1 and Figure 3–2 were selected as the most optimal. Section 3.1 and Section 3.2 discusses these constraints and provides typical characteristics and desktop safety assessment of key roads within the northern and southern road network respectively.

Although The Project has identified the routes to be utilised for HVs it is acknowledged that trucks may, on occasion, use alternate general access routes depending on the origin of the delivery. These are expected to be very minimal. The LV only routes indicated are the likely general routes a worker might take to site. HVs are not recommended for these routes. Further recommendations on preferred routes are contained in the RMP.

HV routes to the Main Site are as follows:

- Route 1:
  - Bruce Highway
  - Mary Valley Link Road
  - Gympie - Brooloo Road
  - Yabba Creek Road
  - Bella Creek Road
  - Borgan Road
- Route 2 (gravel material from Boral quarry):
  - Moy Pocket Road
  - Gympie Brooloo Road
  - Yabba Creek Road
  - Bella Creek Road
  - Borgan Road.

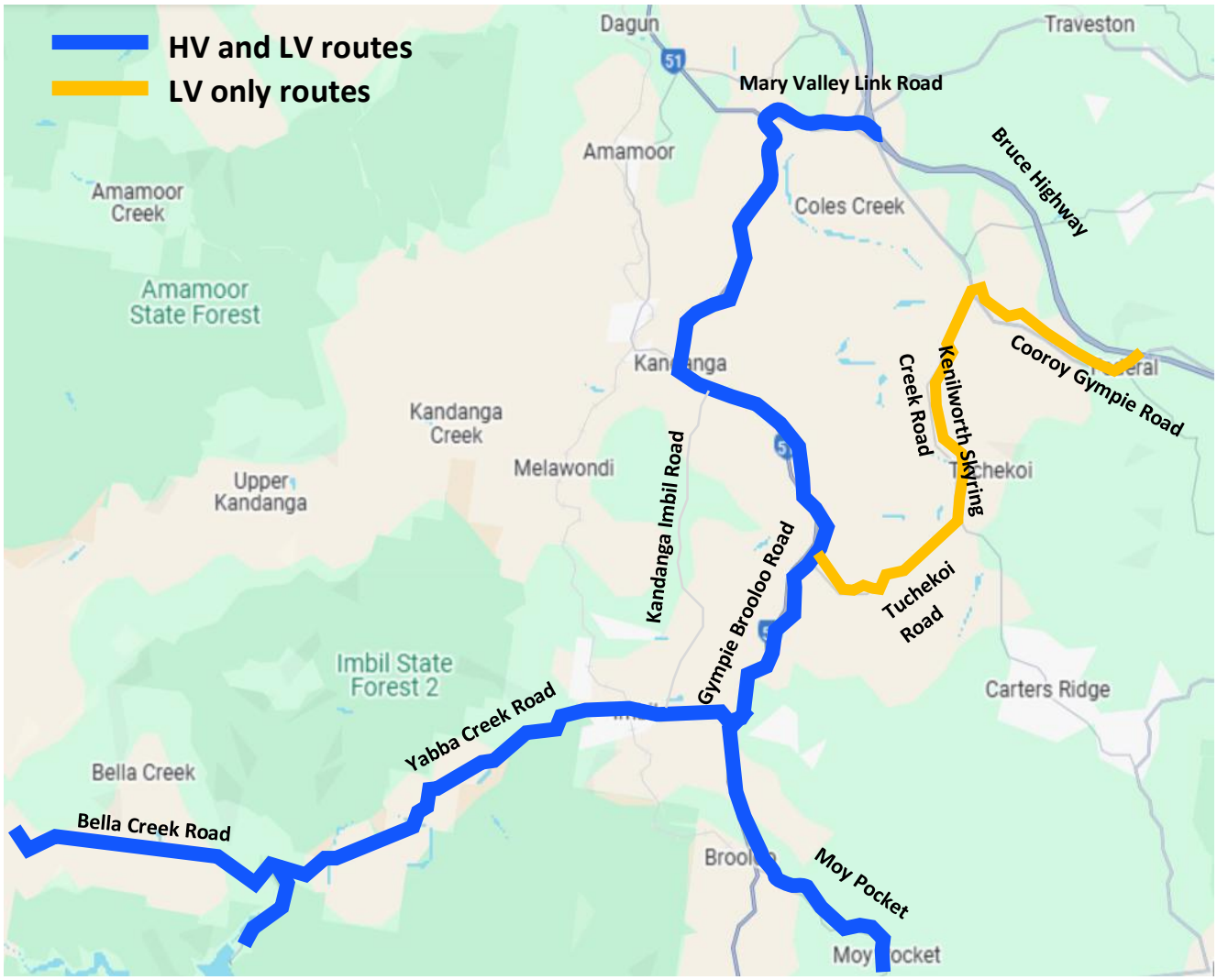


Figure 3–1: Proposed Northern network to access to the northern side of Borumba Dam

Access to the Upper Site of the Exploratory Works is via the southern approach, through the township of Kilcoy (refer to Figure 1–3 and Figure 3–2). Typically, Exploratory Works traffic will travel along two possible routes as below:

- Route 1:
  - West along D'Aguilar Highway towards Kilcoy
  - Right onto William Street
  - Right onto Kilcoy Murgon Road (Kennedy Street)
  - Right onto Sunday Creek Road
  - Left onto Yielo Road
- Route 2 (gravel material):
  - Brisbane Valley Highway
  - Right onto D'Aguilar Highway
  - Left onto William Street
  - Right onto Kilcoy Murgon Road
  - Right onto Sunday Creek Road
  - Left onto Yielo Road.

Figure 3–2: Proposed Southern network to access the upper camp from D'Aguilar Highway

Table 3–1 and Table 3–2 provides a summary of roads with details of the hierarchy, transport data, and cross section for State network on the northern and southern routes respectively.

Table 3–1: Data summary and description for existing State Controlled Roads – Northern Route

Road	Hierarchy	Site ID	Posted Speed Limit (km/h)	2023 AADT	%HV	2023 Weekday Ave Peak Hour (vph)	10 Year Historical Growth Rate	Road Cross Section	Project HV route	Active Transport	School Bus Route
Bruce Highway	Highway	20521	110	22,134	23%	AM – 1,676 PM – 1,735	4.6%	4-lane 2-way dual carriageway	Yes	Cyclists and pedestrians not allowed	No
Mary Valley Link Road	Secondary	23920	100	3,623	15%	AM – 282 PM – 330	11.0%	2-lane 2-way sealed carriageway. Sealed shoulders.	Yes	No on-road active transport facilities	Yes
Gympie - Brooloo Road (Mary Valley Road)	Secondary	20842 (north of Yabba Creek Road)	100	2514	11%			2-lane 2-way sealed carriageway. Gravel shoulders.	Yes	No on-road active transport facilities	Yes
		23569 (north of MVLR)	100	3,702	11%	AM - 283 PM – 350	7.3%				
		20507 (north of Tuchekoi Road)	100	837	17%	AM – 63 PM – 70	2.5%				
Cooroy - Gympie Road (Old Bruce Highway)	Secondary	23904	100	2,070	11%	AM – 186 PM – 205	15.8%	2-lane 2-way sealed carriageway. Sealed shoulders	No	No on-road active transport facilities	No
Kenilworth Skyring Creek Road	Secondary	20838	100	2,023	12%	AM – 151 PM – 167	8.7%	2-lane 2-way sealed carriageway. Gravel shoulders	No	No on-road active transport facilities	Yes
		20509	100	712	14%	AM – 56 PM – 61	4.5%	1-lane 2-way sealed carriageway. Gravel shoulders	No		
Tuchekoi Road	Secondary	20055	100 (Unsigned)	1,441	12%	AM – 103 PM – 117	6.9%	2-lane 2-way sealed carriageway. Sealed shoulders.	No	No on-road active transport facilities	No
Yabba Creek Road	Local Connector	21920	40	3,050	13%	AM – 249 PM – 295	8.4%	2-lane 2-way sealed carriageway. Gravel shoulders On-street parking through Imbil	Yes	Continuous footpath south side Sections of footpath north side No on-road cycle path	Yes
		20058	80	1,024	21%	AM – 84 PM – 87	5.7%			No on-road active transport facilities	
		23921	90	374	13%	AM – 35 PM – 31	5.6%				

Table 3–2: Data summary and description for existing State Controlled Roads – Southern Route

Road	Hierarchy	Site ID	Posted Speed Limit (km/h)	2023 AADT	%HV	2023 Weekday Ave Peak Hour (vph)	10 Year Historical Growth Rate	Road Cross Section	Project HV route	Active Transport	School Bus Route
D'Aguilar Highway	Highway	20052	60	7655	15%	-	1.2%	2-lane 2-way sealed carriageway	Yes	No on-road active transport facilities	Yes
		20053	80	7,193	13%	AM – 525 PM – 594	2.4%				
		20533	80	4,014	17%	AM – 320 PM – 290	0.9%				
		160044160044	100	4537	18%	-	2.49				
Brisbane Valley Highway	Highway	32629	100	2806	17%	-	-1.17	2-lane 2-way sealed carriageway	Yes	No on-road active transport facilities	Yes
William Street	Arterial	-	50	3,665	4%	-	-	2-lane 2-way sealed carriageway	Yes	No on-road active transport facilities	Yes
Kilcoy Murgon Road	Secondary	20061	100	887	11%	AM – 33 PM – 48	0.7%	2-lane 2-way sealed carriageway. Gravel shoulders	Yes	No on-road active transport facilities	Yes
		20373	100	114	25%	AM – 12 PM – 12	-3.0%				

Table 3–3 and Table 3–4 provide a summary of the hierarchy, transport data, cross section and if Over-Size / Over-Mass vehicles (OSOM) permitted route for local government-controlled roads on the northern and southern routes respectively.

Table 3–3: Data summary and description for existing local roads – Northern Route

Road	Road Owner	Hierarchy	Posted Speed Limit (km/h)	ADT[1]	2024 Peak Hour (vph)	Road Cross Section	Project HV route	Active Transport	School Bus Route
Moy Pocket Road	GRC	Rural Arterial	70	294	AM – 18 PM – 12	2-lane 2-way, 7-8m seal	Yes	No on-road active transport facilities	Yes
Bella Creek Road	GRC	Rural Local	100 (Unsigned)	102	AM – 9 PM – 4	Unsealed gravel road	Yes	No on-road active transport facilities	No
Borgan Road	GRC	Unmaintained	100 (Unsigned)	-	-	Unsealed and unmaintained	Yes	No on-road active transport facilities	No
Borumba Dam Road	Seqwater	Rural Local	60	160		Sealed single lane used for access to existing Borumba Dam	Yes	No on-road active transport facilities	No
Old Yabba Road	GRC	Rural Local	100	-	-	Unsealed gravel road	Yes	No on-road active transport facilities	No
Kandanga Imbil Road	GRC	Rural Arterial	100	1383	AM – 124 PM – 151	2-lane 2-way, 7m seal	No	No on-road active transport facilities	Yes

1. ADT based on 12-hour intersection survey undertaken Thursday 1st February 2024.

Table 3–4: Data summary and description for existing local roads – Southern Route

Road	Road Owner	Hierarchy	Posted Speed Limit (km/h)	ADT[1]	2024 Peak Hour (vph)	Road Cross Section	Project HV route	Active Transport	1
Sunday Creek Road	SRC	Rural Local	100 (Unsigned)	14 north end unsurfaced section 24 south end surfaced section	AM – 2 PM – 7	Sealed for 1.7km then unsealed gravel road	Yes	No on-road active transport facilities	-

Road	Road Owner	Hierarchy	Posted Speed Limit (km/h)	ADT[1]	2024 Peak Hour (vph)	Road Cross Section	**Project HV route**	Active Transport	**1**
Yielo Road	SRC	Rural Local	100 (Unsigned)	8	-	Unsealed gravel road / unformed track	Yes	No on-road active transport facilities	-

1. ADT based on 12-hour intersection survey undertaken Thursday 1st February 2024.

3.1 Northern network

The roads for accessing the site from the north are described below. This provides access for loads that do not exceed general access limits. The selection of these routes was focused around areas which already have high percentage of HV use. All the roads listed below have high split of HV's between 11% and 21%.

All bridge or culverts structures meet General Mass Limits or more. The limitations of delivery load limits to the Main Site have been defined by the structures listed under Section 3.1.7 for Yabba Creek Road.

3.1.1 Mary Valley Link Road

Mary Valley Link Road is approximately 2.3km long, linking the Bruce Highway to Gympie – Brooloo Road (Mary Valley Road). The road formation is at a high standard and consistent with a high-speed rural road environment. There are no significant constraints of concern. Provision has been made for wide sealed road shoulders and safety rails on approach and depart to Coles Creek (Bason Bridge), Mary River (Groves Bridge) and on approach to Gympie – Brooloo Road intersection.

Figure 3–3: Mark Valley Link Road – westbound on approach to Coles Creek (Bason Bridge)

3.1.2 Gympie – Brooloo Road

Also known as Mary Valley Road, Gympie – Brooloo Road has a road geometry characterised by long straights, low undulating vertical alignment, larger radius curves with occasional smaller radius curves, supported by curve alignment markers, frequent guideposts and centre line delineation. This type of road environment is consistent with a low to intermediate speed rural road. Some rutting and pavement cracking occurs.

Road shoulder is grassed up to the edge of bitumen with frequent rural gravel driveways providing access to large rural lots, as seen in Figure 3–4. Such locations can be safety hazards due to stones or gravel being flicked up and possibly causing vehicles to lose control on bends.

Figure 3–4: Gympie - Brooloo Road southbound – gravel rural driveways

A high number of culverts pass under the road with minimal offset between the edge of bitumen and culvert headwalls, as seen in Figure 3–5. In addition, the formation design creates a raised profile for large sections. This results in batters grading away from the edge of bitumen on large stretches of road and no flat road shoulder. As seen in Figure 3–5, this provides no room to pull over and unforgiving road environment if a driver becomes distracted and drifts onto the shoulder.

Figure 3–5: Gympie – Brooloo Road (CH 20.5 km) – note box culverts and curve alignment markers on the outside of a curve

3.1.3 Kandanga Imbil Road

Kandanga Imbil Road is approximately 8km long, linking Imbil to Kandanga. The road formation is at a reasonable standard and consists of a delineated 2-lanes, 2-way formation with vegetation and grass up the edge line. The alignment is typically north south with long sections of straight road, wide curves and changes in vertical alignment and curves. This creates potential reduction in sight lines. This type of alignment may encourage higher speeds in locations with reduced sight lines over the crest creating some concerns in relation to road safety.

The project does not encourage this road for access.

Figure 3–6: Kandanga Imbil Road (CH 20.5 km) – note combination of vertical and horizontal changes in alignment reducing sight lines.

3.1.4 Cooroy – Gympie Road

Also known as Old Bruce Highway, the road formation is in good condition with long straight stretches, high radius curves and limited change in vertical alignment. This type of road environment is consistent with a high-speed rural road.

Figure 3–7: Cooroy – Gympie Road - south approach to Kenilworth Skyring creek Road

3.1.5 Kenilworth Skyring Creek Road

Between Old Bruce Highway and Tuchekoi Road, Kenilworth Skyring Creek Road has a road design that is largely straight, with several large radius and smaller radius curves. This type of road environment is consistent with a low to intermediate speed rural road.

Due the following constraints, Project HV traffic are not recommended for this route.

Noticeable constraints occur at:

- Chainage 1.5 to 2km where the road curves as it passes through a low cutting, has high vertical alignment, limited shoulder width, poor sight distance through the curve and a concealed driveway (Figure 3–8) mid-

way through the curve. For northbound traffic, the change in curve and grade over the crest may be difficult to see and warning signage indicates an informal bus stop (Figure 3–9) is located on this curve. However, no information can be found regarding this bus stop.

Figure 3–8: Kenilworth Skyring Creek Road (CH 1.5km) southbound – Concealed driveway warning

Figure 3–9: Kenilworth Skyring Creek Road (CH 2km) northbound – Bus stop warning

- Kenilworth Skyring Road / Peacons Pocket Road intersection, where there is a unique warning light, as seen in Figure 3–10. This design is non-standard and unexcepted for drivers unfamiliar with the location. It suggests the intersection has sight line issues and known safety concerns for vehicles wanting to turn right off Kenilworth Skyring Road.

Figure 3–10: Kenilworth Skyring Creek Road / Peacons Pocket Road intersection

- The road formation narrows at Chinaman Creek crossing, as seen in Figure 3–11. The barrier narrows and closes down the roadway width and no shoulder are present. The barrier is situated adjacent to the lane edge. It is considered a potential hazard for two HV's to pass on this crossing, especially at higher speeds. The constrained road space is shown in Figure 3–11 highlights how a truck contains the road space.
- Approach sight lines (in both directions) are blocked by vegetation and road cuttings making it a potentially higher risk pinch point for vehicles approaching at higher speeds.
- It is noted that Chinaman Creek crossing is subject to flooding. However, a preliminary desktop review indicates there are no flood warning signs on approach or flood depth indictors. It is unknown what level event results in flooding.

Figure 3–11: Kenilworth Skyring Creek Road – Chinaman Creek crossing

3.1.6 Tuchekoi Road

Tuchekoi Road formation is in good condition with long straight stretches, mixed with high and low radius curves. Vertical alignment undulates along the route and is considered reasonable. This type of road environment is consistent with an intermediate speed rural road.

A constrained narrow creek crossing is located at approximate chainage 3.3km, as seen in Figure 3–12 and Figure 3–13. The barrier narrows and closes down the roadway width and no shoulders are present. The barrier is situated adjacent to the lane edge. Similar to the constrained crossing over Chinaman Creek, it is considered a potential hazard for two HV's to pass on this crossing or passing a cyclist, especially at higher speeds.

Due the above constraints, Project HV traffic are not recommended for this route.

Figure 3–12: Tuchekoi Road alignment

Figure 3–13: Tuchekoi Road – Coonoon Gibber Creek crossing

3.1.7 Yabba Creek Road

Yabba Creek Road formation is in good condition with long straight stretches, mixed with high radius curves and variable vertical alignment. This type of road environment is consistent with an intermediate speed rural road, with the following pinch point / constraints noted:

- Between chainage 2.5 to 4.5km Yabba Creek Road has variable speed limits, including a 40km/h signed speed limit through the town centre. Section 2.3.2 identifies potential pedestrian safety concerns and provides recommendations to improve pedestrian crossing facilities within the town centre.
- As seen in Figure 3–14 there is periodic high demand for on-street parking in the vicinity of the Railway Hotel and Rail Trail. Parking has poor offset from the travel lane creating a potential risk for drivers egressing vehicles. It is noted the lower 40km/h speed helps mitigate this risk.
- The crash history shows a pedestrian was hit on Yabba Creek Road between the intersections of Edward Street and Diggings Road.
- The provision of pedestrian crossing facilities is lacking.

Figure 3–14: Imbil township – high demand on-street parking and no pedestrian crossing facilities

There are several narrow pinch points along Yabba Creek Road, which include:

- Up to five two-way single lane creek crossings (bridges and culverts) are locate at along Yabba Creek Road with one direction of traffic controlled by give way signage, as shown in Figure 3–15. There are no flooding warning signs, however, it is reasonable to expect Yabba Creek Road to flood during heavy rain events.
- There are several narrow bridge/culvert crossings, however, five crossings only provide a single lane for two way traffic.
- Several culverts pass under Yabba Creek Road with minimal offset between bitumen seal and culvert headwalls, as seen in Figure 3–16.
- HV's understandably traverse these pinch points closer to the centre line making it hazardous for opposing HV's to pass at these locations.
- While there are no cycle lanes along the full length of Yabba Creek Road, these narrow pinch points create a specific area of hazard for cyclists. Particularly for the five single lane two-way culverts as they take a longer period of time for cyclists to cross due to their lower speeds.

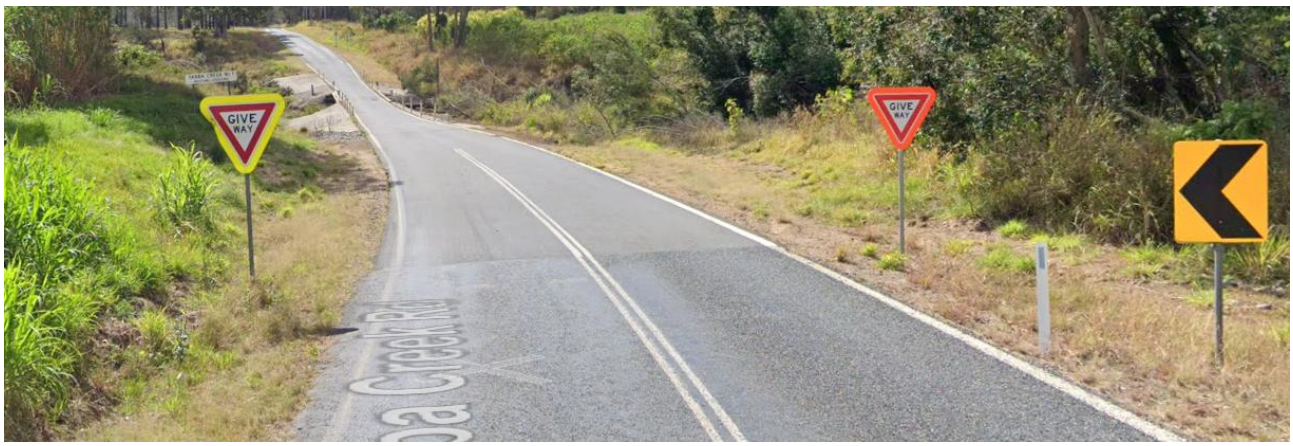


Figure 3–15: Yabba Creek Road - Yabba Creek No. 1 (Neucoms Crossing - CH 7.2km), northbound

Figure 3–16: Yabba Creek Road – culvert at approximate (CH 4.75km)

3.1.7.1 Heavy vehicle restrictions

Yabba Creek Road is closed to all vehicles operating under excess mass permits or excess mass guidelines. If no alternative route is available, a Special Assessment Excess Mass Permit application may be submitted to a Main Roads Permit Officer for consideration. Restrictions include the following vehicle types:

- Category 1 Intelligent Access Program (IAP) special purpose vehicles
- Category 2 IAP special purpose vehicles
- 2-axle prescribed special purpose vehicles and 2-axle articulated steering cranes
- 3-axle articulated steering cranes.

Approval to travel shall be automatically suspended in the event of heavy or prolonged rain affecting the route being travelled.

Table 3–5 presents a summary of the restrictions applicable to the culverts and bridges for the above vehicle classes (except the two noted). Yabba Creek crossing No 6 is restricted to only vehicles that comply with general mass limits. Figure 3–17 indicates the location of the structures.

Table 3–5: Yabba Creek Road structures with vehicle restrictions

Bridge No /description	Structure ID	Chainage	Length	Type	Load Class	Lanes	Restrictions
Yabba Creek Anabranch No 1	1006	0.61	27m	Timber	A Class	Single Lane	Structure is closed to all vehicles operating under excess mass permits or excess mass guidelines. If no alternative route is available, a Special Assessment Excess Mass Permit application may be submitted to a Main Roads Permit Officer for consideration.
Yabba Creek Anabranch No 2	1007	1.77	27m	Timber	A Class	Two Lanes	
Culvert	11758	4.18				Two Lanes	Structure is closed to all vehicles operating under excess mass permits. This does not include travel under guidelines. If no alternative route is available, a Special Assessment Excess Mass Permit application may be submitted to a Main Roads Permit Officer for consideration.
Yabba Creek crossing No 1	1008	6.14	18m	Timber	A Class	Single Lane	Structure is closed to all vehicles operating under excess mass permits or excess mass guidelines. If no alternative route is available, a Special Assessment Excess Mass Permit application may be submitted to a Main Roads Permit Officer for consideration.
Yabba Creek crossing No 4	1011	9.71	21m	Timber	A Class	Single Lane	
Yabba Creek crossing No 5	1012	10.91	24m	Timber	A Class	Single Lane	
Yabba Creek crossing No 6	1013	12.25	52m	Timber	A Class	Single Lane	Structure is closed to all vehicles operating under excess mass permits or excess mass guidelines. Restricted to vehicles that comply with general mass limits.
No restrictions							
Yabba Creek crossing No 2	1009	7.20	27m	Prestressed Concrete	H20S16	Two Lanes	-
Yabba Creek crossing No 3	1010	8.37	27m	Prestressed Concrete	H20S16	Two Lanes	-

Figure 3–17: Yabba Creek Road – bridges and culverts

3.1.8 Moy Pocket Road

Moy Pocket Road is generally in good condition but has frequent curves and variable vertical alignment. This type of road environment is consistent with a low to intermediate speed rural road. The quarry shown in Figure 3–18 will supply the site with gravel material.

The following pinch point / constraints are noted:

- Frequent reduced radii curves through road cuttings creates a narrow road environment (see Figure 3–19 which increases hazards for passing HV's. See Figure 3–19.
- A watercourse crossing with culvert and causeway is located approximately 250m south of the Moy Pocket / Walker Road intersection and shown in Figure 3–20. This creates a constrained roadway with steep batters and no road shoulder offset.
- These elements could be considered a possible higher risk for opposing HV movements, however, regular drivers from the quarry should be familiar with the road.

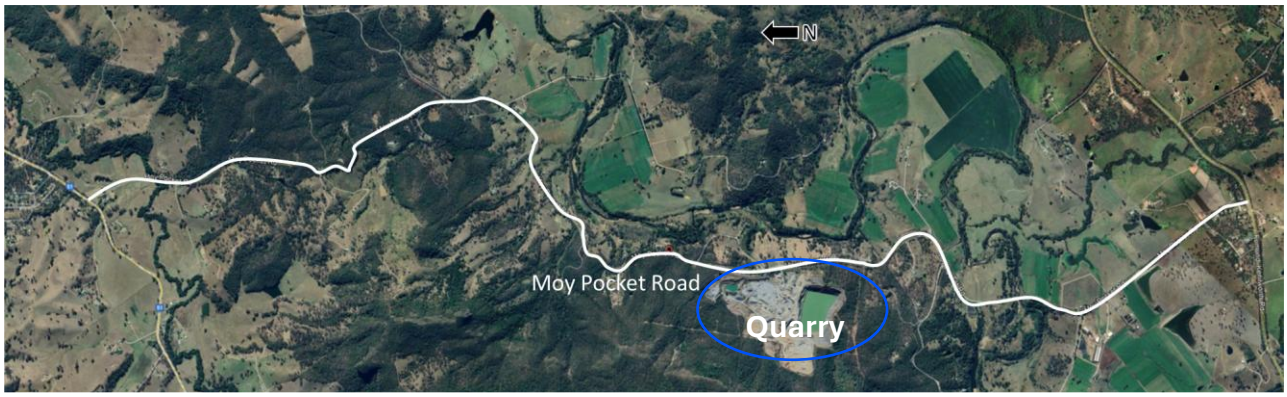


Figure 3–18: Moy Pocket Road alignment

Figure 3–19: Moy Pocket Road – frequent curves increase hazard for passing HV's

Figure 3–20: Moy Pocket Road – culvert and causeway 250m south of Walker Road

3.1.9 Bella Creek Road

Bella Creek Road is a single lane gravel road with a width of approximately 3.5m. The surrounding road shoulder is typically flat and grassed which permits occasional safe passing of HV's. There are several constraints along the road alignment create pinch points that restrict the ability for opposing vehicles to passing, these pinch points are characterised by water crossings, poor sight distance, sections of denser tree vegetation, and embankments.

Project traffic is currently managed along Bella Creek Road with a radio procedure which allows opposing vehicles to notify and pass at designated Call Points.

Figure 3–21: Bella Creek Road – example of water crossing and trees restricting ability for opposing vehicles to pass

3.1.10 Borgan Road

Borgan Road is accessed from Bella Creek Road and is located on the west part of Borumba Dam. The road is a single lane rural local gravel road controlled by GRC. The road leads from Bella Creek Road up to the Main Site gate. Project traffic is currently managed along Borgan Road with a radio procedure which allows opposing vehicles to notify and pass at designated Call Points.

3.1.11 Old Yabba Road

Old Yabba Road connects Borumba Dam Road directly to Bella Creek Road with a 5.0m wide gravel surfaced road. The road runs through the Borumba Dam campgrounds and over a level water crossing which regularly floods.

3.2 Southern network

The selection of these routes was focused around areas which already have high percentage of HV use. All the roads listed below have high split of HV's between 11% and 25%, except for Williams Street which is 4%. Whilst SMEC has analysed the traffic with all LVs approaching Kilcoy from the east as the greatest impact, LVs could also approach from the west via D'Aguilar Highway.

3.2.1 D'Aguilar Highway

D'Aguilar Highway is a State-controlled highway with two-way two-lane formation separated by barrier lines with some sections having a wide centreline treatment. The sealed road shoulder is variable in width on the eastern and western approaches to Kilcoy with grass verges and with numerous trees (≥10cm in diameter) offset 2-3m from the carriageway.

Numerous rural gravel driveways (Figure 3–22) and gravel pullover bays occur along the highway with gravel being tracked onto the carriageway. Hazard signs warn of the risk of stones being flicked up and causing stone strikes to passing vehicles and motorcyclists.

It is noted that extensive upgrades have been underway on the D'Aguilar Highway.

Figure 3–22: Example of gravel driveways

3.2.2 Brisbane Valley Highway

Brisbane Valley Highway connects from D'Aguilar Highway in the north to the Warrego Highway in the south. The two-lane two-way road is of a good standard with a general 100km/h speed limit and 60km/h through the small village of Harlin.

3.2.3 Sinnamons Lane

Sinnamons Lane is the primary access to the quarry and two farm access roads. It is a 6.0m wide unmarked sealed road with flat geometry and long straight sections. All quarry trucks use this road to gain access on the public road network. No streetlighting is installed at the intersection with Brisbane Valley Highway.

3.2.4 Williams Street

Entry into Williams Street from D'Aguilar Highway is not a standard intersection configuration. Williams Street is at an awkward angle midway on a 90-degree curve to D'Aguilar Highway.

On road cycle lanes run along D'Aguilar Highway, through the Williams Street / D'Aguilar Highway intersection and 90-degree bend. It is expected longer west bound HV's navigating this 90-degree curve will encroach into the cycle lane representing a risk to cyclists.

A pedestrian crossing point is situated slightly south of Williams Street on the D'Aguilar Highway which further complicates the interaction between road users at this point. Whilst identified as a risk, no pedestrian crashes have been recorded in the last five years.

Figure 3–23 illustrates the issues discussed above.

Figure 3–23: William Street / D'Aguilar Highway - associated 90-degree bend and pedestrian crossing point

3.2.5 Kilcoy Murgon Road (urban section)

Vehicles accessing Kilcoy Murgon Road from D'Aguilar Highway and William Street must navigate local roads that primarily provide access to residential houses and community buildings. Higher demand on-street parking is located adjacent to several community buildings (i.e., Kilcoy RSL, Post Office) with minimal clearance from the carriageway. See Figure 3–24.

Despite the road being used for logging, a noticeable increase in HV movements could increase the risk for drivers parallel parking and could raise concerns from the local community. Of note, no pedestrian crashes have been recorded in the last five years.

Figure 3–24: Kilcoy Murgon Road – example on-street parking with minimal clearance from traffic lanes.

3.2.6 Kilcoy Murgon Road (rural)

Kilcoy Murgon Road formation, between Kilcoy and Sunday Creek Road, is in generally good condition with long straight stretches, mixed with high radius curves, variable vertical alignment, and centre line delineation in key alignment locations. This type of road environment is consistent with an intermediate speed rural road.

The following pinch point / constraints are noted:

- Numerous gravel driveways access off the road and have tracked gravel onto the road.
- Narrow shoulders occur frequently along Kilcoy Murgon Road.
- A high number of wide culverts pass under the road with minimal offset between edge of bitumen and headwall. Vegetation is typically overgrown and high around the culvert headwalls which hides where the headwalls are located and disguises the minimum offset.
- A two-way single lane bridge over Sheep Station Creek, approximately 8.5km north of Kilcoy. Northbound traffic is controlled via give way signage and line marking. There is good visibility approaching the give way sign. See Figure 3–25.

Figure 3–25: Kilcoy Murgon Road – single lane bridge with give way

- On the same bridge over Sheep Station Creek as above, the bridge has no safety barriers installed. See Figure 3–26.

Figure 3–26: Kilcoy Murgon Road – Sheep Station Creek bridge crossing – single lane and no safety barriers

- A two-way two-lane bridge over Sheep Station Creek, approximately 10km north of Kilcoy, with no safety barrier protection and high drop off either side. Bridge not considered suitable for two-way HV traffic. See Figure 3–27.

Figure 3–27: Kilcoy Murgon Road – Sheep Station Creek 2 bridge crossing – Narrow Road width, no shoulders, no safety barriers

- A two-way two-lane bridge over Sheep Station Creek (East Branch), approximately 17km north of Kilcoy, has substandard safety barriers with high drop off either side.
- From Kilcoy Murgon Road / Ten Mile Road intersection through to Sunday Creek Road alignment changes to frequent curves, changing vertical alignment and overgrown vegetation frequently close the edge of bitumen. These characteristics combine to reduce sight lines towards approaching vehicles and frequently the recommended speed is less than the posted speed limit. See Figure 3–28.
- Kilcoy Murgon Road / Sunday Creek Road intersection currently has no turn treatments.

Figure 3–28: Kilcoy Murgon Road / Ten Mile Road intersection with poor approach sight lines due to changing alignment

- Very steep road grades commencing approximately 11km south of Sunday Creek Road intersection. See Figure 3–29.

Figure 3–29: Kilcoy Murgon Road – steep winding climb

- Gravel and rocks which have fallen off the embankment at numerous locations indicates risk for further debris landing on the road. Sight distance through the embankment and road curve is limited. It appears works are currently under way to repair. See Figure 3–30.

Figure 3–30: Kilcoy Murgon Road – rocks and debris on road edge road.

The details and limitations of structures on Kilcoy Murgon Road are detailed in Table 3–6. The structures are limited to general access weight limits.

Table 3–6: Kilcoy Murgon Road structures with vehicle restrictions

Bridge No /description	Structure ID	Chainage (km)	Length (m)	Type	Design Class	Lanes	Restrictions
Sheepstation Creek No 1 - Bridge	980	8.39	53	Girder/ Beam - Timber	A Modified	1	Structure is closed to all vehicles operating under excess mass permits or excess mass guidelines. If no alternative route is available, a Special Assessment Excess Mass Permit application may be submitted to a Main Roads Permit Officer for consideration.
Sheepstation Creek No 2 - Bridge	981	10.36	37	Girder/ Beam - Timber	A Modified	2	

3.2.7 Winya Road

Project traffic is expected to go into Kilcoy and not use Winya Road and thus not included in Table 7–10.

Winya Road is a sealed road and approximately 6.0m in width. There are several private property accesses along the route. The terrain is gently undulating with cautionary road signage and roadside guideposts along the route's length.

The Kilcoy Creek Walsh's Crossing is a ~150m bridge crossing situated about halfway along the road link.

3.2.8 Mount Kilcoy Road

Project traffic is expected to go into Kilcoy and not use Mount Kilcoy Road and thus not included in Table 7–10.

Mount Kilcoy Road is an extension of Winya Road from the D'Aguilar Highway to Kilcoy Murgon Road.

Mount Kilcoy Road is a sealed road (approximately 6.0m width) and posted speed 100km/h. The vertical and horizontal alignment appears to meet standards.

Mount Kilcoy Road provides access to the Mount Kilcoy area further north-east.

There is some road lighting along Mount Kilcoy Road at the Caballo Way intersection approaches.

3.2.9 Sunday Creek Road

Sunday Creek Road from Kilcoy Murgon Road is sealed for the first 1.7km and 5.0 – 6.0 m in width. Several elements of the route were noted which include:

- A narrow bridge is 500m from Kilcoy Murgon Road. The bridge has tight approaches, restricted sight lines and is a narrow steel girder bridge approximately 4.0 m wide. This bridge will need to be considered for width constraints.
- From 600m there is a moderately steep grade (approximately 10% – 12%) on the sealed section for approximately 1km.
- There is unsealed road from 1.7km to Yielo Road. Approximate 4.0 – 5.0m road formation width with moderate grades and moderately steep verges.
- Sunday Creek Road is a Council managed road from Chainage 0 to 3390. From this point it becomes a forest track with no road reservation delegation.

The current alignment does not remain within the road reservation in one short section (CH 2380 to 2510 km). An opportunity to address the alignment is expected in future phases of the Borumba Project.

It is noted that development application DA22670 (lodged: 13/07/2022) is currently under assessment on Lot 2 SP228062 Sunday Creek Road. The current approval allows 5 days of events per year and events have taken place in the past. This application seeks approval to host Temporary Entertainment Events for up to 25 days per year.

The Sunday Creek Classic (https://www.sundaycreekclassic.cc/) is a 120km cycle race scheduled for May 2025 on a range of local roads including Sunday Creek Road. In 2021 there were about 100 riders + supporters. The Project will need to approach organisers about managing deliveries while this race is on. Alternatively cease deliveries during the event.

3.2.10 Yielo Road

Yielo Road starts at Chainage 3390 on Sunday Creek Road and follows the road reservation cadastral.

Yielo Road is a narrow (3.0 – 4.0m width) unsealed road with gentle to moderate grades. The road is bordered by Conondale National Park and Sunday Creek National Park for the first 3km. Many large trees are within 1.0 – 2.0m of the current roadway for the first 3km.

Multiple cattle grids and large tracts of land with no fences and cattle and horses roaming. Cattle yards at CH 6.0 km from start of road. Most of the length of road from CH 6.5 km is unformed track. The road terminates at CH 15.0 km and the Upper Camp Gate will be located at this point.

The current alignment does not fully adhere to the road reservation with numerous short sections being off alignment.

An opportunity to address the alignment and geometry is expected in future phases of the Project, noting all relevant approvals, permits and assessments will need to be considered.

No other development is expected to occur on Yielo Road and therefore no growth in traffic volume is expected.

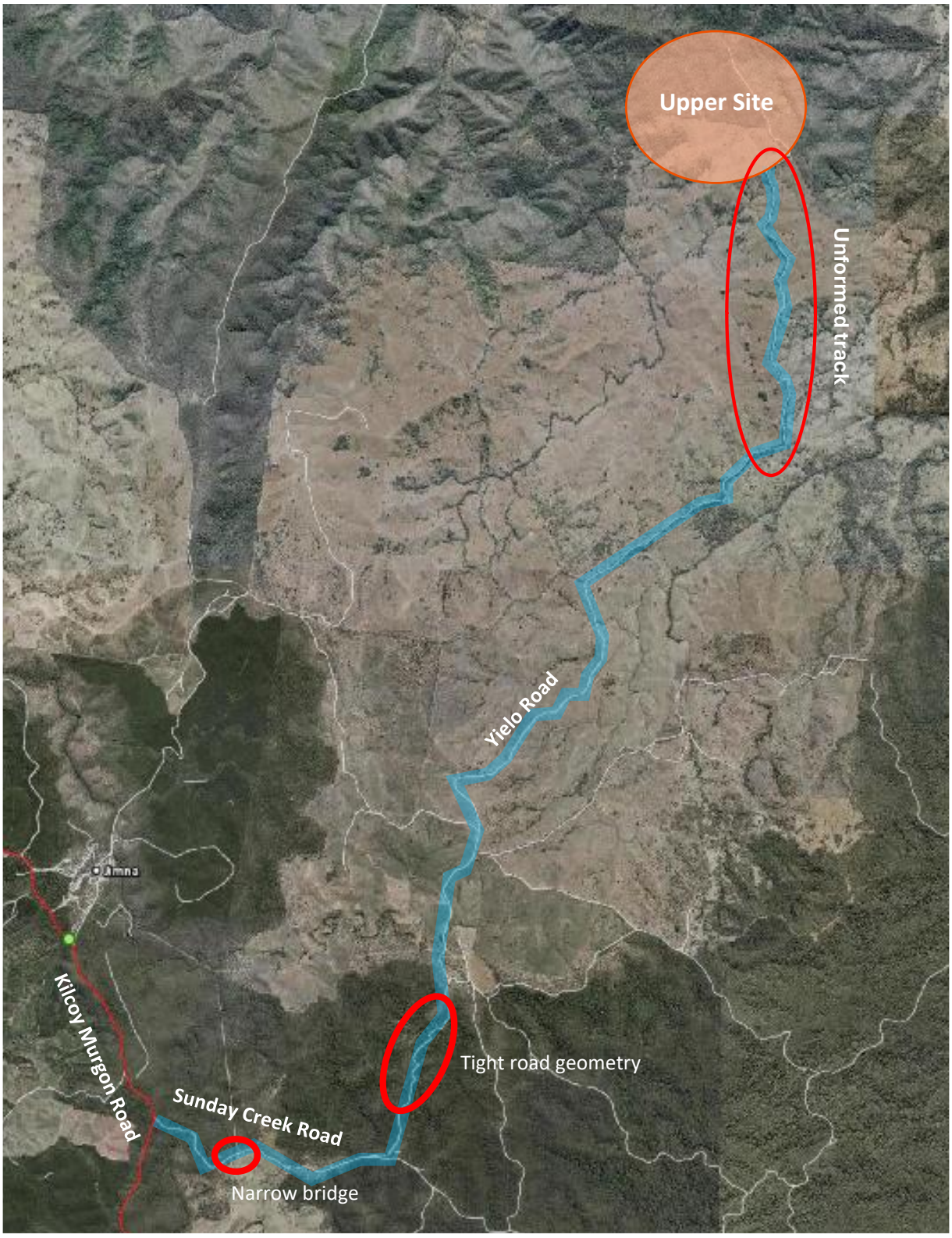


Figure 3–31: Issues on the road network to access to the Upper Site from Kilcoy Murgon Road

4. Existing Traffic Situation

4.1 TMR Data

Traffic data for State-Controlled roads has been obtained from TMR via their website Traffic Data Explorer (tmr.qld.gov.au). Detailed hourly records are shown in **Appendix B**.

To determine the peak hour several areas were reviewed:

- The peak hour traffic for the beginning section of Yabba Creek Road is 98 vehicles per hour (vph) in the 8:00 - 9:00 AM hour and 113vph in the 3:00 - 4:00 PM hour.
- The peak hour traffic for the end section of Yabba Creek Road is generally midday with an estimated 34vph.
- In Imbil town the peak hour traffic volumes are considerably higher. The 8:00 - 9:00 AM peak hour is 232vph and 314vph for the 3:00 - 4:00 PM hour. This can be attributed largely to local trips with school, retail, and business activities.
- There is a distinct increase in traffic over a weekend daytime on the section of Yabba Creek Road beyond Imbil towards the dam, which is likely to be visitors to Borumba Dam and camping areas. This increase is shown in the weekly results contained in **Appendix B**.

4.2 Intersection traffic counts

Traffic counts for the intersections were undertaken on Wednesday 31 January 2024 to Tuesday 6 February 2024 for 24 hours on all seven days. The weather was clearing from previous days of heavy rain fall and Monday and Tuesday were clear and fine. The traffic counts were undertaken outside of school holiday periods. The traffic volumes for AM, PM and midday peak are shown in Figure 4–1 to Figure 4–6.

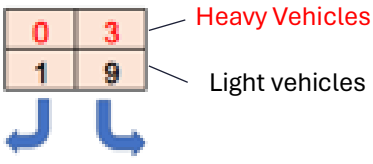
The peak hours detailed below for all intersections are Tuesday 6 February 2024:

- AM Peak 08:00 - 09:00 AM
- Midday peak 2:45 - 3:45 PM
- PM Peak 5:00 - 6:00 PM.

Individual intersections might have a slightly different peak period to above but for consistency the periods above were assessed.

Traffic count data is included as **Appendix C**.

Diagram key:



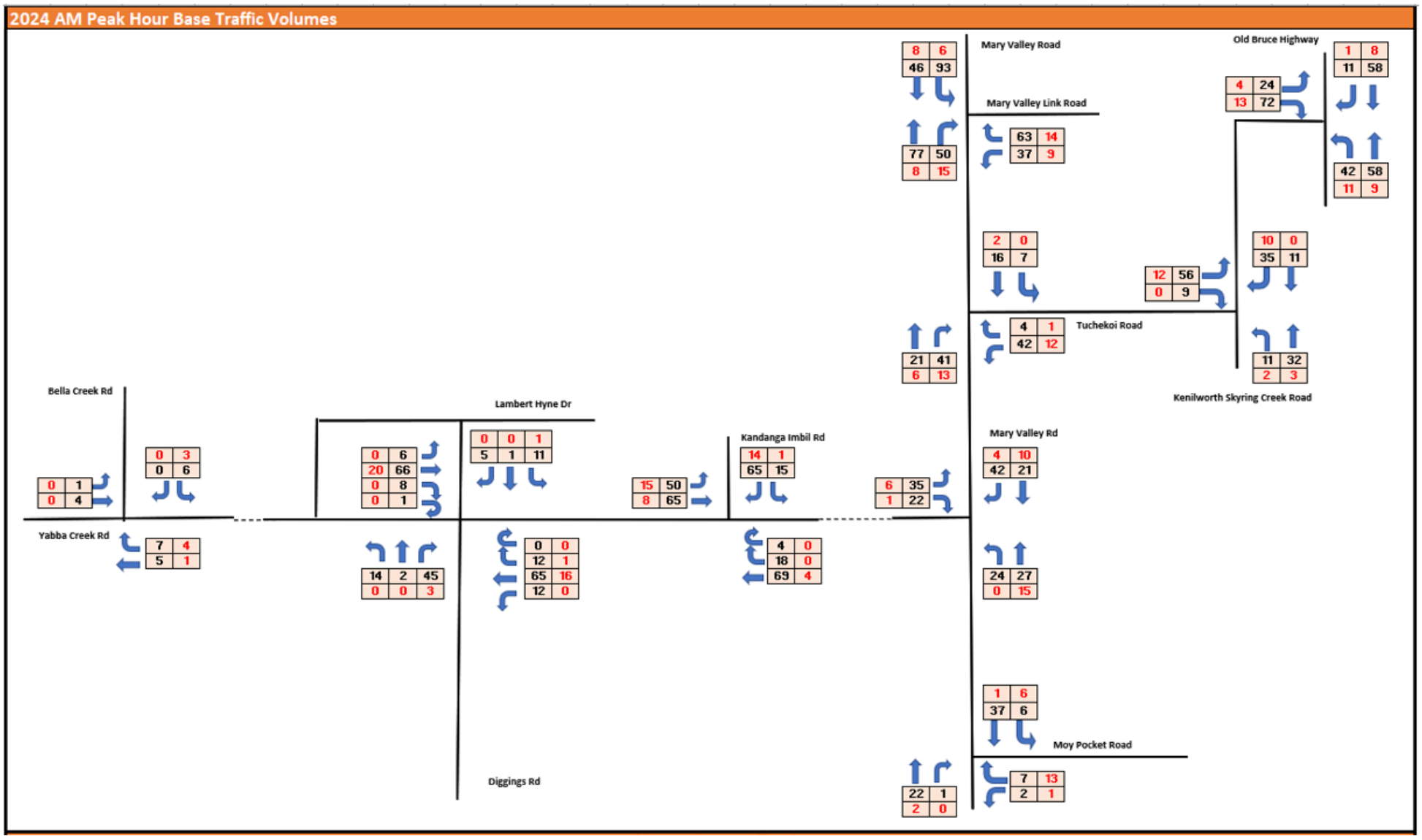


Figure 4–1: 2024 AM Peak Base Traffic Volumes (northern access route)

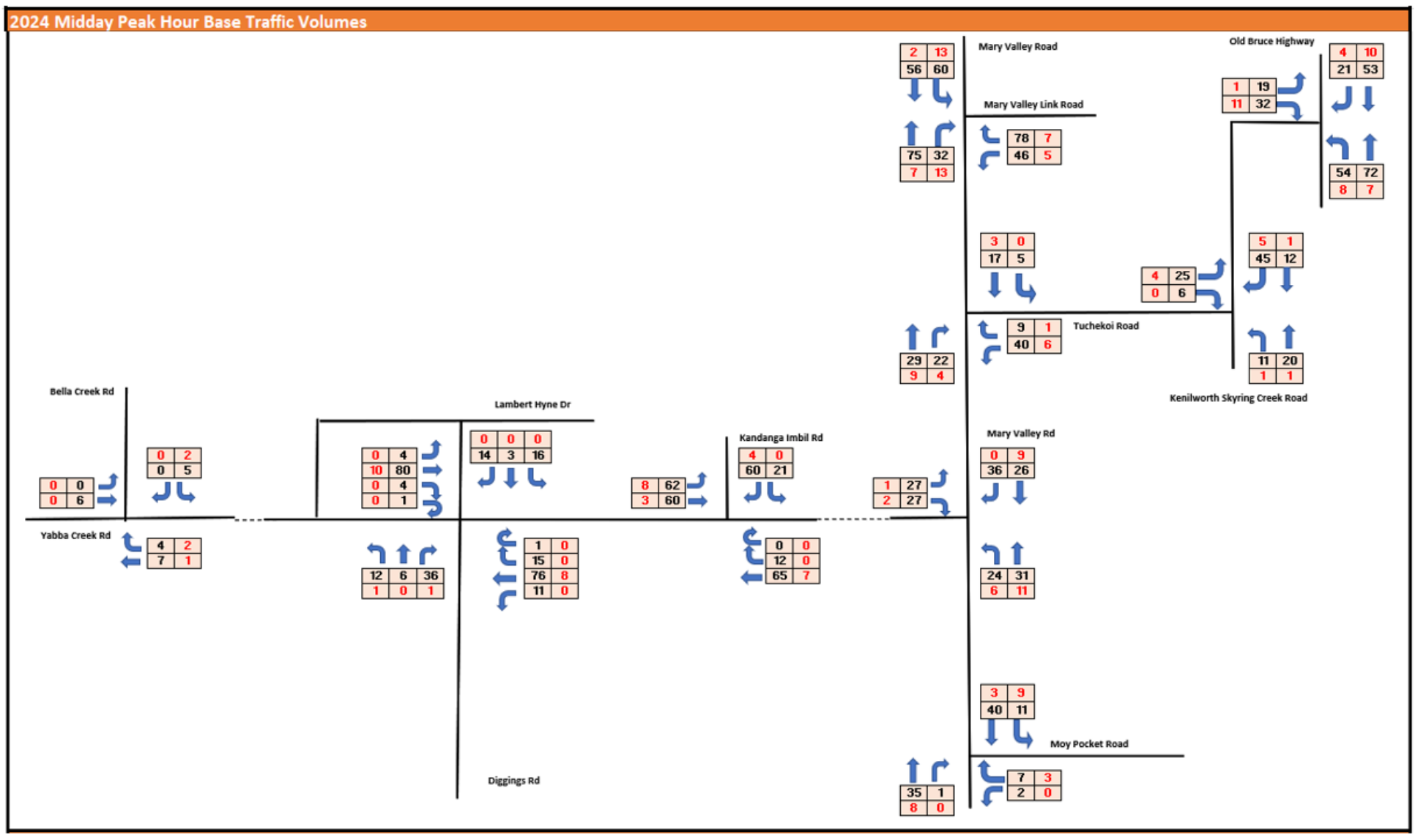


Figure 4–2: 2024 Midday Peak Base Traffic Volumes (northern access route)

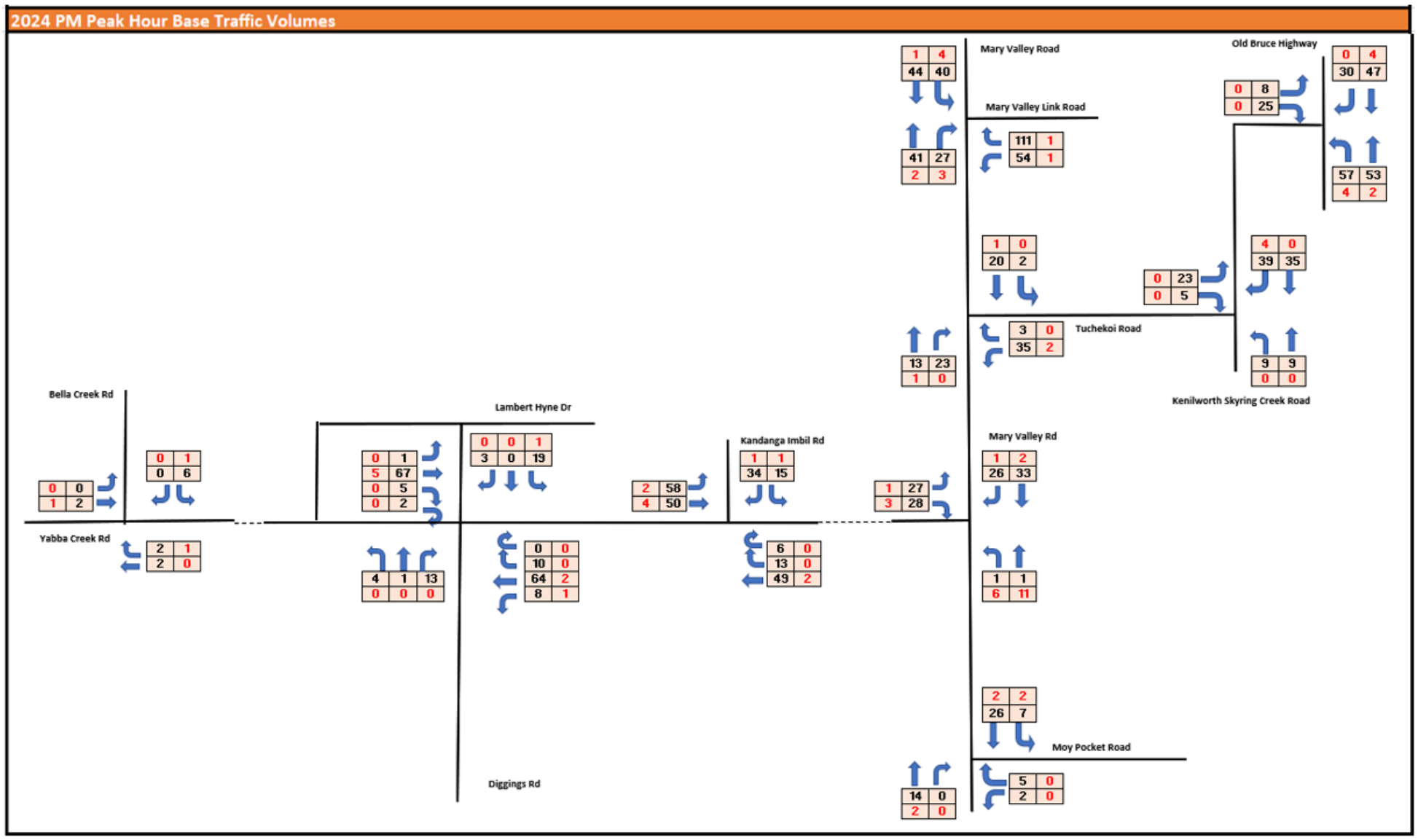


Figure 4–3: 2024 PM Peak Hour Base Traffic Volumes (northern access route)

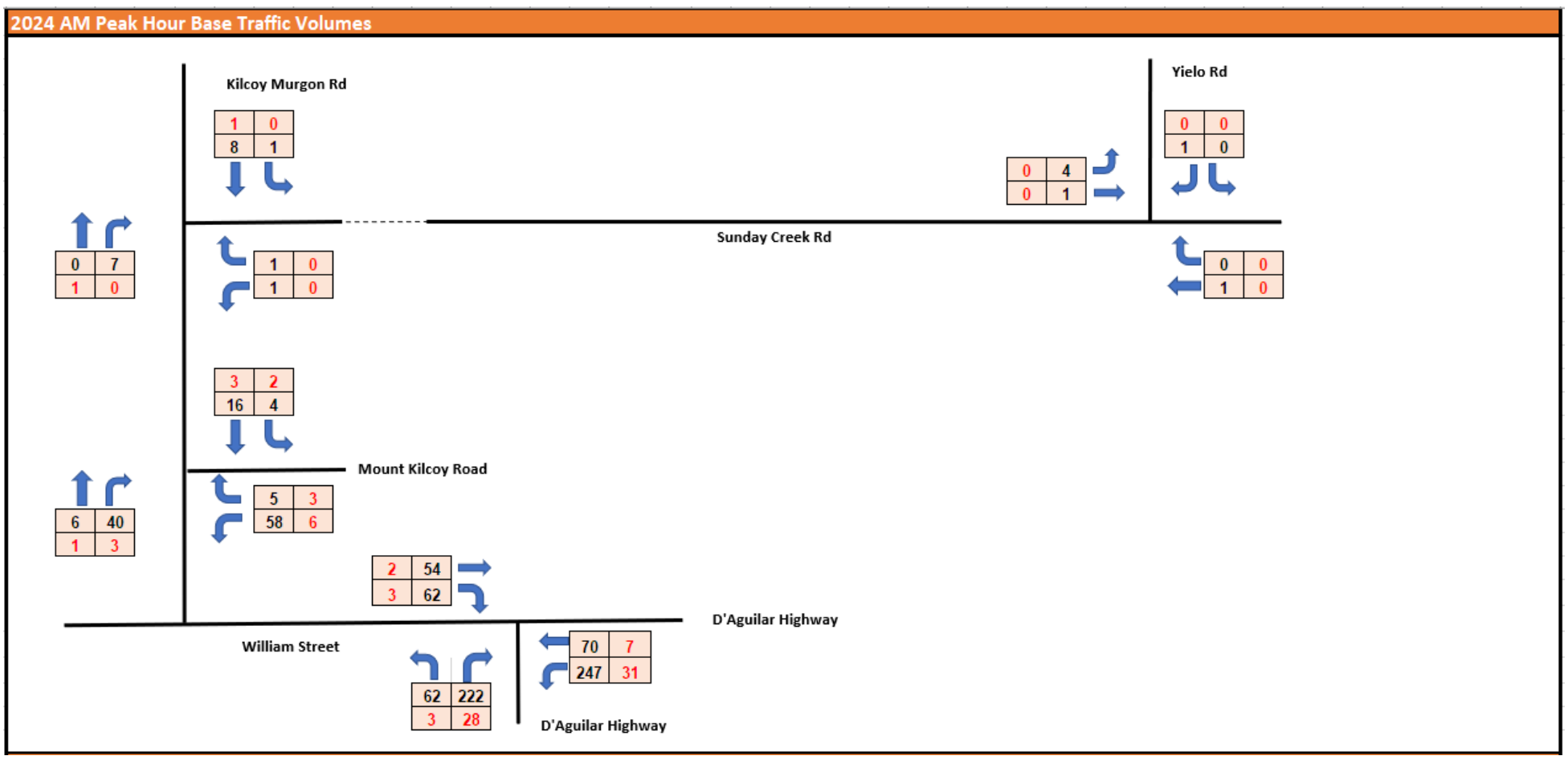


Figure 4–4: 2024 AM Peak Hour Base Traffic Volumes (southern access route)

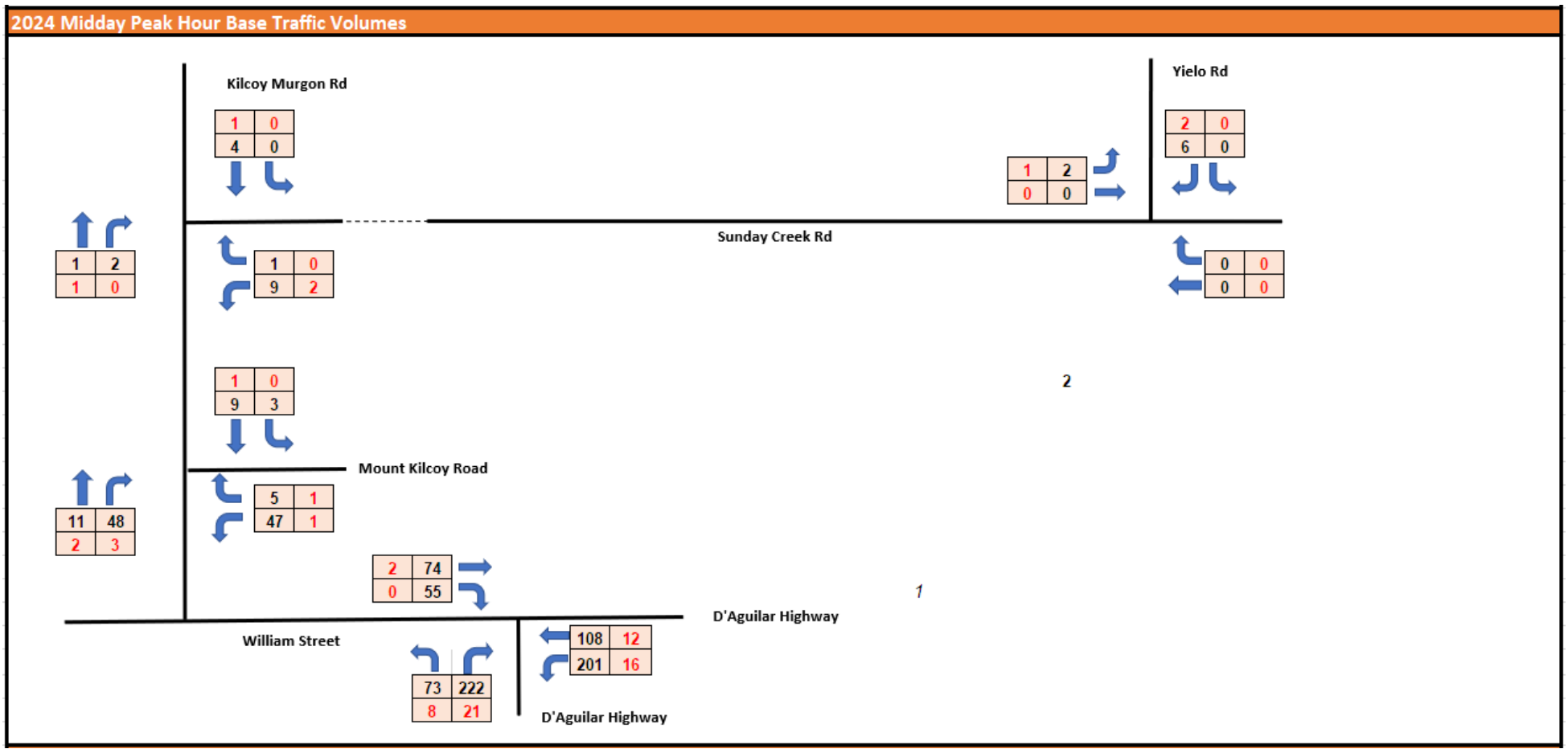


Figure 4–5: 2024 Midday Peak Hour Base Traffic Volumes (southern access route)

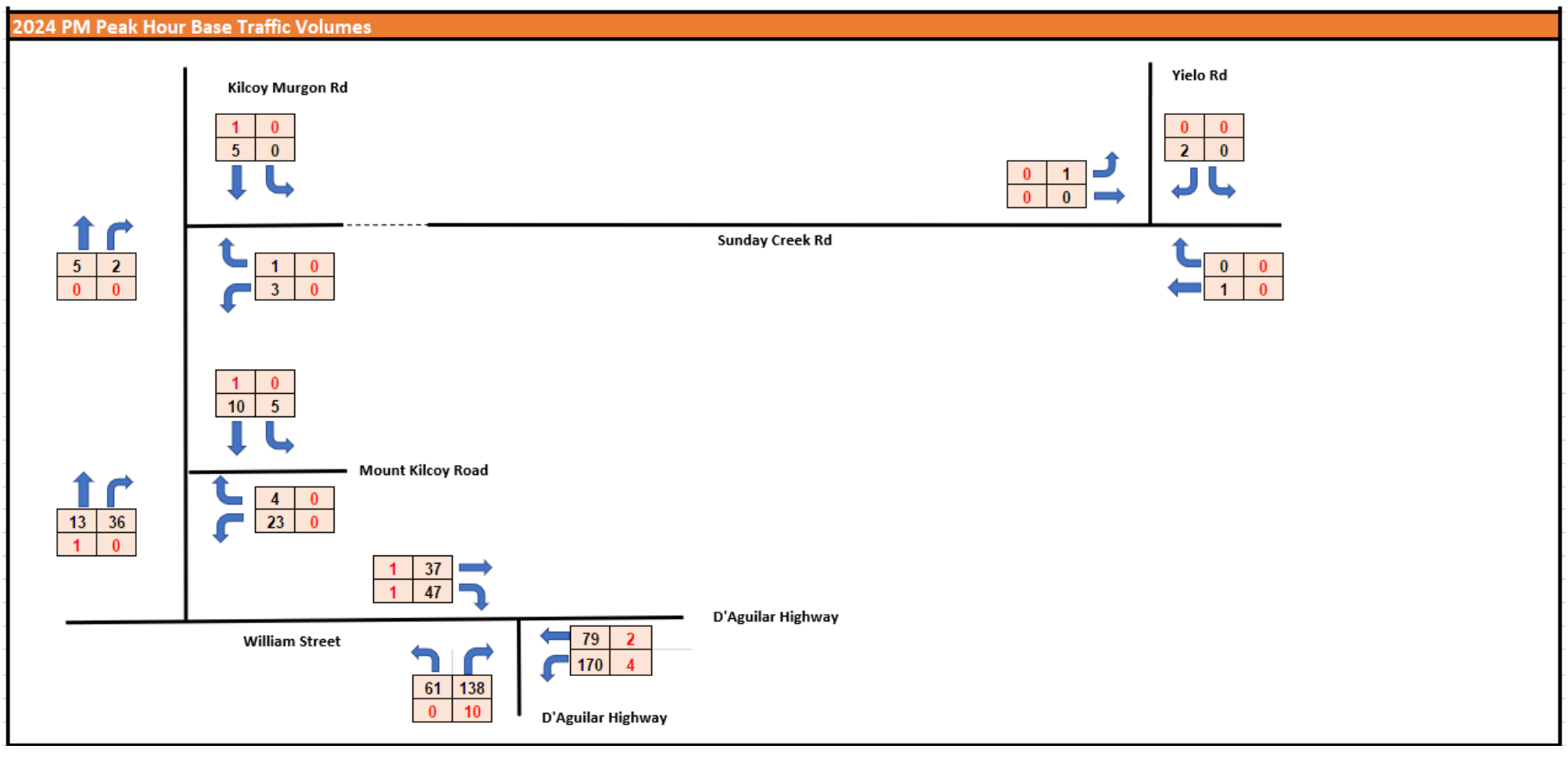


Figure 4–6: 2024 PM Peak Hour Base Traffic Volumes (southern access route)

4.3 Intersection description

For affected intersections, the description, vehicle movements and SIDRA analysis summary is detailed in the following sections. The detailed SIDRA results are contained in Appendix G.

4.3.1 Northern road network

4.3.1.1 Gympie - Brooloo Road / Mary Valley Link Road

This intersection as shown in Figure 4–7 is an unsignalised intersection where Mary Valley Link Road is a give way minor approach with a right and left turn onto Gympie - Brooloo Road. Mary Valley Link Road provides a connection to the Bruce Highway and Traveston in the east.

Figure 4–7: Gympie - Brooloo Road / Mary Valley Link Road intersection (source: Google Maps)

Traffic volumes are relatively balanced numbers in all movement directions. Intersection lighting has been installed to increase safe operations at night.

The SIDRA analysis results in Table 4–1 show that the intersection operates at a high-efficiency level with an overall level of service (LoS A) during the AM peak period. The worst delay recorded is 7.7 seconds on the east approach, with a minimal queue length of 5.4m (less than 1 vehicle). This indicates smooth traffic flow and low congestion at the intersection during the specified time.

Table 4–1: SIDRA results for existing traffic volumes - Gympie - Brooloo Road / Mary Valley Link Road

	Value	Approach	Time period
Intersection LoS	A		
Worst delay (sec)	7.7	East	AM
Worst queue (m)	5.4	East	AM

4.3.1.2 Gympie - Brooloo Road / Tuchekoi Road

This intersection as shown in Figure 4–8 is an unsignalised intersection where Tuchekoi Road is a give way minor approach with a right and left turn onto Gympie - Brooloo Road. Tuchekoi Road provides a connection to Kenilworth Skyring Creek Road and property accesses.

Figure 4–8: Gympie - Brooloo Road / Tuchekoi Road intersection (source: Google Maps)

Major movements for this intersection across all peak periods include a right turn from Gympie - Brooloo Road (south) onto Tuchekoi Road (east) and the reverse movement.

The SIDRA analysis results in Table 4–2 show that the intersection operates at a high-efficiency level with an overall level of service (LoS A) during the AM peak period. The worst delay recorded is 5.9 seconds on the east approach, with a minimal queue length of 2.1m (less than 1 vehicle) in south approach. This indicates smooth traffic flow and low congestion at the intersection during the specified time.

Table 4–2: SIDRA results for existing traffic volumes - Gympie - Brooloo Road / Tuchekoi Road

	Value	Approach	Time period
Intersection LoS	A		
Worst delay (sec)	5.9	East	AM
Worst queue (m)	2.1	South	AM

4.3.1.3 Cooroy - Gympie Road / Kenilworth Skyring Creek Road

This intersection as shown in Figure 4–9, it is well fitted with raised separations between opposing traffic directions and low angle slip lanes for vehicles turning in and out of Kenilworth Skyring Creek Road. Single turning lanes exist for northbound and southbound traffic along the Cooroy - Gympie Road with significant queue length for vehicles to slow to a stop.

Figure 4–9: Cooroy - Gympie Road / Kenilworth Skyring Creek Road intersection (source: Google Maps)

Vehicles travelling along the Cooroy - Gympie Road can access the Bruce Highway at a northern intersection with Mary Valley Link Road intersection (5km from Kenilworth Skyring Creek Road / Cooroy - Gympie Road Intersection) and a southern intersection with Cooroy Connection Road (13km from Kenilworth Skyring Creek Road / Cooroy - Gympie Road Intersection).

During the AM and PM peak period of the week, the proportion of vehicles travelling north from Kenilworth Skyring Creek Rd and travelling west from northern approach of Old Bruce Highway is much lower than the other movements of the approaches. This contrasts the weekend peak hour traffic which has an even split between movements of these approaches. Therefore, during the week, most vehicles originating from the east and north are travelling towards a southern destination.

The SIDRA analysis results in Table 4–3 show that the intersection operates at a high-efficiency level with an overall level of service (LoS A) during the AM peak period. The worst delay recorded is 6.7 seconds on the west approach, with a minimal queue length of 3.0m (less than 1 vehicle). This indicates smooth traffic flow and low congestion at the intersection during the specified time.

Table 4–3: SIDRA results for existing traffic volumes - Cooroy - Gympie Road / Kenilworth Skyring Creek Road

	Value	Approach	Time period
Intersection LoS	A		
Worst delay (sec)	6.7	West	AM
Worst queue (m)	3.0	West	AM

4.3.1.4 Kenilworth Skyring Creek Road / Tuchekoi Road

The intersection as shown in Figure 4–10 between Tuchekoi Road and Kenilworth Skyring Creek Road acts as an efficient route to Imbil from the Bruce Highway and the Old Bruce Highway as it allows vehicles to bypass Kandanga in the north.

Figure 4–10: Kenilworth Skyring Creek Road / Tuchekoi Road intersection (source: Google Maps)

A significant volume of traffic originates from the northern approach of Kenilworth Skyring Creek Road when compared with the Mary Valley Road adjacent north approach. This indicates traffic prefers to travel south from the Bruce Highway using Kenilworth Skyring Creek compared to Mary Valley Road. This is assumed to be because the Kenilworth Skyring Creek Road and Tuchekoi Road is an efficient southbound route from the Bruce Highway. Whereas Mary Valley Road is accessed from the Bruce Highway further north and travels through Kandanga before intersecting with Tuchekoi Road.

This behaviour is also seen in the northbound direction from the Tuchekoi Road eastern approach. A higher proportion of vehicles use Mary Valley Road to access Kenilworth Skyring Rd, via Tuchekoi Road, and continue to Old Bruce Highway. During the PM Peak, traffic volume from the southern Skyring Creek Rd approach is

substantially lower than the other approaches for the PM peak period and is also unique to that time period, the AM and PM peak do not experience this reduced volume.

The SIDRA analysis results shown in Table 4–4 indicate that the intersection performs at a level of service (LoS A) during the AM peak period. The worst delay experienced is minimal, with a delay of only 5.9 seconds occurring on the west approach. Additionally, the worst queue length observed is just 1.8m, also on the west approach, indicating smooth traffic flow and minimal congestion at this intersection during the AM peak.

Table 4–4: SIDRA results for existing traffic volumes - Kenilworth Skyring Creek Road / Tuchekoi Road

	Value	Approach	Time period
Intersection LoS	A		
Worst delay (sec)	5.9	West	AM
Worst queue (m)	1.8	West	AM

4.3.1.5 Kenilworth - Brooloo Road / Moy Pocket Road

Kenilworth - Brooloo Road / Moy Pocket Road as shown in Figure 4–11 is a T-intersection located south of Brooloo township. Moy Pocket Road is a Stop signed and lined priority controlled minor approach. Limited to no traffic generated by Exploratory Works is expected to navigate past this intersection.

Figure 4–11: Kenilworth - Brooloo Road / Moy Pocket Road intersection (source: Google Maps)

The northern approach experiences the highest volume of traffic throughout all periods assessed. The movement from north to south sees the highest amount of traffic for the AM and weekend peak hour. The north to south and south to north through movement in the PM peak is the same. Significantly more HV's through this intersection in the PM peak.

The SIDRA analysis results in Table 4–5 show that the intersection operates at a high-efficiency level with an overall level of service (LoS A) during the AM peak period. The worst delay recorded is 7 seconds on the south-east approach, with a minimal queue length of 0.9m (less than 1 vehicle). This indicates smooth traffic flow and low congestion at the intersection during peak periods.

Table 4–5: SIDRA results for existing traffic volumes - Kenilworth - Brooloo Road / Moy Pocket Road

	Value	Approach	Time period
Intersection LoS	A		
Worst delay (sec)	7.0	Southeast	AM
Worst queue (m)	0.9	Southeast	AM

4.3.1.6 Gympie - Brooloo Road / Yabba Creek Road

The intersection as shown in Figure 4–12 is an unsignalised intersection with some street lighting. Gympie - Brooloo Road has a channelised left and right turn into Yabba Creek Road.

Figure 4–12: Gympie - Brooloo Road / Yabba Creek Road intersection (source: QH)

There was a high proportion of right-turning vehicles from Gympie - Brooloo Road onto Yabba Creek Road towards Imbil at the AM peak. Mary Valley State College is located at Imbil.

The SIDRA analysis results in Table 4–6 show that the intersection operates at a high efficiency level with an overall level of service (LoS A) during the AM peak period. The worst delay recorded is 6.2 seconds on the west approach, with a minimal queue length of 1.8m (less than 1 vehicle). This indicates smooth traffic flow and low congestion at the intersection during the specified time.

Table 4–6: SIDRA results for existing traffic volumes - Gympie - Brooloo Road / Yabba Creek Road

	Value	Approach	Time period
Intersection LoS	A		
Worst delay (sec)	6.2	West	AM
Worst queue (m)	1.8	West	AM

4.3.1.7 Yabba Creek Road / Diggings Road

The intersection as shown in Figure 4–13 is an unsignalised intersection with street lighting within the township of Imbil.

Figure 4–13: Yabba Creek Road / Diggings Road intersection (source: QH)

There was a high proportion of through vehicles at this intersection for both directions on Yabba Creek Road for all three counts. There was a high proportion of right-turning vehicles from Diggings Road onto Yabba Creek Road at the AM peak. Mary Valley State College is to the east of Diggings Road. For the weekend count there was a high proportion of through vehicles on Yabba Creek Road compared to other movements.

The SIDRA analysis results in Table 4–7 show that the intersection operates efficiently with an overall level of service (LoS A) during the AM peak period. The highest delay recorded is 6.6 seconds on the south approach, accompanied by a worst queue length of 1.8m (less than 1 vehicle). These figures suggest smooth traffic conditions with minimal delays and congestion at the intersection during this AM peak.

Table 4–7: SIDRA results for existing traffic volumes - Yabba Creek Road / Diggings Road

	Value	Approach	Time period
Intersection LoS	A		
Worst delay (sec)	6.6	South	AM
Worst queue (m)	1.8	South	AM

4.3.1.8 Yabba Creek Road / Kandanga Imbil Road

The intersection as shown in Figure 4–14 on the northern side of Yabba Creek Road makes a staggered T intersection with the intersection of George Street / Yabba Creek Road on the southern side of Yabba Creek Road, approximately 25m to the west. It is an unsignalised intersection with street lighting. The township of Imbil is directly to the west and there is a service station approximately 30m to the east of Kandanga Imbil Road on the northern side of Yabba Creek Road.

Figure 4–14: Yabba Creek Road / Kandanga Imbil Road intersection (source: QH)

There was a high proportion of right-turning vehicles from Kandanga Imbil Road onto Yabba Creek Road towards Imbil for all counts compared with other movements. For the weekend count there was a high proportion of through vehicles on Yabba Creek Road compared to other movements.

The SIDRA analysis results in Table 4–8 indicate good intersection performance with a level of service (LoS A) during the AM peak period. The worst delay observed is 6.5 seconds on the north approach, and the maximum queue length is 2.7m (less than 1 vehicle). These values reflect minimal delays and short queues, signifying efficient traffic flow at the intersection during this period.

Table 4–8: SIDRA results for existing traffic volumes - Yabba Creek Road / Kandanga Imbil Road

	Value	Approach	Time period
Intersection LoS	A		
Worst delay (sec)	6.5	North	AM
Worst queue (m)	2.7	North	AM

4.3.1.9 Yabba Creek Road / Bella Creek Road

The intersection as shown in Figure 4–15 is an unsignalised intersection with Bella Creek Road being the minor leg which is unsealed.

Figure 4–15: Yabba Creek Road / Bella Creek Road intersection (source: Google Street View)

There was a high proportion of right-turning vehicles from Bella Creek Road onto Yabba Creek Road in all counts, towards the township of Imbil. For the weekend count there was a high proportion of through vehicles per day on Yabba Creek Road compared to other movements.

The SIDRA analysis results in Table 4–9 show that the intersection operates at a high-efficiency level with an overall level of service (LoS A) during the AM peak period. The worst delay recorded is 5.8 seconds on the northwest approach, with a minimal queue length of 0.4m (less than 1 vehicle) in east approach. This indicates smooth traffic flow and very low congestion at the intersection during the specified time.

Table 4–9: SIDRA results for existing traffic volumes - Yabba Creek Road / Bella Creek Road

	Value	Approach	Time period
Intersection LoS	A		
Worst delay (sec)	5.8	Northwest	AM
Worst queue (m)	0.4	East	AM

4.3.2 Southern network

4.3.2.1 D’Aguilar Highway / William Street

The intersection as shown in Figure 4–16 is a complex intersection with multiple turning manoeuvres. While not directly affected by Project traffic, the southern approach has a very wide pedestrian crossing point which is unsuitable for slower moving, more vulnerable pedestrians. This intersection is considered a higher risk pinch point in the network.

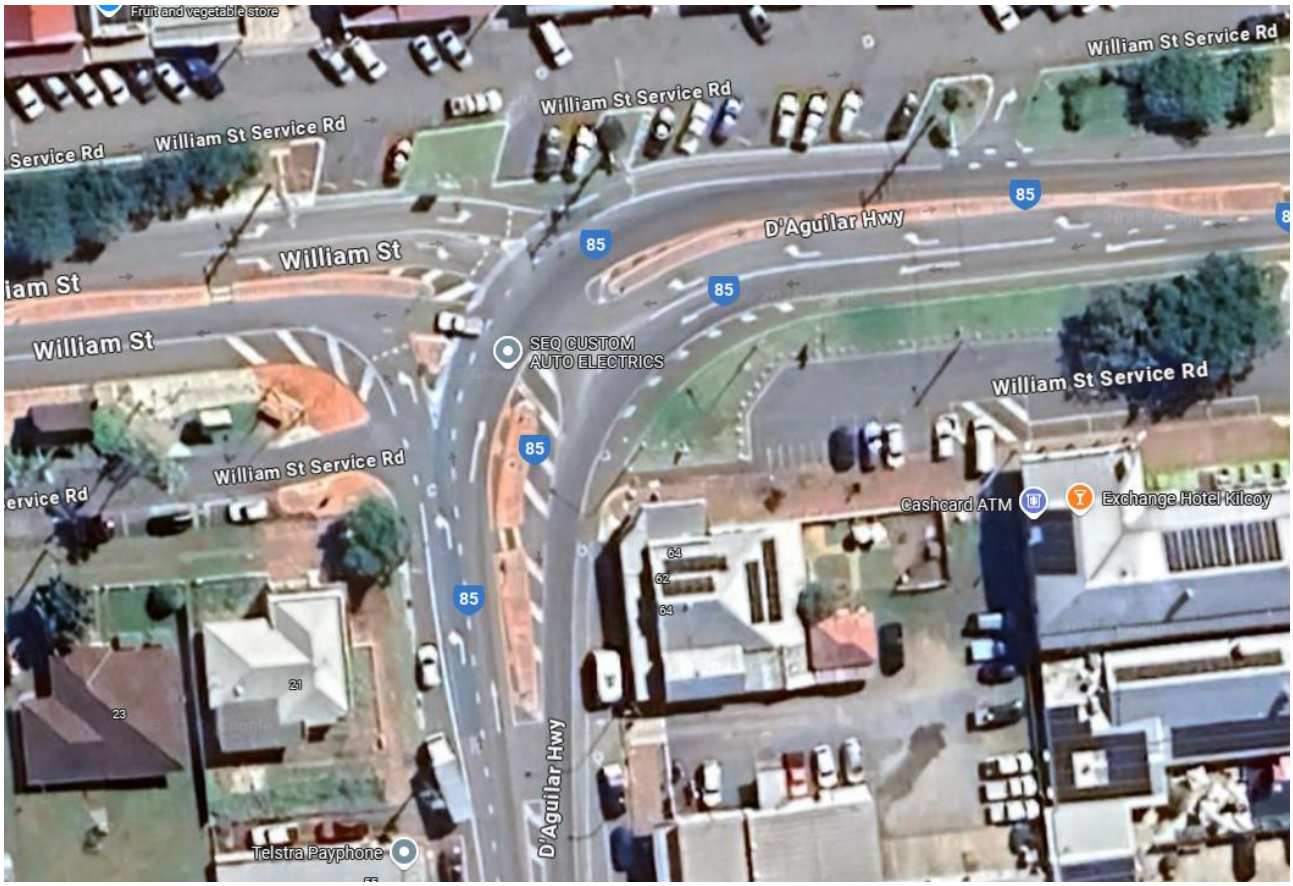


Figure 4–16: D'Aguilar Highway / William Street intersection (source: Google Maps)

While most traffic follows the D'Aguilar Highway alignment through Kilcoy, approximately 25% of westbound traffic turns right into Williams Street and 25% of eastbound traffic turns left into Williams Street. This reflects a high number of turning movements in and out of Williams Street. Traffic egressing Williams Street is reasonably evenly split between left and right turns out.

The SIDRA analysis results in Table 4–10 indicate that the intersection performs at a level of service (LoS A) during the AM peak period. The worst delay experienced is minimal, with a delay of only 8.7 seconds occurring on the northwest approach. Additionally, the worst queue length observed is just 5.5m (less than 1 vehicle), on the south approach, indicating smooth traffic flow and minimal congestion at this intersection during the AM peak.

Table 4–10: SIDRA results for existing traffic volumes - D'Aguilar Highway / William Street

	Value	Approach	Time period
Intersection LoS	A		
Worst delay (sec)	8.7	Northwest	AM
Worst queue (m)	5.5	South	AM

4.3.2.2 William Street / Kilcoy Murgon Road

The intersection as shown in Figure 4–17 is a three-leg roundabout with William Street providing east west through movement and Kilcoy Murgon Road heading north. All exits and approaches are single laned with angled parking permitted at the southern leg.

Figure 4–17: William Street / Kilcoy Murgon Road intersection (source: Google Maps)

While no traffic data is available for this intersection it is reasonable to assume most traffic passing through the intersection moves between the north and east legs. This route provides access to the surrounding areas, such as Jimna. The west leg provides access to local residential housing. A traffic survey undertaken at the Kilcoy Murgon Road / Mount Kilcoy Road intersection identifies approximately 500 ADT heads north from the William Street / Kilcoy Murgon Road intersection direction and approximately 500 ADT heads south towards William Street / Kilcoy Murgon Road intersection.

4.3.2.3 Kilcoy Murgon Road / Mount Kilcoy Road

The intersection as shown in Figure 4–18 is a staggered three-leg juncture, with priority along the north-south Kilcoy-Murgon Road link and with no street lighting.

Figure 4–18: Kilcoy Murgon Road / Mount Kilcoy Road intersection (source: Google Maps)

Most of the traffic occurs between the southern and eastern intersection approaches, travelling to and from Kilcoy. For the weekend peak period, all movements were significantly reduced.

The SIDRA analysis results in Table 4–11 indicate that the intersection performs at a level of service (LoS A) during the AM peak period. The worst delay experienced is minimal, with a delay of only 5.9 seconds occurring on the east approach. Additionally, the worst queue length observed is just 1.2m (less than 1 vehicle), also on the east approach, indicating smooth traffic flow and minimal congestion at this intersection during the AM peak.

Table 4–11: SIDRA results for existing traffic volumes - Kilcoy Murgon Road / Mount Kilcoy Road

	Value	Approach	Time period
Intersection LoS	A		
Worst delay (sec)	5.9	East	AM
Worst queue (m)	1.2	East	AM

4.3.2.4 Kilcoy Murgon Road / Sunday Creek Road

The intersection as shown in Figure 4–19 is an unsignalised intersection with no street lighting.

Figure 4–19: Kilcoy Murgon Road / Sunday Creek Road intersection (source: Google Maps)

There were no vehicles turning left from Kilcoy Murgon Road onto Sunday Creek Road for any of the counts. There was a high proportion of vehicles turning right from Kilcoy Murgon Road onto Sunday Creek Road for the AM count. For the weekend count there was a high proportion of through movements on Kilcoy Murgon Road compared to other movements.

The SIDRA analysis results in Table 4–12 show that the intersection operates efficiently with an overall level of service (LoS A) during the AM peak period. The highest delay recorded is 5.5 seconds on the east approach, accompanied by the worst queue length of 0.2m (less than 1 vehicle) on the south approach. These figures suggest smooth traffic conditions with minimal delays and congestion at the intersection during this AM peak.

Table 4–12: SIDRA results for existing traffic volumes - Kilcoy Murgon Road / Sunday Creek Road

	Value	Approach	Time period
Intersection LoS	A		
Worst delay (sec)	5.5	East	AM
Worst queue (m)	0.2	South	AM

4.3.2.5 Sunday Creek Road / Yielo Road

The intersection is an unsignalised gravel intersection with no street lighting as shown in Figure 4–20.

Yielo Road forks off from Sunday Creek Road but follows the road reservation cadastral. Sunday Creek Road becomes a forest track at this point.

Figure 4–20: Sunday Creek Road /Yielo Road intersection (source: SMEC)

Current traffic volumes at the Sunday Creek Road / Yielo Road intersection are extremely low, with only 60 vpd, with most of that traffic being Project related. The peak hour only has 9 vehicles. As the volumes are so low, this intersection has not been assessed.

There were no HVs observed along Sunday Creek Road or Yielo Road for the AM or weekend peak periods. There were no left-turns from Yielo Road onto Sunday Creek Road and no right-turns from Sunday Creek Road into Yielo Road in any of the peak periods. The HV turning right flows from Yielo Road onto Sunday Creek Road did not progress to Kilcoy Murgon Road for the AM peak. For the weekend peak period all movements were through (no movements in or out of Yielo Road).

The SIDRA analysis results in Table 4–13 show that the intersection operates efficiently with an overall level of service (LoS A) during the AM peak period. The highest delay recorded is 5.5 seconds on the east approach, accompanied by the worst queue length of 0.2m (less than 1 vehicle) on the south approach. These figures suggest smooth traffic conditions with minimal delays and congestion at the intersection during this AM peak.

Table 4–13: SIDRA results for existing traffic volumes - Sunday Creek Road / Yielo Road

	Value	Approach	Time period
Intersection LoS	A		
Worst delay (sec)	5.5	East	AM
Worst queue (m)	0.2	South	AM

4.4 Turn lane warrant assessment (existing)

A turn warrants assessment has been undertaken for existing traffic conditions at key intersections along the construction routes to be used during Exploratory Works. The purpose of the assessment is to identify whether existing intersections meet current traffic conditions.

These assessments have been undertaken in accordance with:

- TMR Supplement to Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections (November 2021).
- Traffic volumes presented within Section 4.2

The following section presents a turn warrant assessment for each major intersection along the:

- Northern network existing conditions – Table 4–14.
- Southern network existing conditions – Table 4–15

Based on Table 4–14 and Table 4–15 the following observations are noted:

- Turn treatments for some key intersections along the northern road network are appropriate with some intersections providing a better turn treatment than required. However, the following intersections do not meet the recommended turn treatments:
  - Diggings Road (north) / Yabba Creek Road intersection:
    - Turn warrants assessment indicates a BAL and BAR are the recommended treatments.
    - The existing layout provides a SL and SR treatment.
  - Diggings Road (south) / Yabba Creek Road intersection:
    - Turn warrants assessment indicates a BAL and BAR are the recommended treatments.
    - The existing layout provides a SL and SR treatment.
  - Kandanga Imbil Road / Yabba Creek Road:
    - Turn warrants assessment indicates a BAR is the recommended treatment.
    - The existing layout provides a SR treatment.
  - Tuchekoi Road / Kenilworth Skyring Creek Road intersection
    - Turn warrants assessment indicates a BAL and BAR are the recommended treatments.
    - The existing layout provides a SL and SR treatment.
- The following intersections along the southern road network do not meet the recommended turn treatments:
  - Mount Kilcoy Road / Kilcoy Murgon Road intersection:
    - Turn warrants assessment indicates a BAR is the recommended treatment.
    - The existing layout provides a SR treatment.

Table 4–14: Turn warrant assessment– northern network existing conditions

Road	Posted Speed (km/h)	Road Type	Turn Type	Splitter Island	AM					Mid-day					PM					Turn Treatment	Existing Treatment
					QM	QT1	QT2	QL	QR	QM	QT1	QT2	QL	QR	QM	QT1	QT2	QL	QR		
Gympie - Brooloo Road (major road)																					
Mark Valley Link Road	100	2-Lane 2-Way	Right	No	238	85	54	99	65	213	82	58	73	45	132	43	45	44	30	CHR(s)	CHR
			Left		54					58					45					BAL	CHL
Tuchekoi Road		2-Lane 2-Way	Right	No	52	27	18	7	54	63	38	20	5	26	37	14	21	2	23	BAR	BAR
			Left		18					20					21					BAL	BAL
Yabba Creek Rd		2-Lane 2-Way	Right	No	124	42	58	24	46	107	35	42	30	36	54	35	12	7	27	BAR	AUR
			Left		58					42					12					BAL	AUL
Yabba Creek Road (major road)																					
Diggings Road (north)	40	2-Lane 2-Way	Right	No	219	81	86	6	13	178	84	90	4	15	139	66	72	1	10	*BAR	SR
			Left		86					90					72					BAL	SL
Diggings Road (south)	40	2-Lane 2-Way	Right	No	213	86	81	12	8	185	90	84	11	4	147	72	66	9	5	BAR	SR
			Left		81					84					66					BAL	SL
Kandanga Imbil Road	60	2-Lane 2-Way	Right	No	211	73	73	65	18	205	72	63	70	12	165	51	54	60	13	BAR	SR
			Left		73					63					54					BAL	BAL
Bella Creek Road	80	2-Lane 2-Way	Right	No	11	6	4	1	11	14	8	6	0	6	5	2	3	0	3	SR	SR
			Left		4					6					3					SL	SL
Cooroy – Gympie Road (major road)																					
Kenilworth Skyring Creek Road	100	2-Lane 2-Way	Right	Yes	133	66	67	53	12	204	63	79	62	25	167	51	55	61	30	BAR	CHR
			Left		67					79					55					BAL	CHL
Kenilworth Skyring Creek Road																					
Tuchekoi Road	100	2-Lane 2-Way	Right	No	59	11	35	13	45	46	13	21	12	50	53	35	9	9	43	BAR	SR
			Left		35					21					9					BAL	SL
Kenilworth - Brooloo Road (major road)																					
Moy Pocket Road	100	2-Lane 2-Way	Right	No	34	24	1	6	1	55	43	3	9	1	20	16	2	2	0	SR	AUR
			Left		1					3					2					SL	SL

*RED text denotes current layout does not meet turn warrant requirement

Table 4–15: Turn warrant assessment– southern network existing conditions.

Road	Posted Speed (km/h)	Road Type	Turn Type	Splitter Island	AM					Mid-day					PM					Turn Treatment	Existing Treatment
					QM	QT1	QT2	QL	QR	QM	QT1	QT2	QL	QR	QM	QT1	QT2	QL	QR		
D'Aguilar Highway (major road)																					
William Road	60	2-Lane 2-Way	Right	Yes	528	278	250	65	77	460	217	243	81	120	322	174	148	61	81	CHR(s)	CHR
			Left		250					243					148					BAL	CHL
Kilcoy Murgon Road (major road)																					
Mount Kilcoy Road	100	2-Lane 2-Way	Right	No	32	7	19	6	43	26	13	10	3	51	30	14	11	5	36	*BAR	SR
			Left		19					10					11					SL	SL
Sunday Creek Road	100	2-Lane 2-Way	Right	No	11	1	9	1	7	7	2	5	0	2	11	5	6	0	2	SR	SR
			Left		9					5					6					SL	SL
Sunday Creek Road																					
Yielo Road	100	2-Lane 2-Way	Right	No	6	1	1	4	0	12	8	1	3	0	2	1	0	1	0	SR	SR
			Left		1					1					0					SL	SL

*RED text denotes current layout does not meet turn warrant requirement

5. Crash Assessment

The vehicle crash history on roads within the Project area, as shown on Figure 5–1 and summarised in Table 5–1, were analysed to identify safety risks. The historical crash data was reviewed for trends and are presented in Figure 5–5, Table 5–1, Table 5–2 and Table 5–3.

Note: the scope of this analysis is based on 5 years and 9 months of crash data (1 January 2019 to 30 September 2024), sourced directly from the Road Use Intelligence unit of TMR.

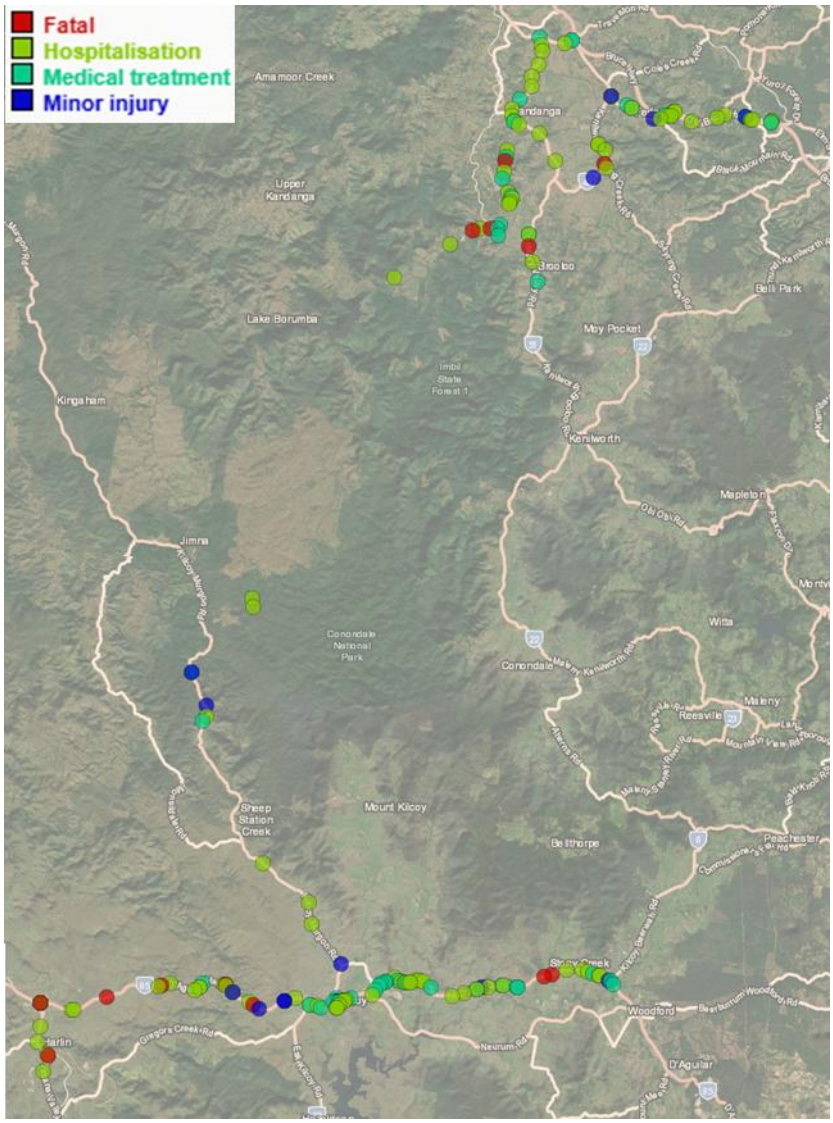


Figure 5–1: Crash History within the Study Extent (1 January 2019 to 30 September 2024)

Table 5–1: Crash Data by Crash Site Location (1 January 2019 to 30 September 2024)

Crash Intersection / Severity	Fatal	Hospitalisation	Medical treatment	Minor injury	Total
Albion Street	1				1
Arnolds Road North		1			1
Ballard Road			1		1
Black Mountain Range Road		1			1
Brisbane Valley Highway	2	6	1	2	11

Crash Intersection / Severity	Fatal	Hospitalisation	Medical treatment	Minor injury	Total
Bruce Highway		7	1		8
Cooroy Connection Road		1	1		2
D'Aguilar Highway	6	35	20	6	67
Diggings Road			1		1
Forbes Drive		1			1
Hope Street		2			2
Kandanga - Imbil Road	1	7	4		12
Kenilworth - Skyring Creek Road	1	5		1	7
Kennedy Street			3		3
Kennedys Road		1			1
Kilcoy - Murgon Road		4	2	3	9
Mary Street		1			1
Mary Valley Link Road		1	3		4
Mary Valley Road	1	12	3		16
Old Bruce Highway		5	5	2	12
Parkinson Road				1	1
Seib Street		1			1
Sunday Creek Road		1			1
William Street			1	1	2
Yabba Creek Road	1	3	1		5
Yielo Road		1			1
Albion Street	1				1
TOTAL	**13**	**96**	**47**	**16**	**172**

Note:

- TMR supplied data identifies 172 crash sites
- Majority of crashes resulted in Hospitalisation

Figure 5–2: Historical Crash Data by Month (1 January 2019 to 30 September 2024)

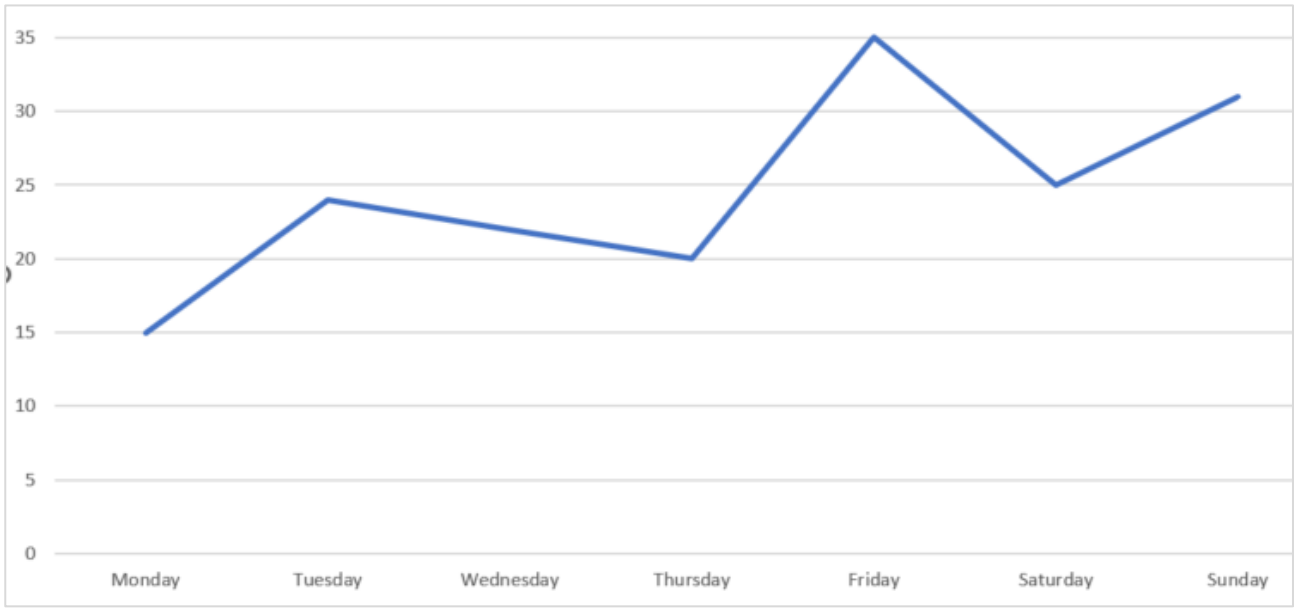


Figure 5–3: Historical Crash Data by Day of Week (1 January 2019 to 30 September 2024)

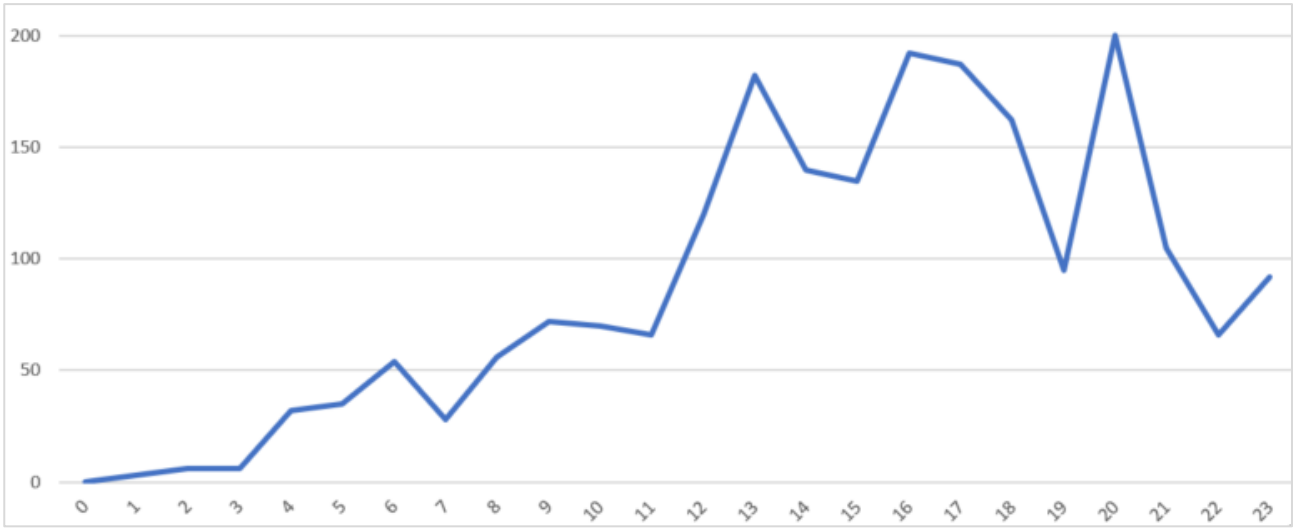


Figure 5–4: Historical Crash Data by Crash Hour (1 January 2019 to 30 September 2024)

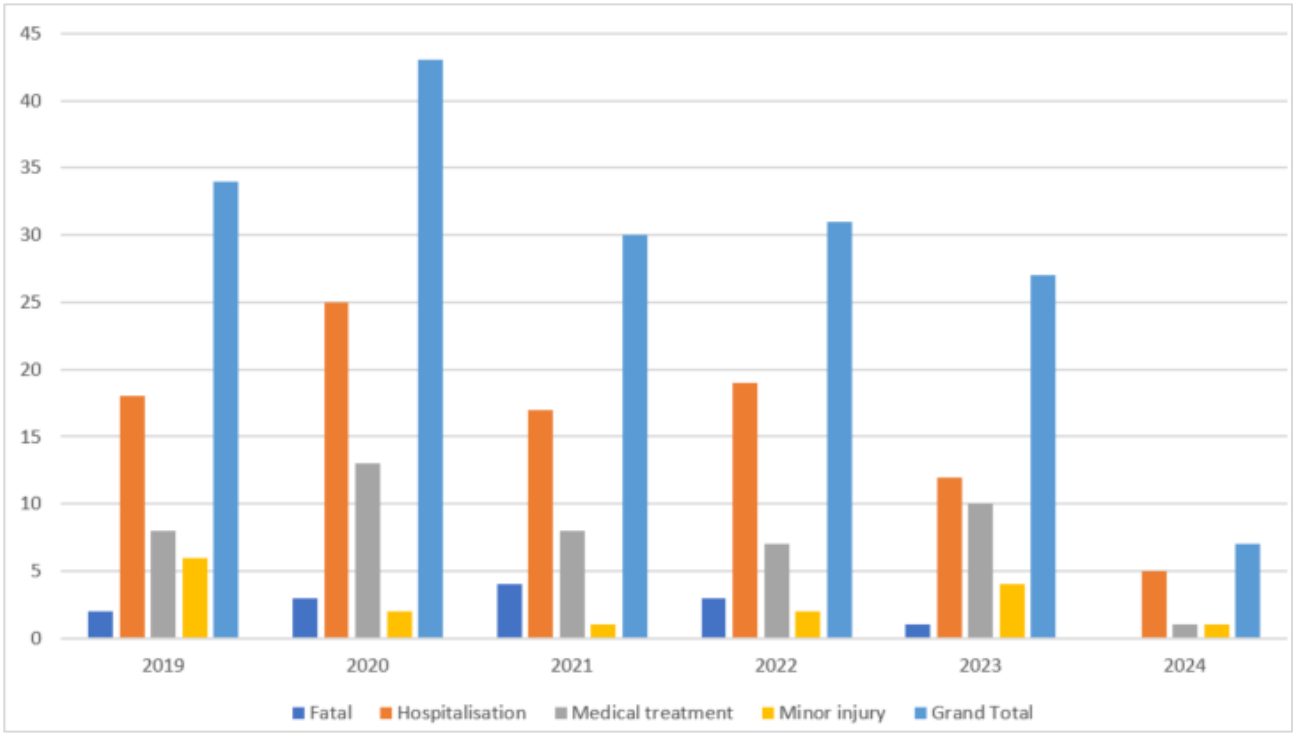


Figure 5–5: Historical Crash Data by Severity and Year (1 January 2019 to 30 September 20242024)

Table 5–2: Historical Crash Data by Crash Site Location and DCA Type (1 January 2019 to 30 September 2024)

Crash DCA Description	No. of Crashes
Off Entering Roadway	3
Head-on	16
Hit Animal	4
Hit Obstruction	3
Hit Parked Vehicle	2
Hit Pedestrian	3
Intersection: Adjacent Approach	14
Lane Change	1

Crash DCA Description	No. of Crashes
Off Path: On Curve	7
Off Path: On Curve: Hit Object	35
Off Path: On Straight	9
Off Path: On Straight: Hit Object	26
Opposing Vehicles Turning	8
Other	4
Out of Control: On Curve	12
Out of Control: On Straight	3
Overtaking / Same Direction	2
Rear End	20
TOTAL	**172**

Table 5–3: Historical Crash Data by Speed Limit (1 January 2019 to 30 September 20242024)

Crash Speed Limit	No. of Crashes
0 – 30 km/h	1
40 km/h	3
50 km/h	9
60 km/h	20
70 km/h	1
80-90 km/h	35
100-110 km/h	103
Total	**172**

Based on these charts the following observations are made:

- 172 crashes were recorded on the road segments in this TIA Project extent between 1 January 2019 to 30 September 2024
- Based on Figure 5–2 to Figure 5–5, there is a general trend for most crashes to occur in the second half of the year, towards the end of the week, and in the PM period.

D'Aguilar Highway recorded 67 crashes (see Table 5–4), equivalent to 39% of all crashes recorded.

- This road section has the most vehicles per kilometres analysed, with 20km of road and an Annual Average Daily Traffic (AADT) of 7,655 vehicles. With noticeably more traffic it is not surprising more crashes occur.
- These crashes resulted in 6 fatal crashes, 35 hospitalisations, 20 medical treatments and 6 minor injuries. This represents 46% of all fatal crashes, 36% of all hospitalisations and 43% of all medical treatments.
- It should be noted that wide centreline treatments were recently installed on D'Aguilar Highway as part of road upgrades in 2022.
- It is noted in Figure 5–6: the posted speed limit along D'Aguilar Highway, between Woodford and Kilcoy, is 100km/h.

Table 5–4: D'Aguilar Highway crashes per year (1 January 2019 to 30 September 2024)

Year	No. of Crashes
2019	16
2020	15
2021	13
2022	14
2023	8
2024	1

Figure 5–6: 100km/h speed zone on D'Aguilar Highway between Woodford and Kilcoy

- Mary Valley Road recorded 16 crashes (see Table 5–5):
  - These included 1 Fatal crash, 12 Hospitalisations and 3 Medical Treatments.
  - A total of 7 crashes occurred in 2020 and no crashes in 2024.
  - These crashes are more frequent towards the northern end of Mark Valley Road.

Table 5–5: Mary Valley Road crashes per year (1 January 2019 to 30 September 2024)

Year	No. of Crashes
2019	1
2020	7
2021	2
2022	3
2023	3
2024	0

6. Road Safety Audit

Yabba Creek Road was selected for a Road Safety Audit (RSA) because it carries a relatively high amount of traffic and has numerous constraints, such as narrow bridges and a busy town centre.

As such, Point 8 has prepared a *Technical Note – Existing Conditions Road Safety Audit (RSA)* of Yabba Creek Road (from Brooloo Road to Yabba Creek Road) and Bella Creek Road - for the first 500m only. This report has included the RSA in **Appendix D**. Below outlines a high-level summary of the RSA finding.

6.1 Yabba Creek Road

The RSA Report highlighted several Extreme and High-risk issues related to the narrow road corridor which has significant horizontal and vertical alignment changes, with inconsistent and limited delineation (warning signs, markers) often not suiting the road conditions, making it difficult to navigate at its posted speed, with large non-frangible trees on the outside of bends presenting a hazard to errant vehicles. The report recommended undertaking a review of the posted speed limit for the existing condition.

The report found that the creek crossings and their approaches were deficient in terms of advanced warning signs, give-way markings, delineation, and guardrails. Crossing No.4 presented additional risks, being at the bottom of a downhill slope after right-hand bend (westbound).

The lack of sealed shoulders and pedestrian / cyclist facilities both the road corridor and Crossings also presents a high-risk at various locations. The Yabba Creek Road – Imbil town extents provide attractors, with parking both sides of the road corridor, but no dedicated crossing facilities presenting high risk. The lack of any pedestrian crossing facilities at Marrapatta House access east of Yabba Creek Crossing No.6, and absence of warning signage informing motorists that pedestrians may be crossing here, also presents a high risk.

6.2 Bella Creek Road

Bella Creek Road connects to Yabba Creek Road at a shallow angle with limited sight distance for approaching eastbound traffic. There is no channelised turn treatment to allow for safe turning from Yabba Creek Road onto Bella Creek Road, with turning motorists having to prop within the through lane, with no room for through motorists to pass safely. The report recommends formalising the Bella Creek Road / Yabba Creek Road intersection by squaring up the approach geometry and sealing the intersection whose road surface is dilapidated.

The road geometry of this 500m section of Bella Creek Road is noted to be difficult to navigate with dips, crests, and blind horizontal curves, with the general surface condition not appropriate for regular use by HV's. The report recommends sealing Bella Creek Road to be a two-lane two-way road corridor or investigating an alternate haul route.

Note, for context the above recommendation is for when the Project flows increase with regular two-way flows which is more applicable for the Main Works phase. During the Exploratory Works phase the trigger for the upgrades is not expected.

7. Project Traffic

7.1 Working hours

Works for most exploratory works components are expected to occur predominantly during standard construction hours over a seven-day work week with a rotating roster. However, some works outside of standard hours are expected during the exploratory works. These include the activities associated with the exploratory tunnels and associated enabling works (e.g. shotcrete batching, spoil relocation and management), and some geotechnical drilling investigations (e.g. deep boreholes at proposed dam locations). Work outside of standard hours is expected to occur 24 hours a day, seven days per week.

7.1.1 Exploratory Works construction

The exploratory works construction program will be based on the following standard construction hours (unless approved otherwise):

- General construction/surface works activities:
  - Monday to Sunday, 6.30 AM - 6.00 PM
  - No work on public holidays.
- Geotechnical drilling:
  - Monday to Sunday, 6.00 AM - 6.00 PM for boreholes less than 200 m deep (with some exceptions)
  - 24 hours a day, 7 days a week for boreholes equal to or more than 200 m deep and shallower boreholes by exception.
- Underground construction activities and associated enabling works:
  - 24 hours a day, 7 days a week.

Works outside of the above construction hours may occur during the exploratory works for the following reasons:

- movement of staff, as well as arrival and departure of construction staff during shift changes
- transport, assembly, or decommissioning of oversized plant, equipment, components or structures
- delivery of ‘in time’ material such as concrete, steel, and other construction materials delivered to site by heavy vehicles
- works requiring continuous construction support such as continuous concrete pours, pipe-jacking or other forms of ground support necessary to avoid a failure or construction incident
- on site movements of heavy plant, materials and equipment
- works in a road reserve
- traffic control crews, including large truck mounted crash attenuator vehicles, medium rigid vehicles, and lighting towers
- emergency works and incident response including tow-trucks for light, medium, and heavy vehicles
- alternative construction rosters to suit delivery or in response to industrial relations issues
- various low-intensity activities.

Where work outside the standard hours (including night works) is required, the works will only proceed on an as required basis and with the appropriate approvals.

For the period when there is no accommodation on site and for staff staying offsite, the project work hours include one hour of travel time to (6:00 - 7:00 AM) and from site (5:00 - 6:00 PM) with 10 hours on site (7:00 AM - 5:00 PM). Figure 7–1 shows the timeline of a typical workday for offsite staff.

Once accommodation becomes available on site for specific tasks, the work hours for those tasks will revert to the standard Monday to Sunday, 6:30 AM - 6:00 PM.

For workers staying in camps there will be a weekly bus service to get from PnR facilities to camp. Staying in camp will allow increased work time.

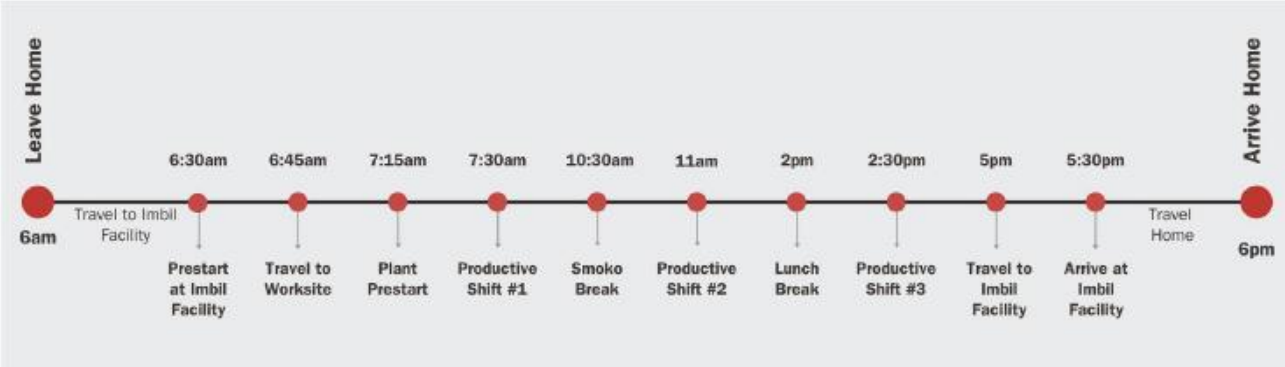


Figure 7–1: Workday breakdown for staff staying offsite

7.2 Summary of Exploratory Works tasks

The Exploratory Works tasks, status, responsibility and expected dates are outlined in Table 7–1.

Table 7–1: Exploratory Works Tasks and dates

Item	Works Start Date	Construction End Date	Works End Date	Status	Construction Responsibility
Works Undertaken by a Road Authority (funded by Queensland Hydro), or works within a Road Corridor under a Local Government Permit					
Bella Creek Road maintenance	Q2 2024	-	Q2 2030	Ongoing	GRC
Works Undertaken under the Works Regulation					
Yielo Road interim access upgrades	Q1 2026	-	Q2 2026	In planning	QH
Access control facilities at Borgan Road and Yielo Road	Q3 2026	-	Q4 2026	In planning	QH
On Site Camps (Rapid Deployment Camps and Temporary Workers Accommodation Camps) - Walkers Top	Q1 2025	-	Q3 2025	Complete	QH
On Site Camps – Borgan Road	Q3 2026	-	Q1 2027	In planning	QH
Seqwater compound (site facilities)	Q2 2027	-	Q3 2027	In planning	QH
Seqwater compound (laydown)	Q3 2027	-	Q3 2027	In planning	QH
Borgan Road improvements	Q3 2026	-	Q3 2027	In planning	QH
Yielo Road construction compound (Upper Reservoir Compound)	Q2 2027	-	Q3 2027	In planning	QH
Works Undertaken under the EPBC Approval					
Temporary water infrastructure	Q1 2026	Q4 2026	Q4 2029	In planning	QH

Item	Works Start Date	Construction End Date	Works End Date	Status	Construction Responsibility
Civil construction compound (Main)	Q1 2026	Q2 2026	Q4 2029	In planning	QH
Kingaham Creek spoil disposal area and access track	Q1 2027	Q1 2027	Q4 2027	In planning	QH
Kingaham Creek bypass	Q1 2027	-	Q4 2027	In planning	QH
Tunnel spoil disposal area	Q1 2027	Q1 2027	Q2 2030	In planning	QH
Geotechnical investigations, all areas	Q1 2026	-	Q4 2027	In planning	QH
Access tracks for geotechnical investigations, all areas	Q1 2026	-	Q3 2027	In planning	QH
Portal access track (including temporary bridge)	Q3 2027	Q4 2027	Q2 2030	In planning	QH
Explosives storage pad and access track	Q1 2027	Q2 2027	Q3 2027	In planning	QH
Explosives store	Q3 2027	Q3 2027	Q2 2030	In planning	QH
Portal pad staging area	Q3 2027	Q4 2027	Q2 2030	In planning	QH
Tunnelling works	Q3 2027	-	Q2 2030	In planning	QH

7.3 Project task Gantt chart

In Figure 7–2 below, the Gantt chart indicates the tasks and the overlap of time.

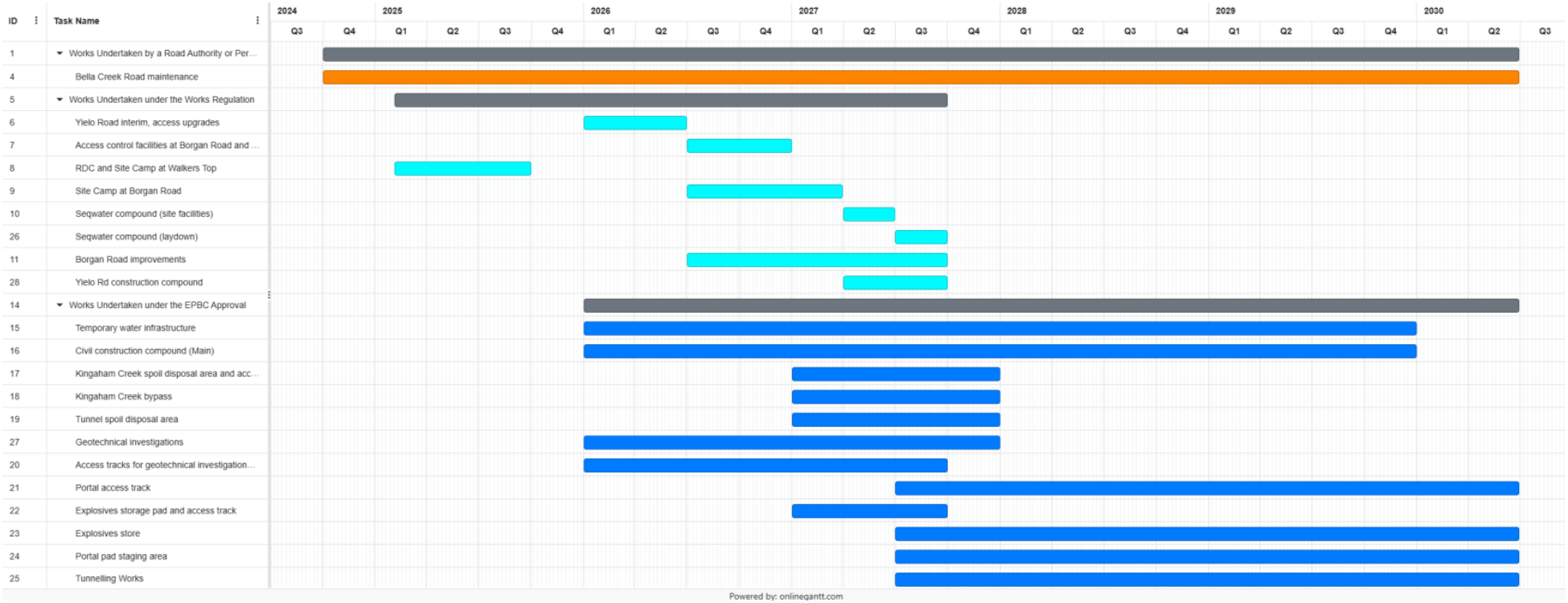


Figure 7–2: Project tasks Gantt chart

7.4 Traffic generation

The traffic generation is broken down into each of the distinct work tasks with the start date, time period and vehicle volumes. The formulation of the daily peak traffic generated by each task below is outlined in Appendix E.

Below is a high-level summary of the type of elements that generate traffic in each work task.

7.4.1 Site preparation

7.4.1.1 Main Site

The Main Site establishment sub tasks major traffic generators are as follows:

- Bella Creek Road - minor road upgrades and maintenance:
  - Minor road widening works have already been completed by Council
- Site Camp – Borgan Road:
  - Import of quality fill material for hard stands
  - Import of dongas
  - Import of concrete materials
  - Staff travelling to and from site by bus weekly.
- Main Construction Compound:
  - Import of quality fill material for hard stands
  - Import of dongas
  - Import of concrete materials
  - Staff travelling to and from site.
- Kingaham Creek Bypass:
  - Import of road building material
  - Staff travelling to and from site by bus daily.
- Borgan Road & access tracks:
  - Import of road building material
  - Staff travelling to and from site by bus daily.
- Portal Pad, Portal access track & Explosives Storage pad:
  - Import of road building material
  - Import of shotcrete materials
  - Staff travelling to and from site by bus daily.
- Temporary Bridge:
  - Part of Portal Access Track construction
  - Import of road building material
  - Import of bridge components
  - Import of concrete materials
  - Staff travelling to and from site by bus daily.
- Temporary Water Infrastructure:
  - Import of concrete

- Import of pipes
- Staff travelling to and from site by bus weekly.

7.4.1.2 Upper Site

The Upper Site sub tasks are as follows:

- Yielo Road interim access upgrades:
  - Import of road building materials
  - Import of water
  - Staff travelling to and from site daily.
- Rapid deployment camp:
  - Import of quality fill material for hard stands
  - Import of dongas
  - Once constructed – general daily supplies.
- Site Camp – Walker Top - construction:
  - Import of quality fill material for hard stands
  - Import of concrete materials
  - Import of water
  - Import of dongas
  - Staff travelling to and from site by bus weekly
  - Once constructed – daily supplies.
- Borehole Access Tracks:
  - Import of water
- Temporary Water Haulage:
  - Import of water.
- Yielo Road Construction Compound (Upper Reservoir Compound):
  - Import of quality fill material for hard stands
  - Import of dongas
  - Import of concrete materials
  - Staff travelling to and from site.

7.4.1.3 Seqwater Compound (site facilities and laydown)

The Seqwater Compound site tasks are as follows:

- Seqwater Compound site setup:
  - Hardstands, container offices, fence, services
- Construction of new and upgraded access tracks:
  - Import of road building materials
  - Staff travelling to and from site by LV daily.
- Civil works zone:
  - Yabba Creek- bed level crossing

- Left and right abutment works.

7.4.2 Geotechnical investigations

7.4.2.1 Main Site

- Staff travelling to and from site weekly by bus.
- Fuel supply.

7.4.2.2 Upper Site

- Staff travelling to and from site weekly by bus.
- Drilling requires a water supply and until the water infrastructure is complete, water will be trucked into site.
- Fue supply.

7.4.2.3 Seqwater Compound

- Staff travelling to and from site by LV daily
- Gravel import material for access roads.

7.4.3 Exploratory tunnels

7.4.3.1 Main Site

The Main Site sub tasks are as follows:

- Tunnelling and Drilling operation – 24 hours
- Explosives delivery
- Shotcrete materials
- Camp supplies
- Staff travelling to and from site by bus weekly.

7.4.4 Construction trips

In Figure 7–3 and Figure 7–4, each task's expected daily HV trips are plotted over time to assess when the accumulative highest trip period is and what the total volume of trucks are.

Table 7–2 and Table 7–4 identifies the expected number of trips per day per quarter of the year. The fluctuation in total trips per day per quarter varies due to the Project schedule with the peak quarter for the Main Site occurring in Q1 2027 and the peak quarter for the Upper Site is Q3 and Q4 2026. These average volumes are used in the assessment of the intersections, combined with background traffic.

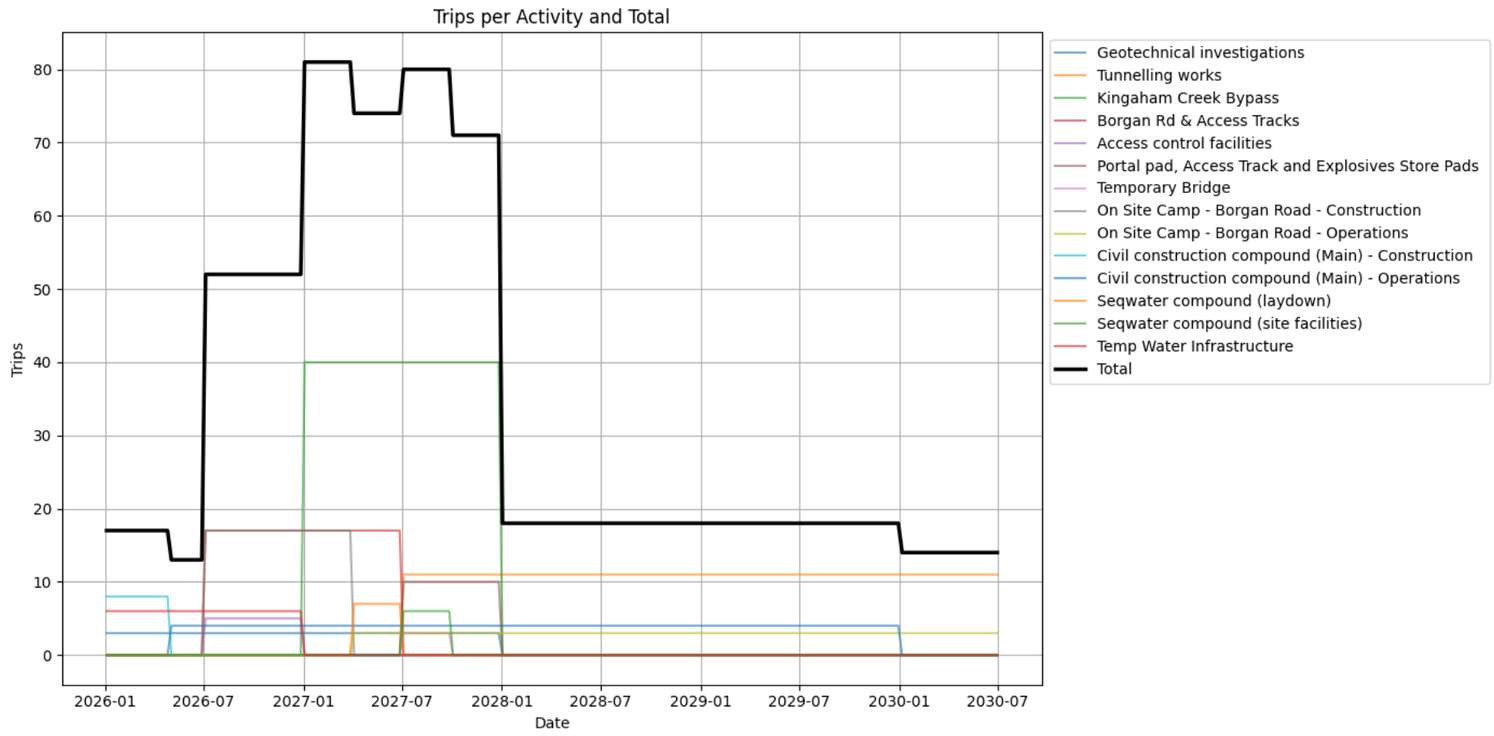


Figure 7–3: Main Site task's daily HV trips plotted over time

Note, the HV trips include water haulage for construction purposes and would occur within the Main Site or at the furthest point, Bella Creek Road. The HV trip estimate is therefore conservative in nature.

Table 7–2: Trip Generation for Main Site and Dam Wall (trips on an average day)

Period	Q4 2024		Q1 2025		Q2 2025		Q3 2025		Q4 2025		Q1 2026		Q2 2026		Q3 2026		Q4 2026		Q1 2027		Q2 2027		Q3 2027		Q4 2027	
Vehicle type	LV	HV	LV	HV	**LV**	**HV**	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV
Total per day	**50**	**18**	**50**	**18**	**50**	**18**	**50**	**8**	**50**	**8**	**34**	**17**	**28**	**14**	**56**	**54**	**56**	**54**	**60**	**83**	**70**	**76**	**78**	**80**	**54**	**71**
AM Peak*	16	6	16	6	16	6	16	-	16	-	12	1	10	1	20	2	20	2	22	4	25	1	28	1	20	1
PM Peak**	16	6	16	6	16	6	16	-	16	-	12	1	10	1	20	2	20	2	22	4	25	1	28	1	20	1
Out of peak total***	18	6	18	6	18	6	18	8	18	8	10	15	8	12	16	50	16	50	16	75	20	72	22	78	14	69

Table 7–3: Trip Generation for Main Site and Dam Wall (trips on an average day) - continued

Period	Q1 2028		Q2 2028		Q3 2028		Q4 2028		Q1 2029		Q2 2029		Q3 2029		Q4 2029		Q1 2030		Q2 2030	
Vehicle type	LV	HV	LV	HV	**LV**	**HV**	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV
Total per day	**20**	**18**	**20**	**18**	**20**	**18**	**20**	**18**	**20**	**18**	**20**	**18**	**20**	**18**	**20**	**18**	**16**	**14**	**16**	**14**
AM Peak*	7	-	7	-	7	**-**	7	-	7	-	7	-	7	**-**	7	-	6	-	6	-
PM Peak**	7	-	7	-	7	**-**	7	-	7	-	7	-	7	**-**	7	-	6	-	6	-
Out of peak total***	6	18	6	18	6	18	6	18	6	18	6	18	6	18	4	18	4	14	4	14

Note: *AM single trip to site
**PM single trip from site
***Out of peak trips are to and from site during the workday.

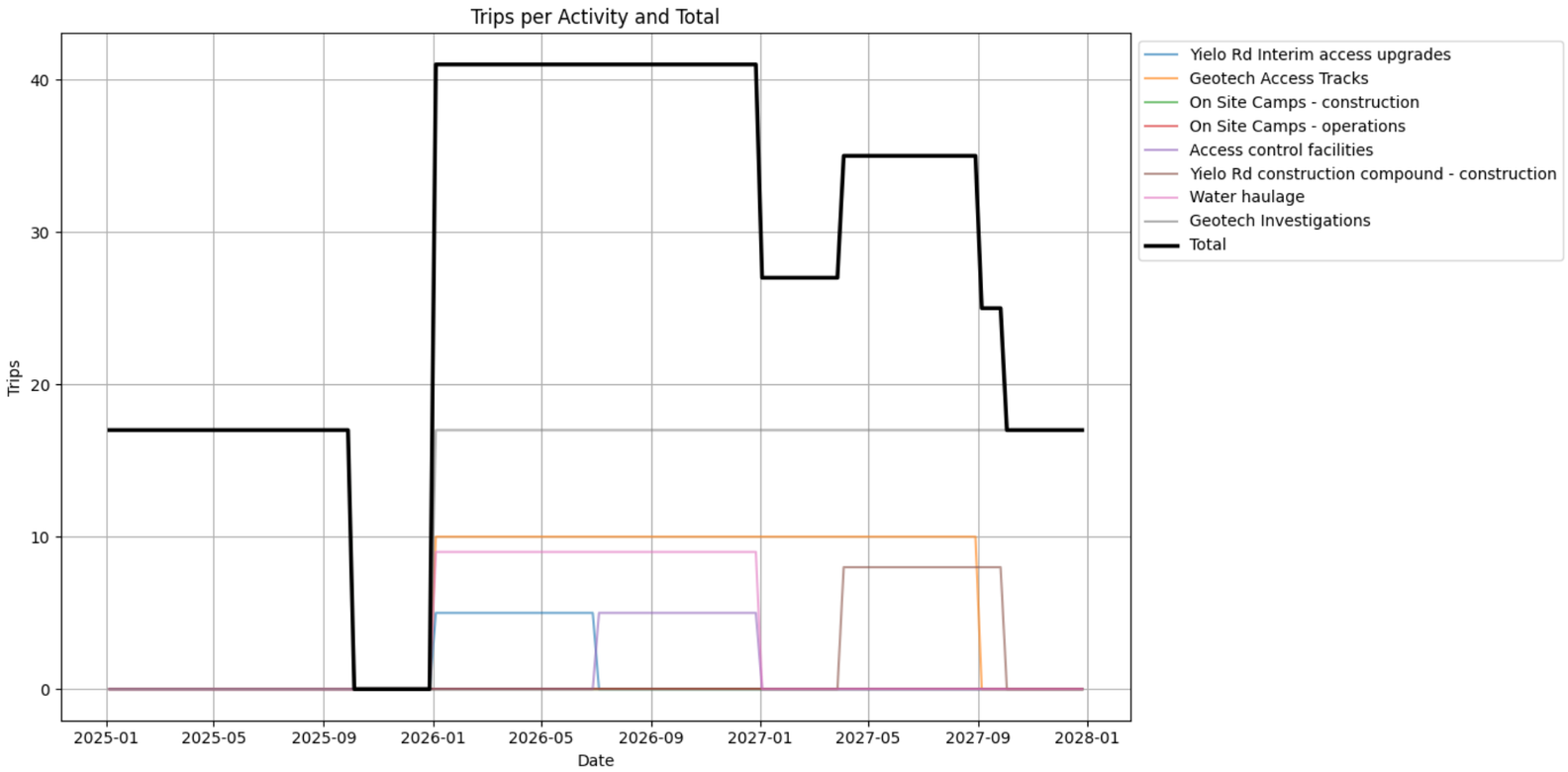


Figure 7–4: Upper Site task's daily HV trips plotted over t

Note, water haulage is assumed be between Sunday Creek Road and the Upper Site. The HV trip total would not extend onto Kilcoy Murgon Road and therefore be reduced from this intersection towards Kilcoy.

Table 7–4: Trip Generation for Upper Site (trips on an average day)

Period	Q4 2024		Q1 2025		Q2 2025		Q3 2025		Q4 2025		Q1 2026		Q2 2026		Q3 2026		Q4 2026		Q1 2027		Q2 2027		Q3 2027		Q4 2027	Q1 2028 to Q2 2030		
Vehicle type	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV
Total per day	**40**	**16**	**64**	**22**	**58**	**22**	**58**	**28**	**58**	**5**	**50**	**41**	**50**	**41**	**52**	**41**	**52**	**41**	**40**	**27**	**60**	**35**	**56**	**31**	**28**	**17**	**12**	**3**
AM Peak*	10	2	17	2	18	2	18	2	18	-	13	-	13	-	13	-	13	-	10	-	20	-	20	-	10	-	4	-
PM Peak**	10	2	17	2	18	2	18	2	18	-	13	-	13	-	13	-	13	-	10	-	20	-	20	-	10	-	4	--
Out of peak total***	20	12	30	18	22	18	22	24	22	5	24	41	24	41	26	41	26	41	20	27	20	35	16	31	8	17	4	3

Note: *AM single trip to site
**PM single trip from site
***Out of peak trips are to and from site during the workday.

7.4.5 Peak hour periods

The construction AM peak hour is expected at 5:30 - 6:30 AM (private vehicles travelling to the hypothetical park and ride facility and buses travelling to site) while the PM peak is expected at 5:15 - 6:15 PM (buses through Imbil and then private vehicles travelling away from the hypothetical park and ride facility, see Section 7.5.3).

Truck deliveries can be expected throughout the day with a small bell curve peak in the middle of the day. A conservative estimate would be 30% of the daily truck traffic occurs from 12:00 - 1:00 PM with an equal inbound outbound movement.

7.5 Trip distribution

7.5.1 Haulage routes

All truck deliveries to the **Main Site** which are not gravel from the Moy Pocket Quarry are expected to come from the Bruce Highway and use the following route (see Figure 7–5):

- From the Bruce Highway turn off at Mary Valley Link Road and head to Gympie - Brooloo Road
- Left turn at Gympie - Brooloo Road and head towards Imbil
- Right turn at Yabba Creek Road, through Imbil toward Bella Creek Road
- Right turn at Bella Creek Road and head towards Borgan Road
- Left turn at Borgan Road and after 1.3km arrive at the Queensland Hydro gate for the Main Site.

Figure 7–5: Route to the Main Site (Source: Google Maps)

Gravel materials for the **Main Site** civil works will come from Boral Quarry at Moy Pocket and the expected routes (see Figure 7–6) is as follows:

- From Boral on Moy Pocket Road
- Right at Kenilworth - Brooloo Road
- Left into Yabba Creek Road
- Right into Bella Creek Road
- Left into Borgan Road and on to site.

Gravel materials for the **Main Site** camp works will come from Corbets Quarry at Bruce Highway / Mary Valley Link Road interchange and the expected routes is as follows:

- From Mary Valley Link Road and head to Gympie - Brooloo Road
- Left turn at Gympie - Brooloo Road and head towards Imbil
- Right turn at Yabba Creek Road, through Imbil toward Bella Creek Road
- Right turn at Bella Creek Road and head towards Borgan Road
- Left turn at Borgan Road and after 1.3km arrive at the Queensland Hydro gate for the Main Site.

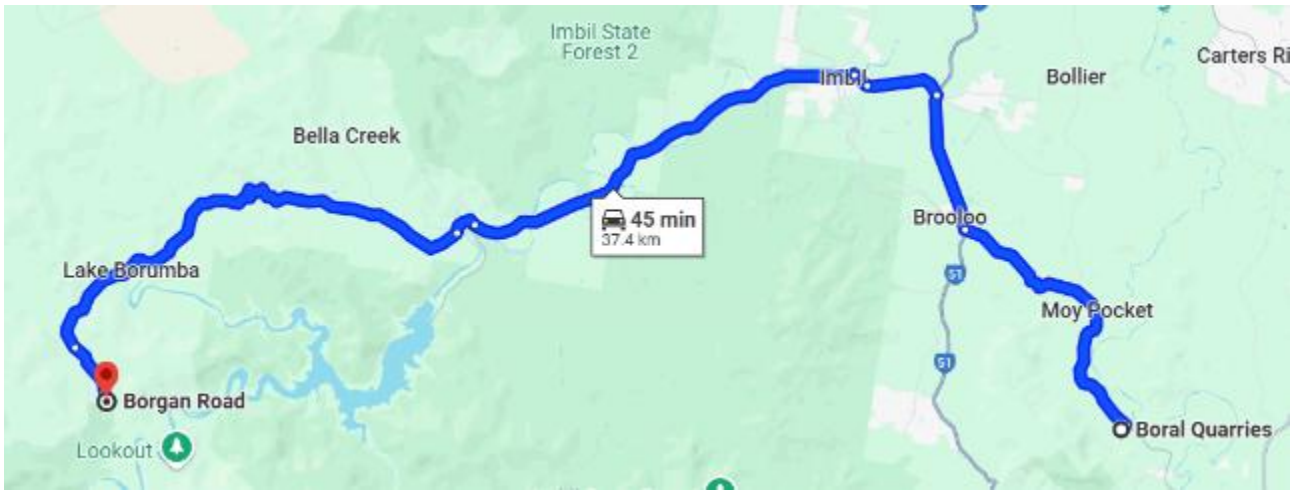


Figure 7–6: Route for gravel material sourced from Boral Quarries (Source: Google Maps)

The expected primary haulage route to Upper Site (see Figure 7–7) is to be as follows:

- From the Bruce Highway turn off at D'Aguilar Highway and head towards Kilcoy
- In Kilcoy turn right onto William Street and right onto Kilcoy Murgon Road and head towards Jimna
- Before Jimna turn right at Sunday Creek Road then turn left onto Yielo Road before arriving at the Upper Site.

Gravel import material is also expected to come from Karreman Quarry near Harlin, southwest of Kilcoy with the route as follows (see Figure 7–8):

- Quarry access road (Sinnamons Lane) onto Brisbane Valley Highway
- Right onto D'Aguilar Highway
- left into Williams Street and right onto Kilcoy Murgon Road and head towards Jimna
- Before Jimna turn right at Sunday Creek Road then turn left onto Yielo Road before arriving at the Upper Site.

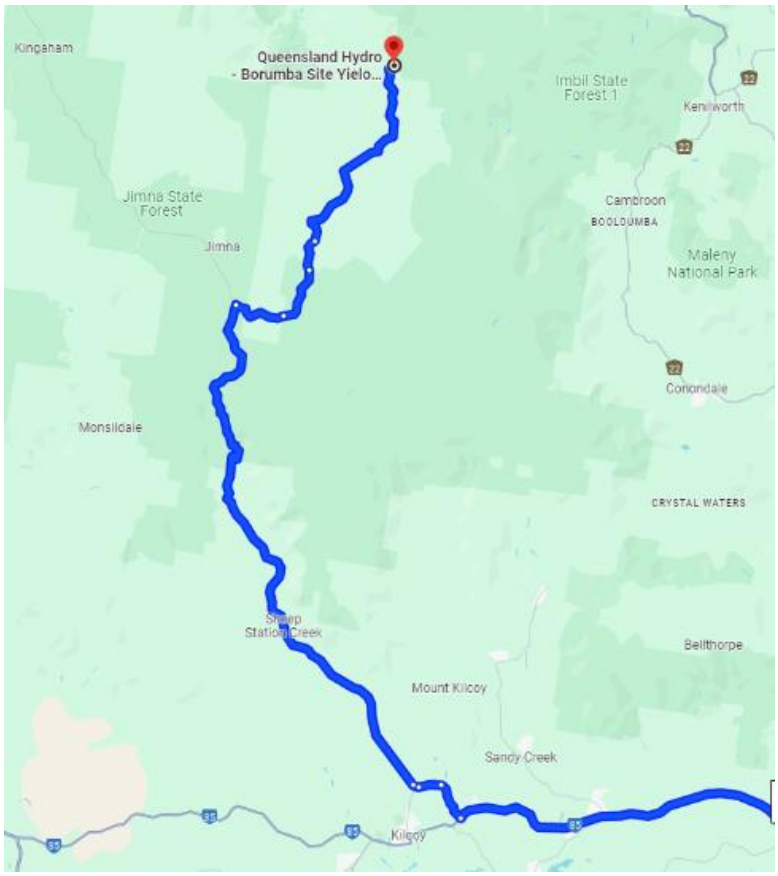


Figure 7–7: Route to Upper Site (Source: Google Maps)

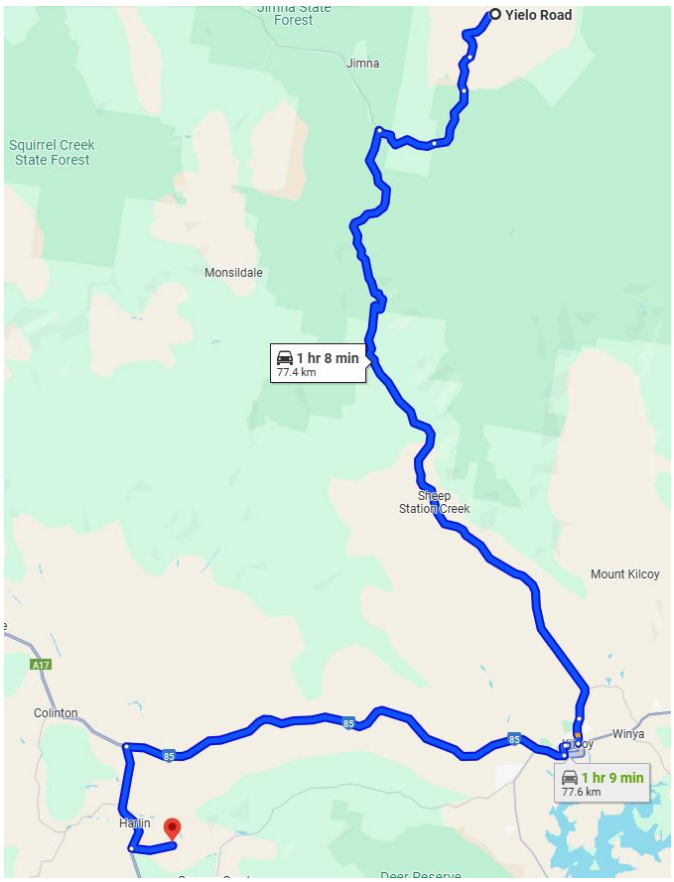


Figure 7–8: Route to Upper Site from Karreman Quarry (Source: Google Maps)

7.5.2 Light vehicle routes

LVs have no restriction as to which route they take to site. In addition to the HV routes, the following roads are also likely to be used as below.

7.5.2.1 Main Site

- All LVs heading to the Main Site from Sunshine Coast (70% of LVs) and using the Bruce Highway taking Exit 244 off ramp and then:
  - Left onto Cooroy Gympie Road
  - Left onto Kenilworth Skyring Creek Road
  - Right onto Tuchekoi Road
  - Left onto Gympie – Brooloo Road and follow the delivery route via Yabba Creek Road.
- All LVs heading to the Main Site from Gympie (30% of LVs) taking Gympie – Brooloo Road and then:
  - Right onto Yabba Creek Road
  - Right onto Bella Creek Road
  - Left into Borgan Road.

7.5.2.2 Upper Site

LVs heading towards the Upper Site from the south will take the delivery route.

7.5.3 Park and ride facilities

Parking on site is limited, and it is estimated that 80% of staff will arrive at Site by bus. At the time of this assessment, the potential bus pick-up and drop-off location or Park and Ride facility (PnR) for the local workers has not been confirmed. The PnR facilities will provide two functions for staff heading to site. Some staff will be travelling by bus every day and require daytime parking. Once the accommodation camps are operational, some staff will require an area to park their vehicle while they are working their shift roster on site (6 to 14 days).

Subject to approval and prior to commencement, each PnR facility will be required to develop their own Traffic Management Plan (TMP) and will likely require a TIA for a change in land use or development application. These processes are outside of the scope of this TIA.

Note, PnR's will not be undertaken by Queensland Hydro and that Contractors will be responsible for their own workforce commute arrangements (under Queensland Hydro guidance).

7.5.3.1 Main Site

For the purposes of this assessment, a single facility shall be assumed at the hypothetical location at the intersection of Gympie – Brooloo Road and Tuchekoi Road. This location is used in order to capture the vehicle trips generated by these facilities.

In the morning, LVs will originate from the Bruce Highway, Gympie, and surrounding areas of Kandanga and Amamoor and head towards the PnR facility. The greatest portion of vehicles are likely to be from the Bruce Highway via Gympie - Brooloo Road (Mary Valley Link Road) and Tuchekoi Road (Kenilworth Skyring Creek Road / Old Bruce Highway).

The LVs are expected to arrive at the facility between 06:00 - 06:30 AM. Buses (25-seaters) are likely to leave the facility at 06:45 AM and head towards the Main Site via Gympie - Brooloo Road, Yabba Creek Road, and Bella Creek Road.

In the afternoon, buses will leave site at 05:00 PM and travel towards the PnR facility arriving at 05:30 PM. LVs will begin to leave the facility 05:40 PM and distribute onto the road network with most vehicles expected to head towards the Bruce Highway in the return journey of how they arrived.

Once the Borgan accommodation camp is operational (Q2 2027), only the civil surface works contractor will bus staff in every day.

An allowance of four buses per week have been accommodated in the trip generation to deliver/collect staff to/from site.

7.5.3.2 Upper Site

The Upper Site is expected to have a PnR facility located near or in Kilcoy. For the purposes of analysis, the hypothetical site has been situated at the intersection of William Street and Kilcoy Murgon Road.

Once the accommodation camp is operational (Q3 2025) there will typically be only weekly bus trips to the Upper Site.

7.6 Peak period traffic

As can be seen in Table 7–2 the Main Site Exploratory Works schedule peaks in the first quarter of 2027 (Q1 2027). This period will be used for analysis to assess the worst-case scenario. Table 7–5 and Table 7–6 detail the peak hour traffic generation to the Main Site.

Table 7–5: Peak hour site generated traffic to Main Site from Park and Ride at Tuchekoi Road

Q2 2026	LV	HV
TOTAL	**60**	**83**
AM peak to site	22	4
PM peak from site	22	4
Operational day total	16	75
Operational day peak hour (midday)	5	24

Table 7–6: Peak hour movement distribution for routes to Main Site

Movement	Volume	Direction
LV AM peak	16 (+ 40 to PnR)	From Bruce Highway
LV PM peak	16 (+40 from PnR)	To Bruce Highway
LV AM peak	6 (+10 to PnR)	From Gympie
LV PM peak	6 (+10 from PnR)	To Gympie
LV midday peak	3	From Bruce Highway
LV midday peak	2	To Bruce Highway
HV AM peak (bus)	4	From PnR
HV PM peak (bus)	4	To PnR
HV midday peak	6	From Moy Pocket Road
HV midday peak	6	To Moy Pocket Road
HV midday peak	6	From Bruce Highway
HV midday peak	6	To Bruce Highway

As can be seen in Table 7–6 above, the peak traffic generation period during the Upper Site Exploratory Works schedule is in the third quarter of 2026 (Q3 2026). This period will be used for analysis to assess the worst-case scenario.

Table 7–7 and Table 7–8 detail the peak hour traffic generation to the Upper Site.

Table 7–7: Peak hour site generated traffic to Upper Site from Park and Ride at Kilcoy

Q2 2025	LV	HV
TOTAL	**52**	**41**
AM peak to site	13	-
PM peak from site	13	-
Operational day total	26	41
Operational day peak hour (midday)	7	9

Table 7–8: Peak hour movement distribution for routes to Upper Site

Movement	Volume	Direction
LV AM peak	13 to site	From D'Aguilar Highway
LV PM peak	13 to site	To D'Aguilar Highway
LV midday peak	4	From D'Aguilar Highway
LV midday peak	3	To D'Aguilar Highway
HV AM peak	-	From Kilcoy
HV PM peak	-	To Kilcoy
HV midday peak	2	From D'Aguilar Highway east
HV midday peak	1	To D'Aguilar Highway east
HV midday peak	3	From D'Aguilar Highway west
HV midday peak	2	To D'Aguilar Highway west

7.7 Trip distribution volumes

Project traffic trips distributed onto the road network are illustrated in **Figure 7–9** to **Figure 7–14**.

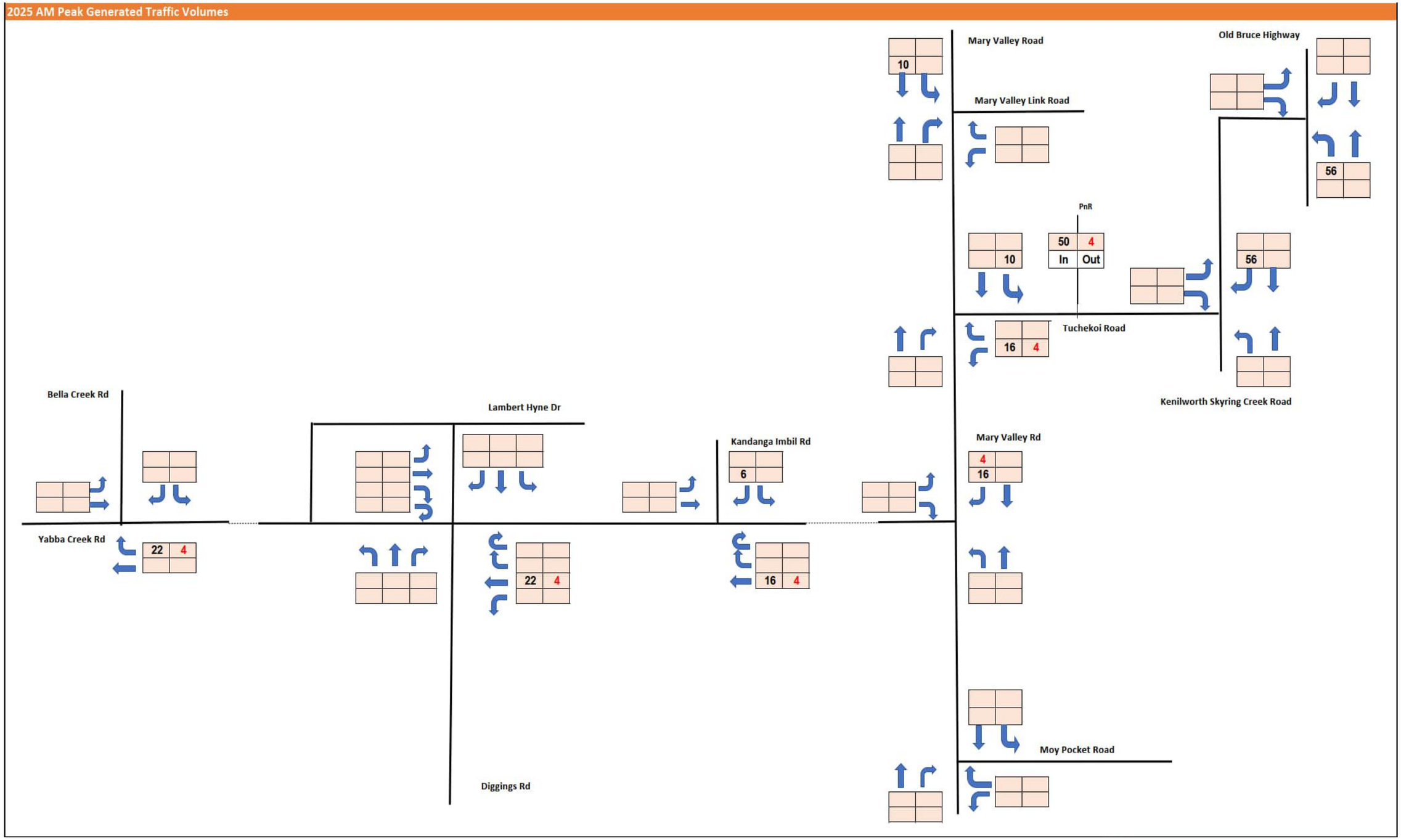


Figure 7–9: Northern Route – AM Peak Site Generated Trip Distribution

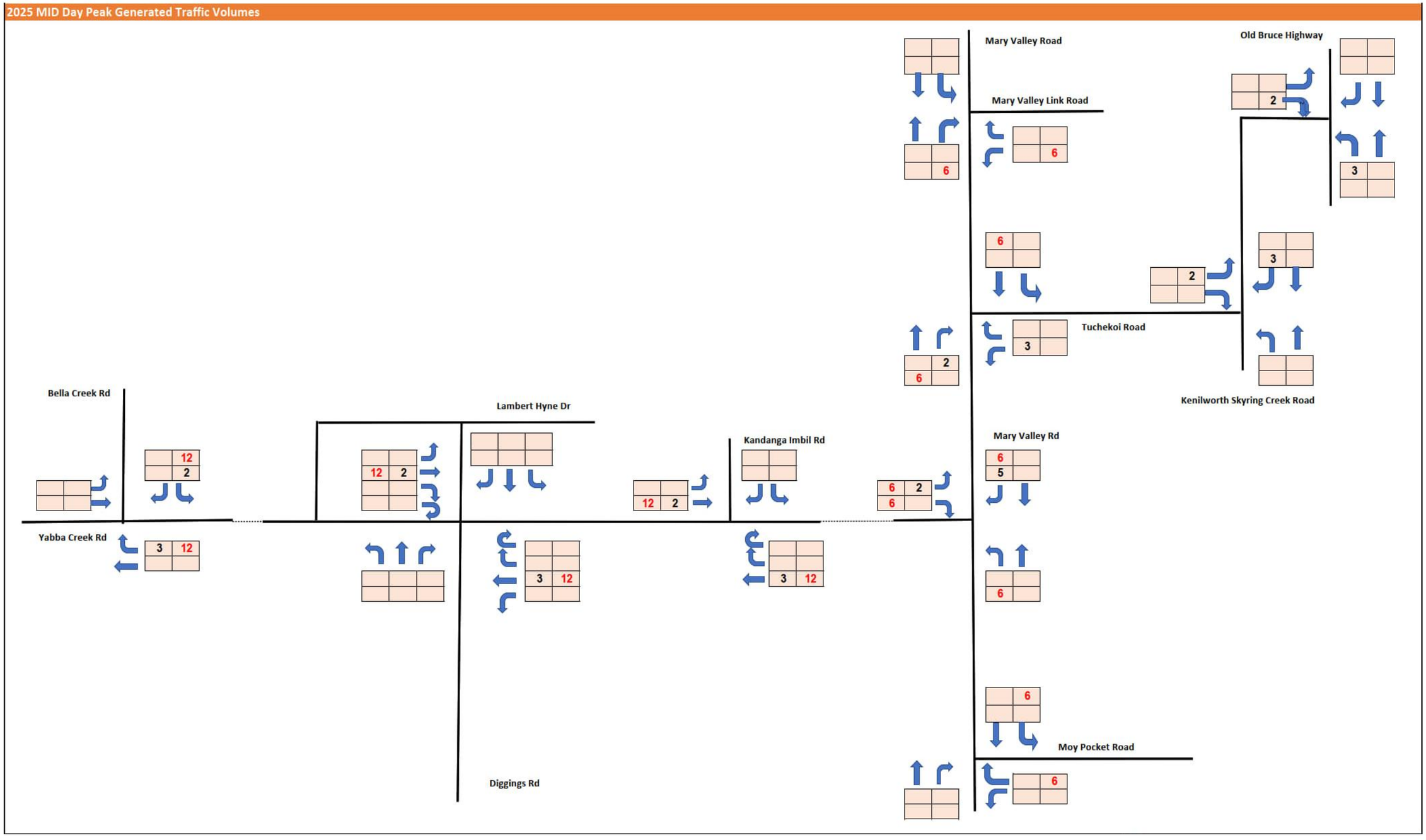


Figure 7–10: Northern Route – Midday Site Generated Trip Distribution

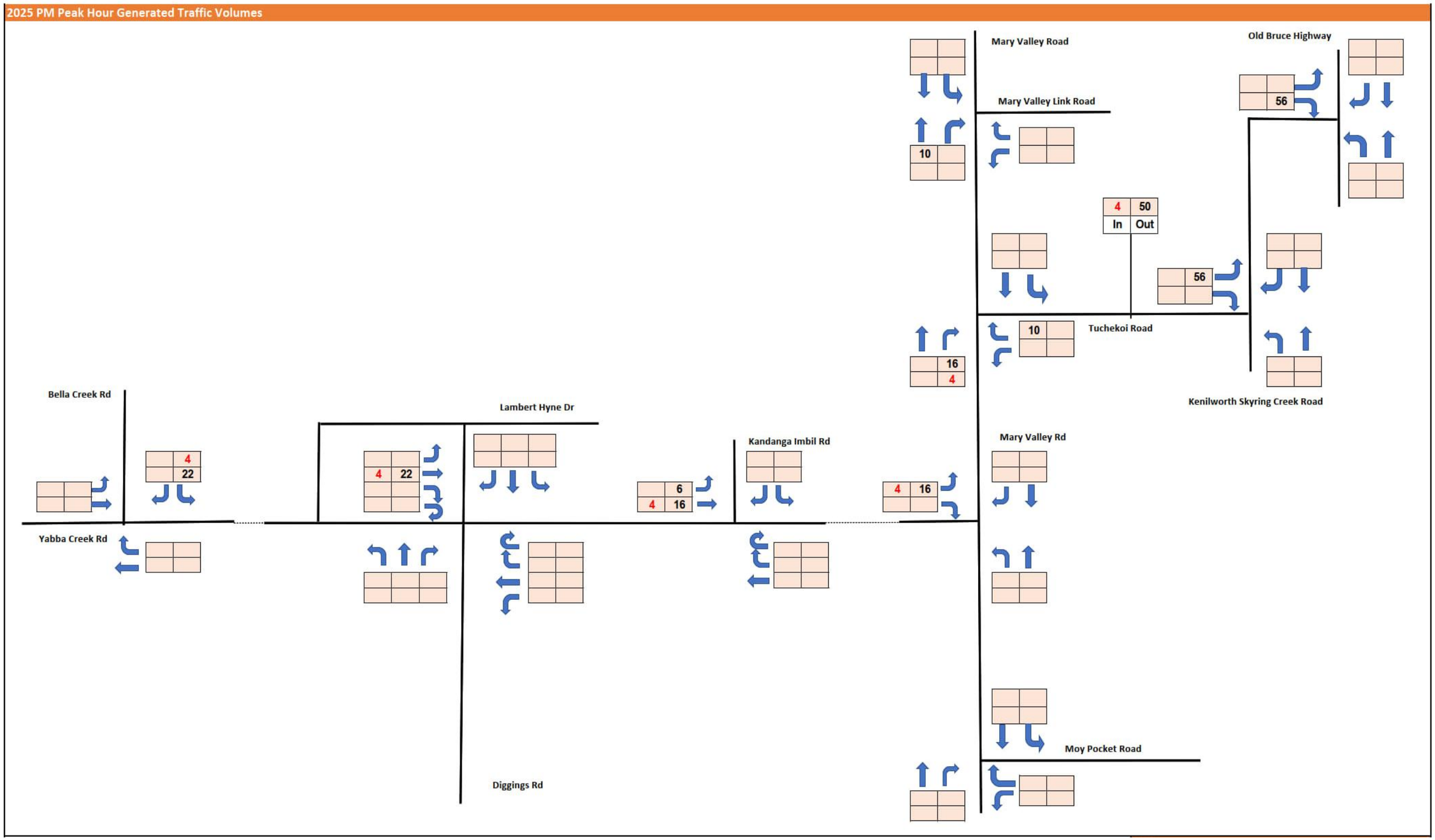


Figure 7–11: Northern Route – PM Peak Site Generated Trip Distribution

2025 AM Peak Hour Generated Traffic Volumes

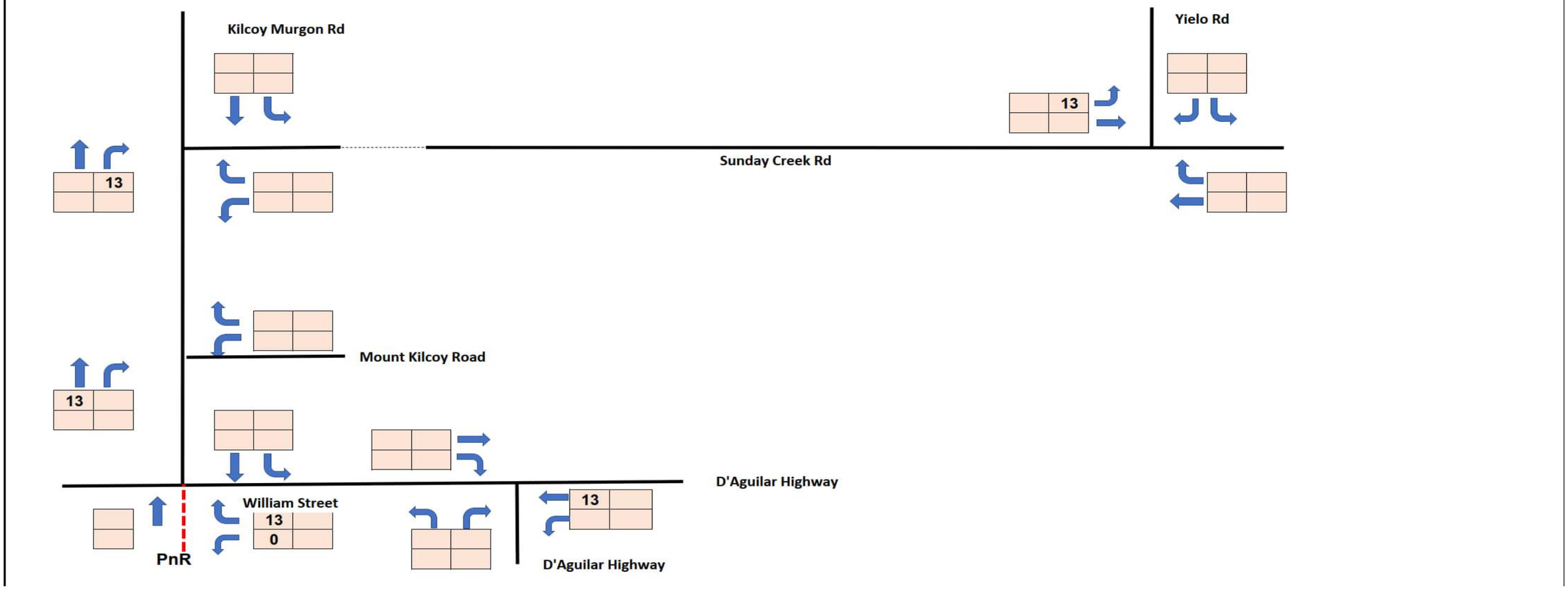


Figure 7–12: Southern Route – AM Peak Site Generated Trip Distribution

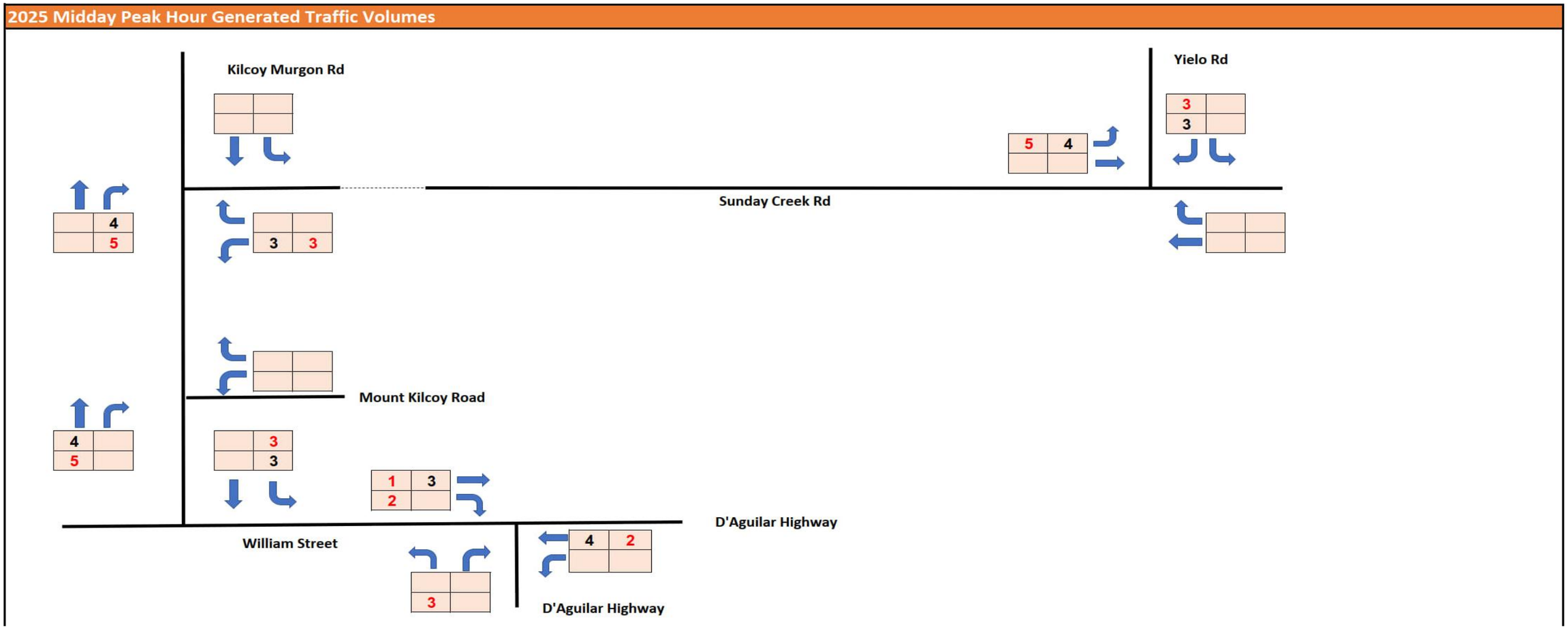


Figure 7–13: Southern Route – Midday Peak Site Generated Trip Distribution

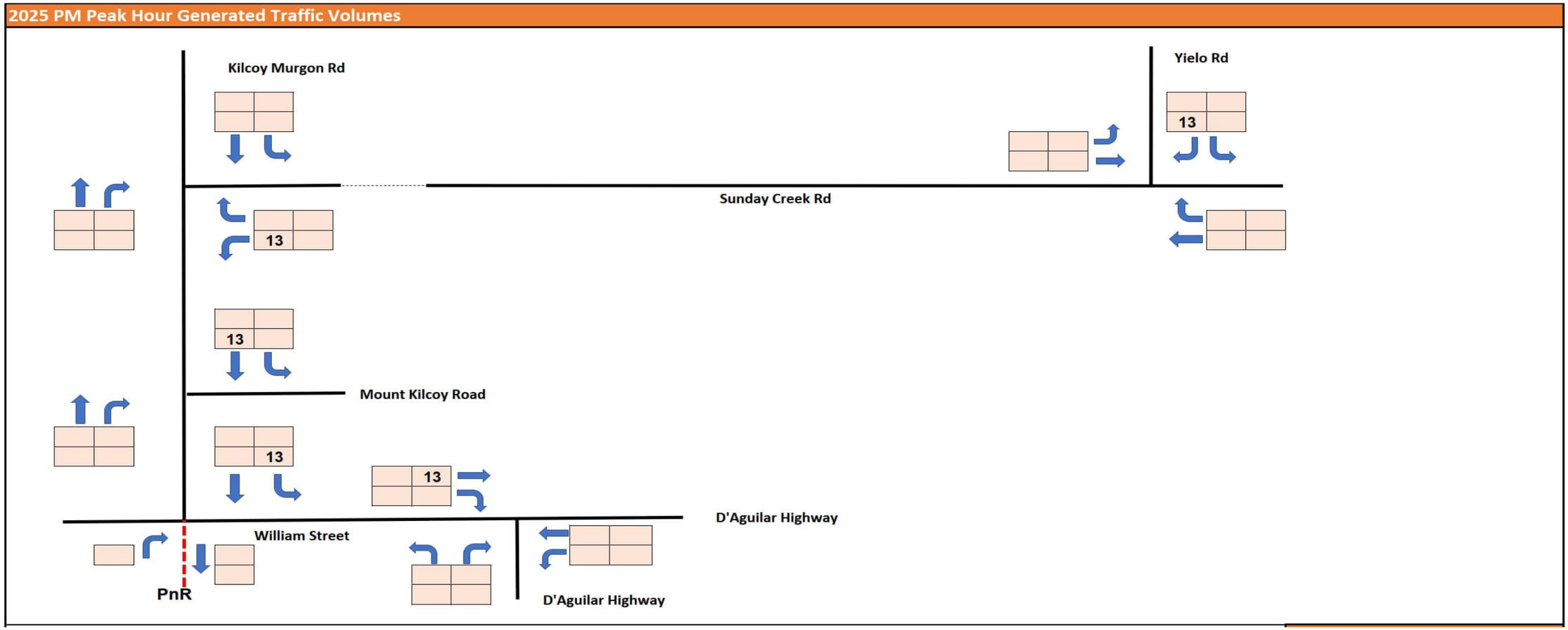


Figure 7–14: Southern Route – PM Peak Site Generated Trip Distribution

7.8 Project Traffic Peaks

To assess the most conservative scenario, the AM Peak, Midday Peak and PM Peak for background traffic was determined (8:00 - 9:00 AM, 2:45 - 3:45 PM and 5:00 - 6:00 PM) and then added to the site generated AM, Midday and PM peak trips to produce new total trips. The peak period hours are shown in Table 7–9.

Table 7–9: Peak hour combination

Period	Background traffic	Construction traffic
AM Peak	8:00 - 9:00 AM	5:30 - 6:30 AM
Midday Peak	2:45 - 3:45 PM	12:00 - 1:00 PM
PM Peak	5:00 - 6:00 PM	5:15 - 6:15 PM

Background traffic has not been forecasted to grow over the next year and 2024 volumes have been utilised for analysis.

For the northern route, the site generated trips plus the background traffic are illustrated in **Figure 7–15** to **Figure 7–17**.

For the southern route, the site generated trips plus the background traffic are illustrated in **Figure 7–18** to **Figure 7–20**.

2025 AM Peak Combined Traffic Volumes

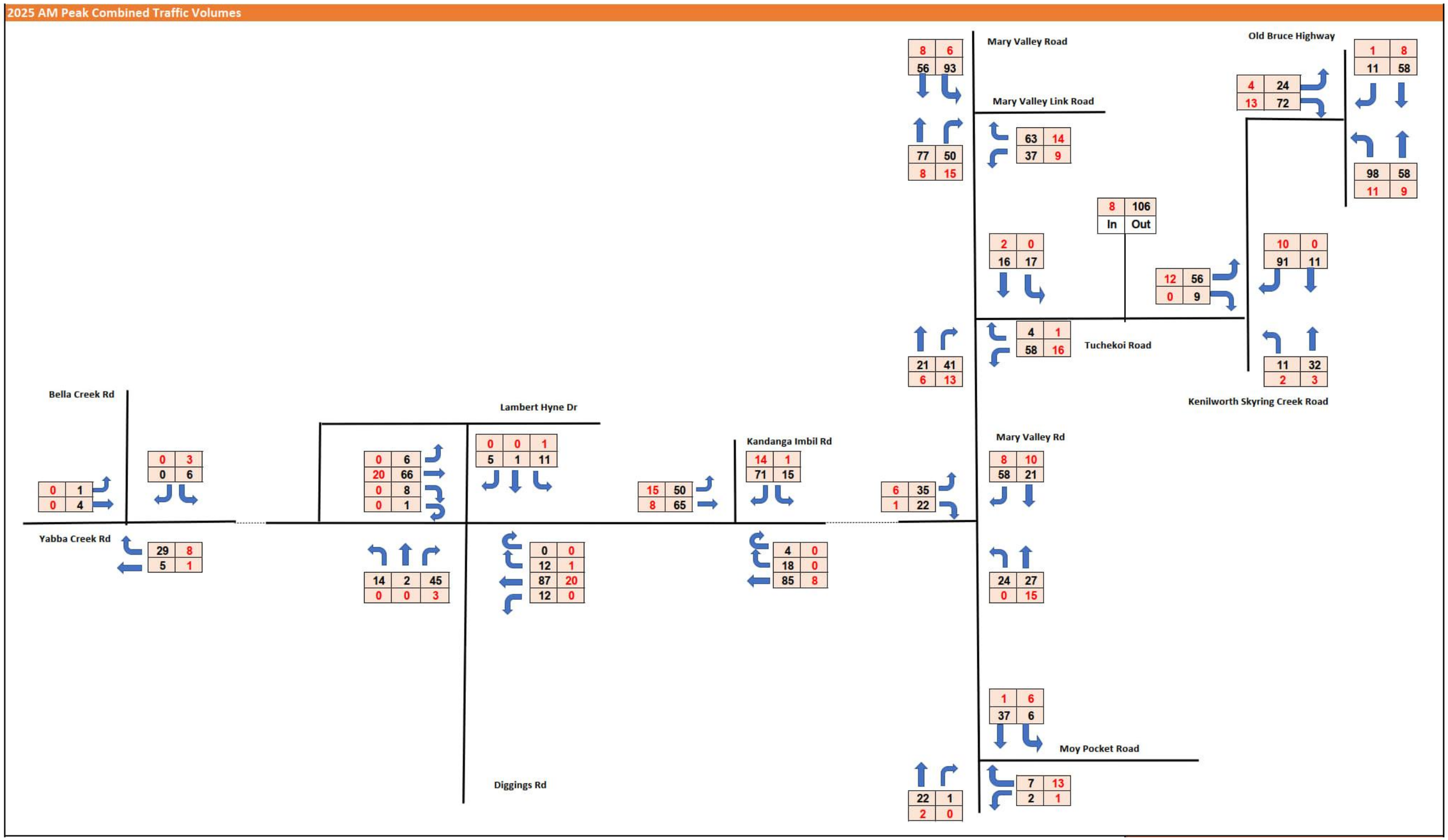


Figure 7–15: Northern route – AM Peak background traffic plus site generated traffic

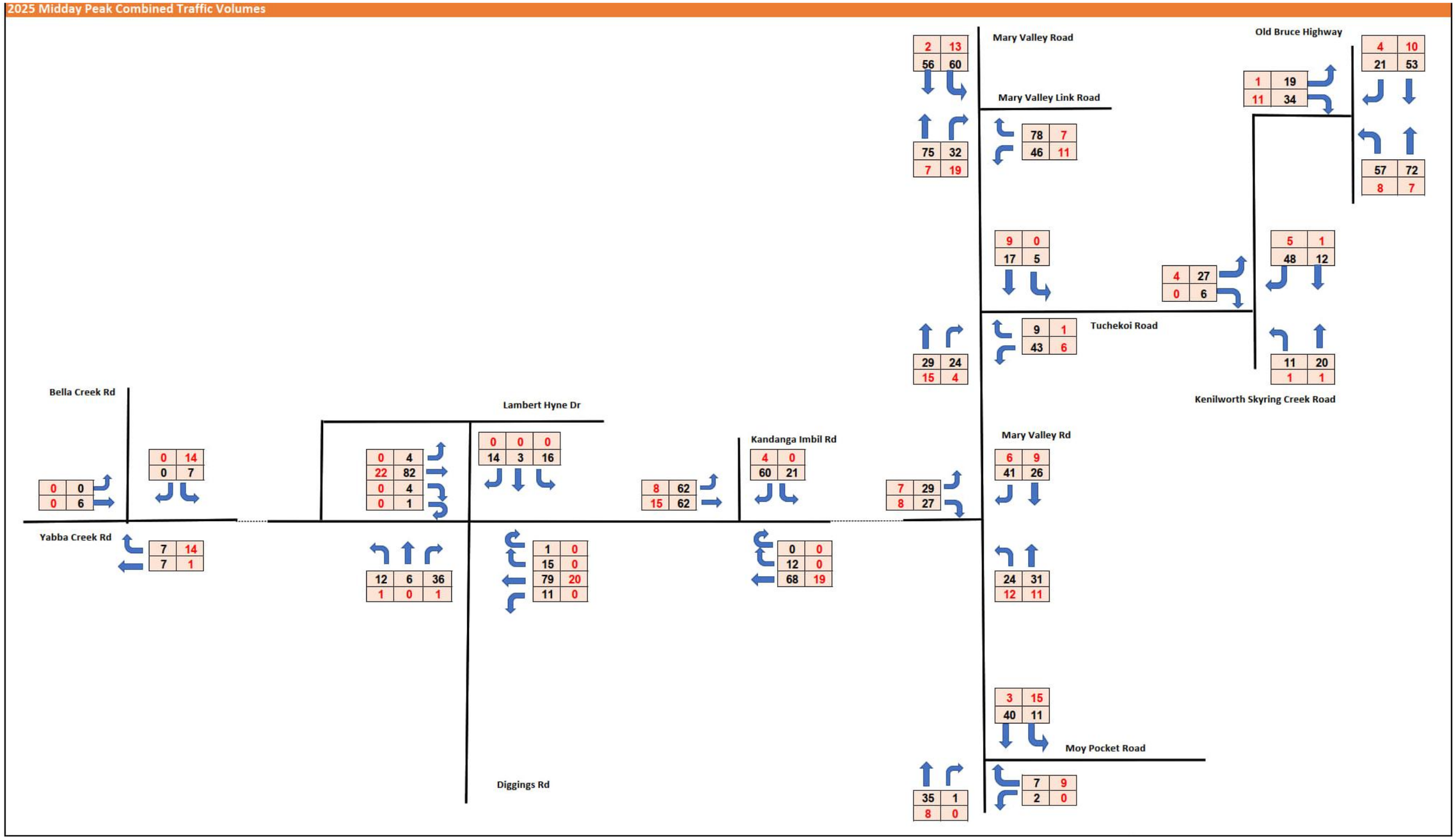


Figure 7–16: Northern route – Midday Peak background traffic plus site generated traffic

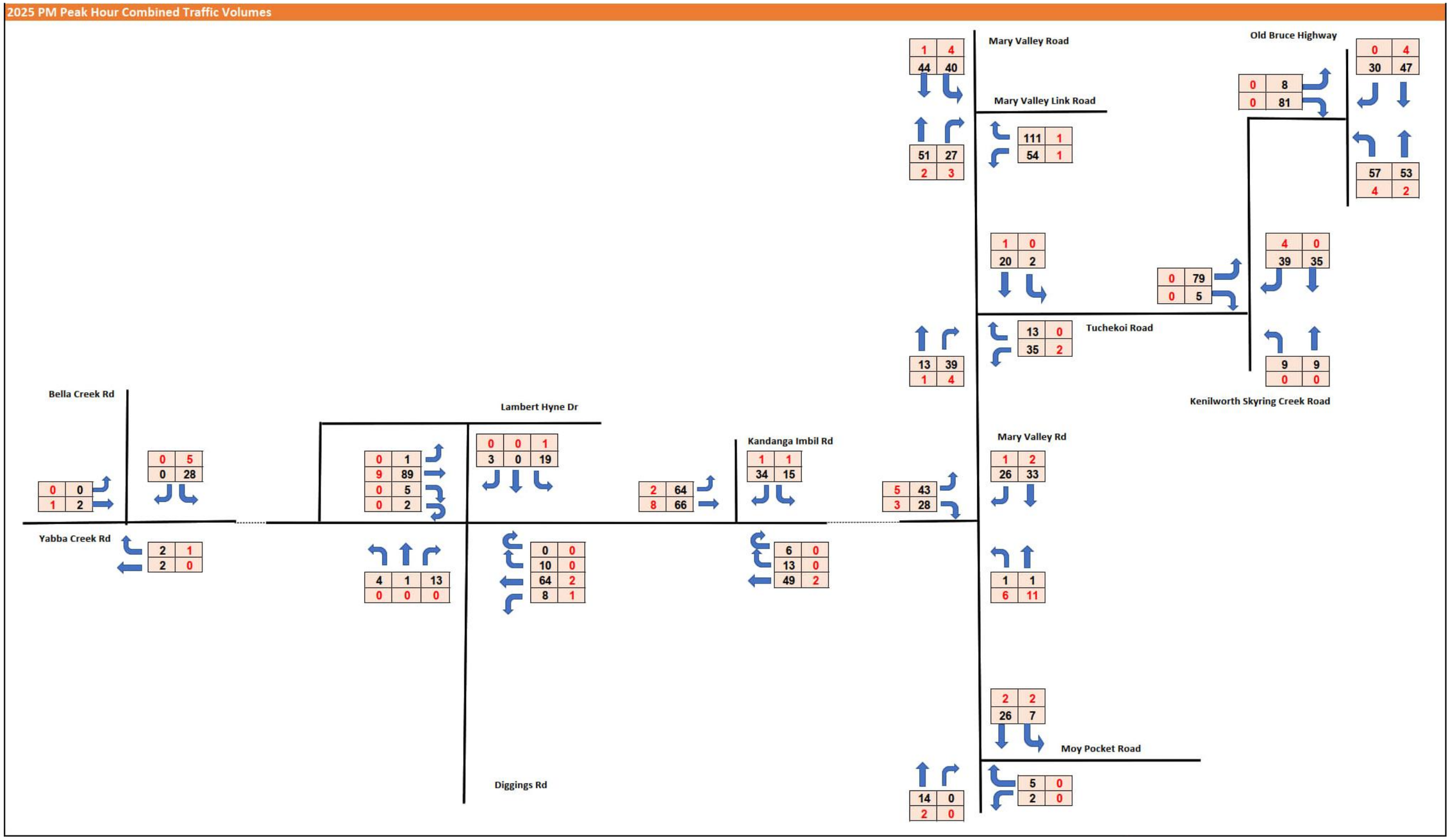


Figure 7–17: Northern route – PM Peak background traffic plus site generated traffic

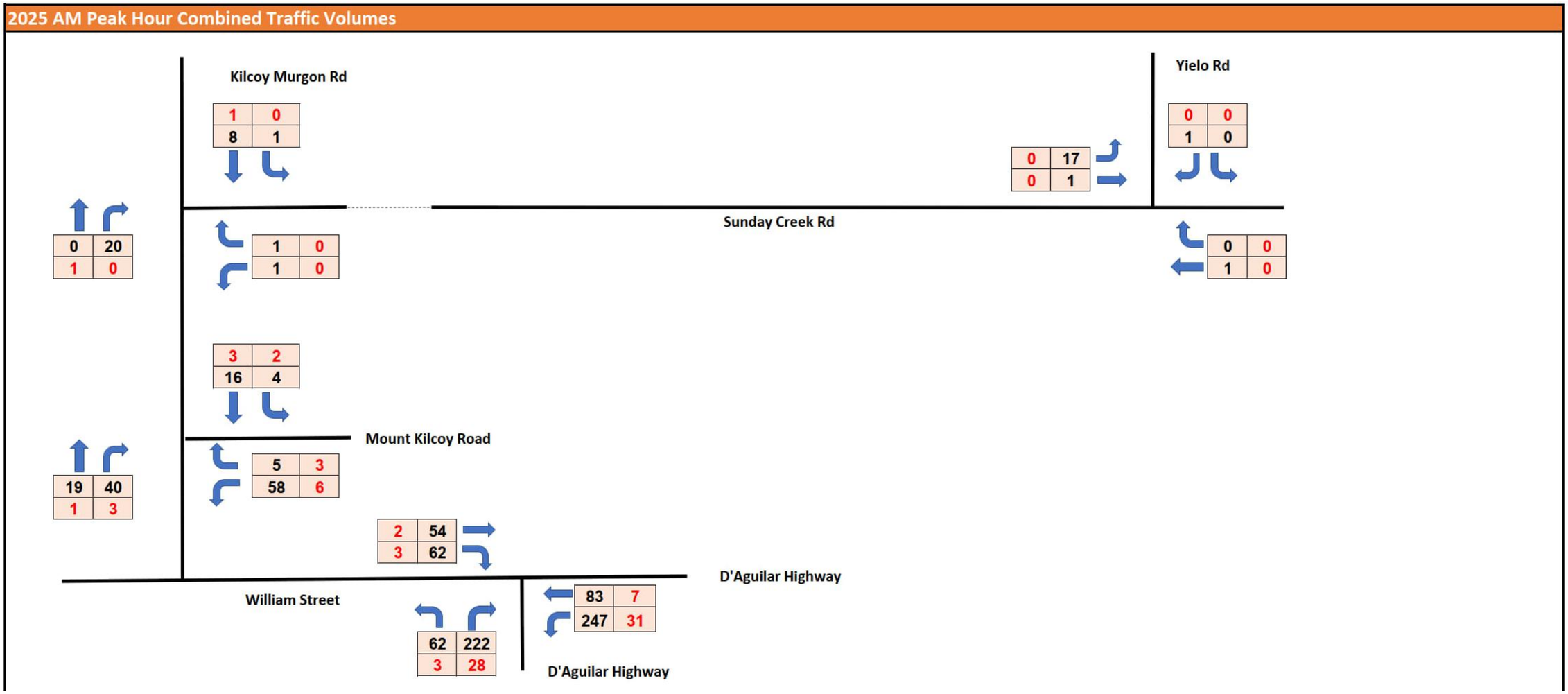


Figure 7–18: Southern route – AM Peak background traffic plus site generated traffic

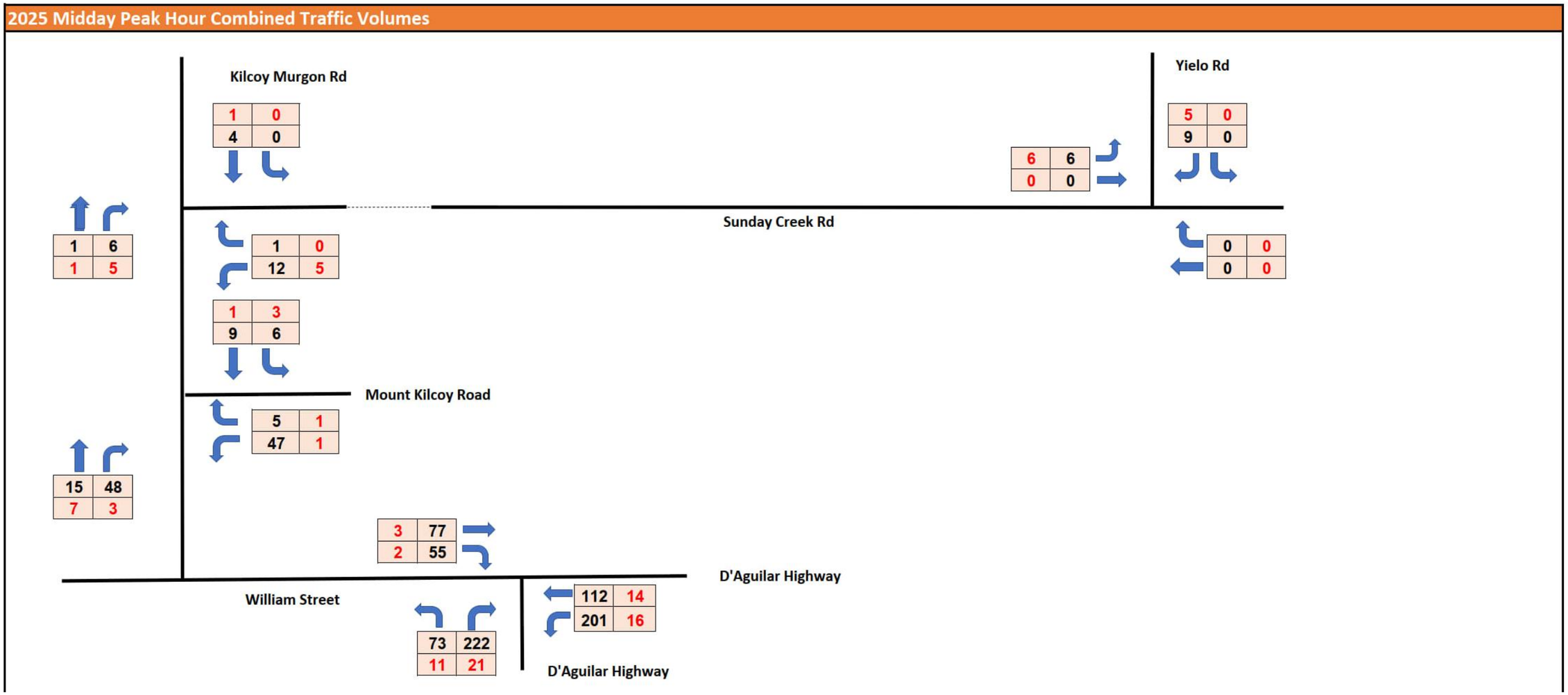


Figure 7–19: Southern route – Midday Peak background traffic plus site generated traffic

2025 PM Peak Combined Traffic Volumes

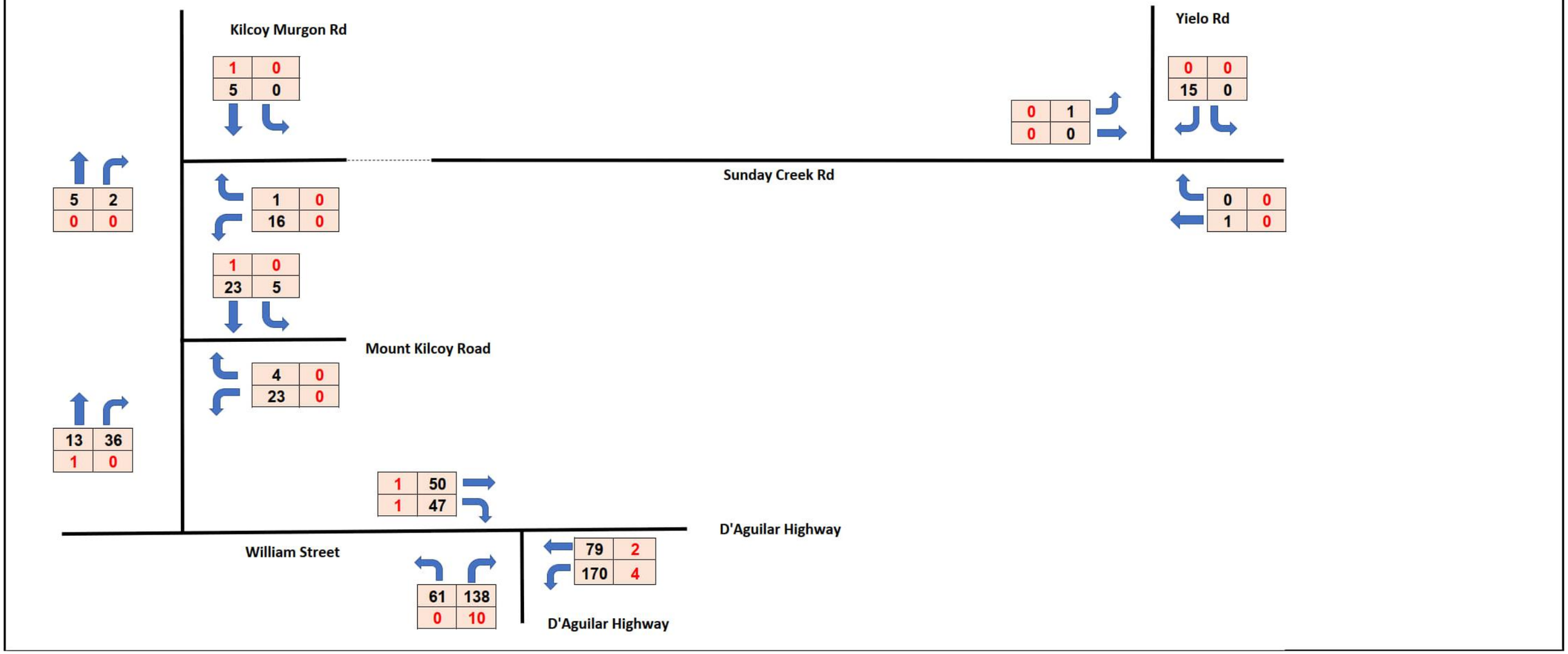


Figure 7–20: Southern route – PM Peak background traffic plus site generated traffic

7.9 Link Assessment

Link capacity is generally not an issue in rural areas such as this area, and the LoS constraints are usually at intersections, shown in Section 7.8. However, slow moving trucks could impact the LoS. The Project is generating (in the worst case) 12 trips in each direction per hour (Gympie Brooloo Road) which to equates to one trip per 5 minutes per lane. There is sufficient gap between trucks to allow for overtaking. More impact could be felt with a change in safety conditions. These impacts are detailed in Section 11.1.

Table 7–10 shows the increase in traffic on each road due to the Project. The increase is based on the daily volumes from the highest average quarter year volumes. Where road links exceed 5% increase in AADT an assessment of the link capacity has been conducted dividing volume over capacity. This assessment assumes a capacity a peak hour factor of 10% of AADT and with typical link capacity ranging between 900 (interrupted flow, slower speed environment) and 2,000vph (uninterrupted flow, higher speed environment). For this analysis 900vph has been assumed to provide a worst-case scenario. If link capacity exceeds 90% it indicates a need for additional lane capacity.

Table 7–10: Increase in traffic due the Project

Road	Owner	Existing AADT	% HV	Project traffic LV	Project traffic HV	Project % increase	Volume over Capacity Assessment [1](<90%)
Northern Route							
Bruce Highway	TMR	22134	23%	128	38	1%	N/A
Mary Valley Link Road	TMR	3,623	15%	0	38	1%	N/A
Gympie - Brooloo Road (north of Tuchekoi Road)	TMR	837	17%	32	38	1%	N/A
Cooroy - Gympie Road (Old Bruce Highway)	TMR	2,070	11%	128	0	1%	N/A
Kenilworth Skyring Creek Road	TMR	2,023	11.50%	128	0	6%	Yes
Tuchekoi Road	TMR	1,441	12%	148	0	10%	Yes
Gympie - Brooloo Road (south Tuchekoi Road)	TMR	2,514	11%	48	42	4%	N/A
Yabba Creek Road west of Edward St	TMR	3,050	13%	60	83	5%	Yes
Yabba Creek Road east of Superior Wood	TMR	1,024	21%	60	83	14%	Yes
Yabba Creek Road near Bella Creek Rd	TMR	374	8%	60	83	38%	Yes
Moy Pocket Road	GRC	294	12%	0	38	13%	Yes

Road	Owner	Existing AADT	% HV	Project traffic LV	Project traffic HV	Project % increase	Volume over Capacity Assessment [1](<90%)
Bella Creek Road	GRC	102	9%	60	83	140%	Yes
Borgan Road	GRC	-		60	83		Yes
Borumba Dam Road	Seqwater	160	1%	20	7	17%	Yes
Southern Route							
D'Aguilar Highway (East of Kilcoy)	TMR	7,655	15%	56	21	1%	N/A
D'Aguilar Highway (West of Kilcoy)	TMR	4,537	18%	0	20	0%	N/A
Brisbane Valley Highway	TMR	2,806	17%	0	20	1%	N/A
William Road	TMR	3,665	4%	56	41	3%	N/A
Kilcoy Murgon Road	TMR	887	11%	56	41	11%	Yes
Sunday Creek Road	SRC	24		56	41	404%	Yes
Yielo Road	SRC	8		56	41	1213%	Yes
Sinnamons Road	SRC	-	-	0	20		N/A

[1] – Volume over capacity assessment is based on the following process:

- Total AADT Volume = Existing AADT + Project Traffic LV + Project Traffic HV
- Peak Hour Volume (Volume) = 10% of Total AADT Volume
- Capacity = 900 vehicles per hour
- Volume over Capacity Assessment = Volume / Capacity.

7.10 Intersection Analysis

As stated within the TMR Guide to Traffic Impact assessment (2018), the desired outcome is to ensure that the sum of intersection delays on base traffic in the impact assessment area does not significantly worsen (that is, does not increase average delay by more than 5% in aggregate) as a result of a development.

To assess the impact of Exploratory Works on intersection delay, key intersections along the northern and southern networks have been modelled in SIDRA. Two scenarios have been modelled:

1. Existing 2024 traffic conditions
2. Estimated future traffic conditions where background traffic and traffic generated by the works are combined.

Existing traffic conditions are based on intersection traffic surveys undertaken between Wednesday 31 January to Tuesday 6 February 2024. Based on these surveys it was identified that Tuesday 6 February had the highest traffic volumes within that 7-day period. Therefore, existing 2024 traffic conditions are based on Tuesday 6 February traffic volumes. Estimated future traffic conditions are based on existing 2024 traffic conditions combined with traffic volumes generated by the exploratory Works (presented within Section 7.7.). No significant growth to existing traffic is expected and therefore it has not been forecasted.

Three peak periods have been analysed, namely: AM peak, Mid-Day and PM Peak.

Comparing the results within Section 7.10 against results presented within Section 4.3 confirms traffic generated by the Exploratory Works does not result in a 5% increase in intersection average delay.

The SIDRA intersection analysis is summarised in the following subsections and Table 7–11 to Table 7–22. The detailed results are contained in **Appendix G**.

7.10.1 Gympie - Brooloo Road / Mary Valley Link Road

The SIDRA analysis results detailed in Table 7–11 show that the intersection operates at a high-efficiency level with an overall level of service (LoS A). The worst delay recorded is 8.7 seconds on the east approach during the AM peak, with a maximum queue length of 5.6 m again on the east approach during the same period. This indicates smooth traffic flow and low congestion at the intersection during the specified time.

Table 7–11: Gympie - Brooloo Road / Mary Valley Link Road Intersection SIDRA Results

Metric	Value	Approach	Time period
Intersection LoS	A		
Worst Movement Delay (s)	8.7	East	AM Peak
Worst Queue (m)	5.6	East	AM Peak

7.10.2 Gympie - Brooloo Road / Tuchekoi Road

The SIDRA analysis results detailed in Table 7–12 show that the intersection operates at a high-efficiency level with an overall level of service (LoS A). The worst delay recorded is 6.2 seconds on the east approach during the AM peak, with a maximum queue length of 2.1 m again on the east approach during the same period. This indicates smooth traffic flow and low congestion at the intersection during the specified time.

Table 7–12: Gympie - Brooloo Road / Tuchekoi Road Intersection SIDRA Results

Metric	Value	Approach	Time period
Intersection LoS	A		
Worst Movement Delay (s)	6.2	East	AM Peak
Worst Queue (m)	2.1	East	AM Peak

7.10.3 Cooroy - Gympie Road / Kenilworth Skyring Creek Road

The SIDRA analysis results detailed in Table 7–13 show that the intersection operates at a high-efficiency level with an overall level of service (LoS A). The worst delay recorded is 7.4 seconds on the west approach during the mid-day peak, with a maximum queue length of 2.6 m on the same approach during the AM peak. This indicates smooth traffic flow and low congestion at the intersection during the specified time.

Table 7–13: Cooroy - Gympie Road / Kenilworth Skyring Creek Road Intersection SIDRA Results

Metric	Value	Approach	Time period
Intersection LoS	A		
Worst Movement Delay (s)	7.4	West	Mid-day Peak
Worst Queue (m)	2.6	West	AM Peak

7.10.4 Kenilworth Skyring Creek Road / Tuchekoi Road

The SIDRA analysis results detailed in Table 7–14 show that the intersection operates at a high-efficiency level with an overall level of service (LoS A) during the AM peak period. The worst delay recorded is 6.0 seconds on the west approach during the AM peak, with a maximum queue length of 2.6 m on the north approach during the same period. This indicates smooth traffic flow and low congestion at the intersection during the specified time.

Table 7–14: Kenilworth Skyring Creek / Tuchekoi Road Intersection SIDRA Results

Metric	Value	Approach	Time period
Intersection LoS	A		
Worst Movement Delay (s)	6.0	West	AM Peak
Worst Queue (m)	2.6	North	AM Peak

7.10.5 Kenilworth - Brooloo Road / Moy Pocket Road

The SIDRA analysis results detailed in Table 7–15 show that the intersection operates at a high-efficiency level with an overall level of service (LoS A) during the AM peak period. The joint worst delay recorded is 11.6 seconds on the east approach in both the AM and mid-day peak periods. The maximum queue length of 1.3 m was observed on the same approach during the AM peak. This indicates smooth traffic flow and low congestion at the intersection during peak periods.

Table 7–15: Kenilworth - Brooloo Road / Moy Pocket Road Intersection SIDRA Results

Metric	Value	Approach	Time period
Intersection LoS	A		
Worst Movement Delay (s)	11.6	East	AM Peak / Mid-day Peak
Worst Queue (m)	1.3	East	AM Peak

7.10.6 Yabba Creek Road / Gympie - Brooloo Road

The SIDRA analysis results detailed in Table 7–16 show that the intersection operates at a high-efficiency level with an overall level of service (LoS A). The worst delay recorded is 7.2 seconds on the west approach during the mid-day peak, with a maximum queue length of 2.6 m on the same approach during the same period. This indicates smooth traffic flow and very low congestion at the intersection during the specified time.

Table 7–16: Yabba Creek Road / Gympie - Brooloo Road Intersection SIDRA Results

Metric	Value	Approach	Time period
Intersection LoS	A		
Worst Movement Delay (s)	7.2	West	Mid-day Peak
Worst Queue (m)	2.6	West	Mid-day Peak

7.10.7 Yabba Creek Road / Kandanga Imbil Road

The SIDRA analysis results detailed in Table 7–17 show that the intersection operates at a high-efficiency level with an overall level of service (LoS A) during the AM peak period. The worst delay recorded is 7.2 seconds on the east approach during the mid-day peak, with a maximum queue length of 2.7 m on the north approach in the AM peak. This indicates smooth traffic flow and low congestion at the intersection during the specified time.

Table 7–17: Yabba Creek Road / Kandanga Imbil Road Intersection SIDRA Results

Metric	Value	Approach	Time period
Intersection LoS	A		
Worst Movement Delay (s)	7.2	East	Mid-day Peak
Worst Queue (m)	2.7	North	AM Peak

7.10.8 Yabba Creek Road / Diggings Road

The SIDRA analysis results detailed in Table 7–18 show that the intersection operates at a high-efficiency level with an overall level of service (LoS A) during the AM peak period. The joint worst delay recorded was 7.4 seconds observed on both the west approach in the AM peak and the east approach in the mid-day peak. The maximum queue length of 1.7 m was observed on the south approach in the AM peak. This indicates smooth traffic flow and low congestion at the intersection during the specified time.

Table 7–18: Yabba Creek Road / Diggings Road Intersection SIDRA Results

Metric	Value	Approach	Time period
Intersection LoS	A		
Worst Movement Delay (s)	7.4	West / East	AM Peak / Mid-day Peak
Worst Queue (m)	1.7	South	AM Peak

7.10.9 Yabba Creek Road / Bella Creek Road

The SIDRA analysis results detailed in Table 7–19 show that the intersection operates at a high-efficiency level with an overall level of service (LoS A) during the AM peak period. The joint worst delay recorded was 6.5 seconds on the west approach across the AM peak, mid-day peak, and PM peak periods. The maximum queue length of 1.0 m was observed on the south approach during the AM peak. This indicates smooth traffic flow and low congestion at the intersection during the specified time.

Table 7–19: Yabba Creek Road / Bella Creek Road Intersection SIDRA Results

Metric	Value	Approach	Time period
Intersection LoS	A		
Worst Movement Delay (s)	6.5	West	AM Peak / Mid-day Peak / PM Peak
Worst Queue (m)	1.0	South	AM Peak

7.10.10 D'Aguilar Highway / William Street

The SIDRA analysis results detailed in Table 7–20 show that the intersection operates at a high-efficiency level with an overall level of service (LoS A). The worst delay recorded is 12.9 seconds on the northwest approach during the AM peak, with a maximum queue length of 6.6 m on the south approach during the same period. This indicates smooth traffic flow and very low congestion at the intersection during the specified time.

Table 7–20: D'Aguilar Highway / William Street Intersection SIDRA Results

Metric	Value	Approach	Time period
Intersection LoS	A		
Worst Movement Delay (s)	12.9	Northwest	AM Peak
Worst Queue (m)	6.6	South	AM Peak

7.10.11 Kilcoy Murgon Road / Mt Kilcoy Road

The SIDRA analysis results detailed in Table 7–21 show that the intersection operates at a high-efficiency level with an overall level of service (LoS A). The worst delay recorded is 6.4 seconds on the east approach during the AM peak, with a maximum queue length of 1.6 m on the south approach during the mid-day peak period. This indicates smooth traffic flow and low congestion at the intersection during the specified time.

Table 7–21: Kilcoy Murgon Road / Mt Kilcoy Road Intersection SIDRA Results

Metric	Value	Approach	Time period
Intersection LoS	A		
Worst Movement Delay (s)	6.4	East	AM Peak
Worst Queue (m)	1.6	South	Mid-day Peak

7.10.12 Kilcoy Murgon Road / Sunday Creek Road

The SIDRA analysis results detailed in Table 7–22 show that the intersection operates at a high-efficiency level with an overall level of service (LoS A). The joint worst delay recorded is 6.7 seconds on the north approach across the AM peak, mid-day peak, and PM peak periods. The maximum queue length of 1.6 m was observed on the east approach during the mid-day peak period. This indicates smooth traffic flow and very low congestion at the intersection during the specified time.

Table 7–22: Kilcoy Murgon Road / Sunday Creek Road Intersection SIDRA Results

Metric	Value	Approach	Time period
Intersection LoS	A		
Worst Movement Delay (s)	6.7	North	AM Peak / Mid-day Peak / PM Peak
Worst Queue (m)	0.5	East	Mid-day Peak

7.11 SIDRA Analysis Summary

Based on the SIDRA analysis presented above, all intersections are expected to maintain a LoS A during Exploratory Works phase. Minimal impacts are expected in relation to delay or back of queue impacts.

- Higher order intersections:
  - Traffic generated by the exploratory Work is expected to have a slight impact on the higher order roads due to the Exploratory Works peak hour traffic expected.
  - The road network operational impacts are likely to be only slight.
- Lower order intersections:
  - Exploratory Works traffic is expected to double existing traffic in some places.
  - However, this is not expected to be a concern as the existing traffic is low, and the road infrastructure can accommodate the increase in traffic.

7.12 Turn Warrants Assessment (Future)

A turn warrants assessment has been undertaken for 2025 construction traffic conditions at key intersections along the construction routes to be used during Exploratory Works. The purpose of the assessment is to identify whether existing intersections meet current traffic conditions.

These assessments have been undertaken in accordance with:

- TMR Supplement to Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections (November 2021)
- Traffic volumes presented within Section 7.8.

Table 7–23 and Table 7–24 presents a turn warrant assessment for existing intersection layouts with construction traffic along each route to site.

Based on the results the following observations are noted:

- Construction traffic associated with the Exploratory Works does not trigger the need for any intersection to be upgraded.
- Turn treatments for the more significant intersections along the northern network are expected to be appropriate to accommodate construction traffic volumes associated with the Exploratory Works.
- The intersections that do not meet the recommended turn treatment requirements are the same intersections listed in Section 4.4 for existing conditions:
  - Diggings Road (north) / Yabba Creek Road intersection:
    - Turn warrants assessment indicates a basic auxiliary left (BAL) and basic auxiliary righty (BAR) are the recommended treatments
    - The existing layout provides a SL and SR treatment
  - Diggings Road (south) / Yabba Creek Road intersection:
    - Turn warrants assessment indicates a BAL and BAR are the recommended treatments
    - The existing layout provides a SL and SR treatment
  - Kandanga Imbil Road / Yabba Creek Road:
    - Turn warrants assessment indicates a BAR is the recommended treatment
    - The existing layout provides a SR treatment
  - Tuchekoi Road / Kenilworth Skyring creek Road intersection:
    - Turn warrants assessment indicates a BAL and BAR are the recommended treatments
    - The existing layout provides a SL and SR treatment
  - Sunday Creek Road / Kilcoy Murgon Road intersection:
    - Turn warrants assessment indicates **construction traffic triggers** the recommendation to provide a BAR treatment
    - The existing layout provides a SR treatment.

Table 7–23: Turn Warrant Assessment– Northern Network 2026 Conditions with Construction Traffic

Road	Posted Speed (km/h)	Road Type	Turn Type	Splitter Island	AM					Mid-day					PM					2025 Turn Treatment	Section 4.4 Treatment	Existing Treatment
					QM	QT1	QT2	QL	QR	QM	QT1	QT2	QL	QR	QM	QT1	QT2	QL	QR			
Gympie - Brooloo Road (major road)																						
Mark Valley Link Road		2-Lane 2-Way	Right	No	248	85	64	99	65	213	82	58	73	51	142	53	45	44	30	CHR(s)	CHR(s)	CHR
			Left		64					58					45					BAL	BAL	CHL
Tuchekoi Road	100	2-Lane 2-Way	Right	No	62	27	18	17	54	75	44	26	5	28	37	14	21	2	43	BAR	BAR	BAR
			Left		18					26					21					BAL	BAL	BAL
Yabba Creek Rd		2-Lane 2-Way	Right	No	97	31	42	24	66	113	35	42	36	47	54	35	12	7	27	BAR	BAR	AUR
			Left		42					42					12					BAL	BAL	AUL
Yabba Creek Road (major road)																						
Diggings Road (north)	40	2-Lane 2-Way	Right	No	199	107	86	6	13	207	99	104	4	15	165	66	98	1	10	BAR	BAR	SR
			Left		86					104					98					BAL	BAL	SL
Diggings Road (south)	40	2-Lane 2-Way	Right	No	205	86	107	12	8	214	104	99	11	4	173	98	66	9	5	BAR	BAR	SR
			Left		107					99					66					BAL	BAL	SL
Kandanga Imbil Road	60	2-Lane 2-Way	Right	No	231	93	73	65	18	234	87	77	70	12	191	51	74	66	13	BAR	BAR	SR
			Left		73					77					74					BAL	BAL	BAL
Bella Creek Road	80	2-Lane 2-Way	Right	No	11	6	4	1	37	14	8	6	0	21	5	2	3	0	3	SR	SR	SR
			Left		4					6					3					SL	SL	SL
Cooroy – Gympie Road (major road)																						
Kenilworth Skyring Creek Road	100	2-Lane 2-Way	Right	Yes	133	66	67	109	12	142	63	79	65	25	106	51	55	61	30	BAR	BAR	CHR
			Left		67					79					55					BAL	BAL	CHL
Kenilworth Skyring Road																						
Tuchekoi Road	100	2-Lane 2-Way	Right	No	59	11	35	13	101	46	13	21	12	53	53	35	9	9	43	BAR	BAR	SR
			Left		35					21					9					BAL	BAL	SL
Kenilworth - Brooloo Road (major road)																						
Moy Pocket Road	100	2-Lane 2-Way	Right	No	74	24	38	12	1	112	43	43	26	1	53	16	28	9	0	SR	SR	AUR
			Left		38					43					28					SL	SL	SL

Table 7–24: Turn Warrant Assessment– Southern Network 2025 Conditions with Construction Traffic

Road	Posted Speed (km/h)	Road Type	Turn Type	Splitter Island	AM					Mid-day					PM					Turn Treatment	Section 4.4 Treatment	Existing Treatment
					QM	QT1	QT2	QL	QR	QM	QT1	QT2	QL	QR	QM	QT1	QT2	QL	QR			
D'Aguilar Highway (major road)																						
William Road	60	2-Lane 2-Way	Right	Yes	528	278	250	65	90	460	217	243	84	126	322	174	148	61	81	CHR	CHR	CHR
			Left		250					243					148					BAR	BAL	CHL
Kilcoy Murgon Road (major road)																						
Mount Kilcoy Road	100	2-Lane 2-Way	Right	No	45	20	19	6	43	41	22	10	9	51	43	14	24	5	36	BAR	BAR	SR
			Left		19					10					24					BAL	BAL	SL
Sunday Creek Road	100	2-Lane 2-Way	Right	No	11	1	9	1	20	7	2	5	0	11	11	5	6	0	2	BAR	SR	SR
			Left		9					5					6					SL	SL	SL
Sunday Creek Road (major road)																						
Yielo Road	100	2-Lane 2-Way	Right	No	19	1	1	17	0	12	0	0	12	0	2	1	0	1	0	SR	SR	SR
			Left		1					0					0					SL	SL	SL

7.13 Site camp parking

The current expectation of site camp parking is between 30 to 35 parking bays at each site. There would be a requirement for utes, buses, delivery vehicles and machinery plant. Specific camp details will be confirmed by the contractor once the design is approved.

Note that the number of vehicles travelling to site in the site generated traffic volumes do not all go to the site camp. There are numerous individual site locations that form the larger Project.

At each of the camps, LV trips are estimated to be 15 arriving (and parking) in the morning and then multiple short stay visits during the day. Parking requirements are estimated to be for 15 permanent parks plus another 15 floating parks for use during the day, or 30 total parking spaces. All vehicles should enter and exit the site camp in a forward motion.

7.14 Site Access

Site access will be formalised and have access control, a wash bay, inspection bay, turn around and guard house facilities. Figure 7–21 and Figure 7–22 show typical access gate layouts that are currently being considered for Borgan Road and Yielo Road respectively.

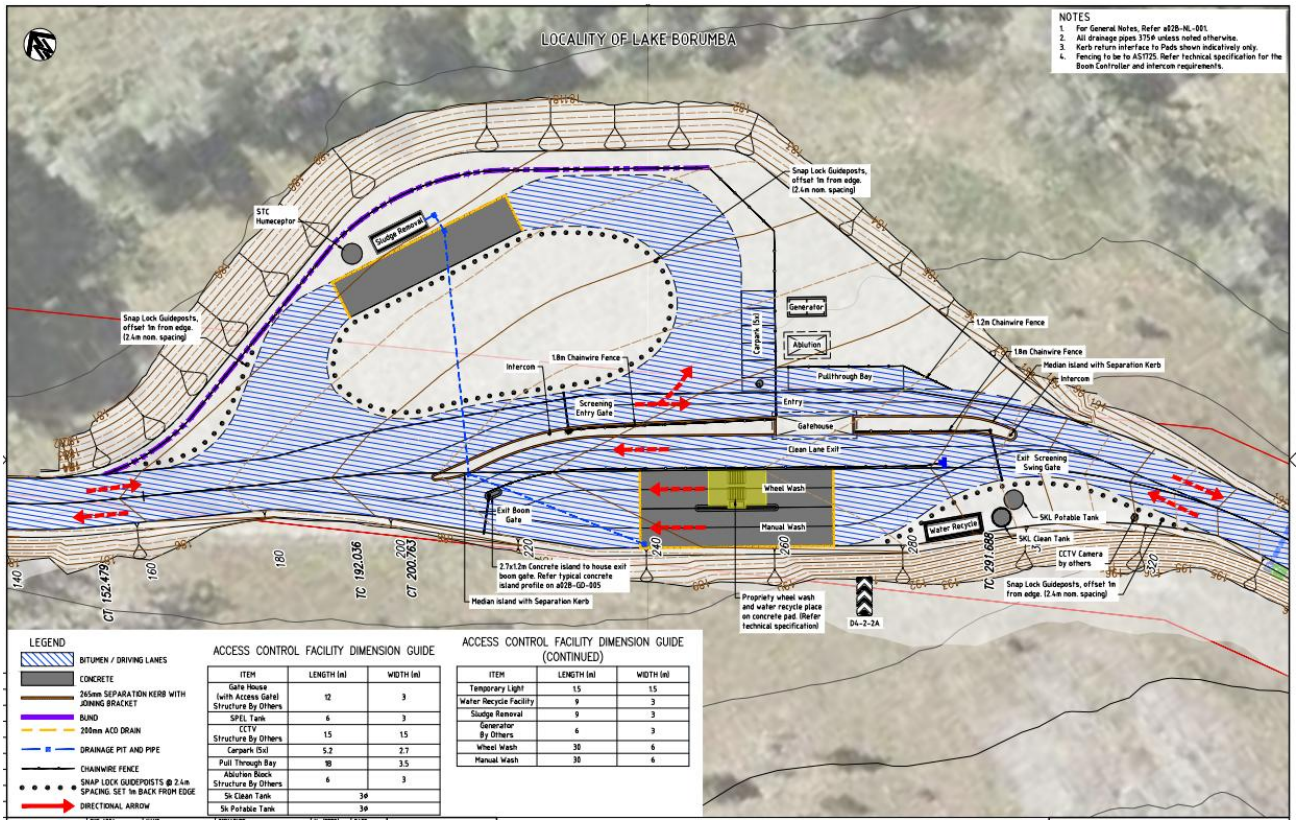


Figure 7–21: Borgan Road access gate layout

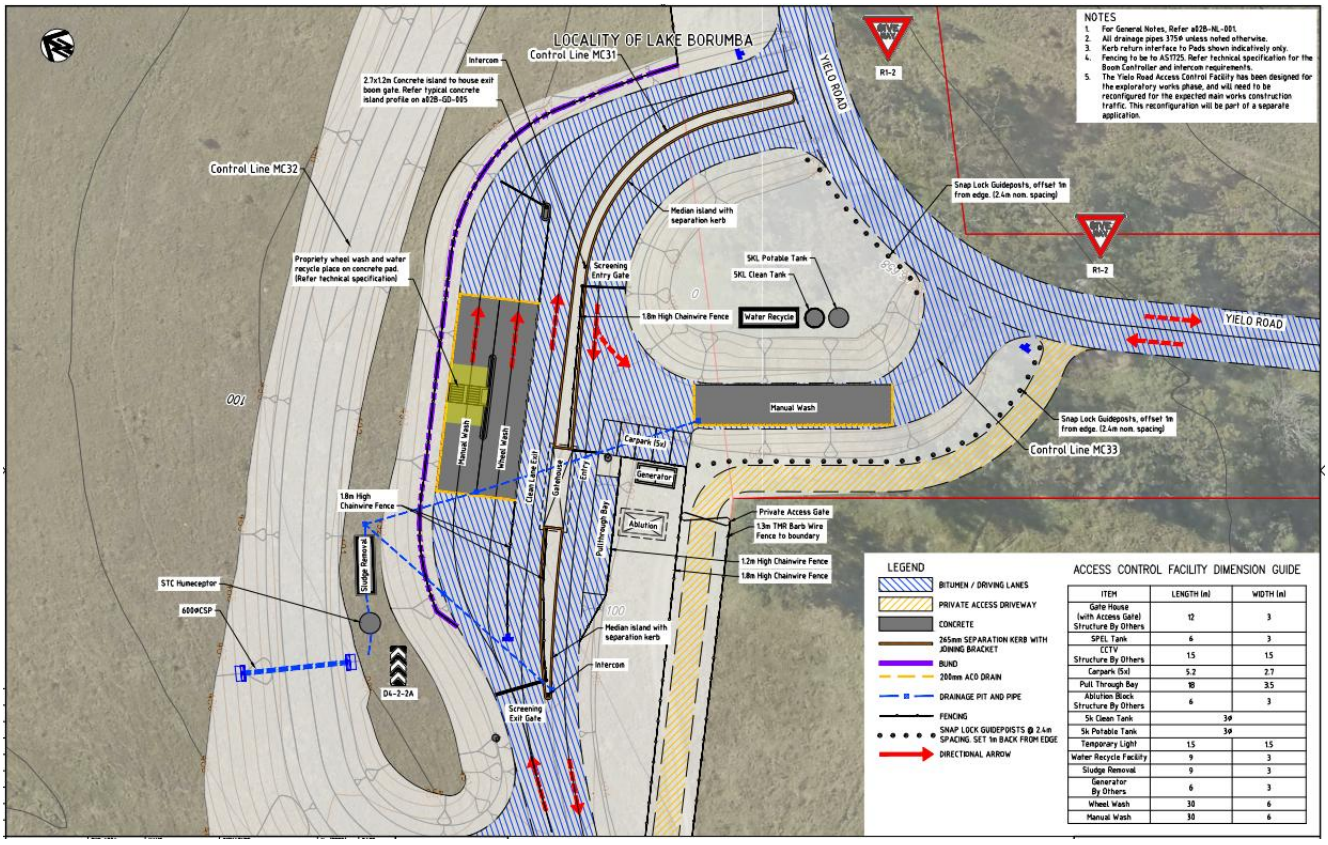


Figure 7–22: Yielo Road access gate layout

8. Swept Path Assessment

The majority of HV's expected on site are rigids and truck and dogs. The preferred HV routes to site have been assessed for a 19m semi-trailer truck as a check vehicle with swept path diagrams contained in **Appendix F** .

Swept paths for semi-trailers have been assessed for Bella Creek Road and improvements to road alignments have been implemented by GRC.

The intersections that were assessed are as follows:

- Gympie – Brooloo Road / Mary Valley Link Road
- Gympie – Brooloo Rd / Yabba Creek Road
- D'Aguilar Highway / Williams Road
- Williams Road / Kilcoy Murgon Road
- Kilcoy Murgon Road / Sunday Creek Road.

The diagrams are based on aerial imagery and should not be considered perfectly accurate. The purpose of this exercise is a high-level assessment to identify any significant turn path conflicts that would require further investigation.

These diagrams confirm intersections along the adopted HV routes do not appear to have significant turn path conflicts except for Kilcoy Murgon Road / Sunday Creek Road requires further investigation and mitigation measure for the left turn from Sunday Creek Road. Additional paths swept paths have been provided for truck and dogs as independent movements (i.e. not overlapping) and the left out crossing the centreline of Sunday Creek Road. The assessment shows temporary traffic management with traffic controller/s will be required as planned to control flow of vehicles with a stop and go arrangement.

9. Infrastructure Assessment

Routes to both the Main Site and Upper Site are being assessed with data supplied by TMR.

9.1 Pavement Impact Assessment

The Pavement Impact Assessment (PIA) (BR-EX-ROD-TDS-TCM-00001.B) was conducted based on information contained in the above sections. The full technical memo is detailed in **Appendix H**, with the following conclusions and recommendations extracted from the technical memo.

9.1.1 Conclusion

An assessment of base case and development traffic loading associated with The Project and identified road sections where a 5% threshold is exceeded (impact assessment area). For the impact assessment area, monetary contributions have been calculated in accordance with the TMR Guide to Traffic Impact Assessment (GTIA) as a means to offsetting the impacts on the pavement which result from the development.

Using the 'marginal cost methodology' outlined in the GTIA and TMR Guide to Traffic Impact Assessment Practice Note: Pavement Impact Assessment, a total development contribution for the Exploratory Works was calculated.

9.1.2 Recommendations

9.1.2.1 Additional Actions

The following actions are recommended to be taken to finalise the PIA:

- Queensland Hydro reviews the input parameters adopted in the PIA. Careful consideration should be given to the presumptive HV type/s, volumes and axle load configurations outlined in the PIA Section 8.
- Queensland Hydro notes the following for discussion with TMR, where applicable:
  - Key input parameters discussed above.
  - The marginal cost rates for Gympie - Brooloo Road and Kilcoy - Murgon Road are further evaluated to appreciate any reasoning for large variations, and how they may be applicable to the PIA.
  - Delivery of routine pavement maintenance activities along the traffic routes in the time prior to and during The Project.

9.1.2.2 Additional Mitigation Measures

Notwithstanding above, it is highlighted to Queensland Hydro that additional mitigation measures can be adopted to minimise the potential impact on the pavement during construction of The Project. These may include but are not limited to:

- Undertaking visual pavement assessments at selective points in The Project programme as a means to identifying early signs of an increased rate of deterioration or pavement failure.
- Installation of shaker grids at site exit points from construction activities.
- Consult with The Project team (including Contractors) on limiting HV volumes during and immediately following periods of inclement weather.
- Pavement maintenance to be included in the RMP.
- It is recommended the standard of existing roads will be assessed against the TMRs Routine Maintenance Guidelines Chapter 4: Routine Maintenance Intervention Level and Response Time (IL/RT) for the current standard of defects. The assessment of the existing condition could form a basis for negotiations about responsibility for maintenance and rehabilitation costs between the project and road owners.

10. Stakeholder engagement

Social impacts have been documented in the Social Assessment and Management Plan (SAMP) with quarterly reporting to the Office of the Coordinator-General on performance measures.

The Community and Stakeholder Engagement Plan (CSEP) provides more detail on stakeholder consultation.

The following typical engagement strategies are proposed to assist with stakeholder engagement for both infrastructure owners and the community.

10.1 Infrastructure stakeholders

A Transport Working Group has been established with infrastructure owners (TMR, SRC, GRC and Queensland Hydro). The working group meets regularly to discuss Project issues that arise.

10.2 Community stakeholders

A Communication and Stakeholder Engagement Action Plan for traffic and haulage has been developed with a three month lookahead for changed traffic conditions, road impacts and haulage movements. This plan will be updated quarterly.

11. Road Network Impacts

The sections below summarise the current safety issues, turn treatments required and the impacts the site generated traffic will have on the road network.

11.1 Road link safety assessment

A link assessment, including a review of RSA findings that currently exist in the road network the Project will impact, are listed in Table 11–1. The table also details how development traffic will impact the current issues.

Table 11–1: Road safety issues for existing conditions and the development impact on them

Item	Road	Location	Issue	Development impact
1.	Gympie – Brooloo Road (Mary Valley Road)	Various	Gravel private accesses can be safety hazards due to stones being flicked up or gravel shifting onto the roadway. Higher speeds can increase the risk.	Potential higher rate of occurrence
2.			Road shoulder is grassed up to the edge of bitumen.	Potential higher rate of occurrence of run off road crashes
3.			Minimal offset between the edge of bitumen and culvert headwalls.	Potential higher rate of occurrence of hitting structures
4.			No flat road shoulder creates a less forgiving road environment, nor place to pull over.	The higher volumes increase chance of occurrence
5.		Various	9 x Hospitalisation crashes (4 crashes centred around the Main Street intersection) 3 x Medical treatment crashes spread along the length of the road. 1 x Hospitalisation and 1 Medical treatment crash at the Yabba Creek Road intersection	Potential higher rate of crash occurrence
6.	Kenilworth Skyring Creek Road	CH 1.75 km	Poor sight distance through the curve with a gravel driveway mid-way.	Potential higher rate of risk
7.		Various	1 x Fatal crash – head-on June 2021 (Daytime and dry conditions) – CH 5km 4 x Hospitalisation crashes occurred between Cooroy Gympie Road intersection and Tuchekoi Road. 4 x various crashes occurred between Peacons Pocket Road and Tuchekoi Road.	Increased traffic volumes through high-speed variable road alignment

Item	Road	Location	Issue	Development impact
8.		Peacons Pocket Road intersection	Sight line issues and unique warning light signage is non-standard, and drivers may not understand.	Potential higher rate of occurrence
9.		Chinaman Creek	The crossing is subject to flooding.	None
10.		Chinaman Creek	The road formation narrows at the crossing.	Potential higher rate of vehicle interactions
11.	Tuchekoi Road	CH 3.3km – Coonoon Gibber Creek	Constrained creek crossing.	Potential higher rate of vehicle interactions
12.	Yabba Creek Road	General	Narrow road corridor.	Potential higher rate of vehicle interactions
13.			Inconsistent and limited delineation.	Potential higher rate of vehicle interactions
14.			Large non-frangible trees on the outside of bends.	Potential higher rate of risk
15.			Lack of sealed shoulders and pedestrian / cyclist facilities.	Potential higher rate of active transport user interactions
16.		Yabba Creek Road / Albion Street intersection	1 Fatal crash – off carriageway August 2020 (Night, streetlights, and dry conditions)	None
17.		50m east of Digging Road intersection	1 Medical treatment – pedestrian hit Sunday 2020	Increased traffic volumes through a pedestrian zone
18.		Numerous creek crossings and their approaches	Deficient in terms of advanced warning signs, give-way markings, delineation, and guardrails.	Potential higher rate of risk
19.		Numerous creek crossings	Subject to flooding.	Potential for road closures
20.		Numerous creek crossings	Minimal offset between bitumen seal and culvert headwalls or bridges.	Potential higher rate of risk
21.		Numerous creek crossings	Structures are load restricted to general access loads only.	None
22.		Town centre	No dedicated pedestrian crossing facilities.	Potential increased rate of occurrence of pedestrian / vehicle interaction
23.			On street parallel parking.	Potential increased rate of occurrence of pedestrian / vehicle interaction
24.		Marrapatta House	No dedicated crossing facilities or pedestrian warning signage.	Potential increased rate of occurrence of pedestrian / vehicle interaction

Item	Road	Location	Issue	Development impact
25.		Mary Valley State College	School is adjacent to the route to site.	Potential increased rate of occurrence of pedestrian / vehicle interaction
26.		Approaches to the sawmills in the vicinity to Wallader Road	Seasonal logging	Greater intensity of HVs
27.	Bella Creek Road	Intersection with Yabba Creek Road	Limited sight distance for traffic approaching from the dam.	Crash risk
28.		General	Constrained geometry with dips, crests, and blind horizontal curves.	Potential increased rate of occurrence of vehicle interaction
29.			Three at-grade water crossings are subject to flooding.	Potential for road closures
30.		Various	Cattle grids constrain the roadway.	Potential loss of level of service due to trucks having to slow down.
31.	Kandanga Imbil Road	200m north of Kandanga Imbil Road / Melawondi Road intersection	1 x Fatal crash – head-on September 2022 (Daytime and dry conditions)	No pattern – Limited impact
32.		Various	6 x Hospitalisations – 4 on the curve immediately north of Ray Meyers Road	Potential increased rate of crash occurrence
33.			4 x Medical treatments – 1 on curve immediately north of Ray Meyer Road	No pattern – Limited impact
34.	Moy Pocket Road	Various	Frequent reduced horizontal radii curves through road cuttings creates a narrow road environment	None – truck drivers from the quarry are familiar with the route
35.		250m south of the Moy Pocket / Walker Road intersection	Culvert and causeway create a constrained road environment with steep batters and no road shoulder offset	None – truck drivers from the quarry are familiar with the route
36.	D'Aguilar Highway	Various	Potential for occasional cattle on the road	Crash risk
37.			Rural gravel driveways and gravel pullover bays occur along the highway with gravel being tracked onto the carriageway	Potential loss of traction on roadway or stones getting flicked up into windows
38.			High crash statistics	New wide centreline treatments to assist in reducing crashes

Item	Road	Location	Issue	Development impact
39.		William Street / D'Aguilar Highway intersection	On road cycle lanes mixing with truck turning traffic	Potential increased rate of occurrence of cyclist interaction
40.	Kilcoy Murgon Road	In urban environment (Kennedys Rd)	On street parallel parking with trucks passing by	Potential increased rate of occurrence of pedestrian interaction
41.		Various	Numerous gravel driveways access	Crash risk
42.			Wide culverts with minimal offset between edge of bitumen and headwall	Crash risk
43.		Sheep Station Creek, approximately 8.5km north of Kilcoy.	Northbound traffic is controlled via give way signage and line marking	Right of way confusion could lead to crash risk
44.		Sheep Station Creek (East Branch), approximately 17km north of Kilcoy	Substandard safety barriers with high drop off either side	Crash risk
45.		From Kilcoy Murgon Road / Ten Mile Road intersection through to Sunday Creek Road	Frequent curves, changing vertical alignment and overgrown vegetation	Crash risk
46.		Commencing approximately 11km south of Sunday Creek Road intersection	Very steep road grades	Potential reduced capacity due to higher volume of HVs
47.		Approximately 10.5km south of Sunday Creek Road intersection.	Landslip potential (close to edge of embankment)	Crash and road closed risk
48.			Sight distance is limited	Crash risk
49.		Entire route	Seasonal logging	Greater intensity of HVs
50.	Sunday Creek Road	500 m from Kilcoy Murgon Road	Narrow steel girder bridge (approximately 4.0 m wide) with tight approaches	Geometric constraints and right of way conflict because east bound approach is unsighted from the Kilcoy Murgon Road
51.		Sealed section from CH 700 m to 1700 m	Moderately steep grade (approximately 10% – 12%)	Slower moving HVs could impact link capacity
52.		Length of the sealed section	DA is lodged for entertainment events to take place at Lot 2 SP228062 Sunday Creek Road. Application is for 25 days a year. No indication of traffic generation could be found	Unknown traffic impact of events. Potential for conflict with higher volume traffic for short periods

Item	Road	Location	Issue	Development impact
53.	Yielo Road	The first 3 km	Many large trees are within 1.0 – 2.0 m of the current roadway	Crash risk and geometric constraints for HVs
54.		Various	Cattle / animals roam free	Crash risk due to interaction with animals
55.			Numerous cattle gates and grids	Crash risk due to narrow gate
56.			The roadway is unformed for the latter part of the road	Crash risk and potentially constrained when wet due to rain

11.2 Turn treatments required

Table 11–2 provides a summary of the intersection turn treatments that are required for current traffic conditions. The development traffic does not change the requirements.

Table 11–2: Required turn treatment summary

Item	Intersection	Turn Treatment Upgrades
1	Kenilworth Skyring Creek Road / Tuchekoi Road	BAR treatment to accommodate existing traffic conditions. BAL treatment to accommodate existing traffic conditions.
2	Yabba Creek Road / Kandanga Imbil Road	BAR treatment to accommodate existing traffic conditions.
3	Yabba Creek Road / Diggings Road	BAR treatments to both sides of the intersection to accommodate existing traffic conditions.
4	Kilcoy Murgon Road / Mount Kilcoy Road	BAR treatment to accommodate existing traffic conditions. BAL treatment to accommodate existing traffic conditions.
5	Kilcoy Murgon Road / Sunday Creek Road	BAR treatment to accommodate additional Exploratory Works traffic.

11.3 Development impacts

The impacts directly occurring from site generated traffic that are not currently a safety issue on the road network are listed in Table 11–3.

Table 11–3: Traffic impacts

Item	Location	Cause	Impact
1	All	Increase in HV traffic	Road surface condition deterioration
2		Increase in HV traffic	Road structures deterioration
3	Bella Creek Road	Increased HV traffic on a single lane gravel road	Higher crash potential
4		Increased general traffic	Loss of amenity for residents
5	Yabba Creek Road	Increased general traffic through Imbil	Loss of amenity for residents
6		Increased HV traffic through Imbil	Vehicle interactions
7			Pedestrian interactions
8			Cyclist interactions
9			Increased noise - loss of amenity for residents
10		Unexpected additional weekend HV traffic through Imbil town (tourists visiting)	Vehicle interactions
11			Pedestrian interactions
12			Cyclist interactions
13	Kilcoy town	Increased general traffic through Kilcoy	Vehicle interactions
14			Pedestrian interactions
15			Cyclist interactions
16	Kilcoy Murgon Road	Seasonal logging	Higher intensity of HVs
17	Sunday Creek Road	Substantial increase in traffic from current conditions on single lane road	Higher crash potential
18		Vehicles per day exceeding 50	May require surfacing (SRC LoS requirement)
19	Yielo Road	Substantial increase in traffic from current conditions on single lane road	Vehicle interactions
20			Loss of amenity for residents
21		Unsuitable road geometry for HVs	Crash potential
22		Unsuitable road surface conditions for HVs	Crash potential
23		Vehicles per day exceeding 50	May require surfacing (SRC LoS requirement)

12. Conclusions

The Exploratory Works consist of tunnel drilling and geotechnical investigations to provide information on the conditions along the locations of the key potential Project infrastructure. As part of this phase, some infrastructure requires upgrading to support the exploratory drilling and tunnelling.

The purpose of this report is to document the traffic impacts of the Exploratory Works phase only. The Main Works will be detailed in a separate report.

The expected routes to the sites will be from the Bruce Highway with the northern network to the Main Site going via:

- Mary Valley Link Road, Gympie - Brooloo Road, Yabba Creek Road, Bella Creek Road to access Borgan Road where the Main Site will be situated.
- LVs from the Bruce Highway south could also use Kenilworth - Skyring Creek, Tuchekoi Road to access Gympie - Brooloo Road and on to site.

The southern network to the Upper Site will be from:

- D'Aguilar Highway, Kilcoy Murgon Road, Sunday Creek Road and Yielo Road.

New roads and temporary bridges are to be built to access specific areas within the Qld Hydro works areas.

Intersection and route analysis impacts

- Higher order roads:
  - Traffic generated by the Exploratory Works is expected to have only a minor impact on LoS on the higher order roads and intersections. All intersections analysed are LoS A which highlights the Project traffic does not impact the operation of the road network.
- Lower order roads:
  - Exploratory Works traffic is expected to significantly increase the traffic on some roads, such as Bella Creek Road, Borgan Road, Sunday Creek Road and Yielo Road.
  - Traffic generated by the Exploratory Works is expected to only have a minor impact on LoS on the lower order roads and intersections due to low volume of traffic. All analysed intersections operate at LoS A and as above highlights the Project traffic does not impact the operation of the road network.

Intersection turn lane treatments

- Section 11.2 details the intersections which require additional turn lane treatments.
- The project traffic triggers upgrades for one intersection due to turn lane warrants. The Kilcoy Murgon Road / Sunday Creek Road intersection is currently a SR treatment and requires a BAR. The intersection upgrade can also allow for the turn path to be contained in the sealed surface. Temporary traffic management with two traffic controller is planned to control the flow of vehicles with a stop and go arrangement.
- Numerous other intersections, under existing traffic conditions, currently meet the warrants for upgraded treatments and the development traffic doesn't change the requirement or type of treatment.

Safety impacts

- The increase in HV volumes may increase the general crash risk. Imbil town is specifically highlighted with several concerns, where there are higher chance of interaction between of HV's, pedestrians, and cyclists.
- The Kandanga Imbil Road is not a recommended Project route, however, it is possible some workers in LVs will use this road. The curve immediately north of Ray Meyers Road has a high rate of crash occurrences.
- Gravel roads leading to each of the site gates are also of concern due to substandard geometry (grades, curves and sight lines) and narrow or uneven road surface.

- The above and any safety concerns will be managed by the RMP with measures such as all staff and contactors completing a driver awareness and education as part of Project induction and use of in vehicle telematics system/device tracking all movement to and from site for all deliveries. Data recording can include:
  - Global Positioning System tracking and geo-fencing alerts
  - Fatigue management
  - Speed violations
  - Route compliance
  - Load & Mass Control.
- Bella Creek Road was identified in the RSA to be sealed for 500m. Since the audit was conducted, numerous improvements and re-grading of the surface has occurred for the entire length of Bella Creek Road. Currently, there is ongoing maintenance including dust suppression measures which improve the safety from when the RSA was conducted. With the anticipate traffic volumes in the Exploratory Works, sealing the road is not deemed necessary. Consideration should be given to sealing the road as other phases of the project are scheduled to begin.
- Lastly, a public / regional road safety program is also recommended to be developed by the QH Stakeholder Engagement and Social Performance team (QH SE&SP) covering general safety tips and awareness of good driver behaviour around and near HV's.

Social impacts

- Daytime Exploratory Works traffic is expected to have a noticeable degree of social impact on the town of Imbil due to an increase in HV traffic.
- The SAMP has examined the impacts of Exploratory Works Traffic on the towns of Kilcoy and Imbil and have proposed management measures for the social impacts. Reporting to the Coordinator-General (Queensland) on performance measures should occur quarterly.
- The CSEP provides more detail on stakeholder consultation.

Mitigation measures

- Mitigation and management measures for all traffic impacts listed in this document are detailed in the RMP formulated by Queensland Hydro as document ***Borumba Pumped Hydro Energy Storage Project – Exploratory Works: Road-Use Management Plan (RMP).***
- With mitigation and management measures, the road infrastructure can accommodate the increase in traffic.

12.1 Next steps to action

In future phases, the items detailed in Table 12–1 should be actioned.

Table 12–1: Action plan

No.	Action	Responsibility
1	Continuous monitoring of traffic and associated impacts occurs. Update the RMP accordingly.	QH Delivery teams
2	Continuous monitoring of social impacts. Quarterly monitoring and reporting of measures documented in the SAMP and to be provided to the Office of the Coordinator-General.	QH SE&SP team
3	Engagement with the local community is encouraged to continue with information on HV numbers, construction times and types of equipment to expect in accordance with the CSEP.	QH SE&SP teams

No.	Action	Responsibility
4	Engagement with the community, TMR and GRC on possibly improving pedestrian crossings.	QH SE&SP and Delivery teams
5	Engage with the community including local schools and school bus operators to provide updates on traffic movements and to obtain feedback on any traffic issues and potential improvement of management measures	QH SE&SP teams
6	Works will be undertaken in accordance with relevant environmental and planning approvals, or exemptions, where applicable. Approvals or exemptions are to be obtained for works requiring such.	QH Delivery and Approvals teams
7	All Principal Contractors to provide TMPs for works under their contract and provides details of (but not limited to):	Principal Contractor (QH Delivery team to review)
8	Any further safety issues with specific mitigation measures that will be implemented.	Principal Contractor (QH Delivery team to review)
9	Transportation of dangerous goods (Emulsion, explosives, etc). Details of haulage route, risk analysis and approval requirements should be provided.	Principal Contractor (QH Delivery team to review)
10	Transportation of waste material removal (Sewerage, kitchen grease, bin disposal, etc). Details should be provided for the waste location, route, frequency of vehicles.	Principal Contractor (QH Delivery team to review)
11	Further traffic counts for school holiday periods and weekends to be considered in the RMP.	RMP
12	Identification and assessment of sensitive receptors for noise and environment.	QH SE&SP, Environmental, Land and Delivery team

Appendix A

Public Transport – School Bus Routes

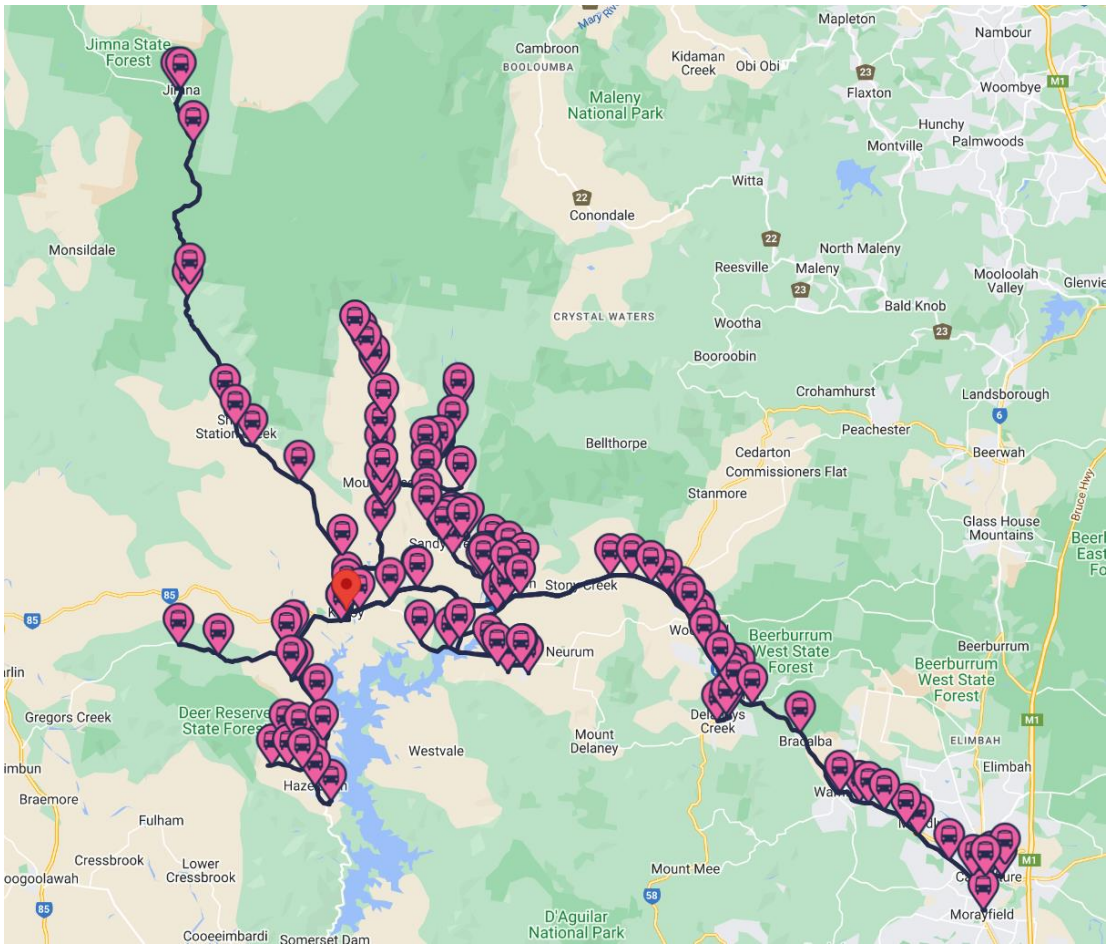
Christensen's Bus and Coach timetable

CHRISTENSEN'S BUS & COACH
Saleyard Road, Kilcoy Q 4515
Ph: 07 5497 1478 Fax: 07 5497 1946

914 Jimna Timetable		
Jan-24	AM	PM
Depart shed	**7.04am**	4.33pm
JIMNA SCHOOL BUS SHELTER	7.40am	3.56pm
JIMNA "BELLBIRD PARK"	7.41am	3.55pm
SUNDAY CREEK I/S	7.43am	3.58pm
YEDNIA - Eaton	8.00am	3.35pm
PRATTEN No 2020 Eaton pick up	8.01am	3.33pm
EATON No. 2025 drop off		3.33pm
FREDRIKSEN No.1569	8.04am	3.30pm
MONSILDALE ROAD (Schneider/Ryan)	8.05am	3.29pm
FERLING "Creekview" No 1262	8.06am	3.28pm
DUNN No. 925 Kilcoy-Murgon Rd	8.09am	3.25pm
TONES No. 529 Neil Harrison driveway	8.12am	3.22pm
BECHLY No.492 (fare payer)	8.14am	3.21pm
TONES No.369 Time check	8.14am	3.20pm
NISSAN No. 259 (fare payer)	8.14am	3.20pm
WADE ST	8.17am	3.17pm
KHS	8.20/21am	3.15pm
KPS	8.23am	**3.10pm**
Depot	8.26am	**3.05pm**

Please ensure students are at their designated stops 3-5 minutes prior to the above AM times.
UHF Channel 39 out of town on run
Call location at Sheep Station Ck bridges and range markers

School bus routes and stops for Kilcoy



Karrabee Bus and Coaches

S314 - BOLLIER, TUCHEKOI, BROOLOO, IMBIL, KANDANGA to GYMPIE SCHOOLS

Morning Pick Up	Morning Bus Stops	Afternoon Drop Off	Hordern Road Interesection
7.15am	Depot	4.35pm	Depot
7.28am	Tuchekoi Rd Intersection	4.25pm	Reeves Rd Mary Valley Rd Intersection
7.30am	Whelan Road Bus Stop	4.22pm	Whelan Road Intersection
7.32am	Moy Pocket Intersection	4.14pm	Hordern Road Interesection
7.34am	U Turn Coonoongibba Rd Intersection	4.18pm	U Turn Coonoongibba Rd Intersection
7.35am	Hordern Road Interesection	4.16pm	Moy Pocket Intersection
7.42am	Brooloo Bus Shelter	4.13pm	Brooloo Bus Shelter
7.44am	154 Imbil Brooloo Rd	4.11pm	154 Imbil Brooloo Rd
7.45am	Mary Valley State College Bus Stop	4.10pm	MaryValley State College Bus Stop
7.53am	Ballard Rd Intersection	4.08pm	Ballard Rd Intersection
7.55am	Hillcrest Court Intersection	4.07pm	Hillcrest Court Intersection
7.56am	Ray Myers Rd Intersection	4.06pm	Ray Myers Rd Intersection
7.57am	Barsby Rd Bus Shelter	4.04pm	Barsby Rd Intersection
7.58am	Woodhill Rd Intersection	4.02pm	Woodhill Rd Intersection
8am	Kandanga Bus Shelter	4.00pm	Cnr of Kandanga Imbil Rd & Mary Valley Rd
8.02am	Hasthorpe Rd Bus Shelter	3.58pm	Hasthorpe Rd Intersection
8.04am	Juster Road Intersection	3.56pm	Juster Rd Intersection
8.06am	2140 Mary Valley Rd	3.54pm	2140 Mary - Valley Rd
		3.52pm	Goomong Rd Intersection
8.08am	Sanders Road Intersection	3.51pm	Sanders Road Intersection
8..10am	Mary Valley Rd West	3.48pm	Mary Valley Rd East
8.14am	Hutchins Rd Intersection	3.47pm	Cnr Hutchins ary Mary - Valley Rd
8.05am	**Dagun School Interchange with KarrabeeS66**	3.45pm	**Dagun School Interchange with KarrabeeS66**
8.22am	Gildora Rd Intersection	3.32pm	Ashton Rd Intersection
8.30am	Arrive GYMPIE STATE HIGH SCHOOL	3.25pm	Depart GYMPIE STATE HIGH SCHOOL
08.38am	Arrive GYMPIE WEST STATE SCHOOL	3.15pm	Depart JAMES NASH STATE HIGH SCHOOL
08.39am	Arrive GYMPIE TAFE	3.07pm	Depart GYMPIE TAFE
08.40am	Arrive JAMES NASH STATE HIGH SCHOOL	3.05pm	Depart GYMPIE WEST STATE SCHOOL
08.45am	Arrive VICTORY COLLEGE	3.03pm	Depart VICTORY COLLEGE

S66 - KANDANGA CREEK, KANDANGA, AMAMOOR, DAGUN to GYMPIE SCHOOLS

Morning Pick Up	Morning Bus Stops	Afternoon Drop Off	Afternoon Bus Stops
7.20am	Depot	4.30pm	Depot
7.22am	45 Diamondfield Road	4.27pm	45 Diamondfield Road
7.23am	127 Diamondfield Road	4.25pm	127 Diamondfield Road
7.24am	Edwards Road Intersection	4.23pm	Edwards Road Intersection
7.26am	308 Diamondfield Rd	4.21pm	308 Diamondfield Rd
7.33am	Lewis Rd Intersection	4.20pm	Lewis Rd Intersection
7:39am	U Turn Colburn Rd	4.10pm	U Turn Pitt Rd Intersection
7.45am	Pitt Rd Intersection	4.09pm	910 Kandanga Creek Road
7.47am	910 Kandanga Creek Road	4.07pm	696 Kandanga Creek RD
7:49am	696 Kandanga Creek RD	4.06pm	670 Kandanga Ck Rd
7:50am	670 Kandanga Ck Rd	4.05pm	Diamondfield Cross Roads
7.52am	Diamondfield Cross Roads Bus Stop	4.04pm	388 Kandanga Creek Rd
7.54am	388 Kandanga Creek Rd	4.02pm	Sommervile Rd Intersection
7.56am	Somerville Rd Intersection	4.00pm	**Kandanga State School Interchange with Karrabee P526**
8.00am	**Kandanga State School Interchange with Karrabee P526**	3.55pm	249 Kandanga AmamoorRd
8.03am	249 Kandanga Amamoor Rd	3.53pm	**Dagun School Interchange with Karrabee S314**
8.05am	**Amamoor Interchange with Amamoor Creek Bus**	3.49pm	Amamoor Lookout PM
8.10am	Amamoor Lookout	3.48pm	29 Amamoor Dagun Road
8.12am	29 Amamoor Dagun Road	3.45pm	Dagun School Interchange
8.15am	**Dagun School Interchange with Karrabee S314**	3.41pm	1340 Mary Valley Rd
8.20am	1340 Mary Valley Rd	3.30pm	Depart JONES HILL STATE SCHOOL
8.30am	Arrive JONES HILL STATE SCHOOL	3.20pm	Depart GYMPIE STATE HIGH SCHOOL
8.35am	Arrive ST PATRICKS COLLEGE	3.15pm	Depart ONE MILE STATE SCHOOL
8.40am	Arrive ONE MILE STATE SCHOOL	3.12pm	Depart ST PATRICKS COLLEGE
8.45am	Arrive GYMPIE STATE HIGH SCHOOL		

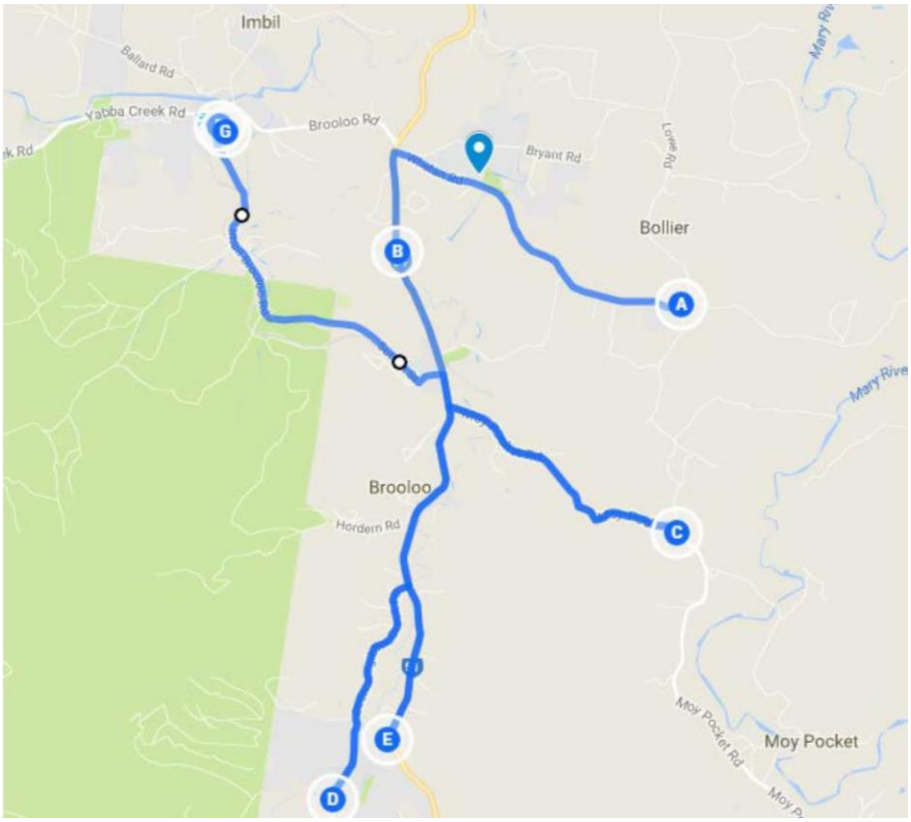
P526 - BOLLIER, TUCKEKOI, KANDANGA, AND KANDANGA CREEK to KANDANGA SCHOOL AND MARY VALLEY STATE COLLEGE

Morning Pick Up	Morning Bus Stops	Morning Bus Stops	Afternoon Bus Stops
7.40am	2505 Mary Valley Rd	3.05pm	Arrive MARY VALLEY STATE COLLEGE
7.42am	Knobby Glen Road Intersection	3.08 pm	Ray Myers Rd Intersection
7.43am	2635 Mary Valley Rd Outbound	3.11pm	Woodhill Rd Intersection
7.46am	132 Riversdale Rd	3.13pm'	Kandanga Bus Shelter
7.47am	100 Riversdale Rd	3.15.pm	Arrive KANDANGA STATE SCHOOL
7.52am	Bergins Pocket Rd Mary Valley Rd Intersection	3.17pm	14 Stephens St, Kandanga
7.54am	U Turn Tuchekoi Rd Intersection	3.20pm	Knobby Glen Road
7.56am	2720 Mary Valley Road	3.22pm	2635 Mary Valley Rd Outbound
7.57am	2430 Mary Valley Road	3.24pm	132 Riversdale Road
8.00am	**Kandanga School Interchange with Karrabee S66**	3.35pm	Diamondfield Cross Roads
8.05am	Woodhill Rd Intersection	3.40pm	910 Kandanga Creek Road
8.08am	Ray Myers Rd Intersection	3.42pm	Pitt Road Intersection
8.12am	Arrive MARY VALLEY STATE COLLEGE	3.47pm	U Turn Colburn Rd Intersection
		4.00pm	**Kandanga School Interchange with Karrabee S66**
		4.02pm	2505 Mary Valley Rd
		4.05pm	Knobby Glen Road
		4.07pm	2635 Mary Valley Rd Outbound
		4.10pm	132 Riversdale Road
		4.12pm	100 Riversdale Road
		4.14pm	Bergins Pocket Rd MaryValley Rd Intersection

Karrabee™ BUS COACH

For more information phone 0438 843 195

Polleys Coaches – Routes for AM / PM School bus Services



Route: 787

POLLEYS
We go the extra Smile.

Imbil Morning School Service

Time	Direction	Position	Notes
7:45	Depart	Depot (Whelan Rd Imbil)	
7:45	Left	Mary Valley Hwy	
7:47	Left	3585 Drive Way Mary V Hwy	Go up drive to turn around pick up 1 pax
7:47	Left	Mary Valley Hwy	
7:50	Left	Moy Pkt Rd	
8:00	U Turn	Moy Pkt & Lowe Rd	
8:03	Left	Mary Valley Hwy	
8:14	U Turn	Callemonda Rd	
8:14	Straight	Mary Valley Hwy	
8:16	Left	Coonoongibber Crk Rd	
8:19	U Turn	Araucaria Crk Rd	
8:21	Stop	Marroo Rd	
8:21	Straight	Coonoongibber Crk Rd	
8:23	Stop	Breakneck Rd	
8:23	Straight	Coonoongibber Crk Rd	
8:25	Left	Mary Valley Hwy	
8:27	Stop	Hordern Rd	
8:27	Straight	Mary Valley Hwy	
8:30	Left	Parry St	
8:31	Right	Sutton St	
8:31	Stop	Brooloo Bus Shelter	
8:31	Straight	Brooloo Imbil Rd	
8:38	Right	Arthur St	
8:39	Right	Edward St	
8:40	Arrive	Mary Valley College	End Of Route

Route: 787

Imbil Afternoon School Service

POLLEYS
We go the extra Smile.

Time	Direction	Position	Notes
14:45	Depart	Depot (Whelan Rd Imbil)	
15:00	Arrive	Mary Valley College	
15:10	Depart	Mary Valley College	
15:10	Left	Brooloo Imbil Rd	
15:14	Straight	Sutton St	
15:15	Stop	Brooloo Bus Shelter	
15:15	Left	Parry St	
15:16	Right	Mary Valley Hwy	
15:16	Left	Moy Pocket Rd	
15:20	U Turn	Moy Pocket and Lowe Rd	
15:25	Left	Mary Valley Hwy	
15:27	Right	Hordern Rd Turn Around	
15:27	Right	Mary Valley Hwy	
15:35	U Turn	Callemonda Rd	
15:35	Straight	Mary Valley Hwy	
15:36	Left	Coonoongibber Crk Rd	
15:40	U Turn	Araucaria Crk Rd	
15:41	Stop	Marroo Rd	
15:42	Stop	Breakneck Rd	
15:42	Straight	Coonoongibber Crk Rd	
15:45	Left	Mary Valley Hwy	
15:47	Right	3585 Mary Valley Hwy	Go up drive to turn around drop off 1 pax
15:48	Right	Mary Valley Hwy	
15:55	Right	Whelan Rd	
16:00	Arrive	Depot	End Of Route

Lorrain Creevey Bus Service

2025 BORUMBA BUS P14 A.M. TIMETABLE	TIME	KLMS
MARY VALLEY COLLEGE	7.36 AM	000
TURN RIGHT ONTO DIGGINGS ROAD	7.37 AM	0.3
TURN LEFT ONTO YABBA CREEK ROAD	7.38 AM	0.8
CREEK NO 4	7.44 AM	7.9
NO 5 CREEK CROSSING	7.45 AM	9.1
PULL OVER ON THE LEFT DRIVEWAY JUST BEFORE DEER PARK	7.46 AM	9.5
DRIVE UP TO DEER PARK DRIVEWAY	7.47 AM	9.6
DO A U TURN AND GO BACK THE WAY YOU CAME	7.47 AM	9.6
CROSSING NO 5	7.48 AM	10
CROSSING NO 4		11.3
PULL IN ON LEFT AT 508 YABBA CREEK ROAD	7.52 AM	15.9
Continue through town (Edward Street, school road is on right)	7.56 AM	18.6
TURN RIGHT ONTO MARY VALLEY ROAD	7.58 AM	20.9
TURN LEFT INTO WHELAN ROAD	7.58 AM	21.1
Follow to lowe road on your left DO A SEMI U TURN AT LOWE ROAD ON YOUR LEFT (so you are facing towards Whelan rd).	8.02 AM	25.3
TURN RIGHT ONTO WHELAN ROAD	8.03 AM	25.4
PULL OVER ON LEFT AT 306 WHELAN ROAD	8.05 AM	26.6
Follow road back to Mary Valley Road	8.09 AM	29.5
TURN RIGHT ONTO MARY VALLEY ROAD	8.09 AM	29.5
TURN LEFT INTO YABBA CREEK RD	8.09 AM	29.7
TURN LEFT INTO EDWARD STREET	8.12 AM	31.9
PULL IN ON LEFT AT MARY VALLEY COLLEGE. drop off . continue	8.13 AM	32.1
TURN RIGHT ONTO DIGGINGS ROAD	8.14 AM	32.4
TURN RIGHT ONTO YABBA CREEK ROAD	8. 15 AM	32.9
TURN LEFT ONTO MARY VALLEY ROAD	8. 19 AM	35.4
TURN LEFT INTO 3420 MARY VALLEY ROAD DRIVEWAY	8.20 AM	35.6
blue house) AND FOLLOW DRIVEWAY AROUND	8.20AM	35.6
TURN RIGHT ONTO MARY VALLEY ROAD	8.21 AM	35.7
TURN LEFT INTO WHELAN ROAD	8.22 AM	36
TURN LEFT INTO BRYANT ROAD	8.22AM	36.1
PULL OVER ON LEFT AT 59 BRYANT ROAD (iron man figure)	8.23AM	36.7
TURN RIGHT INTO TIMANI ROAD AND FOLLOW TO THE TOP	8.25 AM	38.1
PICK UP AND DO U TURN NO 65	8.26AM	38.8
TURN LEFT ONTO BRYANT ROAD	8.27 AM	39.5
PULL OVER ON LEFT AT NO 32 MICROWAVE LETTER BOX	8.28AM	39.7
TURN RIGHT ONTO WHELAN ROAD	8.31 AM	41.5
TURN RIGHT ONTO MARY VALLEY ROAD	8.31 AM	41.7
TURN LEFT ONTO YABBA CREEK ROAD	8.32 AM	41.8

TURN LEFT AT EDWARD STREET	8.35.AM	44.1
PULL OVER ON LEFT AT MARY VALLEY COLLEGE	8.35 AM	44.4
TURN LEFT ONTO DIGGINGS ROAD		44.7
TURN LEFT ONTO YABBA CREEK ROAD		45.2
TURN LEFT INTO driveway NO 24 YABBA CREEK ROAD park bus, make sure all lights & flashing lights are off, sweep, mop, key out of ignition		458

BORUMBA BUS P14 P.M. TIMETABLE	TIME	KLMS
MARY VALLEY COLLEGE	3.08 PM	0000
TURN RIGHT INTO DIGGINGS STREET	3.09 PM	0.3
TURN RIGHT ONTO YABBA CREEK ROAD	3.11 PM	0.8
TURN LEFT ONTO MARY VALLEY ROAD	3..14PM	3.3
TURN LEFT AT NO 3420 MARY VALLEY ROAD (blue house)	3.14 PM	3.5
And follow driveway around	3.14 PM	3.5
TURN RIGHT ONTO MARY VALLEY ROAD	3.15 PM	3.6
TURN LEFT ONTO WHELAN ROAD	3.16 PM	3.9
TURN LEFT ONTO BRYANT ROAD	3.16 PM	4
PULL IN ON LEFT AT NO 59 BRYANT ROAD (white iron man Figure)	3.17 PM	4.6
TURN RIGHT UP TIMANI ROAD	3.19 PM	6
U TURN AT TOP DROP OFF	3.20 PM	6.7
PULL IN DRIVEWAY ON LEFT AT NO 60 TIMANI ROAD (reverse out)	3.20 PM	6.8
TURN LEFT ONTO BRYANT ROAD	3.21 PM	7.4
PULL OVER ON LEFT AT NO 52 MICROWAVE LETTER BOX	3.22 PM	7.6
TURN RIGHT ONTO WHELAN ROAD	3.25 PM	9.4
TURN RIGHT ONTO MARY VALLEY ROAD	3.26 PM	9.6
TURN LEFT ONTO YABBA CREEK ROAD	3.26 PM	9.7
TURN LEFT INTO EDWARD STREET IMBIL	3.29 PM	12.2
PULL IN ON LEFT AT MARY VALLEY COLLEGE (PICK UP STUDENTS)	3.29 PM	12.3
TURN RIGHT ONTO DIGGINS ROAD	3.30 PM	12.6
TURN RIGHT ONTO YABBA CREEK ROAD	3.31 PM	13.1
TURN RIGHT ONTO MARY VALLEY ROAD	3.34 PM	15.6
TURN LEFT INTO WHELAN ROAD (follow to Lowe Road on left)	3.35 PM	15.8
DO SEMI U-TURN AT LOWE ROAD ON LEFT, SO YOU ARE FACING WHELAN RD	3.39 PM	20
TURN RIGHT ONTO WHELAN ROAD	3.39 PM	20.1
PULL OVER ON LEFT AT 80KLM SIGN AFTER LOWE ROAD	3.40 PM	20.2
PULL OVER ON LEFT AT NO 306 WHELAN ROAD	3.41 PM	21.3
TURN RIGHT ONTO MARY VALLEY ROAD	3.45 PM	24.2
TURN LEFT ONTO YABBA CREEK ROAD	3.45 PM	24.4
CONTINUE THROUGH TOWN AND FOLLOW ROAD (Edward Street on right)	3.48 PM	26.7
PULL IN ON RIGHT AT NO 502 YABBA CREEK ROAD (YABBA RIDGE SIGN)	3.52 PM	29.4

TURN RIGHT BACK ONTO YABBA CREEK ROAD	3.52 PM	29.5
TURN RIGHT INTO DRIVEWAY 536 YABBA CREEK RD SWING TO THE RIGHT	3.53 PM	29.8
REVERSE AND THEN DRIVE OUT FACING YABBA CREEK ROAD		
TURN RIGHT ONTO YABBA CREEK ROAD	3.54 PM	29.8
TURN RIGHT INTO DWYER ROAD GO DOWN & DROP OFF & DO U -TURN	3.55 PM	31.4
TURN RIGHT ONTO YABBA CREEK ROAD	3.56 PM	31.5
TURN LEFT INTO RUSH ROAD	3.58 PM	34.7
4TH DRIVEWAY ON RIGHT (ONE BEFORE NO 46)	3.59 PM	35.2
TURN AROUND AND GO BACK TO YABBA CREEK ROAD		
TURN LEFT ONTO YABBA CREEK ROAD	4.01 PM	35.6
PULL OVER ON LEFT JUST BEORE DEER PARK ENTRANCE NO 1113-1139	4.02 PM	36.7
DRIVE UP TO DEER PARK ENTRANCE DO U TURN	4.02 PM	36.8
GO BACK THE WAY YOU CAME		
GO THROUGH TOWN PAST GARAGE ON LEFT	4.09 PM	45.9
TURN RIGHT INTO DRIVEWAY NO 24 YABBA CREEK ROAD, PARK BUS	4.10 PM	46.2
SWEEP BUS, MOP IF NEEDED, MAKE SURE ALL LIGHTS, & FLASHING LIGHTS ARE OFF.IGNITION OFF DOORS CLOSED		

Appendix B

Traffic Data from TMR

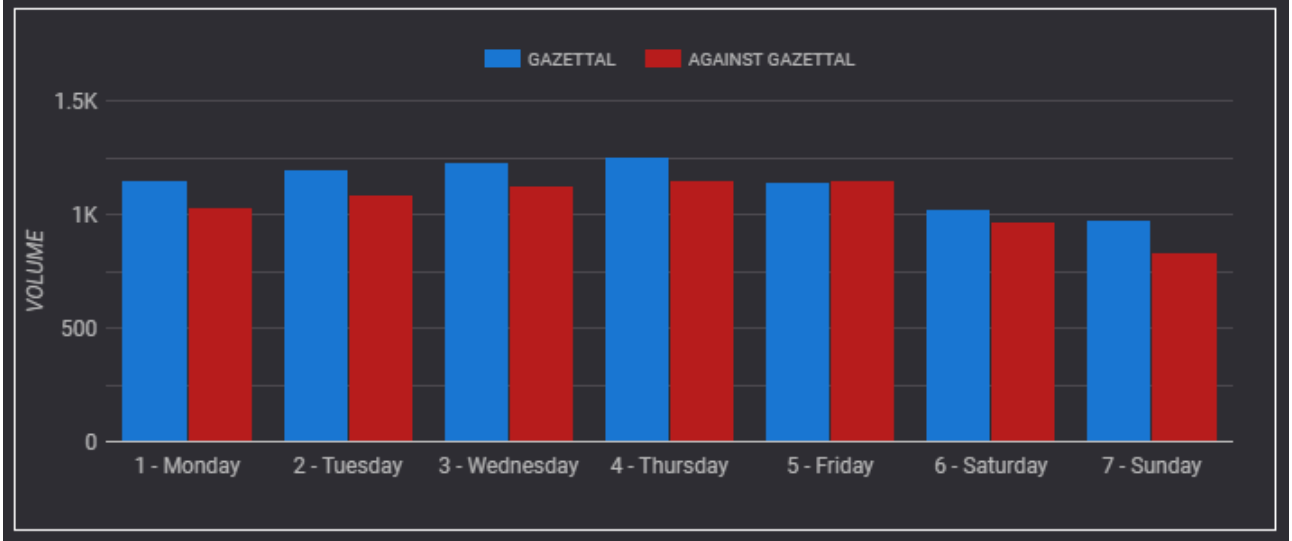
Detailed Daily Traffic Volumes

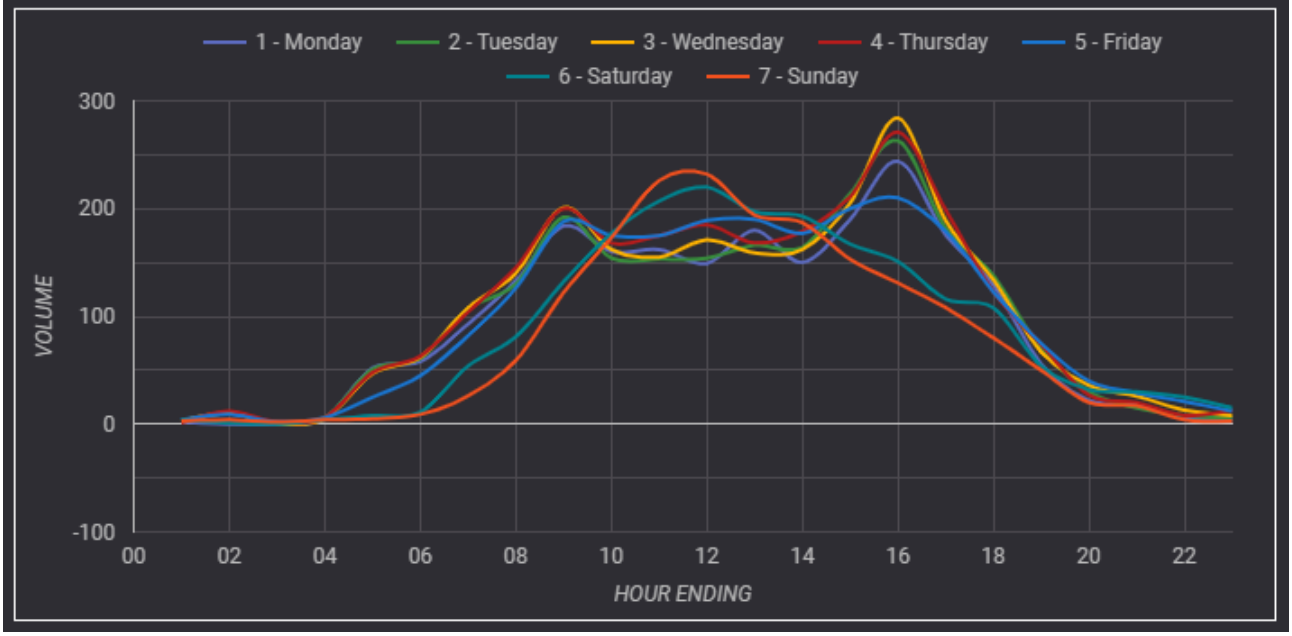
Data sourced from the TMR [Traffic Data Explorer (tmr.qld.gov.au)](tmr.qld.gov.au).

Site: 21920, In Imbil - Between Island Road & Rail Xing, Through distance: 2.365

2021 AADT 2795 (16% Heavies)

ROAD NAME	DESCRIPTION	GAZETTAL DIRECTION	VOLUME
YABBA CREEK ROAD	In Imbil - Between Island Rd & Rail Xing	GAZETTAL	7,968
YABBA CREEK ROAD	In Imbil - Between Island Rd & Rail Xing	AGAINST GAZETTAL	7,345

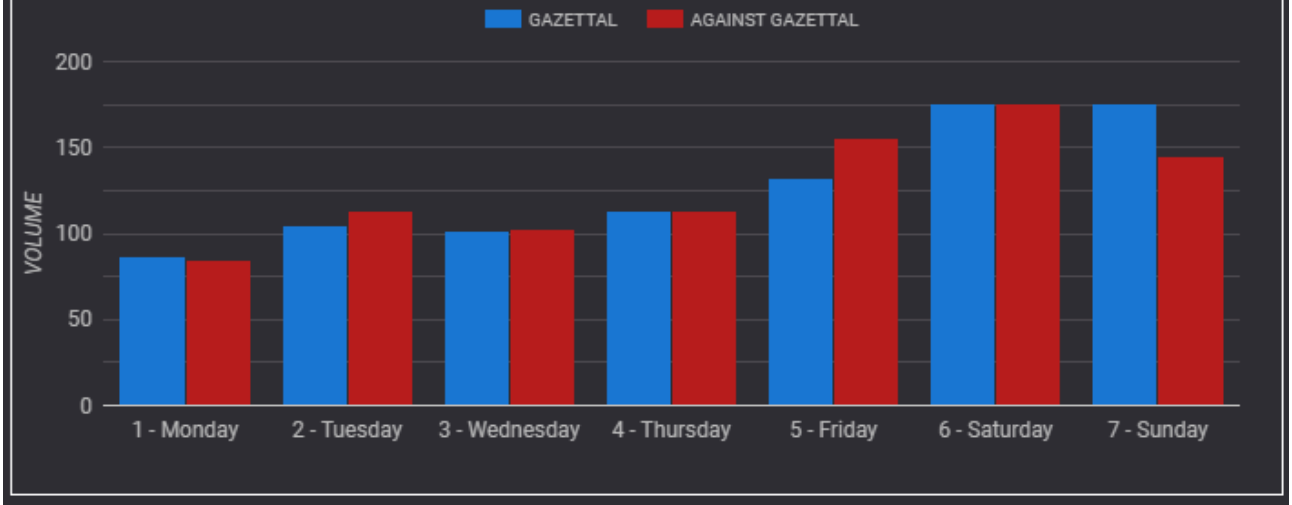


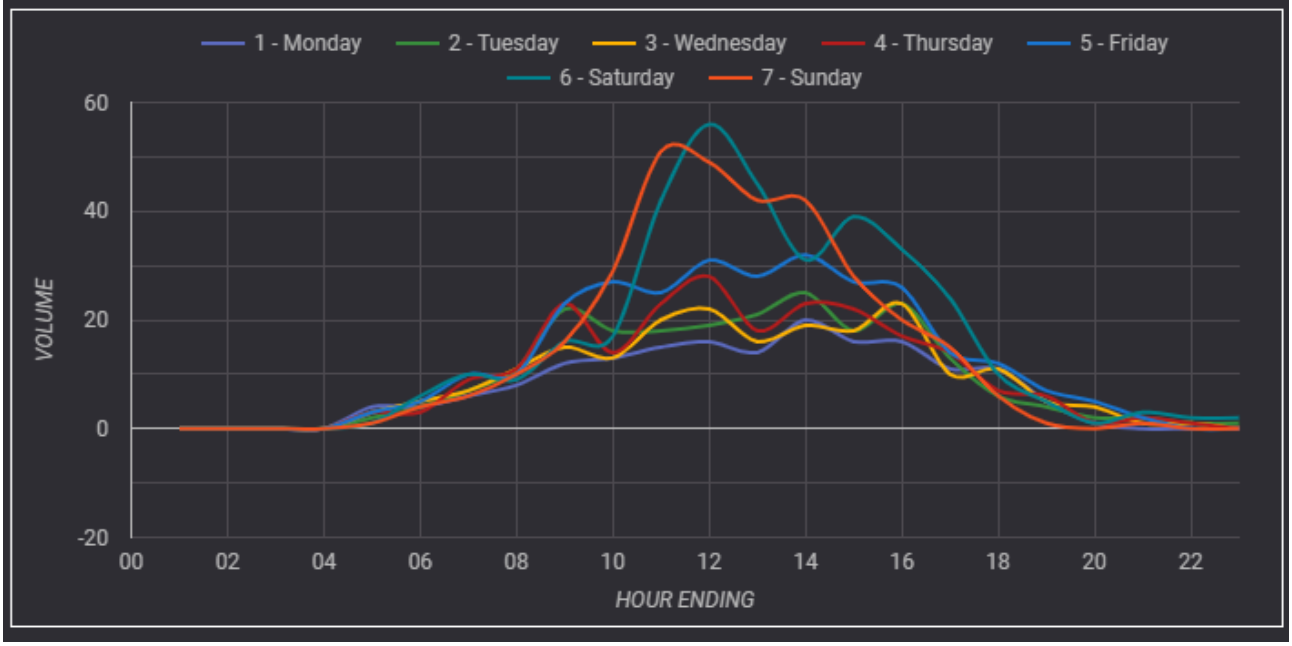


Site: 23921, Between Yabba Creek 6 & Bella Creek Road, Through distance: 12.4

2021 AADT 385 (12.5% Heavies)

ROAD NAME	DESCRIPTION	GAZETTAL DIRECTION	VOLUME
YABBA CREEK ROAD	Between Yabba Ck 6 & Bella Ck Rd	GAZETTAL	891
YABBA CREEK ROAD	Between Yabba Ck 6 & Bella Ck Rd	AGAINST GAZETTAL	891



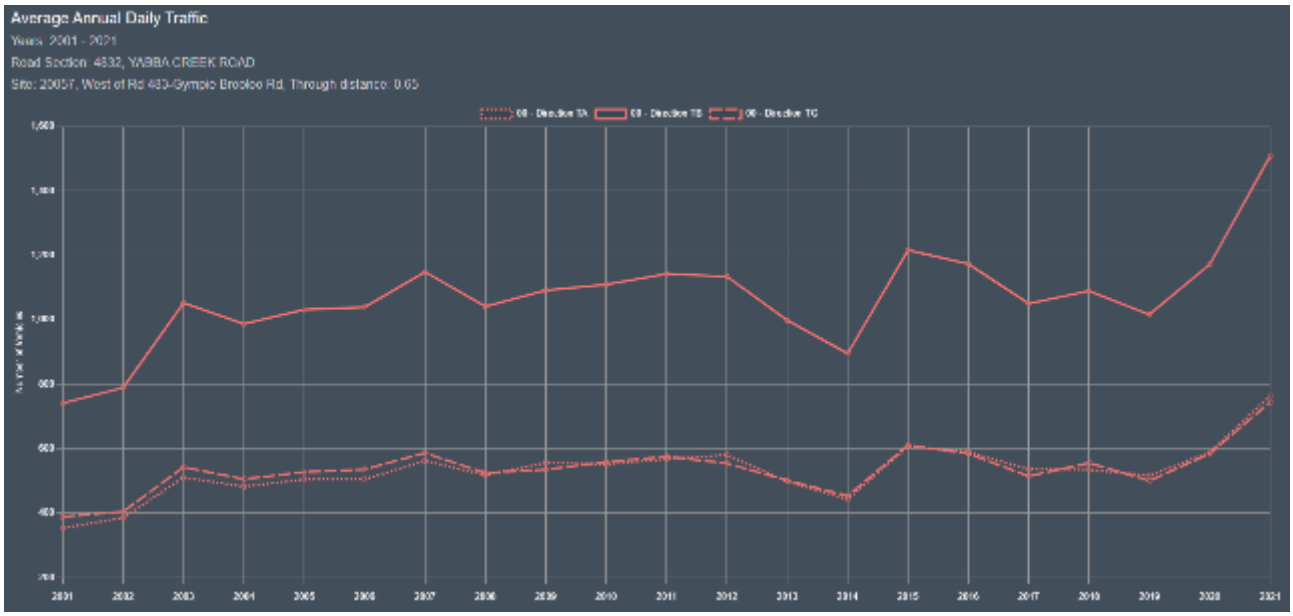


Traffic growth

Background traffic growth is expected to be as per historic records. Data sourced from the TMR Traffic Data Explorer (tmr.qld.gov.au).

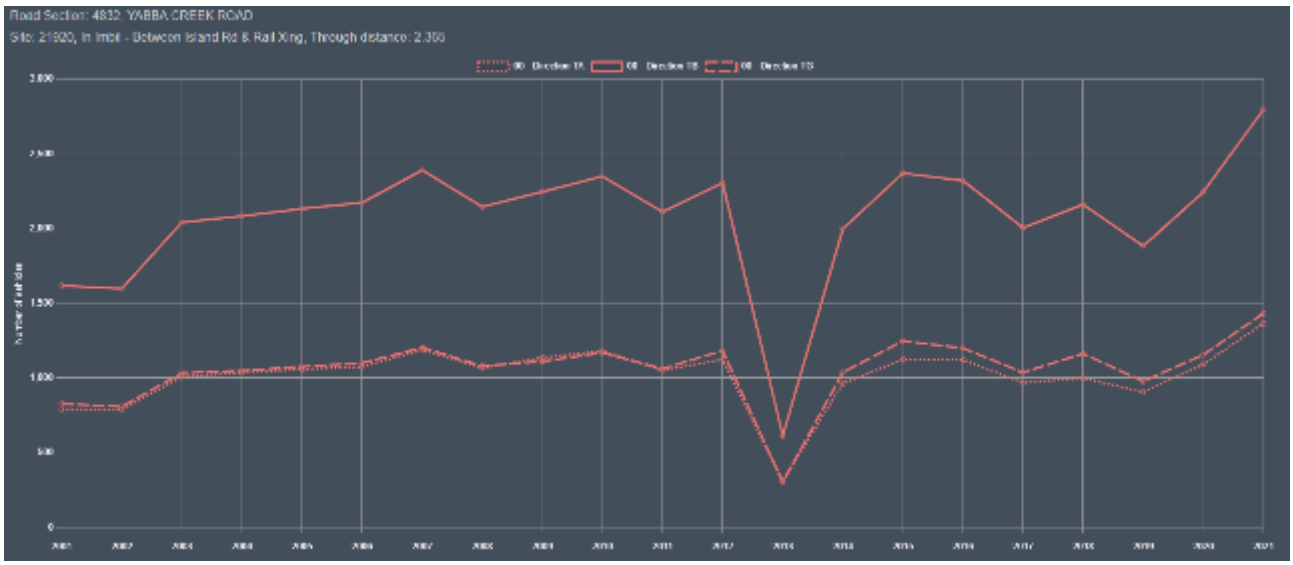
Site: 20057, West of Road 483-Gympie - Brooloo Road, Through distance: 0.65

The growth rate is relatively flat until 2021 and then there is a post covid peak.



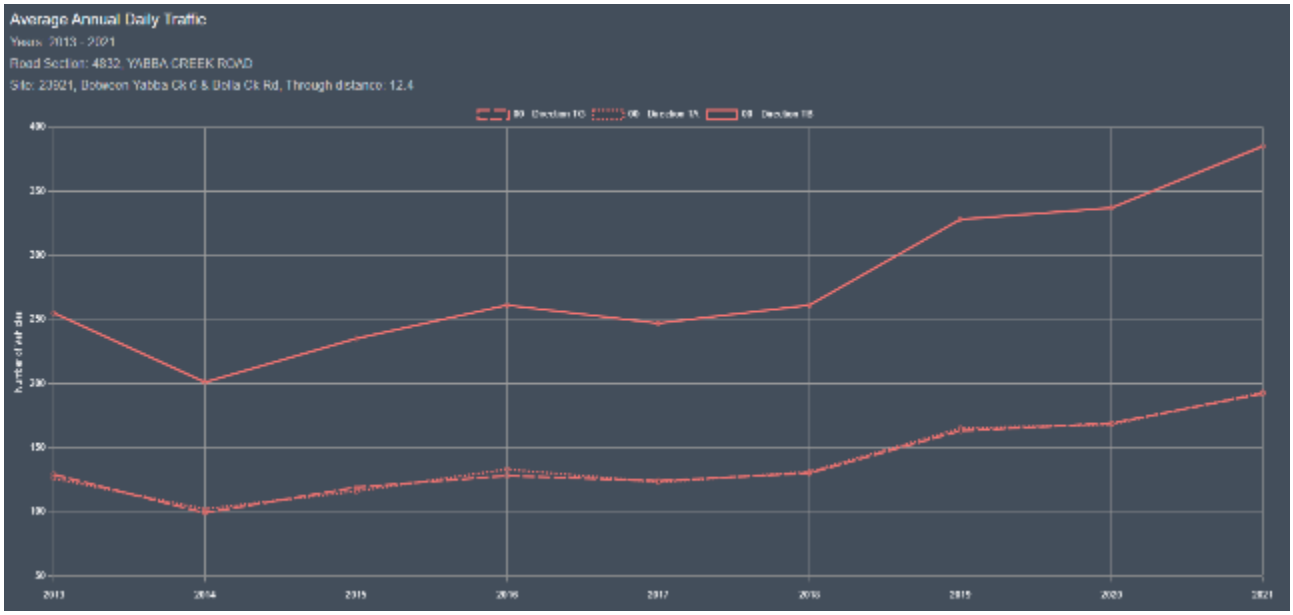
Site: 21920, In Imbil - Between Island Road & Rail Xing, Through distance: 2.365

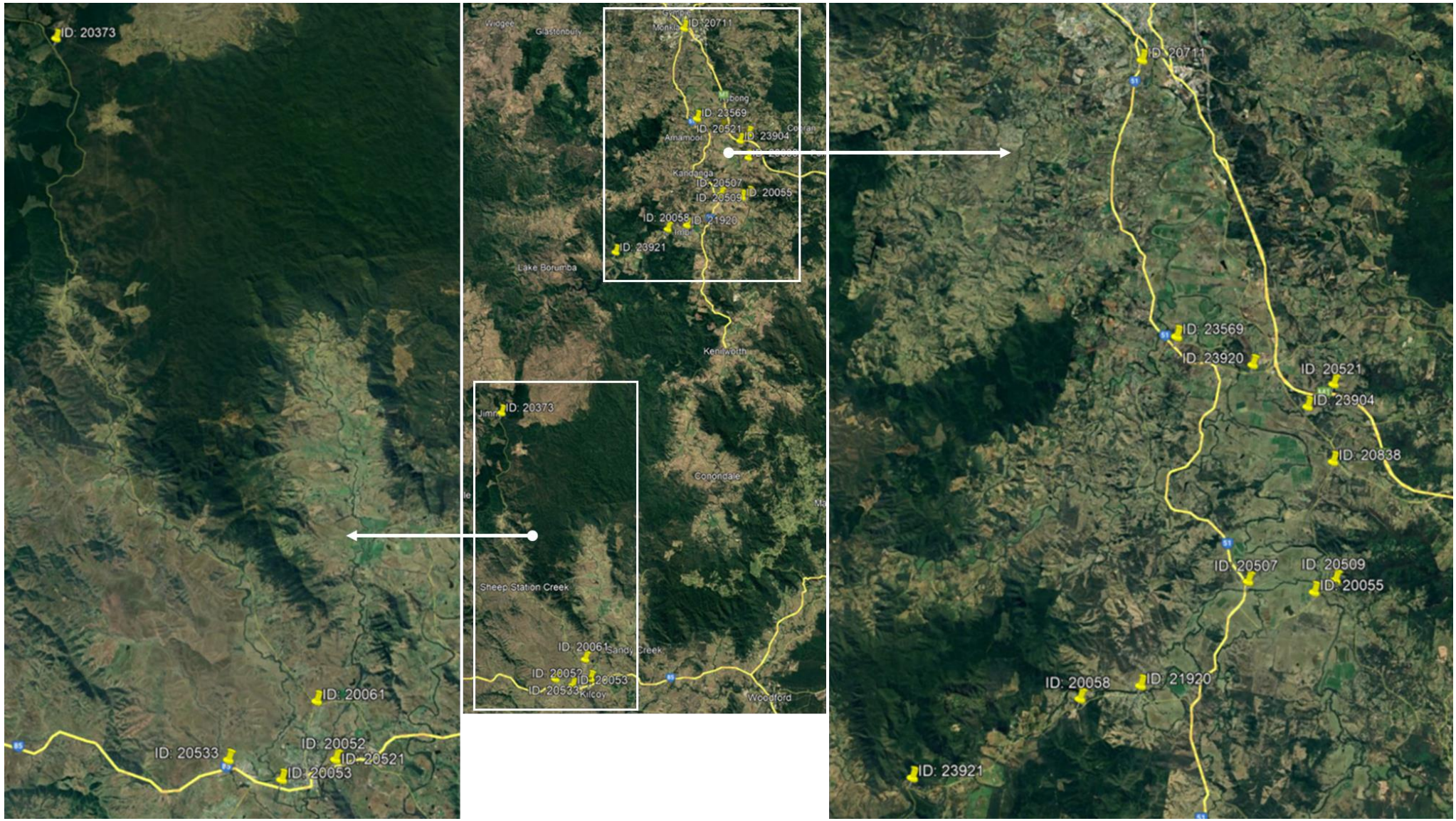
The growth rate is relatively flat until 2021 and then there is a post Covid peak.



Site: 23921, Between Yabba Creek 6 & Bella Creek Road, Through distance: 12.4

The growth rate has a steady climb of approximately 5.6% (linear growth) from 2013 to 2021.





Location of TMR 2023 traffic count data sites

Appendix C

Traffic Count Data

AUSTRAFFIC VIDEO INTERSECTION COUNT

Site No.: 7 **Weather:** Fine

Location: Mary Valley Road/Yabba Creek Road

Day/Date: Tuesday, 6 February 2024

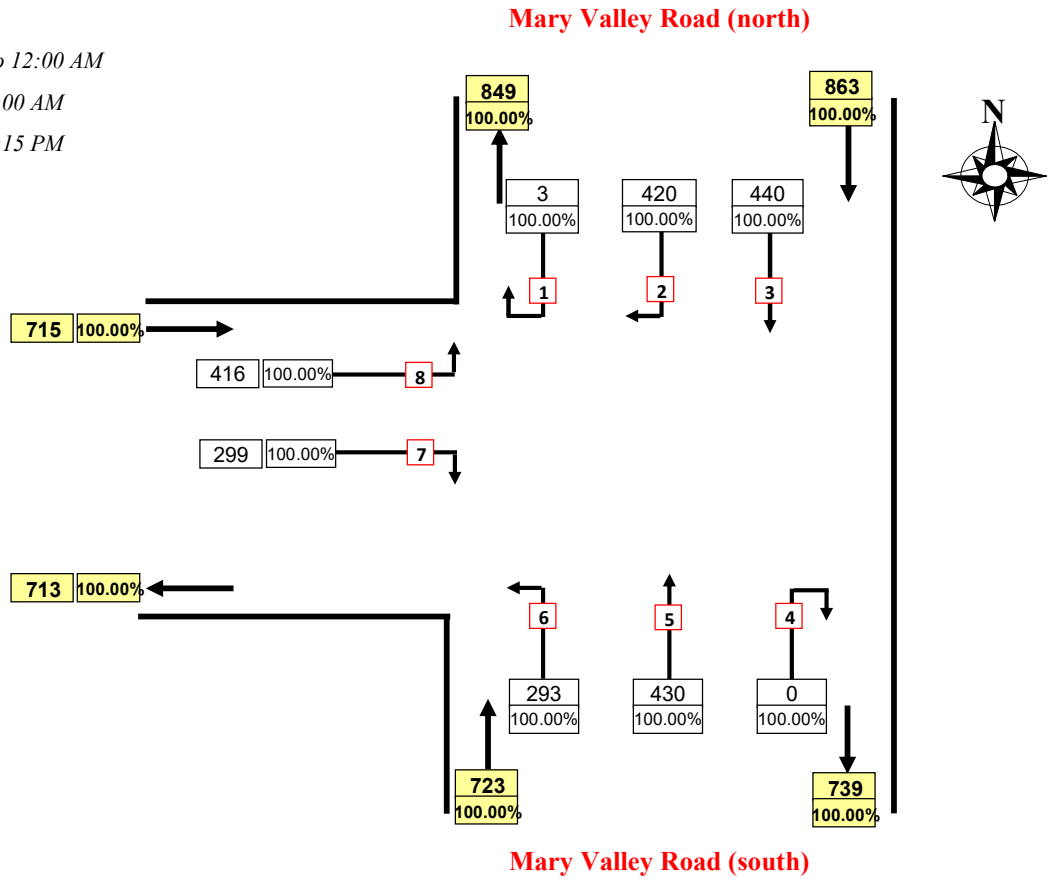
Summary: 24 Hour Volumes : *12:00 AM to 12:00 AM*

AM Peak : *Hour ending - 9:00 AM*

PM Peak : *Hour ending - 3:15 PM*

Hour Ending: Total Time

Classification: Total Vehicles



Note: 3.28% = proportion of selected vehicle classification as a percentage of total vehicles

AUSTRAFFIC VIDEO INTERSECTION COUNT

Site No.: 10 **Weather:** Fine

Location: Yabba Creek Road/Kandanga Imbil Road

Day/Date: Tuesday, 6 February 2024

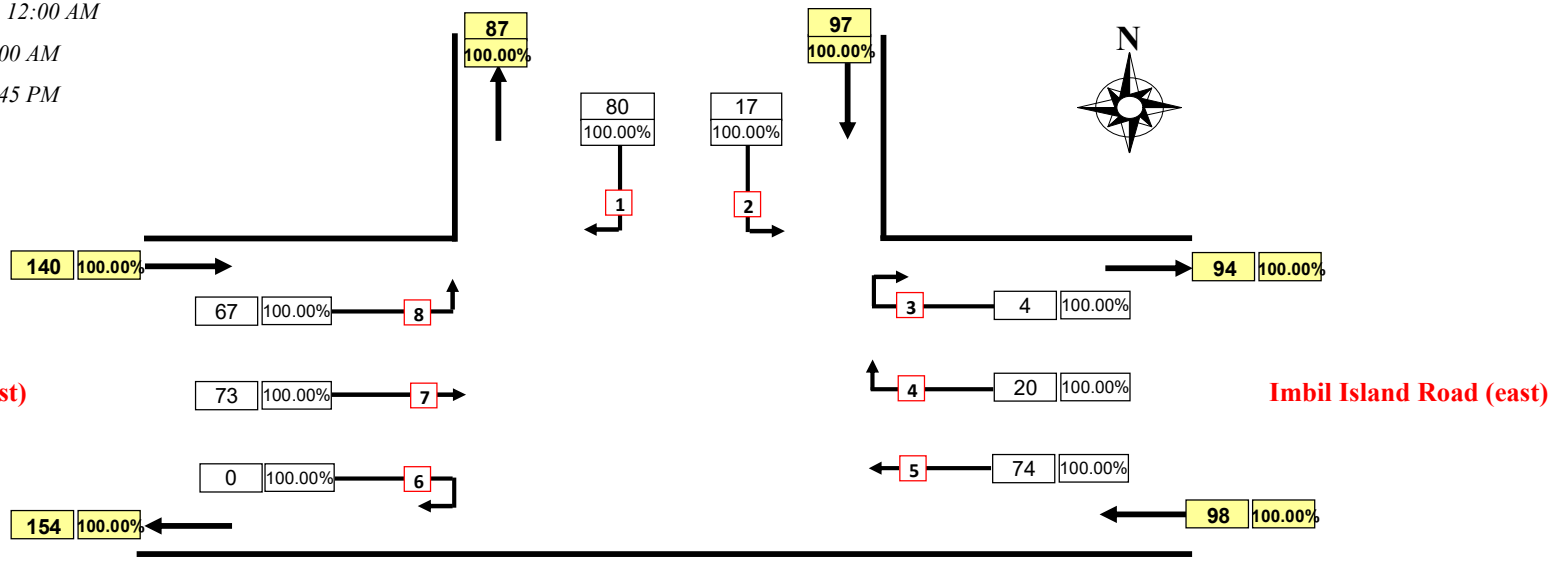
Summary: 24 Hour Volumes : *12:00 AM to 12:00 AM*

AM Peak : *Hour ending - 9:00 AM*

PM Peak : *Hour ending - 3:45 PM*

Hour Ending: 9:00 AM

Classification: Total Vehicles



Note: 3.28% = proportion of selected vehicle classification as a percentage of total vehicles

AUSTRAFFIC VIDEO INTERSECTION COUNT

Site No.: 11 **Weather:** Fine

Location: Yabba Creek Road/Diggings Road

Day/Date: Tuesday, 6 February 2024

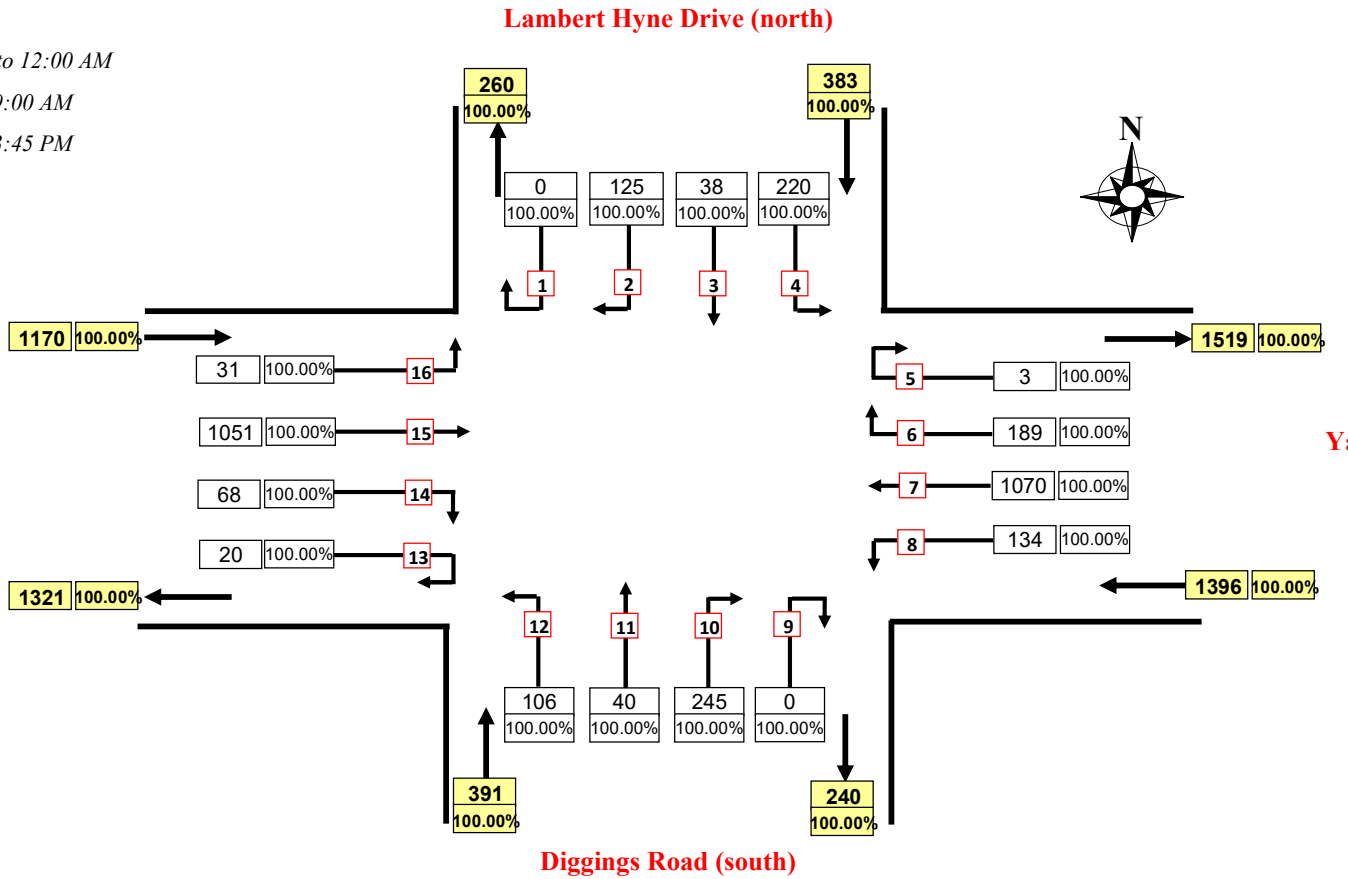
Summary: 24 Hour Volumes : *12:00 AM to 12:00 AM*

AM Peak : *Hour ending - 9:00 AM*

PM Peak : *Hour ending - 3:45 PM*

Hour Ending: Total Time

Classification: Total Vehicles



Note: 3.28% = proportion of selected vehicle classification as a percentage of total vehicles

AUSTRAFFIC VIDEO INTERSECTION COUNT

Site No.: 12 **Weather:** Fine

Location: Bella Creek Road/Yabba Creek Road

Day/Date: Tuesday, 6 February 2024

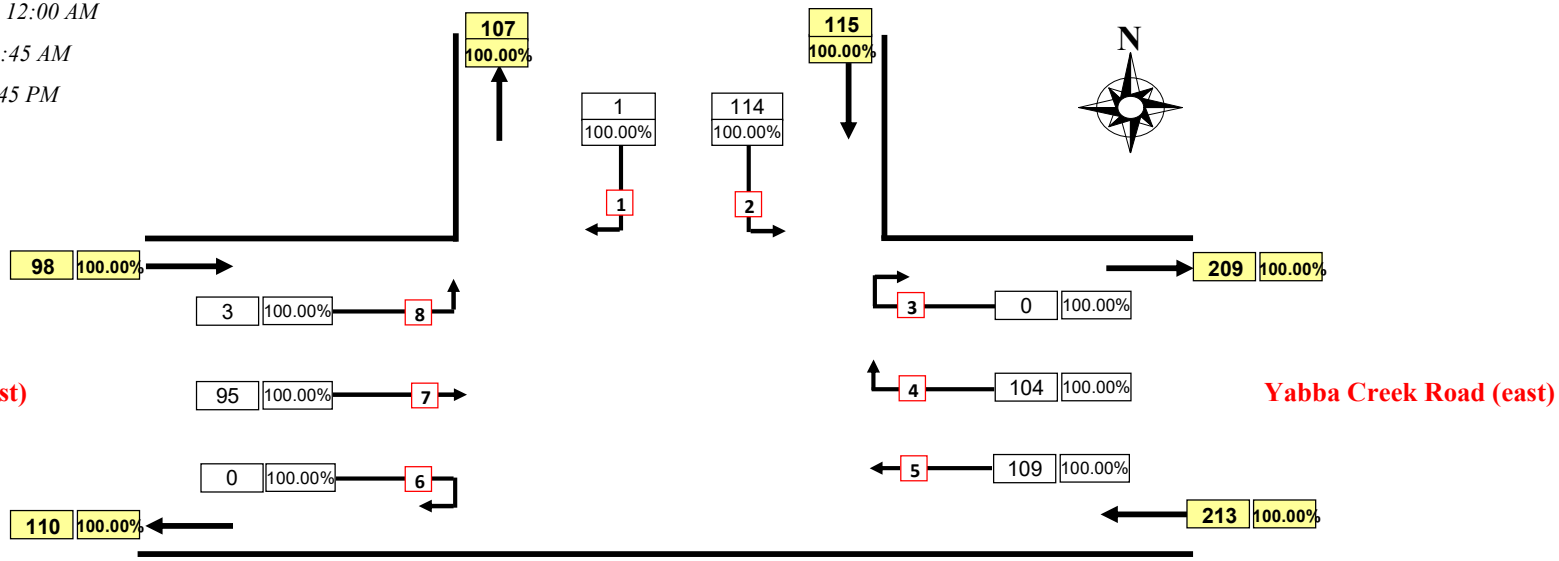
Summary: 24 Hour Volumes : *12:00 AM to 12:00 AM*

AM Peak : *Hour ending - 11:45 AM*

PM Peak : *Hour ending - 1:45 PM*

Hour Ending: Total Time

Classification: Total Vehicles



Note: 3.28% = proportion of selected vehicle classification as a percentage of total vehicles

AUSTRAFFIC VIDEO INTERSECTION COUNT

Site No.: 16 **Weather:** Fine

Location: Kilcoy Murgon Road/Sunday Creek Road

Day/Date: Tuesday, 6 February 2024

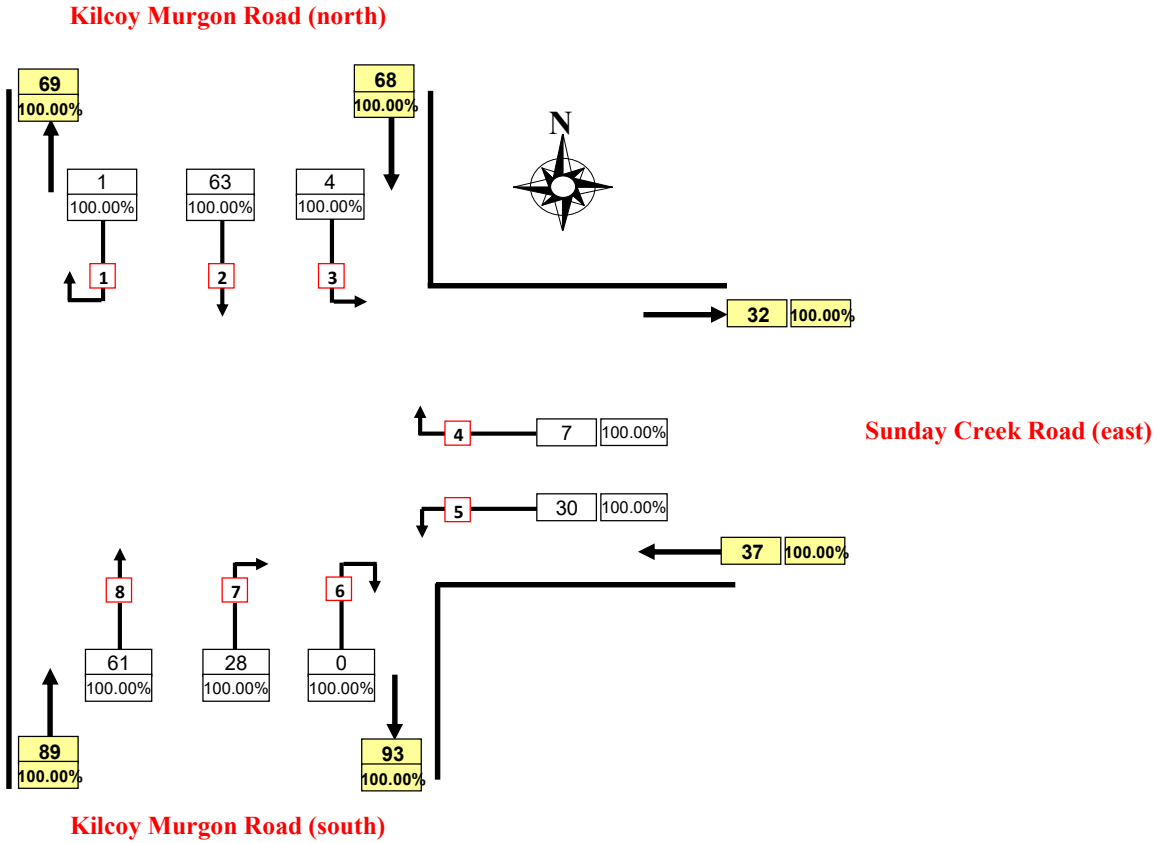
Summary: 24 Hour Volumes : *12:00 AM to 12:00 AM*

AM Peak : *Hour ending - 8:30 AM*

PM Peak : *Hour ending - 5:30 PM*

Hour Ending: Total Time

Classification: Total Vehicles



Note: 3.28% = proportion of selected vehicle classification as a percentage of total vehicles

AUSTRAFFIC VIDEO INTERSECTION COUNT

Site No.: 17 **Weather:** Fine

Location: Sunday Creek Road/Yielo Road

Day/Date: Tuesday, 6 February 2024

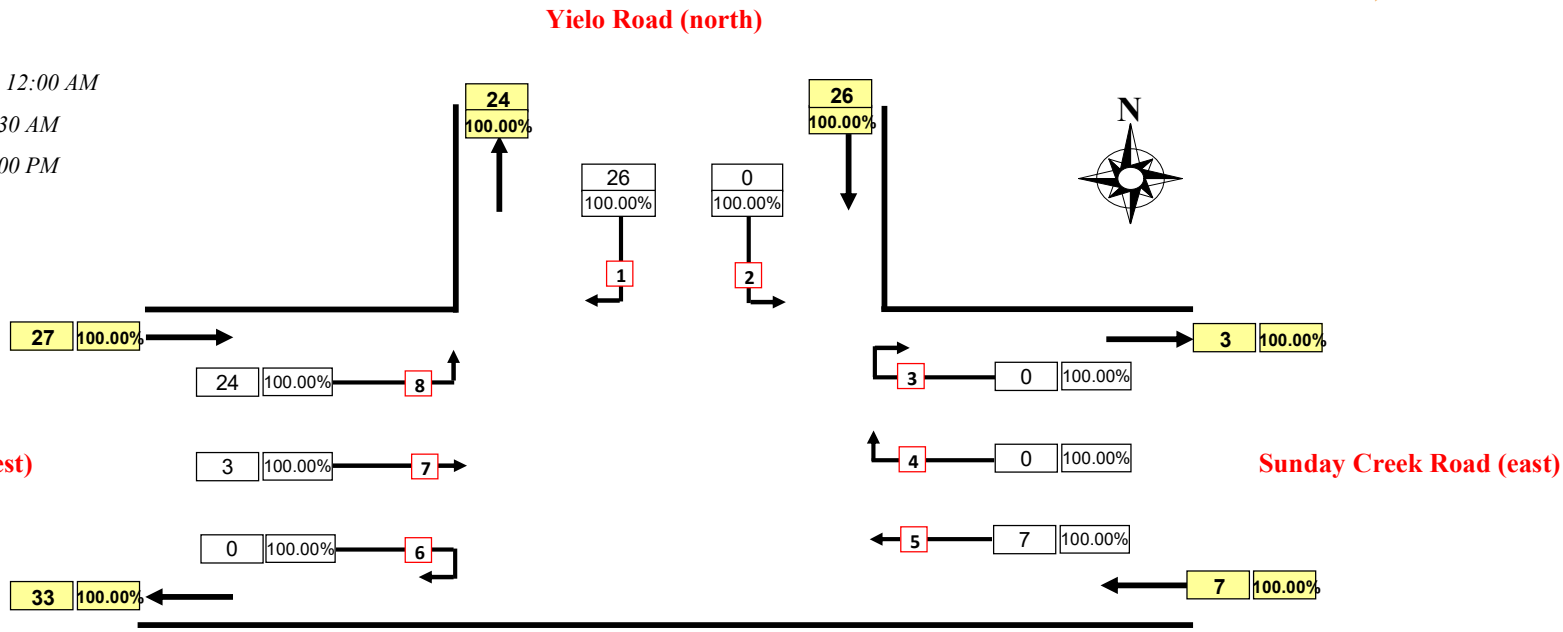
Summary: 24 Hour Volumes : *12:00 AM to 12:00 AM*

AM Peak : *Hour ending - 6:30 AM*

PM Peak : *Hour ending - 4:00 PM*

Hour Ending: Total Time

Classification: Total Vehicles



Note: 3.28% = proportion of selected vehicle classification as a percentage of total vehicles

AUSTRAFFIC VIDEO INTERSECTION COUNT

Site No.: 5 **Weather:** Fine

Location: Mary Valley Road/Tuchekoi Road

Day/Date: Tuesday, 6 February 2024

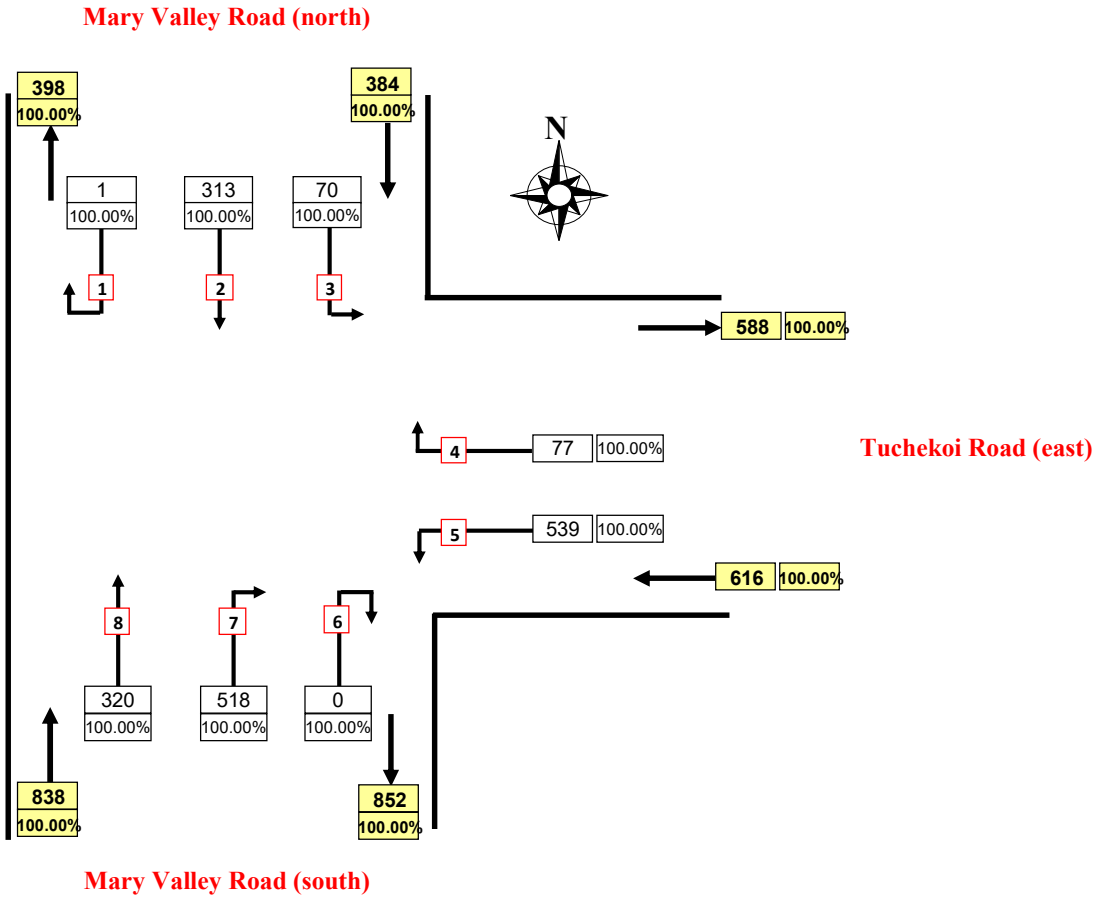
Summary: 24 Hour Volumes : *12:00 AM to 12:00 AM*

AM Peak : *Hour ending - 8:45 AM*

PM Peak : *Hour ending - 4:30 PM*

Hour Ending: Total Time

Classification: Total Vehicles



Note: 3.28% = proportion of selected vehicle classification as a percentage of total vehicles

AUSTRAFFIC VIDEO INTERSECTION COUNT

Site No.: 4 **Weather:** Fine

Location: Kenilworth Skyring Creek Road/Old Bruce Highway

Day/Date: Tuesday, 6 February 2024

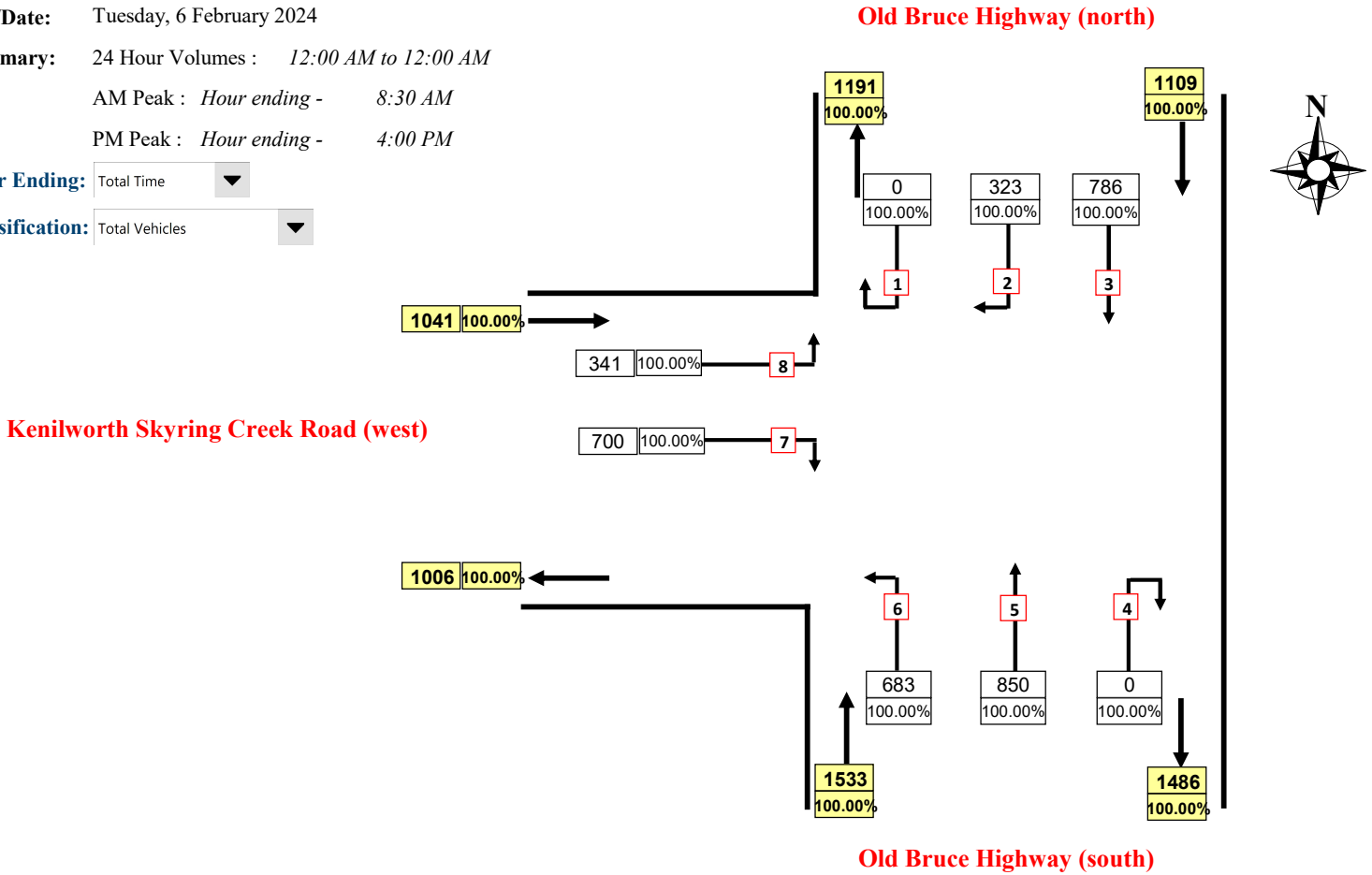
Summary: 24 Hour Volumes : *12:00 AM to 12:00 AM*

AM Peak : *Hour ending - 8:30 AM*

PM Peak : *Hour ending - 4:00 PM*

Hour Ending: Total Time

Classification: Total Vehicles



Note: 3.28% = proportion of selected vehicle classification as a percentage of total vehicles

AUSTRAFFIC VIDEO INTERSECTION COUNT

Site No.: 14 **Weather:** Fine

Location: William Street/D'Aguilar Highway

Day/Date: Tuesday, 6 February 2024

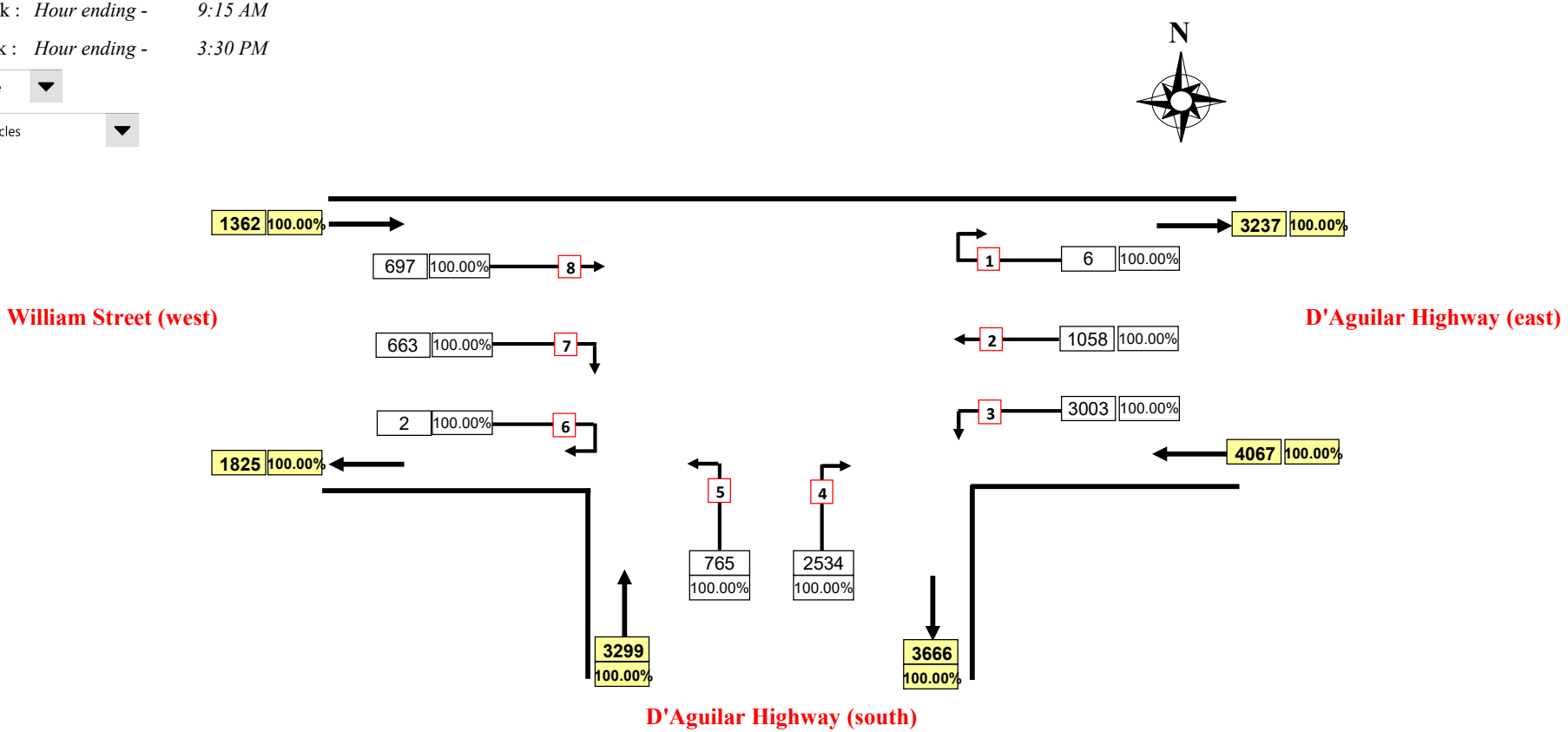
Summary: 24 Hour Volumes : *12:00 AM to 12:00 AM*

AM Peak : *Hour ending - 9:15 AM*

PM Peak : *Hour ending - 3:30 PM*

Hour Ending: Total Time

Classification: Total Vehicles



Note: 3.28% = proportion of selected vehicle classification as a percentage of total vehicles

AUSTRAFFIC VIDEO INTERSECTION COUNT

Site No.: 6 **Weather:** Fine

Location: Tuchekoi Road/Skyring Creek Road

Day/Date: Tuesday, 6 February 2024

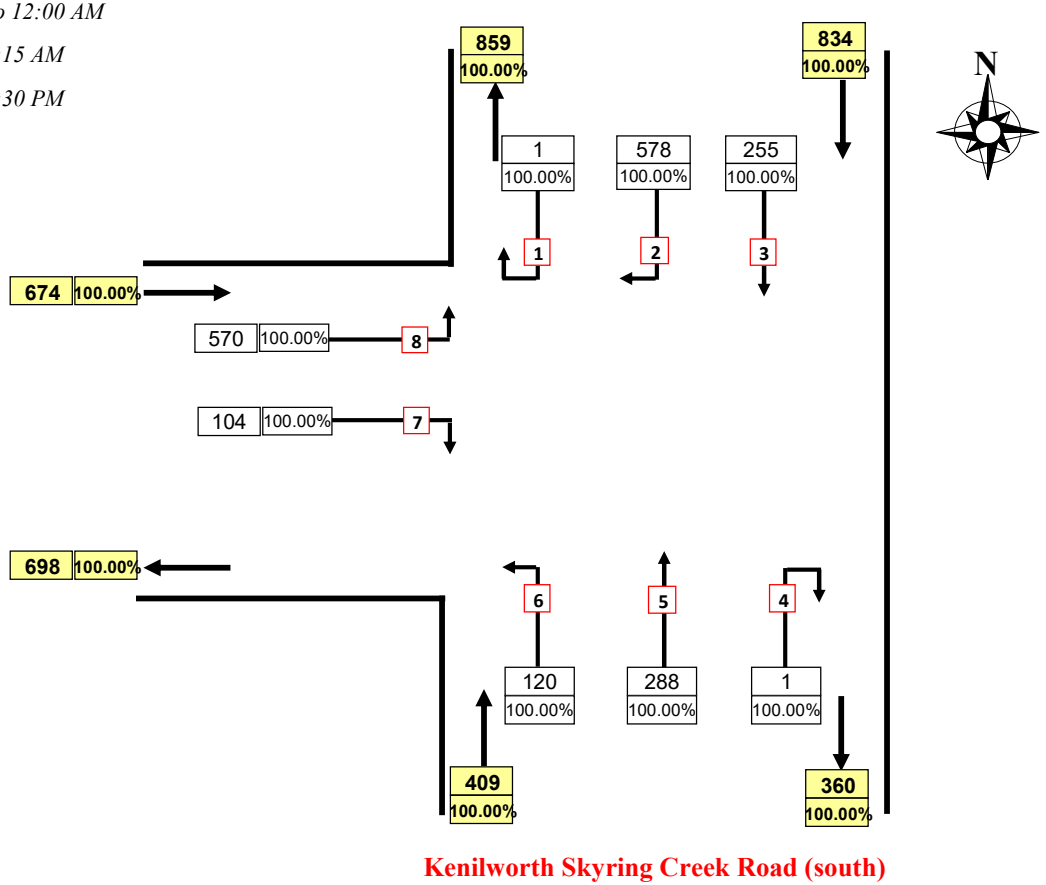
Summary: 24 Hour Volumes : *12:00 AM to 12:00 AM*

AM Peak : *Hour ending - 8:15 AM*

PM Peak : *Hour ending - 4:30 PM*

Hour Ending: Total Time

Classification: Total Vehicles



Note: 3.28% = proportion of selected vehicle classification as a percentage of total vehicles

Appendix D

Road Safety Assessment

Point8
traffic engineering and transport planning

Technical Note

Existing Conditions Road Safety Audit

QLD Hydro
P24028

January 2024

PROJECT NAME	Yabba Creek Road, Road Safety Audit	DATE	31/01/2024
PROJECT NUMBER	P24028	REVISION	B
TECHNICAL NOTE TITLE	Existing Conditions Road Safety Audit		
PREPARED BY	Emily Plath	REVIEWED BY	Mark Plattz
PREPARED FOR	QLD Hydro	ISSUED TO	Matt McCulloch

Version: 6

SUMMARY

Point8 has been commissioned by QLD Hydro to undertake an Existing Conditions Stage Road Safety Audit (RSA) of Yabba Creek Road and Bella Creek Road, between Brooloo Road and 500m west of Bella Creek Road intersection.

The subject section of the corridor features a sealed single-lane, two-way corridor with multiple causeways, horizontal and vertical alignment changes, and some unsealed sections.

A daytime and night-time site inspection was undertaken on Wednesday, 29 November 2023. The audit team inspected the corridor in a 4WD vehicle during overcast and dry conditions. Video records of the inspection are available on request.

Table 2 summarises the audit findings. The audit has identified a total of 48 issues, of the following ratings:

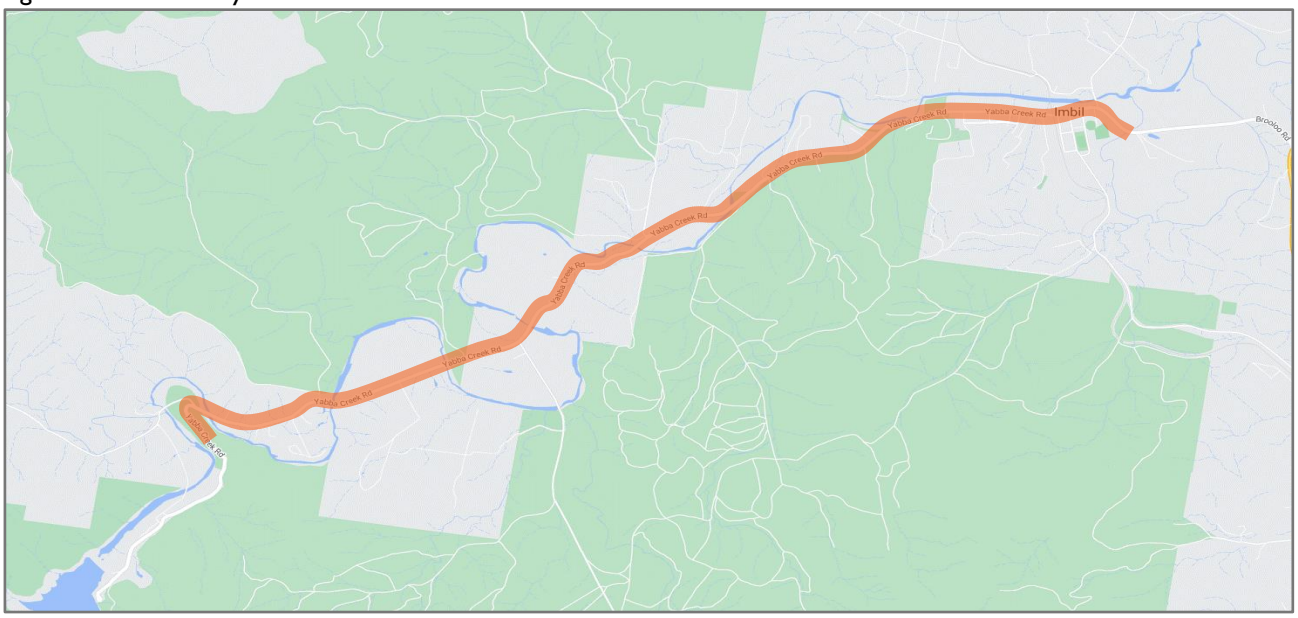
- Extreme (FSI): 8
- High (FSI): 14
- High: 4
- Medium (FSI): 2
- Medium: 8
- Low: 11
- Negligible: 1

INTRODUCTION

AUDIT PURPOSE

Point8 has been commissioned by Queensland Hydro (QLD Hydro) to undertake an existing conditions Road Safety Audit of Yabba Creek Road, Imbil between Brooloo Road and 500m west of Bella Creek Road intersection. The purpose of this road safety audit is to provide an independent assessment of any road safety risks relating to all road users that may be present and to provide advice to QLD Hydro on options to mitigate identified risks that may be present or may be exacerbated as a result of the proposed investigative, preparatory and construction works.

Figure 1 – Road Safety Audit Extents



STATEMENT BY THE AUDIT TEAM

The findings and recommendations in this report are the opinions of the auditors listed below. The auditors have made every effort to identify all relevant safety issues.

- Mark Plattz (Audit Lead) – Accredited Senior Road Safety Auditor .....
- Emily Plath – Accredited Senior Road Safety Auditor .....

CRASH HISTORY

A review of the crash history on Yabba Creek Road (using data obtained from the Department of Transport and Main Roads Crash Data, attached at Appendix A) identified five (5) recorded crashes from January 2018 – December 2022. The following is a summary of the crashes:

- One (1) DCA 803 – Off Path-Curve: Off Carriageway Right Bend Hit Object
- One (1) DCA 805 – Off Path-Curve: Out Of Control On Carriageway
- One (1) DCA 502 – Vehicles Overtaking: Out of Control
- One (1) DCA 704 – Off Path-Straight: Right Off Carriageway Hit Object
- One (1) DCA 000 – Pedestrian: Hit Other

The following notable trends have been identified:

- Four (4) Single Vehicle Off-Path crashes have occurred.
- Two (2) crashes resulted in a fatal outcome.
- Two (2) crashes resulted in a hospitalisation outcome.
- One (1) crash involved a motorcycle/moped.
- One (1) crash involved a truck.
- One (1) crash involved a pedestrian.
- Three (3) crashes occurred in low-light conditions (e.g. nighttime or dawn/dusk).

It is particularly notable that off-path crashes constituted majority of the crashes, with majority of these occurring in low-light conditions and resulting in Fatal and Serious Injury (FSI) outcomes.

SITE INSPECTION DETAILS

A site inspection was undertaken on Wednesday, 29 November 2023. The audit team inspected the corridor in a 4WD vehicle during daytime and nighttime conditions. The weather conditions were dry and overcast.

The audit was completed in accordance with the requirements of Austroads, Guide to Road Safety Part 6: Road Safety Audit, 2022.

ROAD SAFETY RISK RATING

Risk rating of safety issues is defined as per Austroads GTRS Part 6 Figure 10.2. Table 1 below outlines the severity and likelihood relationship consistently used to identify a risk rating. Actions required in response to these ratings are recommended as follows:

- **EXTREME:** Must be corrected as quickly as possible and regardless of cost.
- **HIGH:** Should be corrected or the risk significantly reduced, even if the treatment cost is high.
- **MEDIUM:** Should be corrected or the risk significantly reduced, if the treatment cost is moderate but not high.
- **LOW:** Should be corrected or the risk reduced if the treatment cost is low.
- **NEGLIGIBLE:** Deficiencies identified in the standard or the positioning of traffic control devices which, while unlikely to directly increase risk significantly have very low treatment cost and therefore should be mitigated with routine maintenance actions.

Table 1 – Risk Rating Matrix (AGRS Part 6)

			Severity				
			Insignificant	**Minor**	**Moderate**	**Serious**	**Fatal**
			Property damaged	*Minor first aid*	*Major first aid and/or presents to hospital (not admitted)*	*Admitted to hospital*	*Death within 30 days of the crash*
Likelihood	Almost Certain	*One per quarter*	**Medium**	**High**	**High**	**Extreme (FSI)**	**Extreme (FSI)**
	Likely	*Quarter to 1-year*	**Medium**	**Medium**	**High**	**Extreme (FSI)**	**Extreme (FSI)**
	Possible	*1 to 3 years*	**Low**	**Medium**	**High**	**High (FSI)**	**Extreme (FSI)**
	Unlikely	*3 to 7 years*	**Negligible**	**Low**	**Medium**	**High (FSI)**	**Extreme (FSI)**
	Rare	*7+ years*	**Negligible**	**Negligible**	**Low**	**Medium (FSI)**	**High (FSI)**

The above relies on the professional engineering judgement of the audit team. Importantly, an existing conditions road safety audit is not a design review or check of compliance with standards and guidelines. Further information on determining risk ratings based on probability, severity and level of risk can be found in Austroads GTRS Part 6 Section 10.5.1.

RESPONDING TO AUDIT FINDINGS

Austroads GTRS Part 6 clearly outlines that the client is not under any obligation to accept any or all this road safety audit's recommendations. It should be noted that the recommendations outlined herein may not be the only option for mitigating the risk of a particular issue or may not be the most cost-effective option. It is good practice to document the reason(s) behind rejecting any findings from a road safety audit should such a decision be made. Refer to Austroads GTRS Part 6 Section 11.4 for further recommendations on rejecting audit findings.

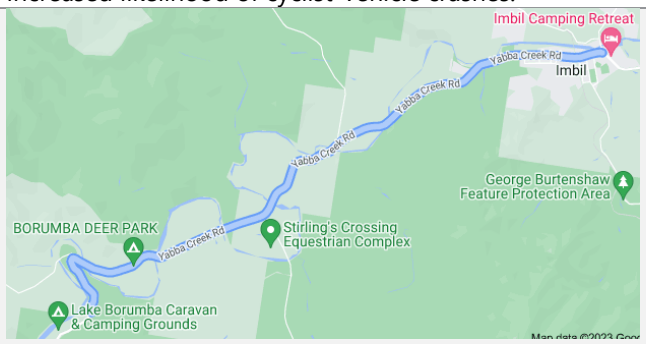
Table 2 - Audit Findings

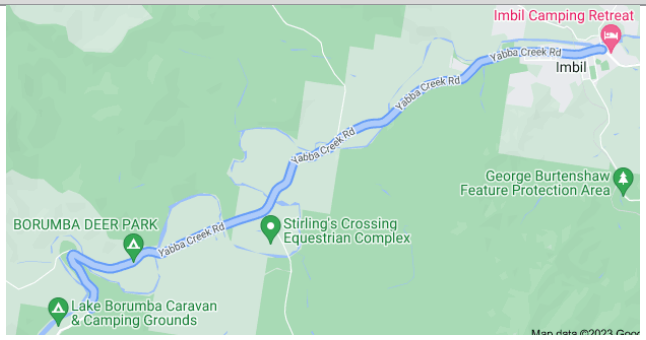
ITEM	LOCATION	ISSUE / RISK DESCRIPTION	RISK (L, S)	RECOMMENDATION
Issues identified throughout Audit Extents				
1.	West of Imbil township extents. Between Mathias Street and Yabba Creek Crossing No. 2.	 The road corridor seal width is narrow (~6.0m), with little to no sealed shoulder and narrow lane widths. A narrow road seal makes it difficult for vehicles to pass simultaneously and limits the margin for error, particularly for heavy vehicles. Increased likelihood of run-off-road and head-on crashes.	EXTREME (FSI) (Possible, Fatal)	Consider reviewing the road corridor width and investigate the possibility of providing a wide centreline treatment. OR Consider reviewing the road corridor width and investigate the possibility of providing sealed shoulders. AND Consider undertaking a speed limit review of the subject corridor.

ITEM	LOCATION	ISSUE / RISK DESCRIPTION	RISK (L, S)	RECOMMENDATION
2.	West of Imbil township extents. Between Yabba Creek Crossing No. 2 and the Bella Creek Road intersection.	 The road corridor seal width is narrow (~6.0m), with little to no sealed shoulder and narrow lane widths. A narrow road seal makes it difficult for vehicles to pass simultaneously and limits the margin for error, particularly for heavy vehicles. Increased likelihood of run-off-road and head-on crashes.	EXTREME (FSI) (Likely, Fatal)	Consider reviewing the road corridor width and investigate the possibility of providing a wide centreline treatment. OR Consider reviewing the road corridor width and investigate the possibility of providing sealed shoulders. AND Consider undertaking a speed limit review of the subject corridor.
3.	Imbil township extents.	 The road corridor seal width is narrow (~6.0m), with little to no sealed shoulder and narrow lane widths. A narrow road seal makes it difficult for vehicles to pass simultaneously and limits the margin for error, particularly for heavy vehicles. Increased likelihood of run-off-road and head-on crashes.	MEDIUM (Unlikely, Moderate)	Consider reviewing the road corridor width and investigate the possibility of a wide centreline treatment. OR Consider reviewing the road corridor width and investigate the possibility of providing sealed shoulders. AND Consider undertaking a speed limit review of the subject corridor.

ITEM	LOCATION	ISSUE / RISK DESCRIPTION	RISK (L, S)	RECOMMENDATION
4.	Audit Extents.	 Guideposts across the entire road corridor are inconsistent and often poor, damaged or missing. Guideposts are used by motorists to interpret the prevailing road alignment and are particularly important on unlit rural roads. Motorists may have difficulty identifying the edge of the roadway. Motorists may also experience difficulty identifying the alignment of the upcoming roadway, and safely navigating the roadway, especially where there is changing horizontal or vertical alignment (e.g. curves or windy road segments). Increased likelihood of run-off-road crashes.	HIGH (FSI) (Possible, Serious)	Consider preparing an installation and maintenance scheme for guideposts to be refurbished or installed in accordance with MUTCD Part 2 Section 4.2.4 and TMR Standard Drawing 1356.

ITEM	LOCATION	ISSUE / RISK DESCRIPTION	RISK (L, S)	RECOMMENDATION
5.	West of Imbil township extents.	 There is an absence of pedestrian facilities throughout the audit extent west of the township of Imbil. Pedestrians may be required to walk in the grassed verge, or may choose to walk in-lane with vehicular traffic. Motorists who are not familiar with the typical users may not be expecting pedestrians to be walking in-lane, and may not be expecting to have to slow or stop for pedestrians. This is exacerbated by high user speeds and the windy alignment where there is sometimes poor sight distance to upcoming users. Increased likelihood of pedestrian-vehicle crashes. Additionally, pedestrians walking in the verge may have difficulty safely traversing the uneven grassed verge, resulting in an increased likelihood of slips, trips and falls.	HIGH (FSI) (Rare, Fatal)	Consider working with key stakeholders and undertaking data collection to inform a study of active travel user behaviour to inform an active travel concept plan. AND Consider working with key stakeholders to identify appropriate management strategies and practices. AND Consider installing warning signage for Pedestrians (W6-1) or Children (W6-3) to make road users aware of pedestrians that may be expected in this area, especially at the beginning of an area where pedestrians are expected or where pedestrians may be crossing.

ITEM	LOCATION	ISSUE / RISK DESCRIPTION	RISK (L, S)	RECOMMENDATION
6.	Audit Extents.	 There is an absence of cyclist facilities throughout the audit extent. Cyclists may be required to ride in-lane with vehicular traffic. Throughout majority of the extent, the road alignment is windy and undulating and features a double barrier line centreline, indicating that there are limited opportunities for vehicles to safely overtake, including overtaking slow cyclists. This may be exacerbated by platoons of cyclists, as motorists require a longer gap in oncoming traffic to overtake safely. Additionally, motorists who are not familiar with the typical users may not be expecting cyclists to be travelling in-lane, and may not be expecting to have to slow or stop for cyclists. This is exacerbated by high user speeds and the windy alignment where there is sometimes poor sight distance to upcoming users. Increased likelihood of cyclist-vehicle crashes.	HIGH (FSI) (Rare, Fatal)	Consider working with key stakeholders and undertaking data collection to inform a study of active travel user behaviour to inform an active travel concept plan. AND Consider working with key stakeholders to identify appropriate management strategies and practices. AND Consider installing warning signage to make road users aware of areas where cyclists may be expected.
7.	Audit Extents.	 West of the Imbil township extents, the road corridor regularly features significant horizontal and vertical alignment changes, with a narrow width seal, that makes the road difficult to navigate comfortably and safely at the posted speed. Speeds of 80km/h and above increase the severity of any incidents that may occur along the road corridor.	HIGH (FSI) (Possible, Serious)	Consider undertaking a speed limit review of the audit extents.

ITEM	LOCATION	ISSUE / RISK DESCRIPTION	RISK (L, S)	RECOMMENDATION
8.	Audit Extents.	 Across the corridor, curve delineation (such as curve warning signs, advisory speeds and Curve Alignment Markers) are used inconsistently, with warnings and advisory speeds that often do not suit the relevant prevailing road conditions. As delineation and advisory speeds are used to accurately notify motorists of the approaching road geometry and conditions, it is imperative it is accurate. Increased likelihood of run-off-road crashes.	HIGH (FSI) (Possible, Serious)	Consider undertaking an assessment of advisory speeds, including a review of relevant curve warning signs, speed advisory signs and Curve Alignment Markers (CAMs) in accordance with AS1742.2.
Yabba Creek Crossing No. 1				
9.	Yabba Creek Crossing No. 1. Westbound approach.	 There is limited advanced warning signage advising motorists of the presence of a one-lane two-way bridge ahead at Yabba Creek Crossing No. 1. If eastbound motorists do not perceive vehicles approaching in the westbound direction, they may fail to give way and proceed across the bridge, potentially resulting in vehicles colliding on the one-lane bridge at high speed. Increased likelihood of head-on crashes.	EXTREME (FSI) (Possible, Fatal)	Consider providing additional advanced warning signage on both approaches to the one-lane bridge. AND Consider reviewing the hold point condition to determine if a STOP hold point should be implemented instead. AND Consider undertaking a speed limit review of the subject corridor.

ITEM	LOCATION	ISSUE / RISK DESCRIPTION	RISK (L, S)	RECOMMENDATION
10.	Yabba Creek Crossing No. 1. Westbound approach.	 No guardrail or delineation is provided on either side of the one-lane bridge at Yabba Creek Crossing No. 1. Motorists may have difficulty navigating the bridge safely, especially in low-light conditions. In the event of an errant vehicle leaving the roadway, there is an increased severity of injury due to the potential for vehicles to overturn into a stream of water.	EXTREME (FSI) (Possible, Fatal)	Consider providing a guardrail on either side of the bridge. AND Consider providing delineation on either side of the bridge. AND Consider undertaking a speed limit review of the subject corridor.
11.	Yabba Creek Crossing No. 1. Westbound approach.	 The one lane bridge advanced warning sign is in poor condition and is non-retroreflective.	LOW (Unlikely, Minor)	Consider replacing the sign.
12.	Yabba Creek Crossing No. 1. Eastbound approach.	 There is a gap in delineation on approach to the one-lane two-way bridge for eastbound motorists between the left-hand CAMs and the bridge causeway guideposts. In low-light or inclement weather, motorists may assume the gap in delineation is the travelled lane and proceed to drive off the roadway into the adjacent waterway. Increased likelihood of run-off-road crashes.	HIGH (FSI) (Possible, Serious)	Consider providing CAMs and guideposts at this location.

ITEM	LOCATION	ISSUE / RISK DESCRIPTION	RISK (L, S)	RECOMMENDATION
13.	Yabba Creek Crossing No. 1. Eastbound approach.	 The Give Way hold point line marking is in poor condition. Motorists approaching the one lane bridge may fail to give way to oncoming motorists on or approaching the bridge. Increased likelihood of head-on crashes.	HIGH (FSI) (Possible, Serious)	Consider reviewing the hold point to determine if the hold point should be changed to a STOP condition. AND Consider reinstating the hold point linemarking.

ITEM	LOCATION	ISSUE / RISK DESCRIPTION	RISK (L, S)	RECOMMENDATION
Yabba Creek Crossing No. 4				
14.	Yabba Creek Crossing No. 4. Westbound approach.	 Yabba Creek Crossing No. 4 is located at the bottom of a downhill slope after a right-hand bend. The approach alignment contributes to motorists approaching at a higher speed. Sight distance to eastbound motorists is obscured by vegetation and the approach geometry of the road arrangement, leaving insufficient sight distance on approach to the one-lane two-way bridge. Whilst some advanced warning and advisory signage is present on approach, motorists are still approaching the one-lane bridge at higher speeds. Motorists may not see approaching vehicles traversing the bridge and be able to stop in time. Additionally, delineation of the right-hand bend is limited, reducing motorists' awareness of the presence of the horizontal alignment change. Increased likelihood and severity of head-on crashes.	EXTREME (FSI) (Likely, Fatal)	Consider providing guideposts on approach and at the bridge. AND Consider refurbishing the linemarking, give-way hold line and providing signage in both verges. AND Consider providing raised retroreflective pavement markers (RRPMs) on approach to the bridge. AND Consider providing additional advanced warning signage on approach to the one-lane bridge. AND Consider reducing the speed prior to the one-lane bridge crossing. OR Consider constructing a two-lane two-way bridge.

ITEM	LOCATION	ISSUE / RISK DESCRIPTION	RISK (L, S)	RECOMMENDATION
15.	Yabba Creek Crossing No. 4. Western approach.	 Yabba Creek Crossing No. 4 is located at the bottom of a steep downhill slope after a right-hand bend. The advanced warning signage is minimal and located in close proximity to the crossing. As eastbound motorists have right-of-way at the one-lane bridge, they may approach the bridge at higher speeds anticipating westbound motorists will stop in time. However, as the vertical geometry is steep and sight distance is limited, they may not anticipate motorists who have already commenced crossing the bridge, and may not have sufficient time and space to stop safely. Increased risk of head-on crashes.	EXTREME (FSI) (Likely, Fatal)	Consider providing guideposts on approach and at the bridge. AND Consider refreshing the linemarking. AND Consider providing raised retroreflective pavement markers (RRPMs) on approach to the bridge. AND Consider providing additional advanced warning signage on approach to the one-lane bridge. AND Consider reducing the speed prior to the one-lane bridge crossing. OR Consider constructing a two-lane two-way bridge.

ITEM	LOCATION	ISSUE / RISK DESCRIPTION	RISK (L, S)	RECOMMENDATION
16.	Yabba Creek Crossing No. 4.	 No guardrail or delineation is provided on, or on approach to, either side of the one-lane bridge at Yabba Creek Crossing No. 4. Motorists may have difficulty navigating the bridge safely, especially in low-light conditions. In the event of an errant vehicle leaving the roadway, there is an increased severity of injury due to the potential for vehicles to overturn into a stream of water.	EXTREME (FSI) (Possible, Fatal)	Consider providing a guardrail on either side of the bridge. AND Consider providing delineation on either side of the bridge. AND Consider undertaking a speed limit review of the subject corridor.
Yabba Creek Crossing No. 6				
17.	Yabba Creek Crossing No. 6. Both approaches.	 No guardrail is provided on either side of the one-lane bridge at Yabba Creek Crossing No. 5, and the delineation provided is in poor condition. In the event of an errant vehicle leaving the roadway, there is an increased risk of fatality as a result of a vehicle overturning into a stream of water.	EXTREME (FSI) (Possible, Fatal)	Consider providing a guardrail on either side of the bridge.
18.	Yabba Creek Crossing No. 6. Westbound approach.	 The give-way linemarking is in poor condition and may not be visible to approaching motorists. Motorists approaching the one lane bridge may fail to give way to oncoming motorists on or approaching the bridge. Increased likelihood of head-on crashes.	MEDIUM (FSI) (Rare, Serious)	Consider refurbishing the give-way linemarking.

ITEM	LOCATION	ISSUE / RISK DESCRIPTION	RISK (L, S)	RECOMMENDATION
19.	Yabba Creek Crossing No. 6.	 There is an absence of any pedestrian facilities at the bridge of Yabba Creek Crossing number 6. Pedestrians may have to walk in-lane with vehicular traffic to cross. Motorists, especially those unfamiliar with the local users and conditions, may not be anticipating pedestrians at this location and may fail to slow or stop in time to give way to pedestrians crossing on the bridge. Increased likelihood of pedestrian-vehicle crashes.	HIGH (FSI) (Possible, Serious)	Consider providing warning signage to inform motorists of the possibility of pedestrians crossing and/or using the bridge. AND Consider undertaking a speed limit review.
20.	East of Yabba Creek Crossing No. 6.	 It is understood that pedestrians often cross Yabba Creek Road in proximity to Yabba Creek Crossing 6 and the Marapatta House access driveway. There is an absence of any pedestrian crossing infrastructure, requiring pedestrians to select an appropriate gap in two directions of oncoming traffic. Additionally, due to the horizontal alignment of the road in this location, pedestrians may not have sufficient sight distance to oncoming traffic to safely select an appropriate gap in cross. This may be exacerbated by large groups of pedestrians attempting to cross, or pedestrians with a lower cognitive ability selecting gaps. Increased likelihood of pedestrian-vehicle crashes.	HIGH (FSI) (Possible, Serious)	Consider investigating whether it is appropriate to provide a mid-block pedestrian crossing including refuge island to allow pedestrians to cross and navigate only one lane of oncoming traffic at a time. AND Consider providing warning signage informing motorists that pedestrians may be expected to be crossing here.

ITEM	LOCATION	ISSUE / RISK DESCRIPTION	RISK (L, S)	RECOMMENDATION
OTHER ISSUES				
21.	Yabba Creek Road southern shoulder, between George Street and Edward Street	 The parking lane is narrow and may not be of sufficient width to accommodate vehicles parked in the shoulder. Passing vehicles and cyclists may strike parked vehicles that are parked on or over the edge line. Increased likelihood of sideswipe crashes. Increased likelihood of rear-end crashes. Increased likelihood of head-on crashes.	MEDIUM (Possible, Minor)	Consider re-linemarking the carriageway lanes to provide sufficient width for parking. OR Consider installing signage and/or linemarking to implement parking restrictions where the carriageway width is insufficient to support parking in the shoulder.
22.	Yabba Creek Road westbound (-26.461741, 152.684434)	 The advanced warning sign sub-plate has been struck and is no longer facing the direction of travel.	NEGLIGIBLE (Rare, Insignificant)	Consider replacing the sign.
23.	Yabba Creek Road westbound. Anabranch Crossing No. 2.	 Delineation at the bridge is missing. Motorists may see the gap in retroreflective markers and assume that is the direction of travel. Increased likelihood of run-off-road crashes, especially in low-light conditions.	LOW (Unlikely, Minor)	Consider undertaking a review of reflectors on guardrails throughout and replacing delineation markers as needed.

ITEM	LOCATION	ISSUE / RISK DESCRIPTION	RISK (L, S)	RECOMMENDATION
24.	Yabba Creek Road westbound. Anabranch Crossing No. 2.	 The existing guardrail shows evidence of being struck. The structural integrity may be compromised and may not provide adequate protection for errant vehicles from the adjacent bridge drop-off. Risk of increased severity of injury in the event of run-off-road crashes.	MEDIUM (Unlikely, Moderate)	Consider replacing the guardrail.
25.	Yabba Creek Road – Imbil town extents.	 The speed limit zoning for Imbil township indicates there is a high degree of pedestrian activity near the road corridor; however, there are no dedicated pedestrian crossing facilities. The presence of attractors and parking either side of the road corridor indicates pedestrians will be crossing the road at informal locations frequently. Increased likelihood of pedestrian vehicle conflict.	HIGH (Possible, Moderate)	Consider providing formalised protected pedestrian crossing(s) across Yabba Creek Road within the Imbil township extents.

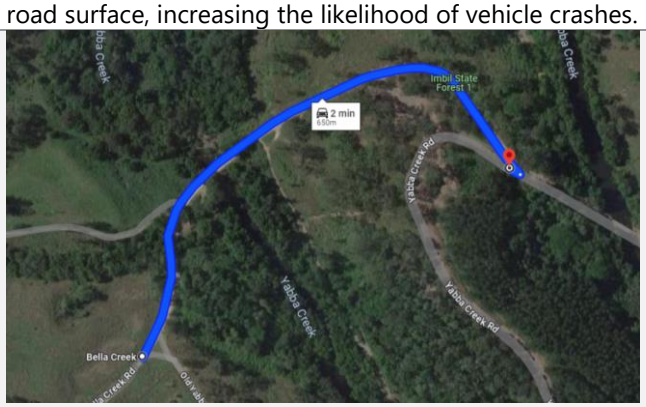
ITEM	LOCATION	ISSUE / RISK DESCRIPTION	RISK (L, S)	RECOMMENDATION
26.	Yabba Creek Road northern shoulder – between Meyers Street and Elizabeth Street.	 90-degree parking is present along the northern shoulder of Yabba Creek Road, just west of the Mary Valley Traders hardware store. Parked motorists have to reverse into live streams of traffic with poor visibility. Increased likelihood of manoeuvring crashes.	LOW (Unlikely, Minor)	Investigate the use of *"reverse in only"* parking signage. OR Consider providing angled parking spaces, consistent with the angle of spaces in from of the Mary Valley Traders store.
27.	Yabba Creek Road southern verge – between Alice Street and HQ Plantations office access.	 Multiple driveway crossovers and the entrances to Yabba Creek Service Road protrude into the travelled lane path of Yabba Creek Road and have a steep crossfall. Should motorists be passing concurrently, vehicles have to traverse the steep crossover, increasing the likelihood of rollover crashes (particularly for heavy vehicles). Additionally, motorists may attempt to hug or cross the double barrier centreline in order to avoid the steep crossfalls, increasing the likelihood of head-on type crashes.	MEDIUM (FSI) (Rare, Serious)	Consider re-grading driveway crossover and side street interfaces.

ITEM	LOCATION	ISSUE / RISK DESCRIPTION	RISK (L, S)	RECOMMENDATION
28.	Audit Extents.	 The intersecting streets of Albion Street, Lutton Lane, Alice Street and Yabba Creek Service Road do not feature any give-way linemarking. Motorists may assume the continuity linemarking is the give-way line and prop in close proximity to through traffic on Yabba Creek Road. Increased likelihood of angle type vehicle crashes.	LOW (Unlikely, Minor)	Consider providing adequate give-way linemarking on all side streets.
29.	Imbil township extents.	 *Example of a street with no channelised turn treatments.* The intersecting streets within the Imbil township do not feature any channelised turn treatments. Turning motorists have to prop within the through lane, with no room for through motorists to pass safely. Increased risk of rear-end crashes.	LOW (Unlikely, Minor)	Consider investigating appropriate turn treatments for all intersections within the Imbil township.

ITEM	LOCATION	ISSUE / RISK DESCRIPTION	RISK (L, S)	RECOMMENDATION
30.	Yabba Creek Road eastbound (-26.4912238, 152.6011669	 There are insuffient CAMs around the right-hand bend to provide sufficient delineation to approaching motorists. Motorists may assume the change in horizontal alignment finishes after the last CAM and continue striaght. Increased likelihood of run-off-road crashes.	MEDIUM (Unlikely, Moderate)	Consider providing a guardrail system. AND Consider installing additional CAMs around the bend.
31.	Yabba Creek Road westbound (-26.464356, 152.651682)	 The advanced warning is in poor condition and non-retroreflective.	LOW (Unlikely, Minor)	Consider replacing the signs.
32.	Yabba Creek Road, between Creek Crossing No. 2 and No. 4.	 No edge line is provided along both directions of travel. The presence of an edge line provides delineation for motorists of the edge of the seal. Increased likelihood of run-off-road crashes.	LOW (Rare, Moderate)	Consider providing an edge line for the corridor extents.

ITEM	LOCATION	ISSUE / RISK DESCRIPTION	RISK (L, S)	RECOMMENDATION
33.	-26.47549498, 152.6296059	 The left-hand bend for westbound motorists west of Yabba Creek Crossing No. 2 is tight in its horizontal geometry. On approach to the bend, there is limited advanced warning signage to indicate the speed reduction needed to navigate the bend, nor appropriate delineation of the presence of the bend such as CAMs. Given the presence of regular advanced warning signage and CAMs for significant horizontal and vertical alignment changes across the corridor, motorists may attempt to navigate the bend at higher speeds. Increased likelihood of run-off-road and head-on crashes.	HIGH (FSI) (Unlikely, Serious)	Consider providing a guardrail system. AND Consider providing CAMs. AND Consider providing advanced warning signage with an advisory speed sub-plate.
34.	-26.47932398, 152.6268445	 The geometry on approach to Yabba Creek Crossing No. 3 for westbound motorists involves a significant horizontal and vertical alignment change, with limited advanced warning or delineation signage. Given the presence of regular advanced warning signage and CAMs for significant horizontal and vertical alignment changes across the corridor, motorists may attempt to navigate the bend at higher speeds. Increased likelihood of run-off-road and head-on crashes.	HIGH (FSI) (Unlikely, Serious)	Consider providing a guardrail system. AND Consider providing CAMs. AND Consider providing advanced warning signage with an advisory speed sub-plate.

ITEM	LOCATION	ISSUE / RISK DESCRIPTION	RISK (L, S)	RECOMMENDATION
35.	Yabba Creek Road/Derrier Road intersection	 Derrier Road is unsealed and connects directly onto the sealed roadway of Yabba Creek Road. Debris and gravel spoil from Derrier Road has spilt onto the through lanes of Yabba Creek Road. Motorists travelling along Yabba Creek Road may lose traction as they attempt to navigate the right-hand bend. Increased likelihood of run-off-road crashes.	MEDIUM (Unlikely, Moderate)	Consider undertaking regular street sweeping.
36.	Yabba Creek Crossing No. 5. Westbound approach.	 The road corridor seal width is narrow with no linemarking. A narrow road seal makes it difficult for vehicles to pass simultaneously and limits the margin for error, particularly for Heavy Vehicles. Increased likelihood of run-off-road and head-on crashes.	LOW (Unlikely, Minor)	Consider widening the seal width. AND Consider providing edge-line and centre-line markings.
37.	Bella Creek Road Causeways.	 The surface condition and road width of Bella Creek Road is poor and difficult to navigate concurrently. The presence of water has caused damage to the surface condition, creating potholes. Increased likelihood of vehicle conflict.	HIGH (Possible, Moderate)	Consider sealing Bella Creek Road and improving the road quality.

ITEM	LOCATION	ISSUE / RISK DESCRIPTION	RISK (L, S)	RECOMMENDATION
38.	Bella Creek Road extents.	 The general surface condition of Bella Creek Road is not appropriate for regular use by heavy vehicles. Regular use by heavy vehicles may lead to dilapidation of the road surface, increasing the likelihood of vehicle crashes.	HIGH (Possible, Moderate)	Consider sealing Bella Creek Road to be a two-lane two-way road corridor. OR Consider investigating an alternate haul route.
39.	Bella Creek Road extents.	 The road geometry of Bella Creek Road is difficult to navigate with dips, crests and blind horizontal curves. Regular use of the road corridor, particularly in low light or inclement weather may lead to an increased risk of vehicle crashes.	HIGH (Possible, Moderate)	Consider sealing Bella Creek Road to be a two-lane two-way road corridor. OR Consider investigating an alternate haul route.

ITEM	LOCATION	ISSUE / RISK DESCRIPTION	RISK (L, S)	RECOMMENDATION
40.	Bella Creek Road/Yabba Creek Road intersection.	 Bella Creek Road connects to Yabba Creek Road at a shallow angle, where sight distance is limited to approaching motorists travelling eastbound. At this location, the road seal of Yabba Creek Road is also dilapidated and in poor condition, with gravel spoil seen to be spilled onto Yabba Creek Road. Additionally, there is no channelised turn treatment to allow for safe turning from Yabba Creek Road onto Bella Creek Road. Turning motorists have to prop within the through lane, with no room for through motorists to pass safely. Increased risk of vehicle conflict.	HIGH (FSI) (Possible, Serious)	Consider formalising the intersection, including sealing the intersection and squaring up the approach geometry.
41.	Yabba Creek Road Eastbound (-26.49232633, 12.5964806)	 Sight distance to two CAMs is obscured by vegetation on approach to the left-hand bend for eastbound motorists. Increased likelihood of run-off-road crashes.	LOW (Unlikely, Minor)	Consider undertaking vegetation maintenance.

ITEM	LOCATION	ISSUE / RISK DESCRIPTION	RISK (L, S)	RECOMMENDATION
42.	Yabba Creek Road Eastbound (-26.47698031, 152.6278045)	 The reverse curve warning sign is the wrong way around and alerting to motorists of a left-hand bend, when there is a right-hand bend ahead. Motorists may assume a left-hand bend is approaching. Increased likelihood of run-off-road crashes.	MEDIUM (Unlikely, Moderate)	Consider installing an appropriate reverse curve warning sign.
43.	-26.47499415, 152.6319699	 There are large non-frangible trees located on the outside of a right-hand bend and are a hazard to errant vehicles. Motorists may not anticipate the bend in the road, particularly in low light or inclement weather in conditions, due to the lack of warning advisory signage and CAMs. Increased severity in the event of an errant vehicle leaving the roadway.	HIGH (FSI) (Possible, Serious)	Consider installing an appropriate guardrail system. OR Consider providing CAMs.
44.	*Superior Wood Timber Mill* Access.	 The intersection arrangement with the Superior Wood Timber Mill has been covered with debris and linemarking is in poor condition. Motorists may be unsure about the prevailing road conditions. Increased likelihood of vehicle conflict.	LOW (Unlikely, Minor)	Consider refurbishing existing linemarking and providing turn arrows. AND Consider undertaking regular street sweeping.

ITEM	LOCATION	ISSUE / RISK DESCRIPTION	RISK (L, S)	RECOMMENDATION
45.	Yabba Creek Road Eastbound (-26.461083, 152.659635)	 The right-hand bend for eastbound motorists is tight in its horizontal geometry. On approach to the bend, there is limited advanced warning signage to indicate the speed reduction needed to navigate the bend, nor appropriate delineation of the bend such as CAMs. Given the presence of regular advanced warning signage and CAMs across the corridor, motorists may not anticipate the bend and attempt to navigate the bend at higher speeds. Increased likelihood of run-off-road and head-on crashes.	HIGH (FSI) (Unlikely, Serious)	Consider providing CAMs. AND Consider providing advanced warning signage with an advisory speed sub-plate.
46.	Yabba Creek Road Westbound (-26.4778823, 152.6275178)	 The reverse curve warning signage and advisory sub-plate is faded and non-retroreflective.	LOW (Unlikely, Minor)	Consider replacing the signs.
47.	Marrapatta Access Driveway.	 On approach to the Marrapatta Driveway access, there is no turning lane treatment and no advanced warning signage to indicate the presence of turning vehicles. Motorists may not anticipate slowed vehicles associated with accessing and egressing the site. Increased likelihood of rear-end crashes.	MEDIUM (Unlikely, Moderate)	Consider providing a *concealed driveway* and *turning vehicles* advanced warning signage. AND Consider investigating whether it is appropriate or warranted to provide any turning lane treatments, noting the likely presence of buses.

ITEM	LOCATION	ISSUE / RISK DESCRIPTION	RISK (L, S)	RECOMMENDATION
48.	Marrapatta Access Driveway.	 There is a change in speed limit (between 90km/h and 60km/h) approximately 100m west of the Marrapatta Access Driveway. As a result, there is likely to be a large speed differential between through and turning motorists at this location. Increased severity of injury in the event of vehicle crashes.	MEDIUM (Unlikely, Moderate)	Consider undertaking a review of the location of the speed change at this location.

Appendix A

Received Data

Crashes on Yabba Creek Road from 2018-2022, all casualty crashes. Sourced from Queensland OpenData.

Crash Ref Number	Crash Severity	Crash Year	Crash Month	Crash Day Of Week	Crash Hour	Crash Nature	Crash Type	Crash Longitude	Crash Latitude	Crash Street	Crash Street Intersecting	Loc Suburb	Crash Speed Limit	Crash Road Surface Condition	Atmospheric Condition	Lighting Condition	Road Horizontal Alignment	Road Vertical Alignment	DCA Code	DCA Description	DCA Group Description	Key Approach Direction
214431	Hospitalisation	2022	January	Sunday	11	Hit object	Single Vehicle	152.6878672	-26.4401534	Kandanga - Imbil Rd		Imbil	100 - 110 km/h	Sealed - Dry	Clear	Daylight	Curved - view open	Level	803	Off Path-Curve: Off Cway Rt Bend Hit Obj	Off carriageway on curve hit object	S
214432	Medical treatment	2022	January	Wednesday	0	Hit object	Single Vehicle	152.6782182	-26.4636134	Diggings Rd	Imbil-Brooloo Rd	Imbil	60 km/h	Sealed - Dry	Clear	Darkness - Not lighted	Curved - view open	Level	804	Off Path-Curve: Off Cway Lt Bend Hit Obj	Off carriageway on curve hit object	S
214433	Hospitalisation	2022	January	Wednesday	6	Hit object	Single Vehicle	152.6853852	-26.4366274	Kandanga - Imbil Rd		Imbil	100 - 110 km/h	Sealed - Dry	Clear	Daylight	Straight	Level	703	Off Path-Straight: Left Off Cway Hit Obj	Off carriageway on straight hit object	N
214438	Hospitalisation	2022	August	Friday	22	Hit object	Single Vehicle	152.6053692	-26.4900484	Yabba Ck Rd		Imbil	80 - 90 km/h	Sealed - Dry	Clear	Darkness - Not lighted	Curved - view open	Dip	803	Off Path-Curve: Off Cway Rt Bend Hit Obj	Off carriageway on curve hit object	W
214441	Medical treatment	2022	September	Saturday	6	Hit object	Single Vehicle	152.6814641	-26.4278776	Kandanga - Imbil Rd		Imbil	80 - 90 km/h	Sealed - Wet	Fog	Dawn/Dusk	Curved - view open	Grade	805	Off Path-Curve: Out Of Control On Cway	Out of control on curve	S
214443	Hospitalisation	2022	October	Thursday	14	Overturned	Single Vehicle	152.6925704	-26.54507124	Invalid Street From Police		Imbil	80 - 90 km/h	Unsealed - Wet	Clear	Daylight	Straight	Grade	701	Off Path-Straight: Left Off Cway	Off carriageway on straight	S
214416	Hospitalisation	2021	January	Friday	17	Hit object	Single Vehicle	152.6825742	-26.4237284	Kandanga - Imbil Rd		Imbil	100 - 110 km/h	Sealed - Dry	Clear	Daylight	Curved - view open	Grade	803	Off Path-Curve: Off Cway Rt Bend Hit Obj	Off carriageway on curve hit object	S
214417	Fatal	2021	February	Monday	14	Hit object	Single Vehicle	152.6603652	-26.4607754	Yabba Ck Rd		Imbil	80 - 90 km/h	Sealed - Dry	Clear	Daylight	Curved - view open	Grade	805	Off Path-Curve: Out Of Control On Cway	Out of control on curve	N
214418	Hospitalisation	2021	April	Friday	20	Hit object	Single Vehicle	152.6863205	-26.44278545	Kandanga - Imbil Rd		Imbil	100 - 110 km/h	Sealed - Wet	Raining	Darkness - Not lighted	Curved - view open	Grade	803	Off Path-Curve: Off Cway Rt Bend Hit Obj	Off carriageway on curve hit object	N
214425	Hospitalisation	2021	August	Sunday	11	Rear-end	Multi-Vehicle	152.6858772	-26.4439064	Kandanga - Imbil Rd	Ray Myers Rd	Imbil	100 - 110 km/h	Sealed - Dry	Clear	Daylight	Curved - view open	Dip	303	Veh'S Same Direction: Right Rear	Rear-end	S
214427	Medical treatment	2021	November	Monday	21	Hit object	Single Vehicle	152.6996922	-26.4630304	Mary Valley Rd	Yabba Ck Rd	Imbil	60 km/h	Sealed - Wet	Raining	Darkness - Not lighted	Curved - view open	Level	804	Off Path-Curve: Off Cway Lt Bend Hit Obj	Off carriageway on curve hit object	E
214396	Minor injury	2020	May	Saturday	22	Hit object	Single Vehicle	152.6737975	-26.45585674	Ballard Rd		Imbil	60 km/h	Sealed - Dry	Clear	Darkness - Not lighted	Curved - view open	Level	804	Off Path-Curve: Off Cway Lt Bend Hit Obj	Off carriageway on curve hit object	E
214399	Fatal	2020	August	Thursday	19	Hit object	Single Vehicle	152.6727252	-26.4595734	Albion St	Yabba Ck Rd	Imbil	60 km/h	Sealed - Dry	Clear	Darkness - Lighted	Straight	Level	502	Veh'S Overtaking: Out Of Control	Off carriageway on straight	W
214403	Hospitalisation	2020	August	Friday	17	Hit object	Single Vehicle	152.6656712	-26.4595604	Yabba Ck Rd		Imbil	60 km/h	Sealed - Dry	Clear	Dawn/Dusk	Straight	Grade	704	Off Path-Straight:Right Off Cway Hit Obj	Off carriageway on straight hit object	E
214411	Medical treatment	2020	November	Sunday	6	Hit pedestrian	Hit pedestrian	152.6779142	-26.4595024	Yabba Ck Rd		Imbil	0 - 50 km/h	Sealed - Dry	Clear	Daylight	Straight	Level	0	Ped'N: Hit Other	Other	W
214412	Hospitalisation	2020	November	Thursday	16	Overturned	Single Vehicle	152.7022882	-26.4804254	Mary Valley Rd		Imbil	100 - 110 km/h	Sealed - Dry	Clear	Daylight	Straight	Level	701	Off Path-Straight: Left Off Cway	Off carriageway on straight	S
214382	Hospitalisation	2019	March	Sunday	20	Hit object	Single Vehicle	152.6998042	-26.4629454	Mary Valley Rd	Yabba Ck Rd	Imbil	100 - 110 km/h	Sealed - Dry	Clear	Darkness - Not lighted	Straight	Level	700	Off Path-Straight: Other	Other	E
214384	Medical treatment	2019	May	Thursday	5	Hit animal	Other	152.6874522	-26.4391354	Kandanga - Imbil Rd		Imbil	100 - 110 km/h	Sealed - Dry	Fog	Darkness - Not lighted	Curved - view obscured	Grade	609	Pass & Misc: Hit Animal	Hit animal	N
214390	Hospitalisation	2019	October	Sunday	19	Hit object	Single Vehicle	152.5211942	-26.49516239	Bella Creek Rd		Bella Creek	60 km/h	Unsealed - Dry	Clear	Darkness - Not lighted	Curved - view open	Level	803	Off Path-Curve: Off Cway Rt Bend Hit Obj	Off carriageway on curve hit object	W
214363	Hospitalisation	2018	January	Tuesday	5	Hit object	Single Vehicle	152.685609	-26.44466526	Kandanga - Imbil Rd		Imbil	100 - 110 km/h	Sealed - Dry	Clear	Dawn/Dusk	Straight	Level	703	Off Path-Straight: Left Off Cway Hit Obj	Off carriageway on straight hit object	S
214364	Minor injury	2018	February	Saturday	9	Rear-end	Multi-Vehicle	152.6996932	-26.4628834	Mary Valley Rd	Yabba Ck Rd	Imbil	80 - 90 km/h	Sealed - Dry	Clear	Daylight	Straight	Crest	303	Veh'S Same Direction: Right Rear	Rear-end	S
214375	Hospitalisation	2018	July	Wednesday	8	Overturned	Single Vehicle	152.6844622	-26.4816617	Imbil-Brooloo Rd		Imbil	80 - 90 km/h	Sealed - Dry	Clear	Daylight	Curved - view obscured	Grade	805	Off Path-Curve: Out Of Control On Cway	Out of control on curve	N

Appendix E

Trip Generation Calculation Table

Main Camp Schedule and Trips

	Activities using Yabba Ck Rd for access	Dates Quarters Start	Dates Quarters Finish	Dates Actual Start	Dates Actual Finish	Vehicle Type	Peak HVs per week: Concrete	Civil Other	Explosives	Steel	Mech	Elec & Comms	Fuel	Water	Other inc Maintenance	Bus	Crew (by LV per day)	Vehicle Type	Ave vehicle per day	One way AM peak LV	One way PM peak LV	Two way Midday peak (30% of off-peak)	Two way Off peak LV
Tunnelling and drilling	Geotechnical investigations (Main site)	Q1 2026	Q4 2027	Jan-26	Dec-27	LV											10	LV	10	3	3	1	4
		16 months				HV	1		2	1	2	2				2		HV	3	1	1	1	
	Tunnelling works	Q3 2027	Q2 2030	Jul-27	Jun-30	LV											10	LV	10	3	3	1	4
		Tunnelling would commence after the explosive store				HV	6		3	20	1	1			1	2		HV	11			3	
Site establishment	Kingaham Creek Bypass	Q1 2027	Q4 2027	Jan-27	Dec-27	LV											18	LV	18	7	7	1	4
		12 months				HV	6	90		7			4	7		7		HV	40	1	1	11	
	Borgan Rd improvements	Q3 2026	Q3 2027	Jul-26	Jun-27	LV											12	LV	12	4	4	1	4
						HV		40					5		5	7		HV	19	1	1	5	
	Access control facilities	Q3 2026	Q4 2026	Jul-26	Dec-26	LV											4	LV	4	2	2	0	
						HV	5	5		5			0		0			HV	5			2	
	Portal pad, Access Track and Explosives Store Pads	Q3 2027	Q4 2027	Jul-27	Dec-27	LV											6	LV	6	2	2	1	2
		Construction will occur over four months for portal pad				HV	4	20		5						7		HV	12			3	
	Temporary Bridge	Q3 2027	Q4 2027	Jul-27	Sep-27	LV											4	LV	4	2	2	0	
	As part of Portal Access Track construction	4 months				HV	3	2		5								HV	3			1	
	On Site Camp - Borgan Road - Construction	Q3 2026	Q1 2027	Jul-26	Mar-27	LV											12	LV	12	4	4	1	4
						HV	10	10		14	5	1	4	0		7		HV	17	1	1	5	
	On Site Camp - Borgan Road - Operations	Q2 2027	Q2 2030	Apr-27	Jun-30	LV											2	LV	2	2	2	0	
						HV							4		5	1		HV	3			1	
	Civil construction compound (Main) - Construction	Q1 2026	Q2 2026	Jan-26	Apr-26	LV											10	LV	10	4	4	1	2
		4 months construction? Remainder is operations				HV	5	5		2			2	4		7		HV	8			2	
	Civil construction compound (Main) - Operations	Q3 2026	Q1 2029	May-26	Dec-29	LV											4	LV	4	2	2		
		4 months construction? Remainder is operations				HV							2	4	7			HV	4			1	
	Seqwater compound (laydown)	Q2 2027	Q3 2027	Apr-27	May-27	LV											20	LV	20	9	9	1	2
						HV		22										HV	7			2	
	Seqwater compound (site facilities)	Q2 2027	Q3 2027	Jun-27	Sep-27	LV											20	LV	20	9	9	1	2
						HV		18										HV	6			2	
	Temp Water Infrastructure	Q1 2026	Q4 2026	Jan-26	Dec-26	LV											10	LV	10	4	4	1	2
		should be a 12 month construction schedule (or less)				HV	5				8		2		1	1		HV	6			2	
Exploratory Works Operations	Visitors & Brisbane Office					LV											1	LV	4	2	2	0	0
	Regional and Site QH Staff					LV											2	LV					
	Environmental Studies					LV											1	LV					

Calculation theory	
Total LV	Crew X 2 trips / 2 people per LV
Total HV	Total HV per week X 2 trips / 6 days

Excludes RED	Vehicle per day Q3 2027	One way AM peak LV	One way PM peak LV	Two way Midday peak	Two way Off peak LV
LV total	60	22	22	5	16
HV total	83	4	4	24	0
	Q1 2027				

Upper Camp Schedule and Trips

	Activities using Yielo Rd for access	New PD dates Actual Quarters Start	Finish	New PD dates Actual Start	Finish	Vehicle type	Peak HVs per week: Concrete	Civil Other	Explosives	Steel	Mech	Elec & Comms	Fuel	Water	Other inc Maintenance	Bus	Crew (by LV per day)	Vehicle type	Ave vehicle per day Q2 2026	One way AM peak LV	One way PM peak LV	Two way Midday peak	Two way Off peak LV
Site establishment	**Yielo Rd Interim access upgrades**	Q1 2026	Q2 2026	Jan-26	Jun-26	LV											10	LV	10	3	3	1	4
						HV		10					2	2				HV	5			2	
	Geotech Access Tracks	Q1 2026	Q3 2027	Jan-26	Sep-27	LV											12	LV	12	3	3	2	6
						HV		20							10			HV	10				
	On Site Camps - Walkers Top - construction	Q1 2025	Q3 2025	Jan-25	Sep-25	LV											12	LV	12	3	3	2	6
						HV	10	10		14	5	1	4	0		7		HV	17			5	
	On Site Camps - Walkers Top - operations	Q1 2025	Q3 2025	Oct-25	Jun-30	LV											12	LV	12	3	3	2	6
						HV							4		5	1		HV	3			1	
	Access control facilities	Q3 2026	Q4 2027	Jul-26	Dec-26	LV											12	LV	12	3	3	2	6
						HV	5	5		5			0		0			HV	5			2	
	Yielo Rd construction compound - construction	Q2 2027	Q3 2027	Apr-27	Sep-27	LV											20	LV	20	5	5	3	10
						HV	5	5		2			2	4		7		HV	8			2	
	Water haulage (until water infrastructure is complete)			Jan-26	Dec-26	HV								28				HV	9			3	
Drilling	**Geotech Investigations (Upper site)**	Q1 2026	Q4 2027	Jan-26	Dec-27	LV											10	LV	10	2	2	2	6
						HV				1			1	56	2	0		HV	17			5	
Exploratory Works Operation	**Visitors & Brisbane Office**																2	LV		2	2		2
	Regional and Site QH Staff																2	LV					
	Environmental Studies					LV											2	LV	6				

Calculation theory	
Total LV	Crew X 2 trips / 2 people per LV
Total HV	Total HV per week X 2 trips / 6 days

Excludes RED	Ave vehicle per day	One way AM peak LV	One way PM peak LV	Two way Midday peak	Two way Off peak LV
LV total	**52**	**13**	**13**	**7**	**26**
HV total	**41**	**0**	**0**	**9**	**0**
	Q1 2026				

Appendix F

Turn Path Assessment Diagrams

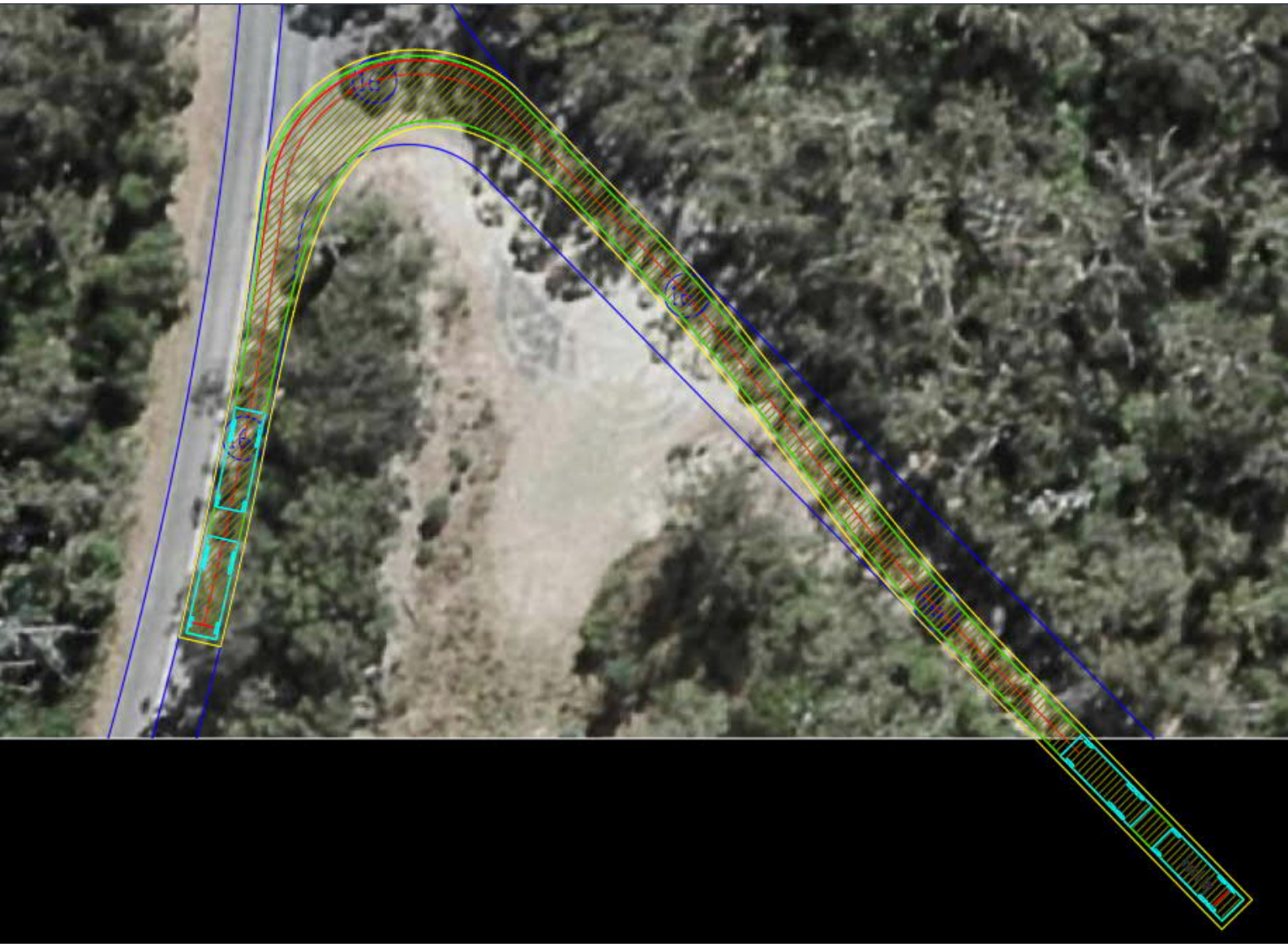

Gympie - Brooloo / Mary Valley Link Road


Gympie - Brooloo / Yabba Creek Road


Bella Creek Road / Yabba Creek Road


Kilcoy Murgon Road / Sunday Creek Road

Kilcoy Murgon Road / Sunday Creek Road intersection
Truck and dog swept path




Kilcoy Murgon Road / D'Aguilar Highway
Kilcoy

Appendix G

SIDRA Results

USER REPORT FOR SITE

Project: BPHES SIDRA 10-3-25

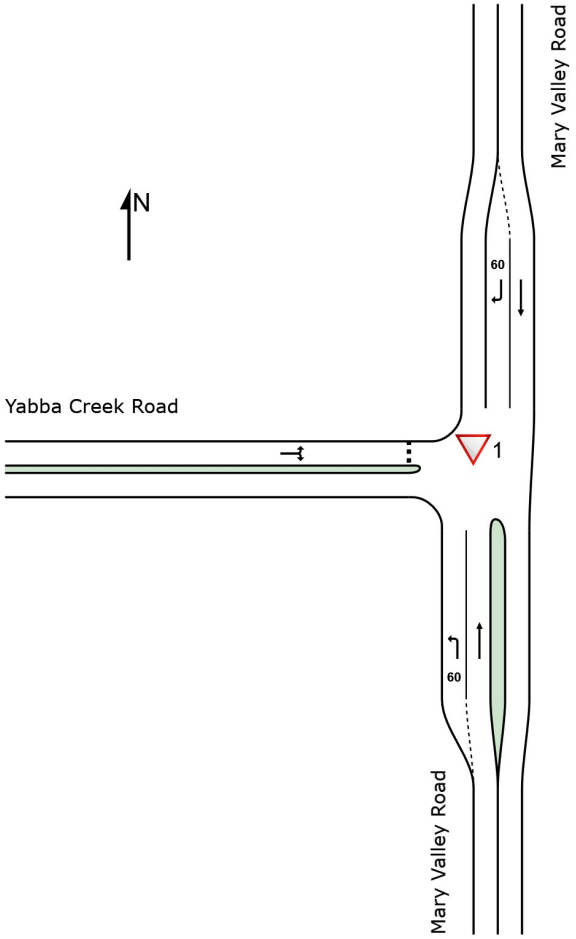
Output produced by SIDRA INTERSECTION Version: 9.1.5.224 **Template: Default Site User Report**

Site: 1 [1 - Yabba Creek Road / Mary Valley Road AM Peak (Site Folder: Total Traffic, AM Peak)]

Yabba Creek Road / Mary Valley Road
Site Category: AM Peak
Give-Way (Two-Way)

Site Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Mary Valley Road															
1	L2	All MCs	24	0.0	24	0.0	0.013	5.5	LOS A	0.0	0.0	0.00	0.58	0.00	52.9
2	T1	All MCs	42	35.7	42	35.7	0.027	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			66	22.7	66	22.7	0.027	2.0	NA	0.0	0.0	0.00	0.21	0.00	57.2
North: Mary Valley Road															
8	T1	All MCs	31	32.3	31	32.3	0.019	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
9	R2	All MCs	66	12.1	66	12.1	0.052	5.9	LOS A	0.2	1.6	0.18	0.56	0.18	51.7
Approach			97	18.6	97	18.6	0.052	4.0	NA	0.2	1.6	0.12	0.38	0.12	54.1
West: Yabba Creek Road															
10	L2	All MCs	41	14.6	41	14.6	0.061	5.9	LOS A	0.2	1.8	0.17	0.54	0.17	51.8
12	R2	All MCs	23	4.3	23	4.3	0.061	6.7	LOS A	0.2	1.8	0.17	0.54	0.17	52.2
Approach			64	10.9	64	10.9	0.061	6.2	LOS A	0.2	1.8	0.17	0.54	0.17	51.9
All Vehicles			227	17.6	227	17.6	0.061	4.1	NA	0.2	1.8	0.10	0.38	0.10	54.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Mary Valley Road															
1	L2	All MCs	38	33.3	38	33.3	0.025	5.9	LOS A	0.0	0.0	0.00	0.57	0.00	51.5
2	T1	All MCs	44	26.2	44	26.2	0.027	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			82	29.5	82	29.5	0.027	2.7	NA	0.0	0.0	0.00	0.26	0.00	55.8
North: Mary Valley Road															
8	T1	All MCs	37	25.7	37	25.7	0.022	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
9	R2	All MCs	49	12.8	49	12.8	0.040	6.0	LOS A	0.2	1.2	0.20	0.56	0.20	51.6
Approach			86	18.3	86	18.3	0.040	3.4	NA	0.2	1.2	0.11	0.32	0.11	54.9
West: Yabba Creek Road															
10	L2	All MCs	38	19.4	38	19.4	0.080	6.0	LOS A	0.3	2.6	0.21	0.55	0.21	51.5
12	R2	All MCs	37	22.9	37	22.9	0.080	7.3	LOS A	0.3	2.6	0.21	0.55	0.21	51.3
Approach			75	21.1	75	21.1	0.080	6.6	LOS A	0.3	2.6	0.21	0.55	0.21	51.4
All Vehicles			243	22.9	243	22.9	0.080	4.2	NA	0.3	2.6	0.10	0.37	0.10	54.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Mary Valley Road															
1	L2	All MCs	7	85.7	7	85.7	0.006	6.5	LOS A	0.0	0.0	0.00	0.56	0.00	49.5
2	T1	All MCs	12	91.7	12	91.7	0.010	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			19	89.5	19	89.5	0.010	2.4	NA	0.0	0.0	0.00	0.21	0.00	55.6
North: Mary Valley Road															
8	T1	All MCs	35	5.7	35	5.7	0.019	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
9	R2	All MCs	27	3.7	27	3.7	0.020	5.6	LOS A	0.1	0.6	0.09	0.56	0.09	52.3
Approach			62	4.8	62	4.8	0.020	2.4	NA	0.1	0.6	0.04	0.25	0.04	56.4
West: Yabba Creek Road															
10	L2	All MCs	48	10.4	48	10.4	0.072	5.7	LOS A	0.3	2.1	0.10	0.54	0.10	52.2
12	R2	All MCs	31	9.7	31	9.7	0.072	6.3	LOS A	0.3	2.1	0.10	0.54	0.10	52.2
Approach			79	10.1	79	10.1	0.072	5.9	LOS A	0.3	2.1	0.10	0.54	0.10	52.2
All Vehicles			160	17.5	160	17.5	0.072	4.2	NA	0.3	2.1	0.06	0.39	0.06	54.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

USER REPORT FOR SITE

Project: BPHES SIDRA 10-3-25

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Template: Default Site User Report

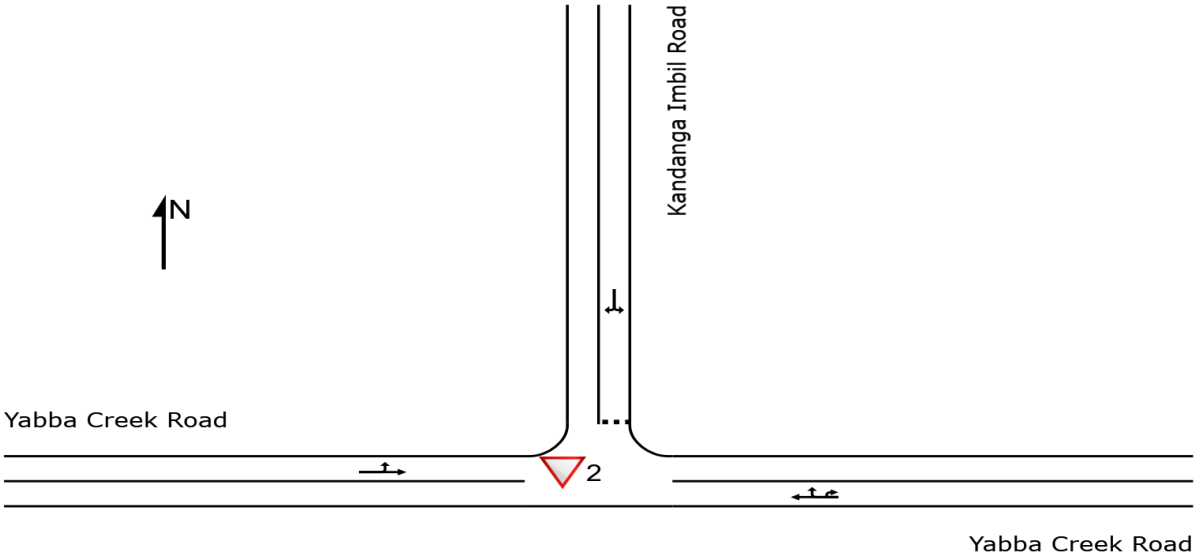
Site: 2 [2 - Yabba Creek Road / Kandanga Imbil Road AM Peak (Site Folder: Total Traffic, AM Peak)]

Yabba Creek Road / Kandanga Imbil Road

Site Category: AM Peak
Give-Way (Two-Way)

Site Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Yabba Creek Road															
5	T1	All MCs	93	8.6	93	8.6	0.066	0.1	LOS A	0.1	1.1	0.11	0.15	0.11	58.0
6	R2	All MCs	18	0.0	18	0.0	0.066	5.9	LOS A	0.1	1.1	0.11	0.15	0.11	55.8
6u	U	All MCs	4	0.0	4	0.0	0.066	7.1	LOS A	0.1	1.1	0.11	0.15	0.11	55.6
Approach			115	7.0	115	7.0	0.066	1.3	NA	0.1	1.1	0.11	0.15	0.11	57.4
North: Kandanga Imbil Road															
7	L2	All MCs	16	6.3	16	6.3	0.100	5.9	LOS A	0.3	2.7	0.27	0.60	0.27	51.9
9	R2	All MCs	85	16.5	85	16.5	0.100	6.7	LOS A	0.3	2.7	0.27	0.60	0.27	47.5
Approach			101	14.9	101	14.9	0.100	6.6	LOS A	0.3	2.7	0.27	0.60	0.27	48.3
West: Yabba Creek Road															
10	L2	All MCs	65	23.1	65	23.1	0.081	5.8	LOS A	0.0	0.0	0.00	0.27	0.00	52.8
11	T1	All MCs	73	11.0	73	11.0	0.081	0.0	LOS A	0.0	0.0	0.00	0.27	0.00	57.0
Approach			138	16.7	138	16.7	0.081	2.7	NA	0.0	0.0	0.00	0.27	0.00	54.9
All Vehicles			354	13.0	354	13.0	0.100	3.4	NA	0.3	2.7	0.11	0.33	0.11	53.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV %]	Arrival Flows [Total veh/h	HV %]	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist m]	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Yabba Creek Road															
5	T1	All MCs	92	21.8	92	21.8	0.062	0.1	LOS A	0.1	0.7	0.08	0.11	0.08	58.5
6	R2	All MCs	13	0.0	13	0.0	0.062	6.0	LOS A	0.1	0.7	0.08	0.11	0.08	56.1
6u	U	All MCs	1	0.0	1	0.0	0.062	7.2	LOS A	0.1	0.7	0.08	0.11	0.08	55.9
Approach			105	19.0	105	19.0	0.062	0.9	NA	0.1	0.7	0.08	0.11	0.08	58.1
North: Kandanga Imbil Road															
7	L2	All MCs	22	0.0	22	0.0	0.082	5.8	LOS A	0.3	2.1	0.26	0.59	0.26	52.2
9	R2	All MCs	67	6.3	67	6.3	0.082	6.5	LOS A	0.3	2.1	0.26	0.59	0.26	48.9
Approach			89	4.7	89	4.7	0.082	6.3	LOS A	0.3	2.1	0.26	0.59	0.26	49.9
West: Yabba Creek Road															
10	L2	All MCs	74	11.4	74	11.4	0.090	5.7	LOS A	0.0	0.0	0.00	0.28	0.00	53.1
11	T1	All MCs	81	19.5	81	19.5	0.090	0.0	LOS A	0.0	0.0	0.00	0.28	0.00	56.6
Approach			155	15.6	155	15.6	0.090	2.7	NA	0.0	0.0	0.00	0.28	0.00	54.8
All Vehicles			349	13.9	349	13.9	0.090	3.1	NA	0.3	2.1	0.09	0.31	0.09	54.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Yabba Creek Road															
5	T1	All MCs	51	3.9	51	3.9	0.041	0.2	LOS A	0.1	0.9	0.14	0.21	0.14	57.3
6	R2	All MCs	13	0.0	13	0.0	0.041	5.9	LOS A	0.1	0.9	0.14	0.21	0.14	55.3
6u	U	All MCs	6	0.0	6	0.0	0.041	7.1	LOS A	0.1	0.9	0.14	0.21	0.14	55.1
Approach			70	2.9	70	2.9	0.041	1.8	NA	0.1	0.9	0.14	0.21	0.14	56.6
North: Kandanga Imbil Road															
7	L2	All MCs	16	6.3	16	6.3	0.043	5.9	LOS A	0.1	1.1	0.21	0.57	0.21	52.1
9	R2	All MCs	35	2.9	35	2.9	0.043	6.1	LOS A	0.1	1.1	0.21	0.57	0.21	49.6
Approach			51	3.9	51	3.9	0.043	6.0	LOS A	0.1	1.1	0.21	0.57	0.21	50.5
West: Yabba Creek Road															
10	L2	All MCs	66	3.0	66	3.0	0.077	5.6	LOS A	0.0	0.0	0.00	0.28	0.00	53.6
11	T1	All MCs	74	10.8	74	10.8	0.077	0.0	LOS A	0.0	0.0	0.00	0.28	0.00	56.6
Approach			140	7.1	140	7.1	0.077	2.6	NA	0.0	0.0	0.00	0.28	0.00	55.2
All Vehicles			261	5.4	261	5.4	0.077	3.1	NA	0.1	1.1	0.08	0.32	0.08	54.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

USER REPORT FOR SITE

Project: BPHES SIDRA 10-3-25

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Template: Default Site User Report

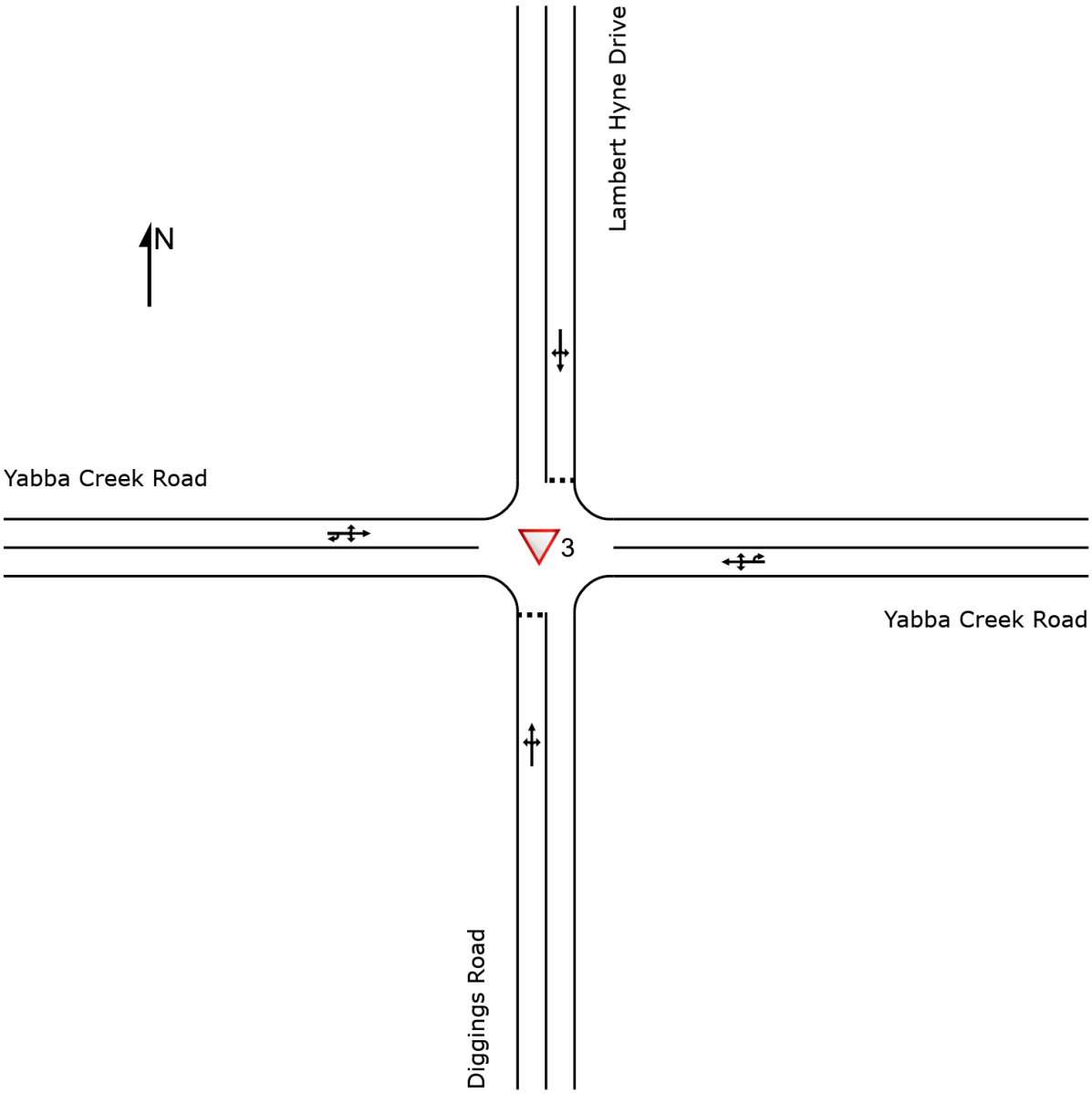
Site: 3 [3 - Yabba Creek Road / Diggings Road AM Peak (Site Folder: Total Traffic, AM Peak)]

Yabba Creek Road / Diggings Road

Site Category: AM Peak
Give-Way (Two-Way)

Site Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Diggings Road															
1	L2	All MCs	14	0.0	14	0.0	0.069	5.9	LOS A	0.2	1.7	0.31	0.60	0.31	52.1
2	T1	All MCs	2	0.0	2	0.0	0.069	5.1	LOS A	0.2	1.7	0.31	0.60	0.31	38.4
3	R2	All MCs	48	6.3	48	6.3	0.069	6.9	LOS A	0.2	1.7	0.31	0.60	0.31	48.8
Approach			64	4.7	64	4.7	0.069	6.6	LOS A	0.2	1.7	0.31	0.60	0.31	49.4
East: Yabba Creek Road															
4	L2	All MCs	12	0.0	12	0.0	0.077	5.8	LOS A	0.1	0.9	0.06	0.14	0.06	55.1
5	T1	All MCs	107	18.7	107	18.7	0.077	0.1	LOS A	0.1	0.9	0.06	0.14	0.06	58.1
6	R2	All MCs	13	7.7	13	7.7	0.077	5.9	LOS A	0.1	0.9	0.06	0.14	0.06	33.9
6u	U	All MCs	1	0.0	1	0.0	0.077	7.3	LOS A	0.1	0.9	0.06	0.14	0.06	52.2
Approach			133	15.8	133	15.8	0.077	1.2	NA	0.1	0.9	0.06	0.14	0.06	56.2
North: Lambert Hyne Drive															
7	L2	All MCs	12	8.3	12	8.3	0.015	3.2	LOS A	0.1	0.4	0.22	0.49	0.22	42.6
8	T1	All MCs	1	0.0	1	0.0	0.015	2.7	LOS A	0.1	0.4	0.22	0.49	0.22	51.4
9	R2	All MCs	5	0.0	5	0.0	0.015	3.8	LOS A	0.1	0.4	0.22	0.49	0.22	50.2
Approach			18	5.6	18	5.6	0.015	3.3	LOS A	0.1	0.4	0.22	0.49	0.22	46.0
West: Yabba Creek Road															
10	L2	All MCs	6	0.0	6	0.0	0.060	5.8	LOS A	0.1	0.6	0.06	0.11	0.06	38.0
11	T1	All MCs	86	23.3	86	23.3	0.060	0.1	LOS A	0.1	0.6	0.06	0.11	0.06	58.4
12	R2	All MCs	8	0.0	8	0.0	0.060	5.8	LOS A	0.1	0.6	0.06	0.11	0.06	56.0
12u	U	All MCs	1	0.0	1	0.0	0.060	7.4	LOS A	0.1	0.6	0.06	0.11	0.06	55.9
Approach			101	19.8	101	19.8	0.060	0.9	NA	0.1	0.6	0.06	0.11	0.06	56.9
All Vehicles			316	14.2	316	14.2	0.077	2.3	NA	0.2	1.7	0.12	0.24	0.12	54.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Diggings Road															
1	L2	All MCs	14	7.7	14	7.7	0.063	6.0	LOS A	0.2	1.6	0.31	0.60	0.31	51.8
2	T1	All MCs	6	0.0	6	0.0	0.063	5.2	LOS A	0.2	1.6	0.31	0.60	0.31	38.4
3	R2	All MCs	39	2.7	39	2.7	0.063	7.0	LOS A	0.2	1.6	0.31	0.60	0.31	49.4
Approach			59	3.6	59	3.6	0.063	6.6	LOS A	0.2	1.6	0.31	0.60	0.31	49.0
East: Yabba Creek Road															
4	L2	All MCs	12	0.0	12	0.0	0.077	5.8	LOS A	0.1	1.0	0.08	0.15	0.08	54.8
5	T1	All MCs	104	20.2	104	20.2	0.077	0.1	LOS A	0.1	1.0	0.08	0.15	0.08	57.8
6	R2	All MCs	16	0.0	16	0.0	0.077	5.8	LOS A	0.1	1.0	0.08	0.15	0.08	33.7
6u	U	All MCs	1	0.0	1	0.0	0.077	7.4	LOS A	0.1	1.0	0.08	0.15	0.08	51.9
Approach			133	15.9	133	15.9	0.077	1.3	NA	0.1	1.0	0.08	0.15	0.08	55.5
North: Lambert Hyne Drive															
7	L2	All MCs	17	0.0	17	0.0	0.032	3.2	LOS A	0.1	0.8	0.27	0.52	0.27	44.6
8	T1	All MCs	3	0.0	3	0.0	0.032	2.8	LOS A	0.1	0.8	0.27	0.52	0.27	51.1
9	R2	All MCs	15	0.0	15	0.0	0.032	4.0	LOS A	0.1	0.8	0.27	0.52	0.27	49.9
Approach			35	0.0	35	0.0	0.032	3.5	LOS A	0.1	0.8	0.27	0.52	0.27	48.1
West: Yabba Creek Road															
10	L2	All MCs	4	0.0	4	0.0	0.070	5.7	LOS A	0.0	0.4	0.03	0.06	0.03	38.5
11	T1	All MCs	109	21.2	109	21.2	0.070	0.0	LOS A	0.0	0.4	0.03	0.06	0.03	59.1
12	R2	All MCs	4	0.0	4	0.0	0.070	5.7	LOS A	0.0	0.4	0.03	0.06	0.03	56.6
12u	U	All MCs	1	0.0	1	0.0	0.070	7.2	LOS A	0.0	0.4	0.03	0.06	0.03	56.4
Approach			119	19.5	119	19.5	0.070	0.5	NA	0.0	0.4	0.03	0.06	0.03	58.2
All Vehicles			345	13.4	345	13.4	0.077	2.1	NA	0.2	1.6	0.12	0.23	0.12	54.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Diggings Road															
1	L2	All MCs	4	0.0	4	0.0	0.018	5.7	LOS A	0.1	0.4	0.24	0.56	0.24	52.3
2	T1	All MCs	1	0.0	1	0.0	0.018	4.8	LOS A	0.1	0.4	0.24	0.56	0.24	38.6
3	R2	All MCs	13	0.0	13	0.0	0.018	6.4	LOS A	0.1	0.4	0.24	0.56	0.24	50.0
Approach			18	0.0	18	0.0	0.018	6.2	LOS A	0.1	0.4	0.24	0.56	0.24	50.1
East: Yabba Creek Road															
4	L2	All MCs	9	11.1	9	11.1	0.047	5.9	LOS A	0.1	0.6	0.07	0.16	0.07	54.3
5	T1	All MCs	66	3.0	66	3.0	0.047	0.1	LOS A	0.1	0.6	0.07	0.16	0.07	58.0
6	R2	All MCs	10	0.0	10	0.0	0.047	5.7	LOS A	0.1	0.6	0.07	0.16	0.07	33.9
6u	U	All MCs	1	0.0	1	0.0	0.047	7.3	LOS A	0.1	0.6	0.07	0.16	0.07	52.1
Approach			86	3.5	86	3.5	0.047	1.4	NA	0.1	0.6	0.07	0.16	0.07	55.6
North: Lambert Hyne Drive															
7	L2	All MCs	20	5.0	20	5.0	0.018	3.2	LOS A	0.1	0.5	0.20	0.49	0.20	43.6
8	T1	All MCs	1	0.0	1	0.0	0.018	2.4	LOS A	0.1	0.5	0.20	0.49	0.20	51.4
9	R2	All MCs	3	0.0	3	0.0	0.018	3.5	LOS A	0.1	0.5	0.20	0.49	0.20	50.2
Approach			24	4.2	24	4.2	0.018	3.2	LOS A	0.1	0.5	0.20	0.49	0.20	45.2
West: Yabba Creek Road															
10	L2	All MCs	1	0.0	1	0.0	0.059	5.7	LOS A	0.1	0.4	0.03	0.05	0.03	38.5
11	T1	All MCs	98	9.2	98	9.2	0.059	0.0	LOS A	0.1	0.4	0.03	0.05	0.03	59.2
12	R2	All MCs	5	0.0	5	0.0	0.059	5.6	LOS A	0.1	0.4	0.03	0.05	0.03	56.6
12u	U	All MCs	2	0.0	2	0.0	0.059	6.9	LOS A	0.1	0.4	0.03	0.05	0.03	56.4
Approach			106	8.5	106	8.5	0.059	0.5	NA	0.1	0.4	0.03	0.05	0.03	58.8
All Vehicles			234	5.6	234	5.6	0.059	1.5	NA	0.1	0.6	0.08	0.18	0.08	55.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

USER REPORT FOR SITE

Project: BPHES SIDRA 10-3-25

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Template: Default Site User Report

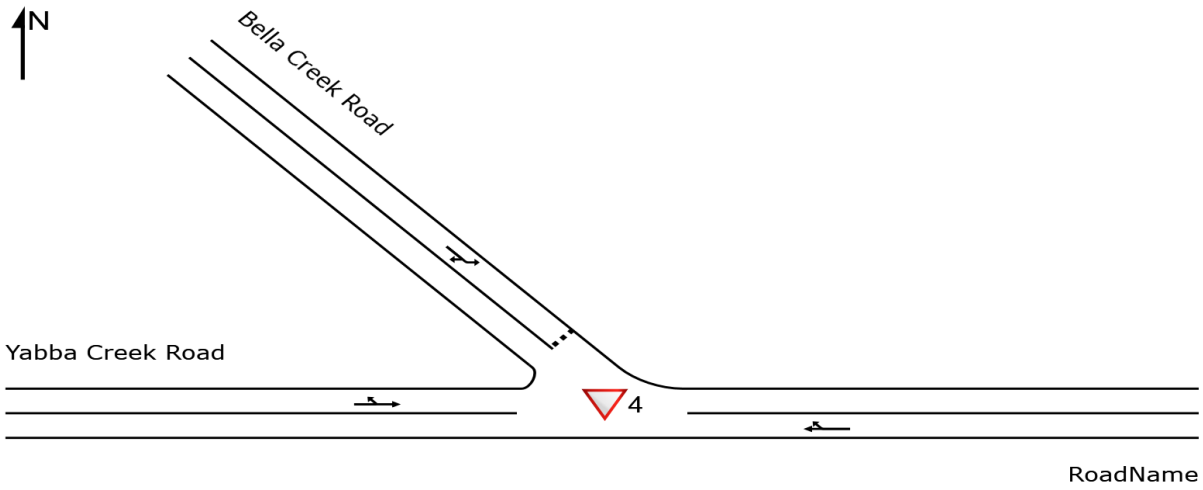
Site: 4 [4 - Yabba Creek Road / Bella Creek Road AM Peak (Site Folder: Total Traffic, AM Peak)]

Yabba Creek Road / Bella Creek Road

Site Category: AM Peak
Give-Way (Two-Way)

Site Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV %]	Arrival Flows [Total veh/h	HV %]	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist m]	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: RoadName															
5	T1	All MCs	6	16.7	6	16.7	0.026	0.0	LOS A	0.1	1.0	0.04	0.46	0.04	56.3
6a	R1	All MCs	37	21.6	37	21.6	0.026	4.8	LOS A	0.1	1.0	0.04	0.46	0.04	53.4
Approach			43	20.9	43	20.9	0.026	4.1	NA	0.1	1.0	0.04	0.46	0.04	53.8
NorthWest: Bella Creek Road															
27a	L1	All MCs	9	33.3	9	33.3	0.007	5.7	LOS A	0.0	0.2	0.03	0.59	0.03	51.2
29b	R3	All MCs	1	0.0	1	0.0	0.007	6.1	LOS A	0.0	0.2	0.03	0.59	0.03	52.4
Approach			10	30.0	10	30.0	0.007	5.8	LOS A	0.0	0.2	0.03	0.59	0.03	51.3
West: Yabba Creek Road															
10b	L3	All MCs	1	0.0	1	0.0	0.003	6.5	LOS A	0.0	0.0	0.00	0.14	0.00	56.3
11	T1	All MCs	4	0.0	4	0.0	0.003	0.0	LOS A	0.0	0.0	0.00	0.14	0.00	58.7
Approach			5	0.0	5	0.0	0.003	1.3	NA	0.0	0.0	0.00	0.14	0.00	58.3
All Vehicles			58	20.7	58	20.7	0.026	4.2	NA	0.1	1.0	0.03	0.45	0.03	53.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehicle Movement Performance														
Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: RoadName															
5	T1	All MCs	8	12.5	8	12.5	0.022	0.0	LOS A	0.1	1.0	0.05	0.39	0.05	57.6
6a	R1	All MCs	22	66.7	22	66.7	0.022	5.3	LOS A	0.1	1.0	0.05	0.39	0.05	52.8
Approach			31	51.7	31	51.7	0.022	3.8	NA	0.1	1.0	0.05	0.39	0.05	54.0
NorthWest: Bella Creek Road															
27a	L1	All MCs	22	66.7	22	66.7	0.019	6.1	LOS A	0.1	0.8	0.04	0.59	0.04	49.8
29b	R3	All MCs	1	0.0	1	0.0	0.019	6.1	LOS A	0.1	0.8	0.04	0.59	0.04	52.4
Approach			23	63.6	23	63.6	0.019	6.1	LOS A	0.1	0.8	0.04	0.59	0.04	49.9
West: Yabba Creek Road															
10b	L3	All MCs	1	0.0	1	0.0	0.004	6.5	LOS A	0.0	0.0	0.00	0.10	0.00	56.7
11	T1	All MCs	6	0.0	6	0.0	0.004	0.0	LOS A	0.0	0.0	0.00	0.10	0.00	59.1
Approach			7	0.0	7	0.0	0.004	0.9	NA	0.0	0.0	0.00	0.10	0.00	58.7
All Vehicles			61	50.0	61	50.0	0.022	4.4	NA	0.1	1.0	0.04	0.43	0.04	52.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: RoadName															
5	T1	All MCs	2	0.0	2	0.0	0.003	0.0	LOS A	0.0	0.1	0.03	0.32	0.03	57.7
6a	R1	All MCs	3	33.3	3	33.3	0.003	4.9	LOS A	0.0	0.1	0.03	0.32	0.03	54.2
Approach			5	20.0	5	20.0	0.003	3.0	NA	0.0	0.1	0.03	0.32	0.03	55.5
NorthWest: Bella Creek Road															
27a	L1	All MCs	33	15.2	33	15.2	0.023	5.5	LOS A	0.1	0.7	0.03	0.58	0.03	52.0
29b	R3	All MCs	1	0.0	1	0.0	0.023	6.0	LOS A	0.1	0.7	0.03	0.58	0.03	52.5
Approach			34	14.7	34	14.7	0.023	5.5	LOS A	0.1	0.7	0.03	0.58	0.03	52.0
West: Yabba Creek Road															
10b	L3	All MCs	1	0.0	1	0.0	0.002	6.5	LOS A	0.0	0.0	0.00	0.17	0.00	55.6
11	T1	All MCs	3	33.3	3	33.3	0.002	0.0	LOS A	0.0	0.0	0.00	0.17	0.00	57.9
Approach			4	25.0	4	25.0	0.002	1.6	NA	0.0	0.0	0.00	0.17	0.00	57.3
All Vehicles			43	16.3	43	16.3	0.023	4.9	NA	0.1	0.7	0.02	0.51	0.02	52.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

USER REPORT FOR SITE

Project: BPHES SIDRA 10-3-25

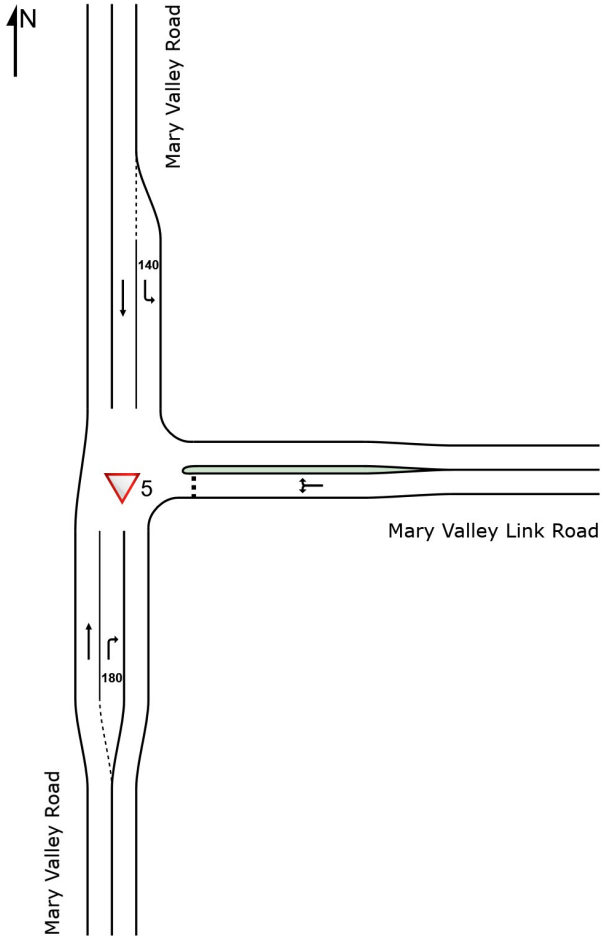
Output produced by SIDRA INTERSECTION Version: 9.1.5.224 **Template: Default Site User Report**

Site: 5 [5 - Mary Valley Road / Mary Valley Link Road AM Peak (Site Folder: Total Traffic, AM Peak)]

Mary Valley Road / Mary Valley Link Road AM Peak
Site Category: AM Peak
Give-Way (Two-Way)

Site Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Mary Valley Road															
2	T1	All MCs	89	9.4	89	9.4	0.049	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	68	23.1	68	23.1	0.065	6.7	LOS A	0.3	2.2	0.30	0.59	0.30	50.9
Approach			158	15.3	158	15.3	0.065	2.9	NA	0.3	2.2	0.13	0.25	0.13	55.7
East: Mary Valley Link Road															
4	L2	All MCs	48	19.6	48	19.6	0.165	6.1	LOS A	0.7	5.5	0.33	0.58	0.33	50.6
6	R2	All MCs	81	18.2	81	18.2	0.165	8.7	LOS A	0.7	5.5	0.33	0.58	0.33	50.6
Approach			129	18.7	129	18.7	0.165	7.7	LOS A	0.7	5.5	0.33	0.58	0.33	50.6
North: Mary Valley Road															
7	L2	All MCs	104	6.1	104	6.1	0.059	5.6	LOS A	0.0	0.0	0.00	0.57	0.00	52.6
8	T1	All MCs	67	12.5	67	12.5	0.037	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			172	8.6	172	8.6	0.059	3.4	NA	0.0	0.0	0.00	0.35	0.00	55.3
All Vehicles			459	13.8	459	13.8	0.165	4.5	NA	0.7	5.5	0.14	0.38	0.14	54.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Mary Valley Road															
2	T1	All MCs	86	8.5	86	8.5	0.047	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	54	37.3	54	37.3	0.052	6.7	LOS A	0.2	1.9	0.28	0.58	0.28	50.4
Approach			140	19.5	140	19.5	0.052	2.6	NA	0.2	1.9	0.11	0.22	0.11	55.9
East: Mary Valley Link Road															
4	L2	All MCs	60	19.3	60	19.3	0.172	6.1	LOS A	0.7	5.6	0.29	0.57	0.29	51.0
6	R2	All MCs	89	8.2	89	8.2	0.172	7.9	LOS A	0.7	5.6	0.29	0.57	0.29	51.4
Approach			149	12.7	149	12.7	0.172	7.2	LOS A	0.7	5.6	0.29	0.57	0.29	51.2
North: Mary Valley Road															
7	L2	All MCs	77	17.8	77	17.8	0.047	5.8	LOS A	0.0	0.0	0.00	0.57	0.00	52.1
8	T1	All MCs	61	3.4	61	3.4	0.032	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			138	11.5	138	11.5	0.047	3.2	NA	0.0	0.0	0.00	0.32	0.00	55.3
All Vehicles			427	14.5	427	14.5	0.172	4.4	NA	0.7	5.6	0.14	0.37	0.14	54.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Mary Valley Road															
2	T1	All MCs	56	3.8	56	3.8	0.029	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	32	10.0	32	10.0	0.025	6.0	LOS A	0.1	0.8	0.20	0.56	0.20	51.7
Approach			87	6.0	87	6.0	0.029	2.2	NA	0.1	0.8	0.07	0.20	0.07	56.7
East: Mary Valley Link Road															
4	L2	All MCs	58	1.8	58	1.8	0.178	5.8	LOS A	0.8	5.4	0.24	0.56	0.24	52.1
6	R2	All MCs	118	0.9	118	0.9	0.178	6.8	LOS A	0.8	5.4	0.24	0.56	0.24	52.1
Approach			176	1.2	176	1.2	0.178	6.4	LOS A	0.8	5.4	0.24	0.56	0.24	52.1
North: Mary Valley Road															
7	L2	All MCs	46	9.1	46	9.1	0.027	5.7	LOS A	0.0	0.0	0.00	0.57	0.00	52.5
8	T1	All MCs	47	2.2	47	2.2	0.025	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			94	5.6	94	5.6	0.027	2.8	NA	0.0	0.0	0.00	0.28	0.00	56.0
All Vehicles			357	3.5	357	3.5	0.178	4.4	NA	0.8	5.4	0.14	0.40	0.14	54.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

USER REPORT FOR SITE

Project: BPHES SIDRA 10-3-25

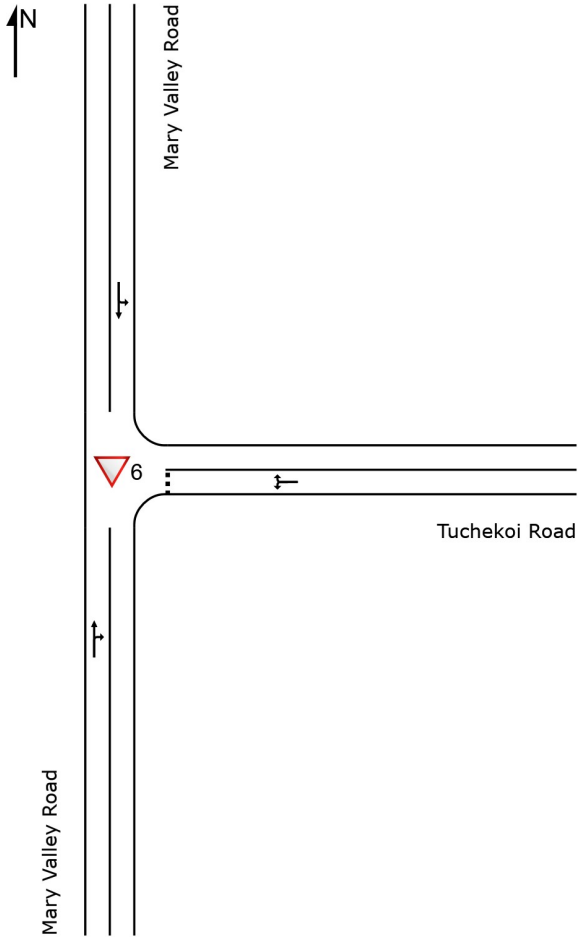
Output produced by SIDRA INTERSECTION Version: 9.1.5.224 **Template: Default Site User Report**

Site: 6 [6 - Mary Valley Road / Tuchekoi Road AM Peak (Site Folder: Total Traffic, AM Peak)]

Mary Valley Road / Tuchekoi Rd AM Peak
Site Category: AM Peak
Give-Way (Two-Way)

Site Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Mary Valley Road															
2	T1	All MCs	28	22.2	28	22.2	0.054	0.1	LOS A	0.2	2.1	0.12	0.39	0.12	56.2
3	R2	All MCs	57	24.1	57	24.1	0.054	5.9	LOS A	0.2	2.1	0.12	0.39	0.12	52.6
Approach			85	23.5	85	23.5	0.054	4.0	NA	0.2	2.1	0.12	0.39	0.12	53.8
East: Tuchekoi Road															
4	L2	All MCs	78	21.6	78	21.6	0.059	5.9	LOS A	0.2	2.0	0.08	0.55	0.08	51.8
6	R2	All MCs	5	20.0	5	20.0	0.059	6.2	LOS A	0.2	2.0	0.08	0.55	0.08	51.5
Approach			83	21.5	83	21.5	0.059	5.9	LOS A	0.2	2.0	0.08	0.55	0.08	51.7
North: Mary Valley Road															
7	L2	All MCs	18	0.0	18	0.0	0.020	5.5	LOS A	0.0	0.0	0.00	0.29	0.00	55.0
8	T1	All MCs	19	11.1	19	11.1	0.020	0.0	LOS A	0.0	0.0	0.00	0.29	0.00	57.3
Approach			37	5.7	37	5.7	0.020	2.7	NA	0.0	0.0	0.00	0.29	0.00	56.2
All Vehicles			205	19.5	205	19.5	0.059	4.5	NA	0.2	2.1	0.08	0.43	0.08	53.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Mary Valley Road															
2	T1	All MCs	46	34.1	46	34.1	0.047	0.1	LOS A	0.2	1.3	0.09	0.24	0.09	57.3
3	R2	All MCs	29	14.3	29	14.3	0.047	5.7	LOS A	0.2	1.3	0.09	0.24	0.09	54.1
Approach			76	26.4	76	26.4	0.047	2.3	NA	0.2	1.3	0.09	0.24	0.09	56.0
East: Tuchekoi Road															
4	L2	All MCs	52	12.2	52	12.2	0.044	5.8	LOS A	0.2	1.3	0.11	0.55	0.11	52.1
6	R2	All MCs	11	10.0	11	10.0	0.044	6.0	LOS A	0.2	1.3	0.11	0.55	0.11	51.9
Approach			62	11.9	62	11.9	0.044	5.8	LOS A	0.2	1.3	0.11	0.55	0.11	52.0
North: Mary Valley Road															
7	L2	All MCs	5	0.0	5	0.0	0.020	5.5	LOS A	0.0	0.0	0.00	0.10	0.00	56.4
8	T1	All MCs	27	34.6	27	34.6	0.020	0.0	LOS A	0.0	0.0	0.00	0.10	0.00	58.8
Approach			33	29.0	33	29.0	0.020	0.9	NA	0.0	0.0	0.00	0.10	0.00	58.4
All Vehicles			171	21.6	171	21.6	0.047	3.3	NA	0.2	1.3	0.08	0.32	0.08	54.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Mary Valley Road															
2	T1	All MCs	15	7.1	15	7.1	0.035	0.1	LOS A	0.2	1.2	0.09	0.44	0.09	55.9
3	R2	All MCs	45	9.3	45	9.3	0.035	5.6	LOS A	0.2	1.2	0.09	0.44	0.09	53.0
Approach			60	8.8	60	8.8	0.035	4.3	NA	0.2	1.2	0.09	0.44	0.09	53.7
East: Tuchekoi Road															
4	L2	All MCs	39	5.4	39	5.4	0.036	5.7	LOS A	0.1	1.0	0.09	0.55	0.09	52.4
6	R2	All MCs	14	0.0	14	0.0	0.036	5.7	LOS A	0.1	1.0	0.09	0.55	0.09	52.4
Approach			53	4.0	53	4.0	0.036	5.7	LOS A	0.1	1.0	0.09	0.55	0.09	52.4
North: Mary Valley Road															
7	L2	All MCs	2	0.0	2	0.0	0.013	5.5	LOS A	0.0	0.0	0.00	0.05	0.00	57.0
8	T1	All MCs	22	4.8	22	4.8	0.013	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	59.5
Approach			24	4.3	24	4.3	0.013	0.5	NA	0.0	0.0	0.00	0.05	0.00	59.3
All Vehicles			137	6.2	137	6.2	0.036	4.1	NA	0.2	1.2	0.07	0.41	0.07	54.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

USER REPORT FOR SITE

Project: BPHES SIDRA 10-3-25

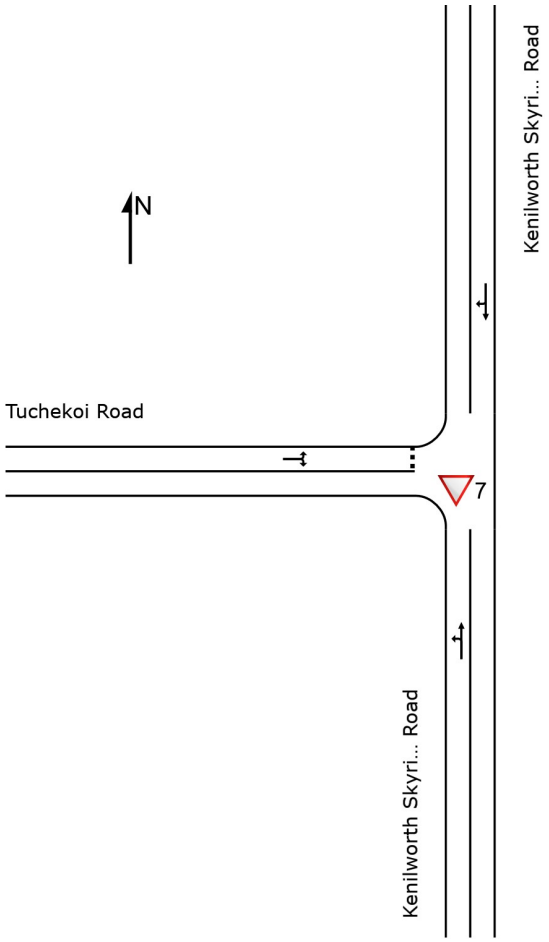
Output produced by SIDRA INTERSECTION Version: 9.1.5.224 **Template: Default Site User Report**

Site: 7 [7 - Tuchekoi Road / Kenilworth Skyring Creek Road AM Peak (Site Folder: Total Traffic, AM Peak)]

Tuchekoi Road / Kenilworth Skyring Creek Road AM Peak
Site Category: AM Peak
Give-Way (Two-Way)

Site Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kenilworth Skyring Creek Road															
1	L2	All MCs	14	15.4	14	15.4	0.028	5.7	LOS A	0.0	0.0	0.00	0.16	0.00	55.5
2	T1	All MCs	37	8.6	37	8.6	0.028	0.0	LOS A	0.0	0.0	0.00	0.16	0.00	58.6
Approach			51	10.4	51	10.4	0.028	1.6	NA	0.0	0.0	0.00	0.16	0.00	57.7
North: Kenilworth Skyring Creek Road															
8	T1	All MCs	12	0.0	12	0.0	0.072	0.2	LOS A	0.3	2.6	0.15	0.51	0.15	55.1
9	R2	All MCs	106	9.9	106	9.9	0.072	5.7	LOS A	0.3	2.6	0.15	0.51	0.15	52.3
Approach			118	8.9	118	8.9	0.072	5.2	NA	0.3	2.6	0.15	0.51	0.15	52.5
West: Tuchekoi Road															
10	L2	All MCs	72	17.6	72	17.6	0.058	5.9	LOS A	0.2	1.8	0.12	0.54	0.12	51.8
12	R2	All MCs	9	0.0	9	0.0	0.058	6.0	LOS A	0.2	1.8	0.12	0.54	0.12	52.3
Approach			81	15.6	81	15.6	0.058	5.9	LOS A	0.2	1.8	0.12	0.54	0.12	51.9
All Vehicles			249	11.4	249	11.4	0.072	4.7	NA	0.3	2.6	0.11	0.45	0.11	53.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kenilworth Skyring Creek Road															
1	L2	All MCs	13	8.3	13	8.3	0.019	5.6	LOS A	0.0	0.0	0.00	0.21	0.00	55.4
2	T1	All MCs	22	4.8	22	4.8	0.019	0.0	LOS A	0.0	0.0	0.00	0.21	0.00	58.1
Approach			35	6.1	35	6.1	0.019	2.1	NA	0.0	0.0	0.00	0.21	0.00	57.1
North: Kenilworth Skyring Creek Road															
8	T1	All MCs	14	7.7	14	7.7	0.041	0.1	LOS A	0.2	1.4	0.11	0.46	0.11	55.6
9	R2	All MCs	56	9.4	56	9.4	0.041	5.7	LOS A	0.2	1.4	0.11	0.46	0.11	52.7
Approach			69	9.1	69	9.1	0.041	4.6	NA	0.2	1.4	0.11	0.46	0.11	53.3
West: Tuchekoi Road															
10	L2	All MCs	33	12.9	33	12.9	0.027	5.8	LOS A	0.1	0.8	0.09	0.55	0.09	52.1
12	R2	All MCs	6	0.0	6	0.0	0.027	5.8	LOS A	0.1	0.8	0.09	0.55	0.09	52.4
Approach			39	10.8	39	10.8	0.027	5.8	LOS A	0.1	0.8	0.09	0.55	0.09	52.2
All Vehicles			143	8.8	143	8.8	0.041	4.3	NA	0.2	1.4	0.08	0.42	0.08	53.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kenilworth Skyring Creek Road															
1	L2	All MCs	9	0.0	9	0.0	0.010	5.5	LOS A	0.0	0.0	0.00	0.30	0.00	55.1
2	T1	All MCs	9	0.0	9	0.0	0.010	0.0	LOS A	0.0	0.0	0.00	0.30	0.00	57.4
Approach			19	0.0	19	0.0	0.010	2.8	NA	0.0	0.0	0.00	0.30	0.00	56.2
North: Kenilworth Skyring Creek Road															
8	T1	All MCs	37	0.0	37	0.0	0.047	0.0	LOS A	0.2	1.5	0.07	0.32	0.07	57.0
9	R2	All MCs	45	9.3	45	9.3	0.047	5.6	LOS A	0.2	1.5	0.07	0.32	0.07	54.0
Approach			82	5.1	82	5.1	0.047	3.1	NA	0.2	1.5	0.07	0.32	0.07	55.3
West: Tuchekoi Road															
10	L2	All MCs	83	0.0	83	0.0	0.056	5.6	LOS A	0.2	1.6	0.05	0.56	0.05	52.7
12	R2	All MCs	5	0.0	5	0.0	0.056	5.6	LOS A	0.2	1.6	0.05	0.56	0.05	52.5
Approach			88	0.0	88	0.0	0.056	5.6	LOS A	0.2	1.6	0.05	0.56	0.05	52.7
All Vehicles			189	2.2	189	2.2	0.056	4.2	NA	0.2	1.6	0.05	0.43	0.05	54.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

USER REPORT FOR SITE

Project: BPHES SIDRA 10-3-25

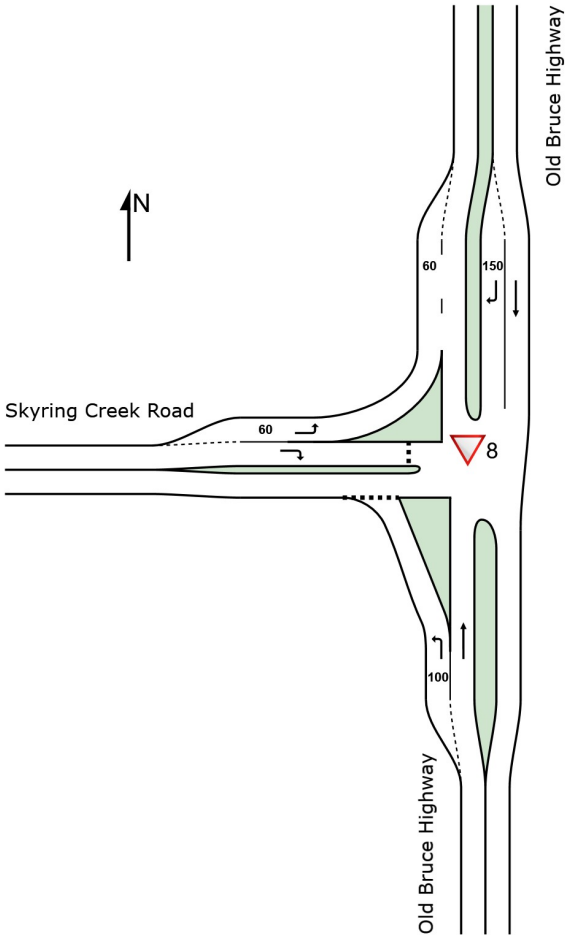
Output produced by SIDRA INTERSECTION Version: 9.1.5.224 **Template: Default Site User Report**

Site: 8 [8 - Skyring Creek Road / Old Bruce Highway AM Peak (Site Folder: Total Traffic, AM Peak)]

Skyring Creek Road / Old Bruce Highway AM Peak
Site Category: AM Peak
Give-Way (Two-Way)

Site Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Old Bruce Highway															
1	L2	All MCs	98	11.2	98	11.2	0.064	5.7	LOS A	0.3	2.0	0.06	0.52	0.06	52.6
2	T1	All MCs	58	15.5	58	15.5	0.033	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			156	12.8	156	12.8	0.064	3.6	LOS A	0.3	2.0	0.03	0.33	0.03	55.1
North: Old Bruce Highway															
8	T1	All MCs	58	13.8	58	13.8	0.032	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
9	R2	All MCs	11	9.1	11	9.1	0.007	5.9	LOS A	0.0	0.2	0.15	0.52	0.15	52.1
Approach			69	13.0	69	13.0	0.032	0.9	NA	0.0	0.2	0.02	0.08	0.02	58.6
West: Skyring Creek Road															
10	L2	All MCs	24	16.7	24	16.7	0.014	5.9	LOS A	0.0	0.0	0.00	0.52	0.00	52.9
12	R2	All MCs	72	18.1	72	18.1	0.083	7.1	LOS A	0.3	2.6	0.33	0.59	0.33	51.2
Approach			96	17.7	96	17.7	0.083	6.8	LOS A	0.3	2.6	0.25	0.57	0.25	51.6
All Vehicles			321	14.3	321	14.3	0.083	4.0	NA	0.3	2.6	0.10	0.35	0.10	54.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Old Bruce Highway															
1	L2	All MCs	60	13.3	60	13.3	0.040	5.8	LOS A	0.2	1.3	0.09	0.52	0.09	52.4
2	T1	All MCs	79	8.9	79	8.9	0.043	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			139	10.8	139	10.8	0.043	2.5	LOS A	0.2	1.3	0.04	0.22	0.04	56.4
North: Old Bruce Highway															
8	T1	All MCs	63	15.9	63	15.9	0.036	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
9	R2	All MCs	25	16.0	25	16.0	0.016	6.0	LOS A	0.1	0.6	0.19	0.52	0.19	51.8
Approach			88	15.9	88	15.9	0.036	1.7	NA	0.1	0.6	0.05	0.15	0.05	57.4
West: Skyring Creek Road															
10	L2	All MCs	20	5.0	20	5.0	0.011	5.8	LOS A	0.0	0.0	0.00	0.53	0.00	53.3
12	R2	All MCs	45	24.4	45	24.4	0.055	7.4	LOS A	0.2	1.8	0.35	0.59	0.35	50.8
Approach			65	18.5	65	18.5	0.055	6.9	LOS A	0.2	1.8	0.24	0.57	0.24	51.6
All Vehicles			292	14.0	292	14.0	0.055	3.2	NA	0.2	1.8	0.09	0.28	0.09	55.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Old Bruce Highway															
1	L2	All MCs	61	6.6	61	6.6	0.039	5.8	LOS A	0.2	1.2	0.09	0.52	0.09	52.6
2	T1	All MCs	55	3.6	55	3.6	0.029	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			116	5.2	116	5.2	0.039	3.0	LOS A	0.2	1.2	0.05	0.27	0.05	55.9
North: Old Bruce Highway															
8	T1	All MCs	51	7.8	51	7.8	0.027	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
9	R2	All MCs	30	0.0	30	0.0	0.017	5.7	LOS A	0.1	0.5	0.14	0.53	0.14	52.5
Approach			81	4.9	81	4.9	0.027	2.1	NA	0.1	0.5	0.05	0.19	0.05	57.0
West: Skyring Creek Road															
10	L2	All MCs	8	0.0	8	0.0	0.004	5.7	LOS A	0.0	0.0	0.00	0.53	0.00	53.5
12	R2	All MCs	81	0.0	81	0.0	0.081	6.5	LOS A	0.3	2.3	0.30	0.57	0.30	52.0
Approach			89	0.0	89	0.0	0.081	6.4	LOS A	0.3	2.3	0.27	0.57	0.27	52.1
All Vehicles			286	3.5	286	3.5	0.081	3.8	NA	0.3	2.3	0.12	0.34	0.12	54.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

USER REPORT FOR SITE

Project: BPHES SIDRA 10-3-25

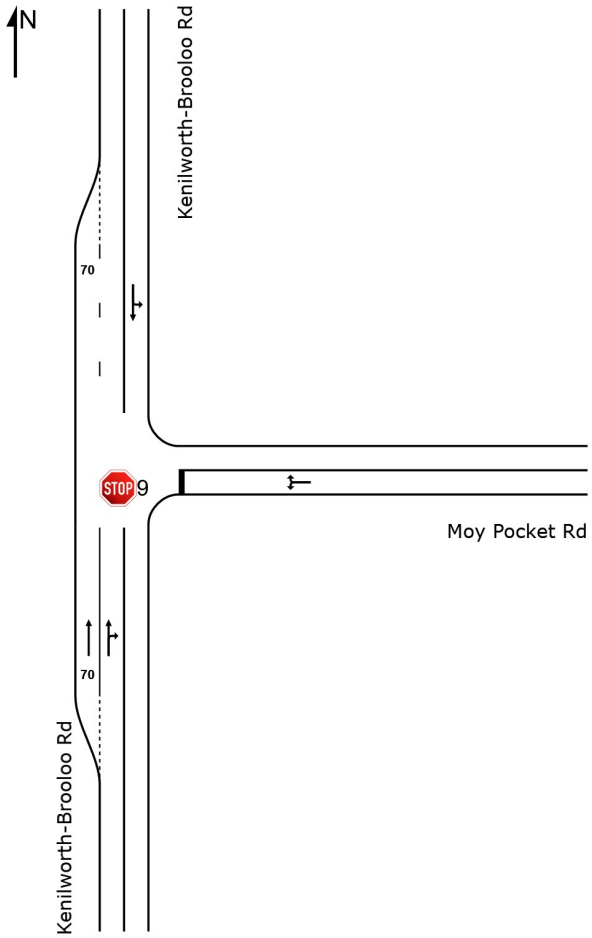
Output produced by SIDRA INTERSECTION Version: 9.1.5.224 **Template: Default Site User Report**

Site: 9 [9 - Kenilworth-Brooloo Rd / Moy Pocket Rd AM Peak (Site Folder: Total Traffic, AM Peak)]

Kenilworth-Brooloo Rd / Moy Pocket Rd
Site Category: (None)
Stop (Two-Way)

Site Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kenilworth-Brooloo Rd															
2	T1	All MCs	25	8.3	25	8.3	0.010	0.0	LOS A	0.0	0.0	0.01	0.03	0.01	98.4
3	R2	All MCs	1	0.0	1	0.0	0.010	6.8	LOS A	0.0	0.0	0.02	0.04	0.02	68.8
Approach			26	8.0	26	8.0	0.010	0.3	NA	0.0	0.0	0.01	0.03	0.01	95.8
East: Moy Pocket Rd															
4	L2	All MCs	3	33.3	3	33.3	0.032	10.2	LOS B	0.1	1.3	0.21	0.96	0.21	54.7
6	R2	All MCs	21	65.0	21	65.0	0.032	11.6	LOS B	0.1	1.3	0.21	0.96	0.21	52.0
Approach			24	60.9	24	60.9	0.032	11.4	LOS B	0.1	1.3	0.21	0.96	0.21	52.3
North: Kenilworth-Brooloo Rd															
7	L2	All MCs	13	50.0	13	50.0	0.030	9.1	LOS A	0.0	0.0	0.00	0.16	0.00	62.5
8	T1	All MCs	40	2.6	40	2.6	0.030	0.0	LOS A	0.0	0.0	0.00	0.16	0.00	95.2
Approach			53	14.0	53	14.0	0.030	2.2	NA	0.0	0.0	0.00	0.16	0.00	79.3
All Vehicles			103	23.5	103	23.5	0.032	3.9	NA	0.1	1.3	0.05	0.31	0.05	69.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kenilworth-Brooloo Rd															
2	T1	All MCs	45	18.6	45	18.6	0.019	0.0	LOS A	0.0	0.1	0.01	0.02	0.01	99.0
3	R2	All MCs	1	0.0	1	0.0	0.019	6.8	LOS A	0.0	0.1	0.01	0.02	0.01	69.0
Approach			46	18.2	46	18.2	0.019	0.2	NA	0.0	0.1	0.01	0.02	0.01	97.4
East: Moy Pocket Rd															
4	L2	All MCs	2	0.0	2	0.0	0.025	8.6	LOS A	0.1	1.0	0.26	0.93	0.26	56.9
6	R2	All MCs	17	56.3	17	56.3	0.025	11.6	LOS B	0.1	1.0	0.26	0.93	0.26	53.0
Approach			19	50.0	19	50.0	0.025	11.2	LOS B	0.1	1.0	0.26	0.93	0.26	53.4
North: Kenilworth-Brooloo Rd															
7	L2	All MCs	27	57.7	27	57.7	0.045	9.3	LOS A	0.0	0.0	0.00	0.25	0.00	59.4
8	T1	All MCs	45	7.0	45	7.0	0.045	0.0	LOS A	0.0	0.0	0.00	0.25	0.00	92.7
Approach			73	26.1	73	26.1	0.045	3.5	NA	0.0	0.0	0.00	0.25	0.00	71.1
All Vehicles			138	26.7	138	26.7	0.045	3.5	NA	0.1	1.0	0.04	0.27	0.04	71.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kenilworth-Brooloo Rd															
2	T1	All MCs	17	12.5	17	12.5	0.007	0.0	LOS A	0.0	0.0	0.01	0.04	0.01	97.7
3	R2	All MCs	1	0.0	1	0.0	0.007	6.7	LOS A	0.0	0.0	0.02	0.06	0.02	68.5
Approach			18	11.8	18	11.8	0.007	0.4	NA	0.0	0.0	0.02	0.04	0.02	94.0
East: Moy Pocket Rd															
4	L2	All MCs	2	0.0	2	0.0	0.007	8.6	LOS A	0.0	0.2	0.13	0.90	0.13	57.9
6	R2	All MCs	5	0.0	5	0.0	0.007	8.2	LOS A	0.0	0.2	0.13	0.90	0.13	62.9
Approach			7	0.0	7	0.0	0.007	8.3	LOS A	0.0	0.2	0.13	0.90	0.13	61.5
North: Kenilworth-Brooloo Rd															
7	L2	All MCs	9	22.2	9	22.2	0.022	8.4	LOS A	0.0	0.0	0.00	0.17	0.00	73.4
8	T1	All MCs	29	7.1	29	7.1	0.022	0.0	LOS A	0.0	0.0	0.00	0.17	0.00	92.9
Approach			39	10.8	39	10.8	0.022	2.0	NA	0.0	0.0	0.00	0.17	0.00	84.2
All Vehicles			64	9.8	64	9.8	0.022	2.3	NA	0.0	0.2	0.02	0.21	0.02	81.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

USER REPORT FOR SITE

Project: BPHES SIDRA 10-3-25

Output produced by SIDRA INTERSECTION Version: 9.1.5.224 **Template: Default Site User Report**

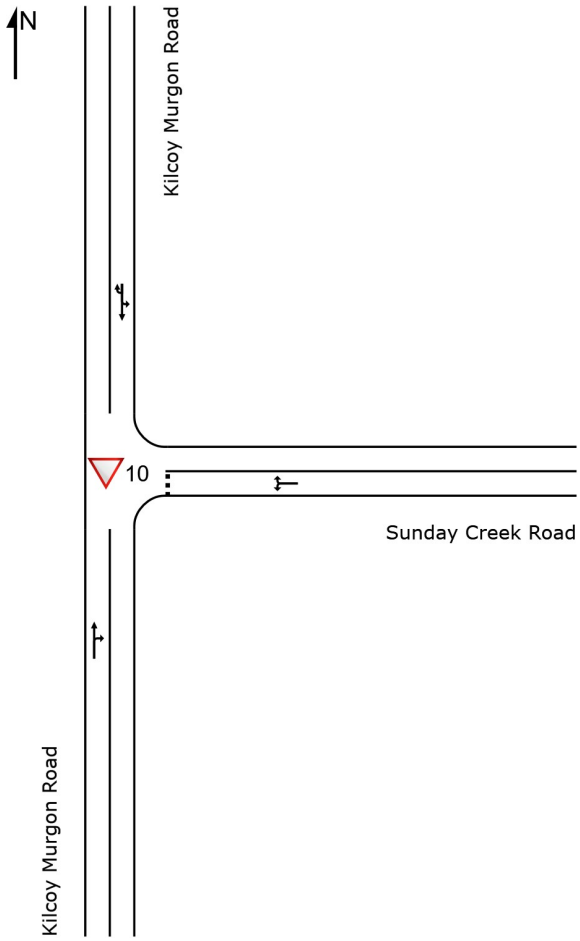
Site: 10 [10 - Kilcoy Murgon Road / Sunday Creek Road AM Peak (Site Folder: Total Traffic, AM Peak)]

Kilcoy Murgon Road / Sunday Creek Road

Site Category: AM Peak
Give-Way (Two-Way)

Site Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kilcoy Murgon Road															
2	T1	All MCs	1	100.0	1	100.0	0.012	0.0	LOS A	0.1	0.4	0.05	0.55	0.05	55.1
3	R2	All MCs	20	0.0	20	0.0	0.012	5.5	LOS A	0.1	0.4	0.05	0.55	0.05	52.7
Approach			21	4.8	21	4.8	0.012	5.2	NA	0.1	0.4	0.05	0.55	0.05	52.8
East: Sunday Creek Road															
4	L2	All MCs	1	0.0	1	0.0	0.001	5.6	LOS A	0.0	0.0	0.06	0.56	0.06	52.8
6	R2	All MCs	1	0.0	1	0.0	0.001	5.5	LOS A	0.0	0.0	0.06	0.56	0.06	52.5
Approach			2	0.0	2	0.0	0.001	5.5	LOS A	0.0	0.0	0.06	0.56	0.06	52.6
North: Kilcoy Murgon Road															
7	L2	All MCs	1	0.0	1	0.0	0.006	5.5	LOS A	0.0	0.1	0.01	0.12	0.01	56.4
8	T1	All MCs	9	11.1	9	11.1	0.006	0.0	LOS A	0.0	0.1	0.01	0.12	0.01	58.8
9u	U	All MCs	1	0.0	1	0.0	0.006	6.7	LOS A	0.0	0.1	0.01	0.12	0.01	55.9
Approach			11	9.1	11	9.1	0.006	1.1	NA	0.0	0.1	0.01	0.12	0.01	58.3
All Vehicles			34	5.9	34	5.9	0.012	3.9	NA	0.1	0.4	0.04	0.41	0.04	54.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kilcoy Murgon Road															
2	T1	All MCs	2	50.0	2	50.0	0.009	0.0	LOS A	0.0	0.4	0.05	0.50	0.05	55.6
3	R2	All MCs	12	45.5	12	45.5	0.009	6.0	LOS A	0.0	0.4	0.05	0.50	0.05	51.1
Approach			14	46.2	14	46.2	0.009	5.1	NA	0.0	0.4	0.05	0.50	0.05	51.8
East: Sunday Creek Road															
4	L2	All MCs	18	29.4	18	29.4	0.013	5.9	LOS A	0.1	0.5	0.04	0.56	0.04	51.6
6	R2	All MCs	1	0.0	1	0.0	0.013	5.5	LOS A	0.1	0.5	0.04	0.56	0.04	52.5
Approach			19	27.8	19	27.8	0.013	5.9	LOS A	0.1	0.5	0.04	0.56	0.04	51.6
North: Kilcoy Murgon Road															
7	L2	All MCs	1	0.0	1	0.0	0.005	5.5	LOS A	0.0	0.1	0.01	0.19	0.01	55.7
8	T1	All MCs	5	20.0	5	20.0	0.005	0.0	LOS A	0.0	0.1	0.01	0.19	0.01	58.0
9u	U	All MCs	1	0.0	1	0.0	0.005	6.7	LOS A	0.0	0.1	0.01	0.19	0.01	55.2
Approach			7	14.3	7	14.3	0.005	1.8	NA	0.0	0.1	0.01	0.19	0.01	57.2
All Vehicles			40	31.6	40	31.6	0.013	4.8	NA	0.1	0.5	0.04	0.47	0.04	52.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kilcoy Murgon Road															
2	T1	All MCs	5	0.0	5	0.0	0.004	0.0	LOS A	0.0	0.1	0.02	0.17	0.02	58.4
3	R2	All MCs	2	0.0	2	0.0	0.004	5.5	LOS A	0.0	0.1	0.02	0.17	0.02	55.7
Approach			7	0.0	7	0.0	0.004	1.6	NA	0.0	0.1	0.02	0.17	0.02	57.6
East: Sunday Creek Road															
4	L2	All MCs	16	0.0	16	0.0	0.011	5.5	LOS A	0.0	0.3	0.04	0.56	0.04	52.8
6	R2	All MCs	1	0.0	1	0.0	0.011	5.5	LOS A	0.0	0.3	0.04	0.56	0.04	52.5
Approach			17	0.0	17	0.0	0.011	5.5	LOS A	0.0	0.3	0.04	0.56	0.04	52.8
North: Kilcoy Murgon Road															
7	L2	All MCs	1	0.0	1	0.0	0.005	5.5	LOS A	0.0	0.1	0.02	0.17	0.02	55.9
8	T1	All MCs	6	16.7	6	16.7	0.005	0.0	LOS A	0.0	0.1	0.02	0.17	0.02	58.3
9u	U	All MCs	1	0.0	1	0.0	0.005	6.7	LOS A	0.0	0.1	0.02	0.17	0.02	55.4
Approach			8	12.5	8	12.5	0.005	1.5	NA	0.0	0.1	0.02	0.17	0.02	57.6
All Vehicles			32	3.1	32	3.1	0.011	3.7	NA	0.0	0.3	0.03	0.38	0.03	54.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

USER REPORT FOR SITE

Project: BPHES SIDRA 10-3-25

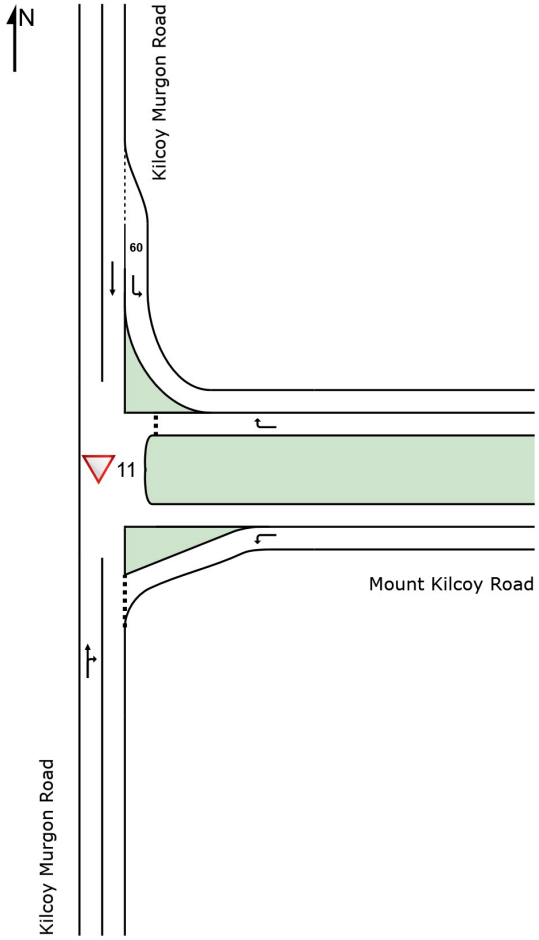
Output produced by SIDRA INTERSECTION Version: 9.1.5.224 **Template: Default Site User Report**

Site: 11 [11 - Kilcoy Murgon Road / Mount Kilcoy Road AM Peak (Site Folder: Total Traffic, AM Peak)]

Kilcoy Murgon Road / Mount Kilcoy Road AM Peak
Site Category: AM Peak
Give-Way (Two-Way)

Site Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kilcoy Murgon Road															
2	T1	All MCs	21	5.0	21	5.0	0.038	0.1	LOS A	0.2	1.3	0.08	0.37	0.08	56.2
3	R2	All MCs	45	7.0	45	7.0	0.038	5.7	LOS A	0.2	1.3	0.08	0.37	0.08	54.0
Approach			66	6.3	66	6.3	0.038	3.9	NA	0.2	1.3	0.08	0.37	0.08	54.7
East: Mount Kilcoy Road															
2	L2	All MCs	67	9.4	67	9.4	0.044	5.8	LOS A	0.2	1.4	0.08	0.52	0.08	52.6
6	R2	All MCs	8	37.5	8	37.5	0.009	6.4	LOS A	0.0	0.2	0.18	0.50	0.18	51.3
Approach			76	12.5	76	12.5	0.044	5.8	LOS A	0.2	1.4	0.09	0.52	0.09	52.4
North: Kilcoy Murgon Road															
7	L2	All MCs	6	33.3	6	33.3	0.004	6.0	LOS A	0.0	0.0	0.00	0.51	0.00	52.3
8	T1	All MCs	20	15.8	20	15.8	0.011	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			26	20.0	26	20.0	0.011	1.4	NA	0.0	0.0	0.00	0.12	0.00	58.0
All Vehicles			168	11.3	168	11.3	0.044	4.4	NA	0.2	1.4	0.07	0.40	0.07	54.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kilcoy Murgon Road															
2	T1	All MCs	23	31.8	23	31.8	0.044	0.0	LOS A	0.2	1.6	0.05	0.38	0.05	55.9
3	R2	All MCs	54	5.9	54	5.9	0.044	5.7	LOS A	0.2	1.6	0.05	0.38	0.05	53.8
Approach			77	13.7	77	13.7	0.044	4.0	NA	0.2	1.6	0.05	0.38	0.05	54.4
East: Mount Kilcoy Road															
2	L2	All MCs	51	2.1	51	2.1	0.031	5.6	LOS A	0.1	0.9	0.05	0.53	0.05	52.9
6	R2	All MCs	6	16.7	6	16.7	0.006	6.2	LOS A	0.0	0.1	0.17	0.51	0.17	52.0
Approach			57	3.7	57	3.7	0.031	5.7	LOS A	0.1	0.9	0.06	0.53	0.06	52.8
North: Kilcoy Murgon Road															
7	L2	All MCs	9	33.3	9	33.3	0.006	6.0	LOS A	0.0	0.0	0.00	0.51	0.00	52.3
8	T1	All MCs	11	10.0	11	10.0	0.006	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			20	21.1	20	21.1	0.006	2.8	NA	0.0	0.0	0.00	0.24	0.00	56.1
All Vehicles			154	11.0	154	11.0	0.044	4.5	NA	0.2	1.6	0.05	0.41	0.05	54.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kilcoy Murgon Road															
2	T1	All MCs	15	7.1	15	7.1	0.029	0.1	LOS A	0.1	1.0	0.09	0.39	0.09	55.9
3	R2	All MCs	38	0.0	38	0.0	0.029	5.7	LOS A	0.1	1.0	0.09	0.39	0.09	54.0
Approach			53	2.0	53	2.0	0.029	4.1	NA	0.1	1.0	0.09	0.39	0.09	54.5
East: Mount Kilcoy Road															
2	L2	All MCs	24	0.0	24	0.0	0.015	5.7	LOS A	0.1	0.4	0.08	0.52	0.08	52.9
6	R2	All MCs	4	0.0	4	0.0	0.004	5.9	LOS A	0.0	0.1	0.15	0.51	0.15	52.7
Approach			28	0.0	28	0.0	0.015	5.7	LOS A	0.1	0.4	0.09	0.52	0.09	52.9
North: Kilcoy Murgon Road															
7	L2	All MCs	5	0.0	5	0.0	0.003	5.6	LOS A	0.0	0.0	0.00	0.53	0.00	53.5
8	T1	All MCs	25	4.2	25	4.2	0.013	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			31	3.4	31	3.4	0.013	1.0	NA	0.0	0.0	0.00	0.09	0.00	58.8
All Vehicles			112	1.9	112	1.9	0.029	3.7	NA	0.1	1.0	0.07	0.34	0.07	55.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

USER REPORT FOR SITE

Project: BPHES SIDRA 10-3-25

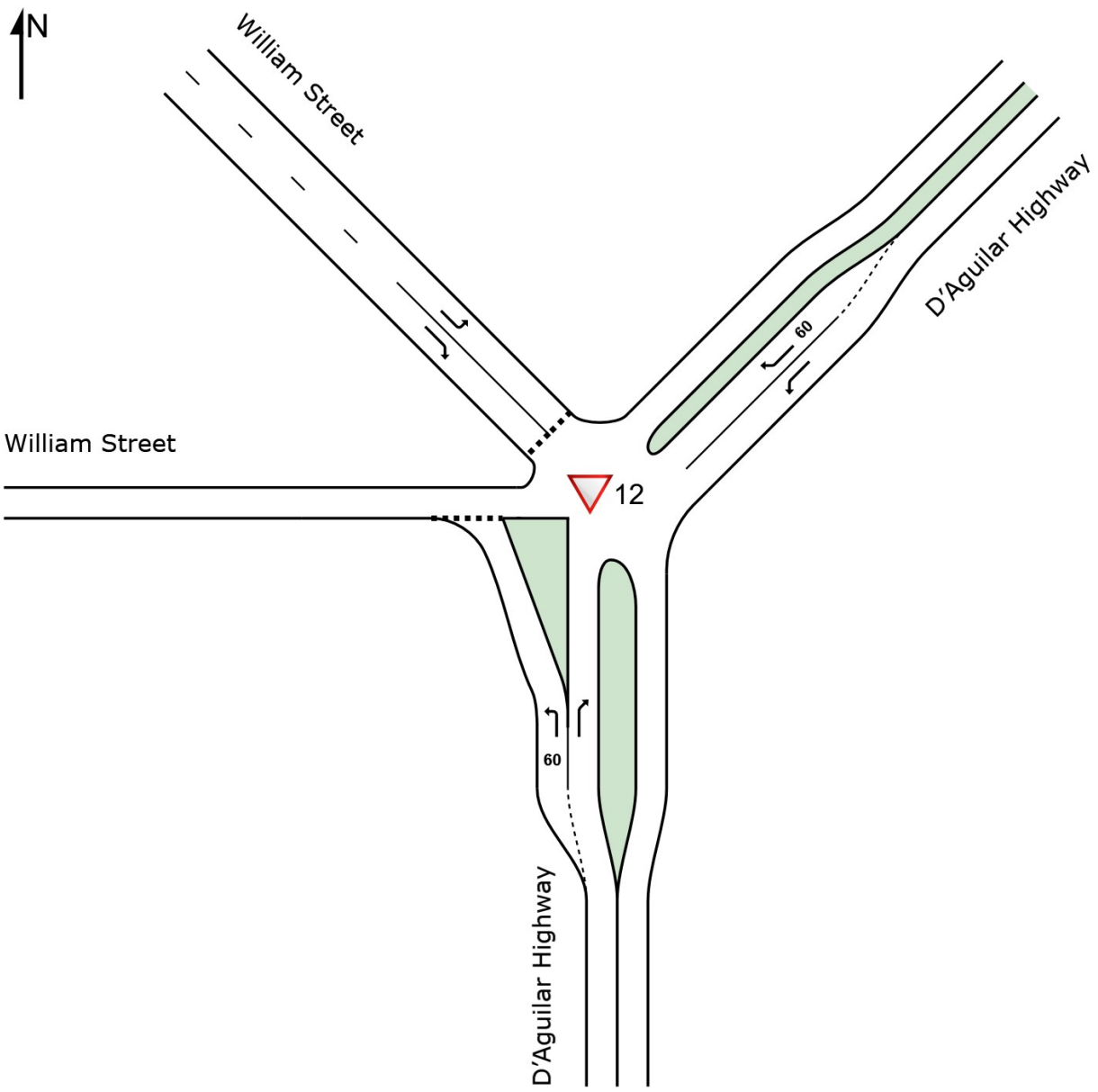
Output produced by SIDRA INTERSECTION Version: 9.1.5.224 **Template: Default Site User Report**

Site: 12 [12 - D'Aguilar Highway / William Street AM Peak (Site Folder: Total Traffic, AM Peak)]

D'Aguilar Highway / William Street AM Peak
Site Category: AM Peak
Give-Way (Two-Way)

Site Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: D'Aguilar Highway															
1	L2	All MCs	68	4.6	68	4.6	0.047	6.0	LOS A	0.2	1.4	0.19	0.52	0.19	52.4
3a	R1	All MCs	263	11.2	263	11.2	0.169	5.1	LOS A	0.9	6.6	0.23	0.53	0.23	52.7
Approach			332	9.8	332	9.8	0.169	5.3	LOS A	0.9	6.6	0.22	0.53	0.22	52.6
NorthEast: D'Aguilar Highway															
24a	L1	All MCs	293	11.2	293	11.2	0.165	4.8	LOS A	0.0	0.0	0.00	0.56	0.00	53.1
26a	R1	All MCs	95	7.8	95	7.8	0.052	4.6	LOS A	0.0	0.0	0.00	0.53	0.00	53.7
Approach			387	10.3	387	10.3	0.165	4.8	NA	0.0	0.0	0.00	0.55	0.00	53.3
NorthWest: William Street															
27	L2	All MCs	59	3.6	59	3.6	0.047	6.5	LOS A	0.2	1.3	0.35	0.59	0.35	51.7
29a	R1	All MCs	68	4.6	68	4.6	0.181	12.9	LOS B	0.7	4.8	0.67	0.84	0.67	48.0
Approach			127	4.1	127	4.1	0.181	9.9	LOS A	0.7	4.8	0.52	0.73	0.52	49.6
All Vehicles			846	9.2	846	9.2	0.181	5.7	NA	0.9	6.6	0.17	0.57	0.17	52.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: D'Aguilar Highway															
1	L2	All MCs	88	13.1	88	13.1	0.066	6.2	LOS A	0.3	2.1	0.24	0.53	0.24	51.9
3a	R1	All MCs	256	8.6	256	8.6	0.169	5.2	LOS A	0.8	6.3	0.28	0.54	0.28	52.6
Approach			344	9.8	344	9.8	0.169	5.5	LOS A	0.8	6.3	0.27	0.54	0.27	52.4
NorthEast: D'Aguilar Highway															
24a	L1	All MCs	228	7.4	228	7.4	0.126	4.8	LOS A	0.0	0.0	0.00	0.56	0.00	53.3
26a	R1	All MCs	133	11.1	133	11.1	0.075	4.6	LOS A	0.0	0.0	0.00	0.53	0.00	53.6
Approach			361	8.7	361	8.7	0.126	4.7	NA	0.0	0.0	0.00	0.55	0.00	53.4
NorthWest: William Street															
27	L2	All MCs	84	3.8	84	3.8	0.067	6.5	LOS A	0.3	1.9	0.34	0.59	0.34	51.7
29a	R1	All MCs	60	3.5	60	3.5	0.144	11.7	LOS B	0.5	3.8	0.63	0.83	0.63	48.8
Approach			144	3.6	144	3.6	0.144	8.7	LOS A	0.5	3.8	0.46	0.69	0.46	50.4
All Vehicles			849	8.3	849	8.3	0.169	5.7	NA	0.8	6.3	0.19	0.57	0.19	52.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: D'Aguilar Highway															
1	L2	All MCs	64	0.0	64	0.0	0.042	5.9	LOS A	0.2	1.2	0.17	0.52	0.17	52.6
3a	R1	All MCs	156	6.8	156	6.8	0.097	4.9	LOS A	0.5	3.4	0.20	0.52	0.20	52.9
Approach			220	4.8	220	4.8	0.097	5.2	LOS A	0.5	3.4	0.19	0.52	0.19	52.8
NorthEast: D'Aguilar Highway															
24a	L1	All MCs	183	2.3	183	2.3	0.097	4.7	LOS A	0.0	0.0	0.00	0.56	0.00	53.5
26a	R1	All MCs	85	2.5	85	2.5	0.045	4.5	LOS A	0.0	0.0	0.00	0.53	0.00	53.9
Approach			268	2.4	268	2.4	0.097	4.7	NA	0.0	0.0	0.00	0.55	0.00	53.6
NorthWest: William Street															
27	L2	All MCs	54	2.0	54	2.0	0.038	6.1	LOS A	0.2	1.1	0.25	0.55	0.25	52.0
29a	R1	All MCs	51	2.1	51	2.1	0.086	8.3	LOS A	0.3	2.3	0.52	0.70	0.52	51.1
Approach			104	2.0	104	2.0	0.086	7.2	LOS A	0.3	2.3	0.38	0.62	0.38	51.6
All Vehicles			593	3.2	593	3.2	0.097	5.3	NA	0.5	3.4	0.14	0.55	0.14	53.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Appendix H

Pavement Impact Assessment

Technical Memorandum

Memo No.	BR-EX-ROD-TDS-TCM-00001.0	**Date of Issue**	14 March 2025
Subject	TMR Roads Pavement Impact Assessment for Exploratory Works	**Discipline**	Pavements
Project Title	Borumba PHES	**Project No.**	30032677
Document No.	BR-EX-ROD-TDS-TCM-00001.0	**Revision**	0
Author	Sam Sawtell		
Reviewed by	Dave Bekker	**Approved by**	Anna West
Prepared for	Queensland Hydro (QH)	**Attention to**	David Lingard
Attachments	**Attachment A** – TMR Supplied Data **Attachment B** – SAR Sensitivity Analysis **Attachment C** – Contribution Calculation Summary **Attachment D** – Important Notice		

1. Project Introduction

Queensland Hydro's Borumba Pumped Hydro Energy Storage (PHES) project will undertake exploratory works beginning in 2024 (the Project). The exploratory works are expected to occur over an approximate 12 month period. The Project is located in the Sunshine Coast hinterland approximately 20km south-west of the township of Imbil (refer to Figure 1). The Project is expected to result in increased traffic on the surrounding road network as a result of the exploratory works, with roads impacted extending as far as Kilcoy and Imbil.

Figure 1: Borumba Pumped Hydro Energy Storage Project Location

2. Purpose of Technical Memorandum

The purpose of this Technical Memorandum (TM) is to document the assessment of pavement impacts as a result of the Project and evaluate mitigation measures specific to the pavement within the declared Queensland Transport and Main Roads (TMR) road sections. The assessment is to be undertaken with due consideration to the mitigation hierarchy set out in the TMR Guide to Traffic Impact Assessment (GTIA). The scope can be further summarised by Step 3 to Step 5 from Figure 7.5.1 of the GTIA, reproduced below in Figure 2.

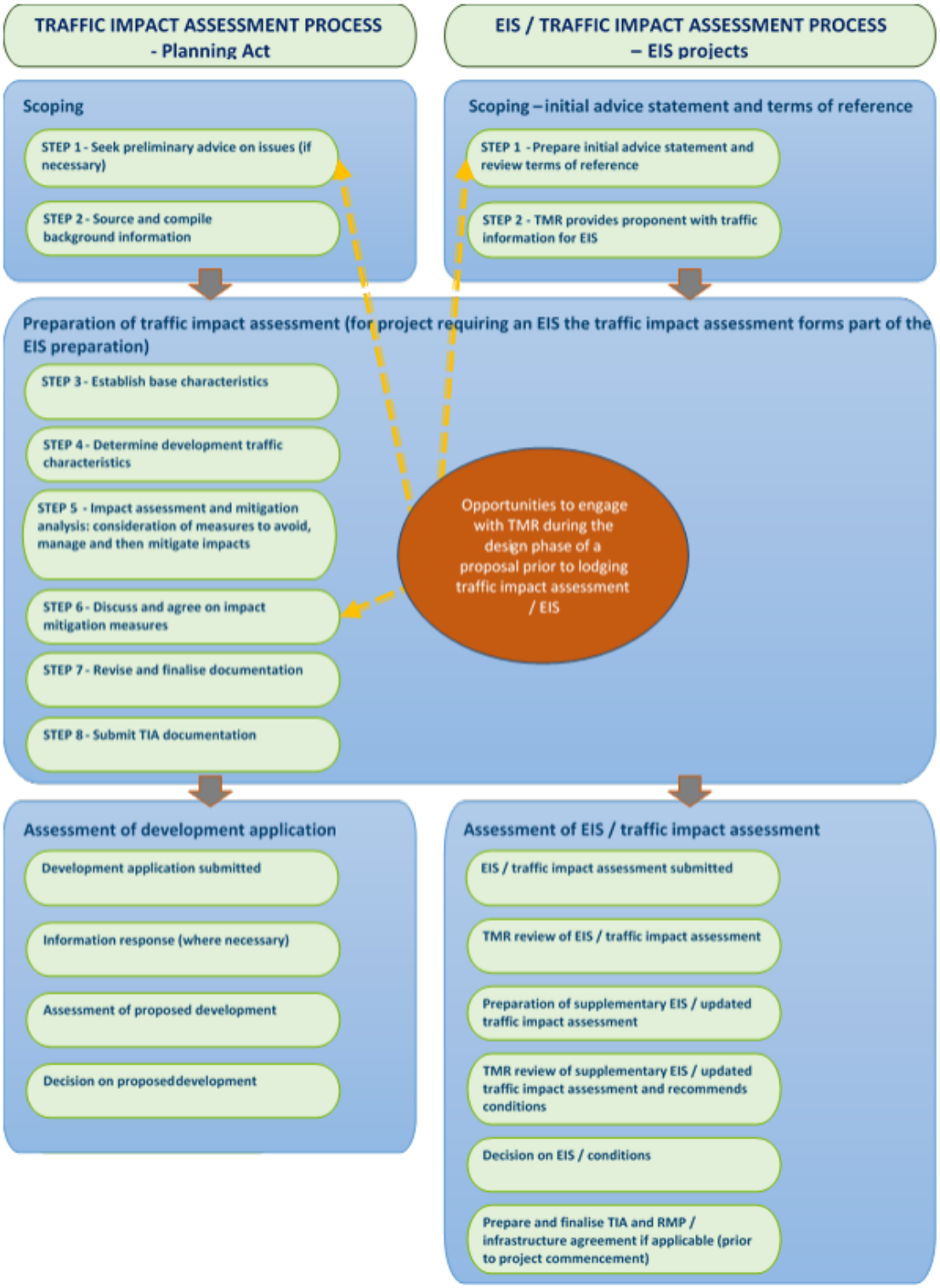


Figure 2 GTIA Figure 7-5-1, Typical Traffic Impact Assessment Process for Planning Act Developments and EIS Developments

3. Terms and Acronyms

Table 1 below outlines the relevant terms and acronyms adopted within this TM.

Table 1 List of Terms and Acronyms

Term / Acronym	Definition
AADT	Annual Average Daily Traffic. Used to inform traffic volumes over the assessment period.
AGPT02	Austroads Guide to Pavement Technology Part 2: Pavement Structural Design (2024)
Austroads	The association of Australian and New Zealand road transport and traffic agencies whose purpose is to contribute to the achievement of improved road transport outcomes.
Base Traffic	The traffic volume without development traffic also referred to as “background” traffic.
COVID-19	Coronavirus disease 2019. Highly contagious respiratory and vascular disease, and the cause of the COVID-19 pandemic, currently ongoing at the time of this report.
Design Horizon Year	For pavement works, the earliest year for which the asset should be designed to operate under its practical capacity.
Design Traffic	The cumulative traffic, often expressed in terms of HVAGs or ESA, predicted to use a road or bridge over the structural design life of the pavement.
Development	The Borumba Pumped Hydro Energy Storage Exploratory Works (refer Section 1 of this TM) being delivered by Queensland Hydro.
Development Traffic	Additional heavy vehicle traffic required to complete the Project (refer Section 1 of this TM).
ESA	Equivalent Standard Axle. A measure defining the cumulative damaging effect to the pavement of the design traffic. It is expressed in terms of the equivalent number of 80kN axles passing over the pavement up to the design horizon. ESA can also be expressed as SAR4.
GTIA	TMR Guide to Traffic Impact Assessment (December 2018)
HVs	Heavy Vehicles
HVAG	Heavy Vehicle Axle Group. Used in traffic calculations to assess the number of axle groups per heavy vehicle and assess SAR values per HV.
Impact Assessment Area	The Traffic Routes declared as being impacted by the Project and assessed as part of this Pavement Impact Assessment (refer Section 5.3).
Impact Assessment Period	The time period when the development’s impacts are compared to the base case impacts for offsets determination purposes.
Impact Mitigation Period	The time period after the opening year for which a development’s impacts and mitigation measures are the responsibility of the development.
NHVR	National Heavy Vehicle Regulator
PIA	Pavement Impact Assessment
PDS	TMR Pavement Design Supplement (June 2021)
PN	TMR Guide to Traffic Impact Assessment Practice Note: Pavement Impact Assessment (December 2018)

Term / Acronym	Definition
QH	Queensland Hydro, a publicly owned entity established by the Queensland Government to design, deliver, operate and maintain long duration pumped hydro energy storage assets.
SAR	Standard Axle Repetition. A measure defining the cumulative damaging effect to the pavement of the actual traffic, it is expressed in terms of the equivalent number of 80kN axles passing over the pavement up to the design horizon for varying damage exponents.
SAR4	A SAR derived with a damage exponent of 4 to assess the overall pavement damage to a granular pavement with thin bituminous surfacing (either asphalt or sprayed seal). For the purpose of PIA, this includes pavements with cement modified (unbound) and lime stabilised base courses. SAR4 can also be expressed as Equivalent Standard Axles (ESA)
SAR5	A SAR derived with a damage exponent of 5 to assess the asphalt fatigue to a pavement containing one or more asphalt layers, including bitumen stabilised base courses. For the purpose of PIA, this includes pavements having sprayed seal over bitumen stabilised (bound) layers.
SAR-km	Standard Axle Repetition kilometre. A unit used when determining the marginal cost of road-wear in accordance with the procedures set out in the GTIA.
TIA	Traffic Impact Assessment
TLD	Traffic Load Distribution. The TLD classifies heavy vehicle movements by axle group type and for each axle group type, the proportion of axles by load magnitude to the nearest 10 kN
TMR	Queensland Department of Transport and Main Roads
Traffic Distribution	The presumptive heavy vehicle type/s (classified in accordance with NHVR specifications) required to facilitate the works associated with the Project (refer to Section 8.1 of this TM).
Traffic Generation	The presumptive heavy vehicle volumes required through the Impact Assessment Area to facilitate the works associated with the Project (refer to Section 8.1 and 8.2 of this TM).
Traffic Routes	Roads or road sections subject to development traffic as a result of the Project.

4. Pavement Impact Assessment Scope

In the context of the Project, the GTIA sets out a mitigation hierarchy which prioritises development strategies that avoid or reduce worsening the pavement condition of the Impact Assessment Area (IAA) as a result of the impacts of development traffic caused by the Project.

If impacts cannot be avoided and options to reduce impacts have been exhausted, then strategies shall be developed to specifically manage the impacts to maintain the existing characteristics of the road transport network.

If avoidance, reduction and management cannot prevent worsening of the characteristics of the traffic routes, then strategies (including programs and works) and / or monetary contributions to programs or works shall be identified and implemented to mitigate the impacts of a proposed development so that the existing characteristics of the network are maintained.

With respect to above, this TM provides assessment of the development's impact on the pavement across the impact assessment area and establishes the strategies (including derivation of monetary contributions).

Figure 3 illustrates the preferred mitigation hierarchy for dealing with traffic impacts of development.

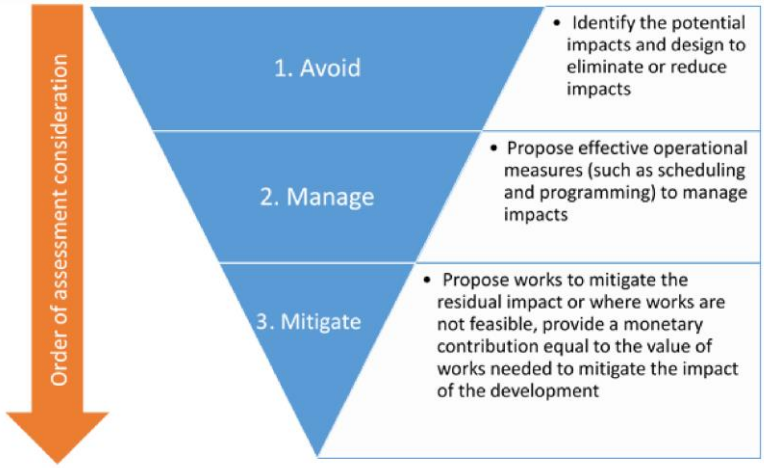


Figure 3 Mitigation Framework

5. Scope and Methodology

5.1 Guidelines and Reference Documents

The following guidelines and reference documents have been used in preparation of this TM:

- Austroads Guide to Pavement Technology – Part 2: Pavement Structural Design (AGPT02), 2024;
- TMR Guideline to Traffic Impact Assessment (GTIA), December 2018; and
- TMR Guideline to Traffic Impact Assessment Practice Note: Pavement Impact Assessment (PN), December 2018.

5.2 Traffic Routes

The TMR traffic routes assessed as part of this PIA are summarised below in Table 2. The total length of road corresponding to the traffic routes assessed as part of the PIA equate to approximately 93km.

Table 2: TMR Traffic Routes Within PIA Scope

TMR Road ID	Road Links	Ch. Start (km)	Ch. End (km)	Section Description
480	Mary Valley Link Road	0	2.51	Full Length
483	Gympie - Brooloo Road (Mary Valley Road)	17.4	37.37	Mary Valley Link Road to 483 End (Parry St)
481	Kenilworth – Brooloo Road (Mary Valley Road)	13.8	14.21	Moy Pocket Road to 483 End (Parry St)
4832	Yabba Creek Road	0	12.3	Full Length
491	Kilcoy-Murgon Road	2.5	35.65	Mount Kilcoy Road to Sunday Creek Road
40A	D'Aguilar Highway	26.6	50.53	Woodford (corner George St) to Kilcoy Murgon Road (Kilcoy)

5.3 Impact Assessment Area

The IAA for the PIA will be defined as traffic routes where the development SARs exceeds 5% of the base traffic SARs in either direction in the year of assessment.

5.4 Impact Mitigation Period

Figure 6.5 of the GTIA provides a visual representation of the temporal aspects of impact assessment and mitigation (refer to Figure 4 below). It is noted the scope of this PIA is limited to pavement impacts resulting only from the exploratory works of the Project which are set to occur from late 2024 to late 2025. For simplicity, this PIA will consider a 12 month period presented as 'Year 2025' from herein.

Impact of heavy vehicles resulting from the construction and operational phase of the dam has not be considered within this TM.

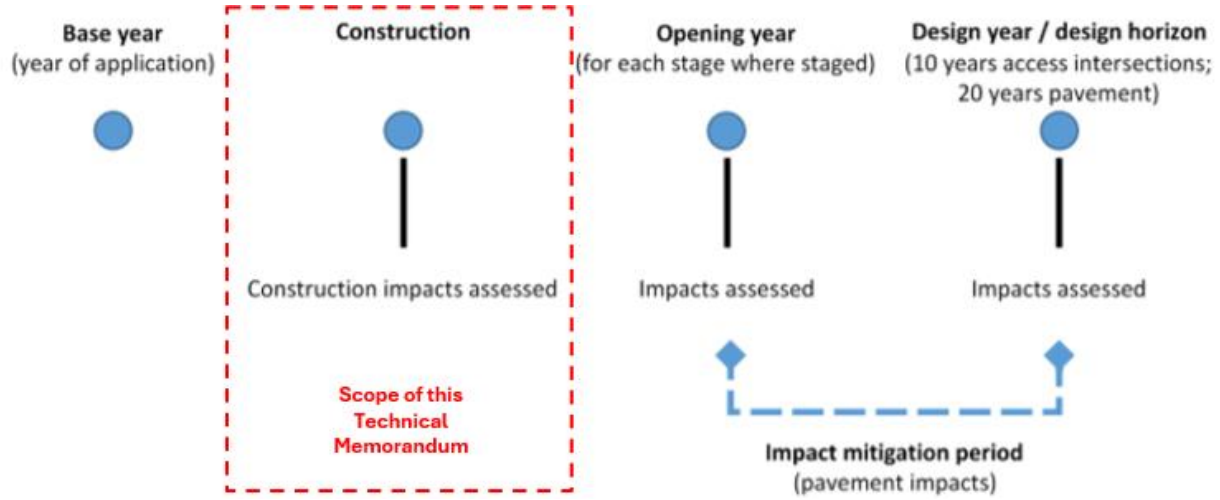


Figure 4 Development Impact Assessment Mitigation Period

5.5 Contribution Assessment

The marginal cost method was adopted for the contribution assessment based on the procedure put forward in the GTIA, as follows:

1. *Determination of the road links proposed to be affected by traffic generated by the Project / development.*

2. *Calculation of the existing SARs for each road link proposed to be affected by traffic generated by the development (base case). Traffic volumes (AADT) and composition (percentage heavy vehicles) were taken from TMR supplied traffic data.*

3. *Assess the types of vehicles that will be generated by the development (the Project) and the calculation of SARs for the development scenario. The vehicle type and volumes in this instance have been advised by SMEC's Transport Planning and Advisory team responsible for undertaking the corresponding Traffic Impact Assessment (TIA).*

4. *Determination of the road links where the development scenario SARs exceeds 5% of the base case SARs in either direction on the road link in the year of assessment. The road links where the 5% threshold is exceeded was adopted as the impact assessment area for the pavement assessment.*

5. *Identification of the relevant marginal cost rate per SAR-km, in this instance based on TMR supplied road segment data which provided a marginal cost rate for each 100m road segment. Calculation of the contribution required to offset pavement impacts using the following formula:*

$$Pavement\ contribution = \sum_{i=1}^{n} [(C + O)_i \times MC_i \times L_i]$$

where,

i *is each road segment triggered*

C *is the construction period in SARs*

O *is the operational period in SARs for the impact mitigation period*

MC *is the relevant marginal cost (cents per SAR-km)*

L *is the length of road section in km*

n *is the number of road segments triggered in the impact assessment area*

5.6 Assumptions, Unknowns and Limitations

SMEC have noted the following key assumptions, unknowns and limitations raised in preparation of this TM:

- The exploratory works have been assumed to be limited to an approximate 12 month period. For the purpose of this PIA and assessing background traffic volumes, this has been taken as 1 year using traffic volumes forecast to the year 2025 based on TMR supplied growth rates. In this respect, it is noted the Design Horizon Year is 2025;
- Heavy vehicles have been assumed to be fully loaded on entry to site (towards Lake Borumba) and travelling fully unloaded (i.e. no payload) on exit from site (away from Lake Borumba) for the development traffic;
- The background traffic adopted growth rate is supplied by TMR and is referred to by TMR as a 5-year average. With due consideration to this value and its suitability for the PIA, it is noted:
  - The rate is assumed to be an annual compound rate;
  - It is assumed the rate is based on heavy vehicle growth, as is relevant to the PIA; and
  - SMEC note that traffic over the past 5 years may have been influenced by the COVID-19 pandemic. For this PIA which assesses background traffic for the year 2025, growth rate has a negligible effect however this should be further evaluated for future assessments spanning beyond the year 2025.
- TMR's 'presumptive TLD' was adopted to assess load parameters of the base case heavy vehicle distribution for the purpose of determining SAR values per heavy vehicle pass. The TMR supplied SAR values have not been adopted on the basis there is project specific data available which gives a more accurate indication of the heavy vehicle distribution. In this respect, it is noted a sensitivity assessment has been undertaken and is reported in Section 7.2.2 of this TM;
- The development traffic vehicle types and volumes are based on advice from SMEC's Transport Planning and Advisory team who are undertaking the TIA for the Project. At the time of preparing this TM, allowance for a single heavy vehicle type was nominated – a general access 19m B-double, NHVR Type 4B. Where other heavy vehicle types are expected or it is anticipated volumes may vary, this PIA should be revised accordingly;
- The PIA is based on data supplied by TMR, which is presented with the following disclaimer: "*While every care is taken to ensure the accuracy of this data, Transport Systems Asset Management (TSAM), Department of Transport and Main Roads makes no representation or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses (including indirect or consequential damage) and costs which you might incur as a result of the data being inaccurate or incomplete in any way and for any reason.*"

QH must confirm the above assumptions are sound based on current available information and the advised scope of works to SMEC. In any instance where these are no longer considered sound, SMEC should be advised and necessary changes to the PIA assessed.

6. Existing Pavement

6.1 Pavement Condition

Evaluation of the existing pavement condition is outside the scope of this TM. Dilapidation surveys of select road sections have been undertaken where requested by QH. Results of these surveys are reported separately and should be read in conjunction with this PIA where pertinent to considering recommendations presented or participating in future discussions on the Project's impact on pavements within the IAA.

6.2 Pavement Type

Pavement types have been derived from TMR supplied data, reported as one of the following pavement configurations:

- GN: Sprayed seal over flexible pavement, including cement modified and lime stabilised layer types C4 and C5 sprayed seal on granular or asphalt on granular;
- AC: Sprayed seal or Asphalt over flexible pavement with bitumen stabilised pavement; or
- AC, Asphalt over flexible pavement, including cement modified and lime stabilised layer types C4 and C5

The extents of each pavement type, based on the TMR supplied data, is detailed in Table 3 below along with their corresponding SAR load damage exponent.

Table 3: Existing Pavement Types and Load Damage Exponent

TMR Road ID	Road Links	Ch. Start (km)	Ch. End (km)	Approximate Length (km)	Pavement Type (Note 1)	SAR Damage Exponent
480	Mary Valley Link Road	0	2.51	2.51	AC	5
483	Gympie - Brooloo Road	17.4	37.36	19.96	GN	4
481	Kenilworth – Brooloo Road	13.81	14.21	0.4	GN	4
4832	Yabba Creek Road	0	12.3	12.3	GN	4
491	Kilcoy-Murgon Road	2.5	35.65	33.15	GN	4
40A	D'Aguilar Highway	26.6	27.6	1	AC	5
		27.6	28.7	1.1	GN	4
		28.7	30.6	1.9	AC	5
		30.6	50.53	19.93	GN	4

7. Background Traffic (Base Case)

7.1 Available Data

7.1.1 Heavy Vehicle Volumes (TMR Data)

TMR have supplied traffic data for road segments within the nominated traffic routes (refer to Table 5 of **Attachment A**). The corresponding annual average daily heavy vehicle (AADHV) volumes are summarised below in Table 4 and Table 5 for the 'towards development' and 'from development' directions of travel respectively. The TMR supplied 5-year growth rate is also included. This growth rate has been assumed to be an annual compound rate and has been adopted to generate an AADHV for the year 2025, where applicable.

Table 4: Adopted Background Daily Heavy Vehicle Volumes – Towards Development

Road Name	Ch. Start	Ch. End	AADT	HV %	Base Year	AADHV Base Year	TMR 5-Year Growth Rate (%)	Forecast AADHV (2025)
Mary Valley Link Road	0	0.11	1513	18.19	2021	275	10.07	404
Mary Valley Link Road	0.11	0.39	1513	18.19	2021	275	10.07	404
Mary Valley Link Road	0.39	0.91	1513	18.19	2021	275	10.07	404
Mary Valley Link Road	0.91	2.98	1513	18.19	2021	275	10.07	404

Road Name	Ch. Start	Ch. End	AADT	HV %	Base Year	AADHV Base Year	TMR 5-Year Growth Rate (%)	Forecast AADHV (2025)
Kenilworth - Brooloo Road	6.75	14.21	607	19.21	2021	117	20.11	244
Gympie - Brooloo Road	17.44	24.27	1202	18.29	2021	220	6.8	286
Gympie - Brooloo Road	24.27	29.96	434	13.1	2021	57	4.81	69
Gympie - Brooloo Road	29.96	34.48	817	6.9	2021	56	8.11	76
Gympie - Brooloo Road	34.48	37.37	582	6.74	2021	39	8.8	55
Kilcoy - Murgon Road	0	0.06	1005	7.84	2023	79	0	79
Kilcoy - Murgon Road	0.06	1.32	1005	7.84	2023	79	0	79
Kilcoy - Murgon Road	1.32	2.57	435	13.03	2023	57	0	57
Kilcoy - Murgon Road	2.57	38.42	222	17.38	2023	39	0	39
Yabba Creek Road	0	2.14	744	31.38	2021	233	8.74	326
Yabba Creek Road	2.14	3.52	1431	24.86	2021	356	7.11	469
Yabba Creek Road	3.52	5.11	517	20.51	2021	106	10.57	158
Yabba Creek Road	5.11	8.95	500	18.37	2021	92	19.33	187
Yabba Creek Road	8.95	13.35	192	15.64	2021	30	10.32	44
D'Aguilar Hwy	22.27	27.2	6420	37.74	2023	2423	3.44	2593
D'Aguilar Hwy	27.2	29.71	4193	14.21	2023	596	3.45	638
D'Aguilar Hwy	29.71	29.9	4193	14.21	2023	596	3.45	638
D'Aguilar Hwy	29.9	30.035	4289	10.02	2023	430	2.96	456
D'Aguilar Hwy	30.035	47.52	4289	10.02	2023	430	2.96	456
D'Aguilar Hwy	47.52	50.41	3804	15.8	2023	601	0	592
D'Aguilar Hwy	50.41	50.53	3804	15.8	2023	601	0	592

Table 5: Adopted Background Daily Heavy Vehicle Volumes – Away from Development

Road Name	Ch. Start	Ch. End	AADT	HV %	AADT Base Year	AADHV Base Year	TMR 5-Year Growth Rate (%)	Forecast AADHV (2025)
Mary Valley Link Road	0	0.11	1485	9.61	2021	143	9.01	202
Mary Valley Link Road	0.11	0.39	1485	9.61	2021	143	9.01	202
Mary Valley Link Road	0.39	0.91	1485	9.61	2021	143	9.01	202
Mary Valley Link Road	0.91	2.98	1485	9.61	2021	143	9.01	202
Kenilworth - Brooloo Road	6.75	14.21	624	9.54	2021	60	18.94	120
Gympie - Brooloo Road	17.44	24.27	1202	11.25	2021	135	7.9	183
Gympie - Brooloo Road	24.27	29.96	422	13.74	2021	58	4.51	69
Gympie - Brooloo Road	29.96	34.48	855	28.92	2021	247	9.01	349
Gympie - Brooloo Road	34.48	37.37	591	8.68	2021	51	8.83	72

Road Name	Ch. Start	Ch. End	AADT	HV %	AADT Base Year	AADHV Base Year	TMR 5-Year Growth Rate (%)	Forecast AADHV (2025)
Kilcoy - Murgon Road	0	0.06	1007	7.94	2023	80	0	80
Kilcoy - Murgon Road	0.06	1.32	1007	7.94	2023	80	0	80
Kilcoy - Murgon Road	1.32	2.57	452	9.72	2023	44	0	44
Kilcoy - Murgon Road	2.57	38.42	218	21.84	2023	48	0	48
Yabba Creek Road	0	2.14	764	9.07	2021	69	9.2	98
Yabba Creek Road	2.14	3.52	1364	7.11	2021	97	8.2	133
Yabba Creek Road	3.52	5.11	516	21.82	2021	113	11.05	172
Yabba Creek Road	5.11	8.95	495	22.33	2021	111	19.29	225
Yabba Creek Road	8.95	13.35	193	9.26	2021	18	10.07	26
D'Aguilar Hwy	22.27	27.2	6468	12.66	2023	819	3.84	883
D'Aguilar Hwy	27.2	29.71	4275	14.54	2023	622	3.46	666
D'Aguilar Hwy	29.71	29.9	4275	14.54	2023	622	3.46	666
D'Aguilar Hwy	29.9	30.035	4461	19.14	2023	854	3.25	910
D'Aguilar Hwy	30.035	47.52	4461	19.14	2023	854	3.25	910
D'Aguilar Hwy	47.52	50.41	3851	26.17	2023	1008	0	996
D'Aguilar Hwy	50.41	50.53	3851	26.17	2023	1008	0	996

7.1.2 Project Specific Traffic Counts

A number of project specific traffic counts have been undertaken at various locations within the surrounding road network. The majority of these counts were undertaken within the past 12 months and over a short period. In some instances, they are only part day counts rather than 24 hour counts.

In considering these traffic surveys for a PIA, it is noted the counts may not be representative due to potential errors in converting to an annual average daily traffic (AADT) or AADHV value, without any account of potential seasonal variations or outliers which may or may not have been captured at the time of the survey.

It is however noted the traffic counts provide12 BIN vehicle classifications which more accurately inform the heavy vehicle distribution when compared to the data supplied by TMR. Further discussion on this are provided below in Section 7.2.

7.2 Traffic Load Distribution

7.2.1 TMR Presumptive SAR / HV

The TMR supplied data gives indication to a presumptive SAR4 / HV value of 3.2.

A high-level perusal of the project specific traffic count surveys indicates this value may not be representative of the heavy vehicle distribution along the traffic routes. With due consideration to the significance of this value in the PIA, a sensitivity analysis to assess SAR / HV values from project specific traffic counts was undertaken.

7.2.2 SAR / HV Sensitivity Analysis

While classified traffic counts are available at numerous locations across the surrounding road network, data to inform the load characteristics of existing heavy vehicles using the traffic routes is not available. In the absence of this data, TMR Weigh in Motion (WiM) data was considered. “Method 3” outlined in the TMR PDS was adopted.

"Method 3" uses presumptive class-specific TLDs combined with project specific classified vehicle counts (e.g. heavy vehicle classifications provided in the project specific traffic counts).

On account of the significant amount of traffic data available, the sensitivity analysis was limited to:

- 24-hr traffic counts;
- Those undertaken on weekdays (Thursday); and
- Those in the gazettal direction, towards the development.

The resultant TLD was assessed and heavy vehicle characteristics such as number of HVAGs and SAR/HV values were derived. The results of this assessment are summarised below in Table 6. A summary of all sites assessed is provided in **Attachment B**.

Table 6: Background Traffic Heavy Vehicle Traffic Load Distribution Analysis from Weekday (Thursday) 24 Hour Traffic Counts (Gazettal)

Road	NHVAG			SAR4 / Pass			SAR5 / Pass		
	μ	σ	P90	μ	σ	P90	μ	σ	P90
Mary Valley Link Road	2.30	0.00	2.30	1.80	0.00	1.80	2.11	0.00	2.11
Gympie - Brooloo Road	2.35	0.07	2.47	2.06	0.13	2.18	2.47	0.18	2.63
Kenilworth – Brooloo Road	2.35	0.07	2.47	2.06	0.13	2.18	2.47	0.18	2.63
Yabba Creek Road	2.44	0.13	2.57	1.98	0.33	2.28	2.32	0.38	2.67
Kilcoy-Murgon Road	2.26	0.10	2.32	1.76	0.13	1.86	2.07	0.15	2.19
D'Aguilar Highway	2.63	0.31	2.80	2.32	0.57	2.63	2.75	0.70	3.13
All Traffic Routes	**2.41**	**0.18**	**2.72**	**2.03**	**0.33**	**2.51**	**2.41**	**0.40**	**2.98**

μ = Average σ = Standard Deviation P90 = 90th Percentile

7.2.3 Adopted Traffic Load Parameters

The sensitivity analysis shows the presumptive SAR values presented in the TMR data are most probably inaccurate for the subject traffic routes. Accordingly, the values derived during the sensitivity analysis as summarised in Table 5 above, have been adopted in this PIA.

It must be noted the sensitivity analysis was undertaken based on select traffic count sites and considering weekday traffic (Thursday) only. If the outcomes of the PIA prove sensitive to the adopted traffic load parameters, then this sensitivity analysis should be expanded to include all traffic count data and all directions of travel and/or additional data requested from TMR for review, where available.

8. Development Traffic (Trip Generation)

8.1 Heavy Vehicle Type

SMEC's Transport Planning & Advisory team undertaking the TIA for the Project have advised the type of heavy vehicles generated by the Project will be as follows:

- General access 19m B-double

For the purpose of this PIA, the vehicle was assessed under an NHVR Type 4B configuration.

8.2 Heavy Vehicle Volumes

Heavy vehicle volumes advised by SMEC's Transport Planning & Advisory team undertaking the TIA for the Project are summarised below in Table 7. It has been assumed the heavy vehicle volumes are one-way volumes, undertaking one trip towards the Project site and one trip away from the Project site.

Table 7: Development Generated Traffic by Vehicle Type and Volume – Year 2025

TMR Road ID	Road Links	Ch. Start (km)	Ch. End (km)	Heavy Vehicles
480	Mary Valley Link Road	0	2.51	13,687
483	Gympie - Brooloo Road	17.4	37.37	13,687
481	Kenilworth – Brooloo Road	13.8	14.21	11,496
4832	Yabba Creek Road	0	12.3	25,183
491	Kilcoy-Murgon Road	2.5	35.65	9,693
40A	D'Aguilar Highway	26.6	50.53	9,693

8.3 Heavy Vehicle Load Assessment

A 'first principles' pavement loading assessment has been undertaken for the heavy vehicle types considered in this PIA. For the purpose of the PIA, the following payload conditions have been assessed in the first instance:

- 100% payload i.e. fully laden – travelling **to** the Project site; and
- 50% payload for comparative purposes;
- 0% payload i.e. fully unladen – travelling **from** the Project site

Figure 5 below summarises the load assessment for the adopted heavy vehicle types. It is noted only heavy vehicle operations under General Mass Limits (GML) have been considered. Where higher mass limits or specialised vehicles are proposed, bespoke assessments should be considered.

Type 4B	Axles	Single	Tandem	Tri-axle	Tri-axle	
	Tyres	Single	Dual	Dual	Dual	
	Base Load / SAR	5.4	13.8	18.6	18.6	Totals
Unloaded [1]	Axle Group Load (t)	4.5	5	6.5	6.5	22.5 tonne
	SAR4 Unloaded	0.48	0.02	0.02	0.02	**0.53** ESA
	SAR5 Unloaded	0.40	0.01	0.01	0.01	**0.42** ESA
100% Payload	Legal Axle Group Load (t)	6.00	16.50	20.00	20.00	62.5 tonne
	SAR4 at Payload	1.52	2.06	1.35	1.35	**6.28** ESA
	SAR5 at Payload	1.69	2.47	1.45	1.45	**7.07** ESA
50% Payload	Legal Axle Group Load (t)	6.00	16.50	20.00	20.00	62.5 tonne
	SAR4 at Payload	0.89	0.37	0.26	0.26	**1.78** ESA
	SAR5 at Payload	0.87	0.29	0.19	0.19	**1.53** ESA

8 Axle B-double
Austroads Class 10

Payload =	26.5	tonne [4]	ESA/t Payload = 0.0157 unloaded
Max Legal Payload =	40.0	tonne [3]	ESA/t Payload = 0.2667 loaded

Payload =	20.0	tonne [4]	ESA/t Payload = 0.0209 unloaded
Max Legal Payload =	40.0	tonne [3]	ESA/t Payload = 0.0763 loaded

[1] Vehicle specific axle tare weights are used where provided by the client. In the absence of such data, assumptive values are used.
[2] If the "payload" is more or less than legal, "axle group loadings" are proportioned based on the legal and the unloaded tonnages.
[3] Calculated from the maximum legal loads & generic unloaded (tare) weights for each axle group of the HV.
[4] Vehicle payloads are based on information provided by the client or in its absence, are assumed to be at the maximum legal payload.

Figure 5: Heavy Vehicle Load Assessment (SAR Analysis)

8.4 SAR4 and SAR5 Loading

Further to Section 8.3 above, below summarises SAR values for a single pass of each heavy vehicle type and load condition considered in the PIA.

Table 8: Development Traffic Heavy Vehicle SAR Calculation Summary

Vehicle Description	SAR4 / Pass for Payload		SAR5 / Pass for Payload	
	To Project Site	From Project Site	To Project Site	From Project Site
NHVR Type 4B	6.28	0.53	7.07	0.42

8.5 Development Total SAR Volumes

The total SAR4 and SAR5 volumes generated by the development is summarised in Table 9 below.

Table 9: Total Development SAR4 and SAR5 (12 Month Period, 2025)

TMR Road ID	Road Links	Ch. Start (km)	Ch. End (km)	Towards Project Site		Away from Project Site	
				Total SAR4	Total SAR5	Total SAR4	Total SAR5
480	Mary Valley Link Road	0	2.51	85,954	96,767	7,254	5,749
483	Gympie - Brooloo Road	17.4	37.37	85,954	96,767	7,254	5,749
481	Kenilworth – Brooloo Road	13.8	14.21	72,195	81,277	6,093	4,828
4832	Yabba Creek Road	0	12.3	158,149	178,044	13,347	10,577
491	Kilcoy-Murgon Road	2.5	35.65	60,872	68,530	5,137	4,071
40A	D'Aguilar Highway	26.6	50.53	60,872	68,530	5,137	4,071
			Project Total	**523,997**	**589,914**	**44,223**	**35,044**

9. Development Impact on Pavement

9.1 Existing Pavement

It is understood the existing pavement condition varies across the Project traffic routes. With consideration to the development generated traffic and corresponding impact on the existing pavement, the following commentary is provided:

- For road sections showing extensive cracking and/or a history of maintenance (such as patching), the increase in trafficking at these locations can be expected to further the rate of deterioration of the surfacing, resulting in further distress. Notwithstanding, it may be in some instances that the surfacing or pavement has reached the end of its useful life at these locations and/or underlying conditions are contributing to pavement distress in some instances;
- For sections of bituminous (asphalt or sprayed seal) surfacing with extensive cracking, deterioration will be further accelerated in periods during and shortly following rain events given the increased passes of heavy vehicles;
- Where existing flushing of sprayed seals is a function of poor quality base, severity of flushing may increase;
- Existing edge breaks will be exacerbated should vehicles regularly traverse the pavement edge; and
- Increased quantity and severity of turning and braking movements along the routes are likely to induce stress on existing surfaces (most notably sprayed seals) greater than that which it was originally designed for. Depending on properties of the existing sprayed seal (e.g. binder type) these increased stress may lead to defects such as stone loss, potholes, flushing and cracking.

9.2 5% SARs Threshold Assessment

The PIA assessment is included in **Attachment C**. The results show the development SAR scenario exceeds 5% of the base case SARs in both directions of travel for the majority of the traffic routes.

9.3 Pavement Impact Assessment Area

The IAA for the PIA has been determined, in accordance with the GTIA, to be those road sections per Table 10 below. Refer to **Attachment C** for a detailed summary.

Table 10: Summary of Pavement Impact Assessment Area

TMR Road ID	Road Links	Ch. Start (km)	Ch. End (km)	Approximate Length
480	Mary Valley Link Road	0	2.51	2.51
483	Gympie - Brooloo Road	17.4	37.37	19.96
481	Kenilworth – Brooloo Road	13.8	14.21	0.4
4832	Yabba Creek Road	0	12.3	12.3
491	Kilcoy-Murgon Road	2.5	35.65	33.15
40A	D'Aguilar Highway	26.6	50.53	23.93

10. Mitigation Works

10.1 Initial Works

It is understood the existing pavement condition is poor at various locations and heavy vehicle trips generated by the Project are expected to increase the rate of deterioration. The necessity for initial works will depend on various factors and consultation with TMR is recommended in this regard to establish:

- TMR's planned pavement maintenance activities for the traffic routes;
- TMR's planned pavement upgrades to the traffic routes;
- A potential maintenance strategy for road sections to be adopted during the Project; and
- Consideration to a monetary contribution in light of the above works and their timing.

Where the existing pavement condition is poor, it may be appropriate the above discussions are progressed in earnest to ensure road sections in poor condition can be effectively managed during the Project.

10.2 Monetary Contribution

10.2.1 Marginal Cost Rate

10.2.1.1 PIA Traffic Routes

Marginal cost rate data for the traffic routes has been provided by TMR (refer to Table 3 of **Attachment A**). An assessment of the cost rates is summarised below in Table 10, and the following observations noted:

- With the exception of Gympie - Brooloo Road and Kilcoy - Murgon Road, the cost rates are fairly consistent across each road section respectively; and
- Gympie - Brooloo Road and Kilcoy - Murgon Road show significant variation in cost rates as evident in the standard deviation. Further discussion on these rates is provided in Section 10.2.1.3 of this TM.

Table 11: Existing Pavement Types and Marginal Cost Rate Assessment

TMR Road ID	Road Links	Ch. Start (km)	Ch. End (km)	Pavement Type (Note 1)	Cents per SAR-km		
					Average	Standard Deviation	90th Percentile
480	Mary Valley Link Road	0	2.51	AC	4.88	0.00	4.88
483	Gympie - Brooloo Road	17.4	37.36	GN	11.17	7.66	21.77
481	Kenilworth – Brooloo Road	13.81	14.21	GN	15.30	0	15.30

TMR Road ID	Road Links	Ch. Start (km)	Ch. End (km)	Pavement Type (Note 1)	Cents per SAR-km		
					Average	Standard Deviation	90th Percentile
4832	Yabba Creek Road	0	12.3	GN	11.19	0.63	11.35
491	Kilcoy-Murgon Road	2.5	35.65	GN	11.27	7.33	21.03
40A	D'Aguilar Highway	26.6	27.6	AC	4.37	0.19	4.55
		27.6	28.7	GN	3.66	0.40	4.22
		28.7	30.6	AC	5.13	0.10	5.23
		30.6	50.53	GN	3.07	0.91	3.90

10.2.1.2 TMR State Controlled Road Network

For comparative purposes, Table 6 of the GTIA (reproduced below in Figure 6) provides a summary of the TMR state controlled Road (SCR) network average marginal cost rates by pavement type. The average cost rates determined for the traffic routes show general alignment to the average for the SCR network.

Type	Length of pavement network	% of network	Average marginal cost	Damage unit
Sealed roads with granular pavement (GN)	24,886 km	82%	13.60 cents / SAR-km	SAR4
Sealed roads with asphaltic concrete pavement (AC)	2,523 km	7%	4.87 cents / SAR-km	SAR5
Sealed roads with cement stabilised pavement (CS)	2,761 km	8%	3.69 cents / SAR-km	SAR12
Sub total	30,171 km	88%	11.94 cents / SAR-km	-
Unsealed roads	4,277 km	12%	14,84 cents / LU-km	LU
Total	34,448 km	100%	-	-

Figure 6: Summary of The TMR State Controlled Road (SCR) Network Average Marginal Cost Rates by Pavement Type (GTIA Table 6)

10.2.1.3 Recommendations

With due consideration to the above assessments, it is recommended cost rates for Gympie - Brooloo Road and Kilcoy - Murgon Road are further evaluated in terms of their suitability, where it is shown they have a notable influence on the outcomes of the PIA.

10.2.2 Contribution Amount

The contribution amount was calculated based on the marginal cost rates reported by TMR for each road segment (typically 100m) and the yearly development SAR volumes (refer Section 8) corresponding to the same road segment. The corresponding contribution amounts are summarised in Table 12 below. Detailed calculations are provided in **Attachment C**.

Table 12: PIA Monetary Contribution Calculation Summary

TMR Road ID	Road Name	Ch. Start (km)	Ch. End (km)	To		From		SUB-TOTAL
				SAR4	SAR5	SAR4	SAR5	
480	Mary Valley Link Road	0	2.51	$-	$16,339	$-	$-	$16,339
483	Gympie - Brooloo Road	17.4	37.36	$180,907	$12,118	$13,004	$124	$206,153

TMR Road ID	Road Name	Ch. Start (km)	Ch. End (km)	To		From		SUB-TOTAL
				SAR4	SAR5	SAR4	SAR5	
481	Kenilworth – Brooloo Road	13.81	14.21	$4,529	$-	$382	$-	$4,911
4832	Yabba Creek Road	0	12.3	$223,056	$14,872	$18,825	$883	$257,636
491	Kilcoy-Murgon Road	2.5	35.65	$229,221	$-	$19,345	$-	$248,566
40A	D'Aguilar Highway	26.6	50.53	$38,573	$8,420	$-	$-	$46,993
			TOTAL	**$676,285**	**$51,749**	**$51,556**	**$1,007**	**$780,598**

11. Conclusions and Recommendations

11.1 Conclusion

This TM has undertaken an assessment of base case and development traffic loading associated with the Project and identified road sections where a 5% threshold is exceeded (impact assessment area). For the impact assessment area, monetary contributions have been calculated in accordance with the GTIA and PN as a means to offsetting the impacts on the pavement which result from the development.

Using the 'marginal cost methodology' outlined in the GTIA and PN, a total development contribution for the Project was calculated to be **$780,598 (AUD).**

11.2 Recommendations

11.2.1 Additional Actions

SMEC recommend the following actions are taken to finalise the PIA:

- QH review closely review the input parameters adopted in this PIA. In particular, careful consideration should be given to the presumptive heavy vehicle type/s, volumes and axle load configurations outlined in Section 8 of this TM;
- On account of the impact identified, it is recommended key parameters discussed throughout this TM are further evaluated, where applicable. These include:
  - SAR / HV values representative to the background traffic. Opportunity exists to expand this assessment to include all traffic count data captured to date and additional data from TMR, where available;
  - Consideration to detailed analysis of the development traffic in terms of heavy vehicle types, number of movements and characteristics in terms of payload both to and from the Project site; and
  - The marginal cost rates for Gympie - Brooloo Road and Kilcoy - Murgon Road are further evaluated to appreciate any reasoning for large variations, and how they may be applicable to the PIA.
- QH note the following for discussion with TMR, where applicable:
  - The methodology adopted for assessing the pavement impact as per the GTIA PN;
  - The base case traffic parameters adopted as per Section 7 of this TM. Most notably the annual average daily heavy vehicle volume and the derived heavy vehicle load distribution characteristics; and
  - The adopted marginal cost rates and large variations within the dataset where present. In line with the GTIA, the marginal cost rate should be derived relative to a 50-year life cycle for the pavement and typical pavement costings include maintenance, rehabilitation and reconstruction. Where notable

variations have been identified in the marginal cost rates, these should be further considered to appreciate how they are representative in the context of the PIA and requirements of the GTIA.

- QH consult with TMR on delivery of routine pavement maintenance activities along the traffic routes in the time prior to and during the Project.

11.2.2 Additional Mitigation Measures

Notwithstanding above, it is highlighted to QH that additional mitigation measures can be adopted to minimise the potential impact on the pavement during construction of the Project. These may include but are not limited to:

- Undertaking visual pavement assessments at selective points in the Project programme as a means to identifying early signs of an increased rate of deterioration or pavement failure;
- Installation of shaker grids at site exit points from construction activities;
- Consult with the Project team (including Contractors) on limiting heavy vehicle volumes during and immediately following periods of inclement weather; and
- Development of strategy for delivery of routine maintenance activities and agreed intervention levels.

Attachment A

TMR Supplied Data

Notes

- Reference number: **DR3319**
- Data extraction date: **10 September 2024**
- Extracted data source: **Roadlink**
- Marginal cost and AADT data in Roadlink is available only for the primary through carriageways within the State Controlled Road Network (SCRN)
- Data were provided between the closest reference points that include the requested range (see 'Road list' worksheet for reference point descriptions and chainages)
- Marginal cost unit for sealed segments: cent/SAR/km
- Marginal cost unit for unsealed segments: cent/LU/km
- Table 7 contents is sourced from the ARMIS Coding Booklet, issued by the Department of Transport and Main Roads (2019)

Data definitions

- AADT – the Annual Average Daily Traffic is the number of vehicles measured during 24 hours, averaged over a year
- AADT_CLASS_1A - the Annual Average Daily Traffic for short vehicles (light vehicles)
- AADT_CLASS_1B - the Annual Average Daily Traffic for trucks and buses
- AADT_CLASS_1C - the Annual Average Daily Traffic for articulated vehicles
- AADT_CLASS_1D - the Annual Average Daily Traffic for road trains
- AADT_NONHV - the Annual Average Daily Traffic for light vehicles
- PERCENT_NONHV - the percentage of the Annual Average Daily Traffic (AADT_CLASS_1A) represented by light vehicles
- AADT_HV - the Annual Average Daily Traffic for heavy vehicles
- PERCENT_HV - the percentage of the Annual Average Daily Traffic (AADT_CLASS_1B+AADT_CLASS_1C+AADT_CLASS_1D) represented by heavy vehicles
- ExistingSAR = (AADT_HV * 2.9) for Bruce Hwy, calculated for sealed segments
- ExistingSAR = (AADT_HV *3.2) for other state controlled roads, calculated for sealed segments
- ExistingLU = (AADT_CLASS_1A*1.00) + (AADT_CLASS_1B*1.10) + (AADT_CLASS_1C*2.48) + (AADT_CLASS_1D*5.25), calculated for unsealed segments

Contents

Links to references

Guide to Traffic Impact Assessment

Refer to the downloadable pdf **"Guide to Traffic Impact Assessment Practice Note: Pavement Impact Assessment"**. The Pavement Impact Assessment Practice Note provides further guidance on how to prepare a pavement impact assessment, including step-by-step examples for a number of different development scenarios.

Table 1
Road list (the requested road sections within SCRN)

ROAD_SECTION_ID	RoadName	SURFACE_TYPE_LABEL	
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	SEALED	D'Aguilar Highway - Kilroy Murgon rd to Woodford (corner George St)
480	MARY VALLEY LINK ROAD	SEALED	Mary Valley Link Road - Full Length
481	KENILWORTH - BROOLOO ROAD	SEALED	Mary Valley Road - Connect 483 to Moy Pocket Road
483	GYMPIE - BROOLOO ROAD	SEALED	Mary Valley Road - Mary Valley Link Road to end (connecting 481)
4832	YABBA CREEK ROAD	SEALED	Yabba Creek Road - Full Length
491	KILCOY - MURGON ROAD	SEALED	Kilroy Murgon Road, Kilroy Murgon to Sunday Creek Road.

Table 2
Reference point descriptions

ROAD_SECTION_ID	CARRIAGEWAY_CODE	ThroughDistance	ROAD_SECTION_RP	RPDescription
40A	1	22.27	40A/6	Int. 40A with Brisbane-Woodford Road (401).
40A	1	27.2	40A/7	East. Int. 40A Neurum Road (L.G. Road)
40A	2	29.9	40A/8	Int. 40A with Kilcoy-Beerwah Road (492).
40A	1	34.24	40A/9	East. Abut. Stony Creek Bridge.
40A	1	38.89	40A/10	Int. 40A with Moreton Bay/Somerset Regional Council Boundary.
40A	2	50.53	40A/12	End of 40A D'Aguilar Hwy (Caboolture- Kilcoy). Int. with 40B D'Aguilar Hwy (Kilcoy-Yarraman) and Kilcoy-Murgon Road (491).
480	2	0	480/1	Start of Mary Valley Link Road (480) Int with Traveston Road
480	2	0.72	480/2	Intersection of 480 with Cooroy - Gympie Road (914)
480	1	2.98	480/3	End of Mary Valley Link Road (480) Int. with Gympie - Brooloo Road (483)
481	1	11.4	481/3	Sth Abut. Coonoon Gibber Creek Bridge.
481	1	14.21	481/4	End of Kenilworth-Brooloo Road (481). Int. with Gympie-Brooloo Road (483).
483	1	17.45	483/3D	Int. Gympie - Brooloo Road (483) with Mary Valley Link Road (480).
483	1	29.96	483/4	Int. 483 with Tuchekoi Road (482).
483	1	34.48	483/5A	Int. of 483 with Yabba Creek Road (4832)
483	1	37.37	483/6	End of Gympie-Brooloo Road (483). Int. with Kenilworth-Brooloo Road (481).
4832	1	0	4832/1	Start of Yabba Creek Road (4832). Int. with Gympie-Brooloo Road (483).
4832	1	13.35	4832/2A	End of Yabba Creek Road (4832) at marker in cutting.
491	2	0	491/1	Start of Kilcoy-Murgon Road (491). Int. with 40A D'Aguilar Hwy (Caboolture- Kilcoy) and 40B D'Aguilar Hwy (Kilcoy- Yarraman).
491	1	10.36	491/2	Sth East Abut. Sheepstation Creek Bridge (2nd Crossing).
491	1	17.74	491/3	Sth East Abut. Sheepstation Creek Bridge (3rd Crossing).
491	1	24.97	491/4A	Southern abutment Sheepstation Creek Culvert. No. 4 crossing.
491	1	35.83	491/5	Int. 491 with Sunday Creek Road to Kenilworth.

Table 3

Marginal cost data for sealed segments of the selected road sections

RoadName	ROAD_SECTION_ID	SUPERSET_CWAY	CARRIAGEWAY_CODE	TDIST_START	TDIST_END	Length	SEAL_FLAG	MC_COSTING_PAVEMENT_TYPE	MarginalCost
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	26.6	26.7	0.1	sealed	AC	4.52
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	26.7	26.8	0.1	sealed	AC	4.5
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	26.8	26.9	0.1	sealed	AC	4.03
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	26.9	27	0.1	sealed	AC	4.3
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	27	27.1	0.1	sealed	AC	4.28
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	27.1	27.2	0.1	sealed	AC	4.42
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	27.2	27.3	0.1	sealed	GN	3.45
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	27.3	27.4	0.1	sealed	GN	3.24
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	27.4	27.5	0.1	sealed	AC	4.62
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	27.5	27.6	0.1	sealed	AC	4.28
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	27.6	27.7	0.1	sealed	GN	3.92
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	27.7	27.8	0.1	sealed	GN	4.02
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	27.8	27.9	0.1	sealed	GN	3.4
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	27.9	28	0.1	sealed	GN	3.3
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	28	28.1	0.1	sealed	GN	3.34
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	28.1	28.2	0.1	sealed	GN	3.5
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	28.2	28.3	0.1	sealed	GN	3.68
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	28.3	28.4	0.1	sealed	GN	4.35
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	28.4	28.5	0.1	sealed	GN	3.24
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	28.5	28.6	0.1	sealed	GN	3.34
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	28.6	28.7	0.1	sealed	GN	4.22
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	28.7	28.8	0.1	sealed	AC	5.16
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	28.8	28.9	0.1	sealed	MC	
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	28.9	29	0.1	sealed	MC	
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	29	29.1	0.1	sealed	MC	
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	29.1	29.2	0.1	sealed	MC	
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	29.2	29.3	0.1	sealed	MC	
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	29.3	29.4	0.1	sealed	AC	5.14
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	29.4	29.5	0.1	sealed	AC	5.24
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	29.5	29.6	0.1	sealed	AC	5.12
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	29.6	29.7	0.1	sealed	AC	5.36
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	29.7	29.71	0.01	sealed	AC	5.17
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	30.035	30.1	0.065	sealed	AC	5.01
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	30.1	30.2	0.1	sealed	AC	5.04
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	30.2	30.3	0.1	sealed	AC	5.09
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	30.3	30.4	0.1	sealed	AC	5.02
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	30.4	30.5	0.1	sealed	AC	5.15
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	30.5	30.6	0.1	sealed	AC	5.07
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	30.6	30.7	0.1	sealed	GN	3.87
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	30.7	30.8	0.1	sealed	GN	1.91
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	30.8	30.9	0.1	sealed	GN	1.93
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	30.9	31	0.1	sealed	GN	1.93
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	31	31.1	0.1	sealed	GN	1.94
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	31.1	31.2	0.1	sealed	GN	1.9
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	31.2	31.3	0.1	sealed	GN	1.93
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	31.3	31.4	0.1	sealed	GN	1.96
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	31.4	31.5	0.1	sealed	GN	1.99
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	31.5	31.6	0.1	sealed	GN	1.99
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	31.6	31.7	0.1	sealed	GN	1.97
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	31.7	31.8	0.1	sealed	GN	1.97
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	31.8	31.9	0.1	sealed	GN	1.88
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	31.9	32	0.1	sealed	GN	2.08
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	32	32.1	0.1	sealed	GN	2.16
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	32.1	32.2	0.1	sealed	GN	1.98
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	32.2	32.3	0.1	sealed	GN	1.98
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	32.3	32.4	0.1	sealed	GN	1.99
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	32.4	32.5	0.1	sealed	GN	1.99
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	32.5	32.6	0.1	sealed	GN	1.99
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	32.6	32.7	0.1	sealed	GN	1.98
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	32.7	32.8	0.1	sealed	GN	1.91
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	32.8	32.9	0.1	sealed	GN	1.89
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	32.9	33	0.1	sealed	GN	1.93
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	33	33.1	0.1	sealed	GN	1.91
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	33.1	33.2	0.1	sealed	GN	1.92
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	33.2	33.3	0.1	sealed	GN	1.92
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	33.3	33.4	0.1	sealed	GN	1.93
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	33.4	33.5	0.1	sealed	GN	1.89
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	33.5	33.6	0.1	sealed	GN	1.9
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	33.6	33.7	0.1	sealed	GN	1.87
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	33.7	33.8	0.1	sealed	GN	1.94
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	33.8	33.9	0.1	sealed	GN	1.91
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	33.9	34	0.1	sealed	GN	1.88
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	34	34.1	0.1	sealed	GN	1.98
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	34.1	34.2	0.1	sealed	GN	3.59
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	34.2	34.3	0.1	sealed	GN	3.35
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	34.3	34.4	0.1	sealed	GN	3.72
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	34.4	34.5	0.1	sealed	GN	1.92
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	34.5	34.6	0.1	sealed	GN	1.97
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	34.6	34.7	0.1	sealed	GN	1.98
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	34.7	34.8	0.1	sealed	GN	1.99
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	34.8	34.9	0.1	sealed	GN	1.99
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	34.9	35	0.1	sealed	GN	1.9
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	35	35.1	0.1	sealed	GN	1.98
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	35.1	35.2	0.1	sealed	GN	1.97
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	35.2	35.3	0.1	sealed	GN	1.99
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	35.3	35.4	0.1	sealed	GN	1.93
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	35.4	35.5	0.1	sealed	GN	1.9
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	35.5	35.6	0.1	sealed	GN	1.94
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	35.6	35.7	0.1	sealed	GN	3.72
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	35.7	35.8	0.1	sealed	GN	3.9
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	35.8	35.9	0.1	sealed	GN	3.72
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	35.9	36	0.1	sealed	GN	3.88
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	36	36.1	0.1	sealed	GN	3.86
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	36.1	36.2	0.1	sealed	GN	3.87
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	36.2	36.3	0.1	sealed	GN	3.91
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	36.3	36.4	0.1	sealed	GN	3.73
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	36.4	36.5	0.1	sealed	GN	3.72
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	36.5	36.6	0.1	sealed	GN	3.72
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	36.6	36.7	0.1	sealed	GN	1.88
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	36.7	36.8	0.1	sealed	GN	1.91
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	36.8	36.9	0.1	sealed	GN	1.9
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	36.9	37	0.1	sealed	GN	1.83
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	37	37.1	0.1	sealed	GN	1.83
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	37.1	37.2	0.1	sealed	GN	1.93
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	37.2	37.3	0.1	sealed	GN	1.94

Table 3
Marginal cost data for sealed segments of the selected road sections

D'AGUILAR HIGHWAY (CABOOL	40A	1	1	37.3	37.4	0.1	sealed	GN	1.93
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	37.4	37.5	0.1	sealed	GN	1.92
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	37.5	37.6	0.1	sealed	GN	1.83
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	37.6	37.7	0.1	sealed	GN	1.83
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	37.7	37.8	0.1	sealed	GN	1.83
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	37.8	37.9	0.1	sealed	GN	1.83
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	37.9	38	0.1	sealed	GN	1.87
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	38	38.1	0.1	sealed	GN	1.83
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	38.1	38.2	0.1	sealed	GN	1.79
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	38.2	38.3	0.1	sealed	GN	3.43
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	38.3	38.4	0.1	sealed	GN	3.37
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	38.4	38.5	0.1	sealed	GN	3.5
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	38.5	38.6	0.1	sealed	GN	3.52
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	38.6	38.7	0.1	sealed	GN	3.3
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	38.7	38.8	0.1	sealed	GN	3.62
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	38.8	38.9	0.1	sealed	AC	4.36
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	38.9	39	0.1	sealed	GN	3.96
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	39	39.1	0.1	sealed	GN	6.46
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	39.1	39.2	0.1	sealed	GN	5.6
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	39.2	39.3	0.1	sealed	GN	4.66
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	39.3	39.4	0.1	sealed	GN	3.84
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	39.4	39.5	0.1	sealed	GN	3.81
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	39.5	39.6	0.1	sealed	GN	4.1
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	39.6	39.7	0.1	sealed	GN	4.98
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	39.7	39.8	0.1	sealed	GN	5.05
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	39.8	39.9	0.1	sealed	GN	3.92
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	39.9	40	0.1	sealed	GN	3.85
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	40	40.1	0.1	sealed	GN	3.88
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	40.1	40.2	0.1	sealed	GN	3.86
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	40.2	40.3	0.1	sealed	GN	3.9
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	40.3	40.4	0.1	sealed	GN	3.81
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	40.4	40.5	0.1	sealed	GN	3.88
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	40.5	40.6	0.1	sealed	GN	3.86
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	40.6	40.7	0.1	sealed	GN	3.83
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	40.7	40.8	0.1	sealed	GN	3.98
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	40.8	40.9	0.1	sealed	GN	3.85
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	40.9	41	0.1	sealed	GN	3.77
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	41	41.1	0.1	sealed	GN	3.73
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	41.1	41.2	0.1	sealed	GN	3.7
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	41.2	41.3	0.1	sealed	GN	3.85
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	41.3	41.4	0.1	sealed	GN	3.87
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	41.4	41.5	0.1	sealed	GN	3.81
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	41.5	41.6	0.1	sealed	GN	3.68
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	41.6	41.7	0.1	sealed	GN	3.78
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	41.7	41.8	0.1	sealed	GN	3.78
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	41.8	41.9	0.1	sealed	GN	3.81
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	41.9	42	0.1	sealed	GN	3.8
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	42	42.1	0.1	sealed	GN	3.76
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	42.1	42.2	0.1	sealed	GN	3.82
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	42.2	42.3	0.1	sealed	GN	3.83
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	42.3	42.4	0.1	sealed	GN	3.58
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	42.4	42.5	0.1	sealed	GN	3.53
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	42.5	42.6	0.1	sealed	GN	3.48
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	42.6	42.7	0.1	sealed	GN	3.51
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	42.7	42.8	0.1	sealed	GN	3.51
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	42.8	42.9	0.1	sealed	GN	3.58
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	42.9	43	0.1	sealed	GN	3.52
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	43	43.1	0.1	sealed	GN	3.64
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	43.1	43.2	0.1	sealed	GN	3.36
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	43.2	43.3	0.1	sealed	GN	3.43
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	43.3	43.4	0.1	sealed	GN	3.49
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	43.4	43.5	0.1	sealed	GN	3.65
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	43.5	43.6	0.1	sealed	GN	3.61
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	43.6	43.7	0.1	sealed	GN	3.69
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	43.7	43.8	0.1	sealed	GN	3.56
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	43.8	43.9	0.1	sealed	GN	3.44
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	43.9	44	0.1	sealed	GN	3.27
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	44	44.1	0.1	sealed	GN	3.38
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	44.1	44.2	0.1	sealed	GN	3.53
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	44.2	44.3	0.1	sealed	GN	3.69
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	44.3	44.4	0.1	sealed	GN	3.63
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	44.4	44.5	0.1	sealed	GN	3.46
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	44.5	44.6	0.1	sealed	GN	3.41
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	44.6	44.7	0.1	sealed	GN	3.64
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	44.7	44.8	0.1	sealed	GN	3.65
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	44.8	44.9	0.1	sealed	GN	3.97
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	44.9	45	0.1	sealed	GN	3.97
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	45	45.1	0.1	sealed	GN	3.88
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	45.1	45.2	0.1	sealed	GN	3.91
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	45.2	45.3	0.1	sealed	GN	3.9
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	45.3	45.4	0.1	sealed	AC	4.4
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	45.4	45.5	0.1	sealed	GN	3.53
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	45.5	45.6	0.1	sealed	AC	4.36
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	45.6	45.7	0.1	sealed	GN	3.75
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	45.7	45.8	0.1	sealed	GN	3.85
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	45.8	45.9	0.1	sealed	GN	4.18
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	45.9	46	0.1	sealed	GN	4.31
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	46	46.1	0.1	sealed	GN	3.62
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	46.1	46.2	0.1	sealed	GN	3.68
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	46.2	46.3	0.1	sealed	GN	3.94
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	46.3	46.4	0.1	sealed	GN	3.99
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	46.4	46.5	0.1	sealed	GN	3.18
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	46.5	46.6	0.1	sealed	GN	3.28
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	46.6	46.7	0.1	sealed	GN	3.29
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	46.7	46.8	0.1	sealed	GN	3.15
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	46.8	46.9	0.1	sealed	GN	3.15
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	46.9	47	0.1	sealed	GN	3
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	47	47.1	0.1	sealed	GN	3.03
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	47.1	47.2	0.1	sealed	GN	2.99
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	47.2	47.3	0.1	sealed	GN	2.96
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	47.3	47.4	0.1	sealed	GN	2.94
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	47.4	47.5	0.1	sealed	GN	4.28
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	47.5	47.6	0.1	sealed	GN	3.28
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	47.6	47.7	0.1	sealed	AC	4.11
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	47.7	47.8	0.1	sealed	GN	2.98
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	47.8	47.9	0.1	sealed	GN	2.95

Table 3
Marginal cost data for sealed segments of the selected road sections

D'AGUILAR HIGHWAY (CABOOL	40A	1	1	47.9	48	0.1	sealed	GN	3.1
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	48	48.1	0.1	sealed	GN	3.09
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	48.1	48.2	0.1	sealed	GN	2.88
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	48.2	48.3	0.1	sealed	GN	3.51
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	48.3	48.4	0.1	sealed	GN	2.88
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	48.4	48.5	0.1	sealed	GN	4.72
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	48.5	48.6	0.1	sealed	GN	3.66
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	48.6	48.7	0.1	sealed	GN	3
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	48.7	48.8	0.1	sealed	GN	3.3
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	48.8	48.9	0.1	sealed	GN	3.28
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	48.9	49	0.1	sealed	GN	3.15
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	49	49.1	0.1	sealed	GN	3.23
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	49.1	49.2	0.1	sealed	GN	3.38
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	49.2	49.3	0.1	sealed	AC	1.67
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	49.3	49.4	0.1	sealed	GN	3.44
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	49.4	49.5	0.1	sealed	GN	3.39
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	49.5	49.6	0.1	sealed	GN	3.43
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	49.6	49.7	0.1	sealed	GN	3.18
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	49.7	49.8	0.1	sealed	GN	1.63
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	49.8	49.9	0.1	sealed	GN	2.44
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	49.9	50	0.1	sealed	GN	2.48
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	50	50.1	0.1	sealed	GN	2.71
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	50.1	50.2	0.1	sealed	GN	2.67
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	50.2	50.3	0.1	sealed	AC	3.34
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	50.3	50.4	0.1	sealed	AC	5.45
D'AGUILAR HIGHWAY (CABOOL	40A	1	1	50.4	50.41	0.01	sealed	AC	4.98
D'AGUILAR HIGHWAY (CABOOL	40A	1	2	50.41	50.5	0.09	sealed	AC	4.98
D'AGUILAR HIGHWAY (CABOOL	40A	1	2	50.5	50.53	0.03	sealed	AC	1.11
MARY VALLEY LINK ROAD	480	1	2	0	0.1	0.1	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	3	3	0	0.1	0.1	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	2	0.1	0.11	0.01	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	3	3	0.1	0.11	0.01	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	1	0.11	0.2	0.09	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	1	0.2	0.3	0.1	sealed	MC	
MARY VALLEY LINK ROAD	480	1	1	0.3	0.39	0.09	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	2	0.39	0.4	0.01	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	3	3	0.39	0.4	0.01	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	2	0.4	0.5	0.1	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	3	3	0.4	0.5	0.1	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	2	0.5	0.51	0.01	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	3	3	0.5	0.51	0.01	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	2	0.51	0.6	0.09	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	2	0.6	0.66	0.06	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	2	0.66	0.7	0.04	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	3	3	0.66	0.7	0.04	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	2	0.7	0.8	0.1	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	3	3	0.7	0.8	0.1	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	2	0.8	0.9	0.1	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	3	3	0.8	0.9	0.1	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	2	0.9	0.91	0.01	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	3	3	0.9	0.91	0.01	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	1	0.91	1	0.09	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	1	1	1.1	0.1	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	1	1.1	1.2	0.1	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	1	1.2	1.3	0.1	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	1	1.3	1.4	0.1	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	1	1.4	1.5	0.1	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	1	1.5	1.6	0.1	sealed	MC	
MARY VALLEY LINK ROAD	480	1	1	1.6	1.7	0.1	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	1	1.7	1.8	0.1	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	1	1.8	1.9	0.1	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	1	1.9	2	0.1	sealed	MC	
MARY VALLEY LINK ROAD	480	1	1	2	2.1	0.1	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	1	2.1	2.2	0.1	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	1	2.2	2.3	0.1	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	1	2.3	2.4	0.1	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	1	2.4	2.5	0.1	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	1	2.5	2.6	0.1	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	1	2.6	2.7	0.1	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	1	2.7	2.8	0.1	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	1	2.8	2.9	0.1	sealed	AC	4.88
MARY VALLEY LINK ROAD	480	1	1	2.9	2.98	0.08	sealed	AC	4.88
KENILWORTH - BROOLOO ROAI	481	1	1	13.8	13.9	0.1	sealed	GN	15.3
KENILWORTH - BROOLOO ROAI	481	1	1	13.9	14	0.1	sealed	GN	15.3
KENILWORTH - BROOLOO ROAI	481	1	1	14	14.1	0.1	sealed	GN	15.3
KENILWORTH - BROOLOO ROAI	481	1	1	14.1	14.2	0.1	sealed	GN	15.3
KENILWORTH - BROOLOO ROAI	481	1	1	14.2	14.21	0.01	sealed	GN	15.3
GYMPIE - BROOLOO ROAD	483	1	1	17.4	17.5	0.1	sealed	AC	8.81
GYMPIE - BROOLOO ROAD	483	1	1	17.5	17.6	0.1	sealed	AC	11.78
GYMPIE - BROOLOO ROAD	483	1	1	17.6	17.7	0.1	sealed	AC	11.8
GYMPIE - BROOLOO ROAD	483	1	1	17.7	17.8	0.1	sealed	AC	9.19
GYMPIE - BROOLOO ROAD	483	1	1	17.8	17.9	0.1	sealed	GN	3.7
GYMPIE - BROOLOO ROAD	483	1	1	17.9	18	0.1	sealed	GN	4.18
GYMPIE - BROOLOO ROAD	483	1	1	18	18.1	0.1	sealed	GN	3.96
GYMPIE - BROOLOO ROAD	483	1	1	18.1	18.2	0.1	sealed	GN	3.76
GYMPIE - BROOLOO ROAD	483	1	1	18.2	18.3	0.1	sealed	GN	3.28
GYMPIE - BROOLOO ROAD	483	1	1	18.3	18.4	0.1	sealed	GN	3.8
GYMPIE - BROOLOO ROAD	483	1	1	18.4	18.5	0.1	sealed	GN	3.64
GYMPIE - BROOLOO ROAD	483	1	1	18.5	18.6	0.1	sealed	GN	2.74
GYMPIE - BROOLOO ROAD	483	1	1	18.6	18.7	0.1	sealed	AC	7.14
GYMPIE - BROOLOO ROAD	483	1	1	18.7	18.8	0.1	sealed	GN	5.59
GYMPIE - BROOLOO ROAD	483	1	1	18.8	18.9	0.1	sealed	GN	6.17
GYMPIE - BROOLOO ROAD	483	1	1	18.9	19	0.1	sealed	GN	5.28
GYMPIE - BROOLOO ROAD	483	1	1	19	19.1	0.1	sealed	GN	12.41
GYMPIE - BROOLOO ROAD	483	1	1	19.1	19.2	0.1	sealed	GN	2.86
GYMPIE - BROOLOO ROAD	483	1	1	19.2	19.3	0.1	sealed	GN	2.75
GYMPIE - BROOLOO ROAD	483	1	1	19.3	19.4	0.1	sealed	GN	3.08
GYMPIE - BROOLOO ROAD	483	1	1	19.4	19.5	0.1	sealed	GN	2.74
GYMPIE - BROOLOO ROAD	483	1	1	19.5	19.6	0.1	sealed	GN	9.73
GYMPIE - BROOLOO ROAD	483	1	1	19.6	19.7	0.1	sealed	GN	12.42
GYMPIE - BROOLOO ROAD	483	1	1	19.7	19.8	0.1	sealed	GN	13.38
GYMPIE - BROOLOO ROAD	483	1	1	19.8	19.9	0.1	sealed	GN	10.18
GYMPIE - BROOLOO ROAD	483	1	1	19.9	20	0.1	sealed	GN	3.53
GYMPIE - BROOLOO ROAD	483	1	1	20	20.1	0.1	sealed	GN	3.87
GYMPIE - BROOLOO ROAD	483	1	1	20.1	20.2	0.1	sealed	GN	9.51
GYMPIE - BROOLOO ROAD	483	1	1	20.2	20.3	0.1	sealed	GN	9.92

Table 3
Marginal cost data for sealed segments of the selected road sections

GYMPIE - BROOLOO ROAD	483	1	1	20.3	20.4	0.1	sealed	GN	3.45
GYMPIE - BROOLOO ROAD	483	1	1	20.4	20.5	0.1	sealed	GN	2.69
GYMPIE - BROOLOO ROAD	483	1	1	20.5	20.6	0.1	sealed	GN	3.43
GYMPIE - BROOLOO ROAD	483	1	1	20.6	20.7	0.1	sealed	GN	2.72
GYMPIE - BROOLOO ROAD	483	1	1	20.7	20.8	0.1	sealed	GN	2.64
GYMPIE - BROOLOO ROAD	483	1	1	20.8	20.9	0.1	sealed	GN	9.1
GYMPIE - BROOLOO ROAD	483	1	1	20.9	21	0.1	sealed	GN	2.82
GYMPIE - BROOLOO ROAD	483	1	1	21	21.1	0.1	sealed	GN	3.35
GYMPIE - BROOLOO ROAD	483	1	1	21.1	21.2	0.1	sealed	GN	2.71
GYMPIE - BROOLOO ROAD	483	1	1	21.2	21.3	0.1	sealed	GN	9.94
GYMPIE - BROOLOO ROAD	483	1	1	21.3	21.4	0.1	sealed	GN	3.27
GYMPIE - BROOLOO ROAD	483	1	1	21.4	21.5	0.1	sealed	AC	3.11
GYMPIE - BROOLOO ROAD	483	1	1	21.5	21.6	0.1	sealed	AC	2.84
GYMPIE - BROOLOO ROAD	483	1	1	21.6	21.7	0.1	sealed	AC	2.85
GYMPIE - BROOLOO ROAD	483	1	1	21.7	21.8	0.1	sealed	AC	3.05
GYMPIE - BROOLOO ROAD	483	1	1	21.8	21.9	0.1	sealed	GN	9.6
GYMPIE - BROOLOO ROAD	483	1	1	21.9	22	0.1	sealed	GN	15.02
GYMPIE - BROOLOO ROAD	483	1	1	22	22.1	0.1	sealed	GN	4.42
GYMPIE - BROOLOO ROAD	483	1	1	22.1	22.2	0.1	sealed	GN	3.78
GYMPIE - BROOLOO ROAD	483	1	1	22.2	22.3	0.1	sealed	GN	16.43
GYMPIE - BROOLOO ROAD	483	1	1	22.3	22.4	0.1	sealed	GN	15.68
GYMPIE - BROOLOO ROAD	483	1	1	22.4	22.5	0.1	sealed	GN	16.71
GYMPIE - BROOLOO ROAD	483	1	1	22.5	22.6	0.1	sealed	GN	3.56
GYMPIE - BROOLOO ROAD	483	1	1	22.6	22.7	0.1	sealed	GN	15.88
GYMPIE - BROOLOO ROAD	483	1	1	22.7	22.8	0.1	sealed	GN	12.13
GYMPIE - BROOLOO ROAD	483	1	1	22.8	22.9	0.1	sealed	MC	
GYMPIE - BROOLOO ROAD	483	1	1	22.9	23	0.1	sealed	GN	6.33
GYMPIE - BROOLOO ROAD	483	1	1	23	23.1	0.1	sealed	GN	11.51
GYMPIE - BROOLOO ROAD	483	1	1	23.1	23.2	0.1	sealed	GN	4
GYMPIE - BROOLOO ROAD	483	1	1	23.2	23.3	0.1	sealed	GN	7.16
GYMPIE - BROOLOO ROAD	483	1	1	23.3	23.4	0.1	sealed	GN	9.47
GYMPIE - BROOLOO ROAD	483	1	1	23.4	23.5	0.1	sealed	GN	13.54
GYMPIE - BROOLOO ROAD	483	1	1	23.5	23.6	0.1	sealed	GN	13.66
GYMPIE - BROOLOO ROAD	483	1	1	23.6	23.7	0.1	sealed	GN	13.03
GYMPIE - BROOLOO ROAD	483	1	1	23.7	23.8	0.1	sealed	GN	11.25
GYMPIE - BROOLOO ROAD	483	1	1	23.8	23.9	0.1	sealed	GN	4.24
GYMPIE - BROOLOO ROAD	483	1	1	23.9	24	0.1	sealed	GN	28.77
GYMPIE - BROOLOO ROAD	483	1	1	24	24.1	0.1	sealed	GN	20.76
GYMPIE - BROOLOO ROAD	483	1	1	24.1	24.2	0.1	sealed	GN	20.88
GYMPIE - BROOLOO ROAD	483	1	1	24.2	24.3	0.1	sealed	AC	12.29
GYMPIE - BROOLOO ROAD	483	1	1	24.3	24.4	0.1	sealed	GN	12.37
GYMPIE - BROOLOO ROAD	483	1	1	24.4	24.5	0.1	sealed	GN	10
GYMPIE - BROOLOO ROAD	483	1	1	24.5	24.6	0.1	sealed	GN	3.21
GYMPIE - BROOLOO ROAD	483	1	1	24.6	24.7	0.1	sealed	GN	8.39
GYMPIE - BROOLOO ROAD	483	1	1	24.7	24.8	0.1	sealed	GN	8.53
GYMPIE - BROOLOO ROAD	483	1	1	24.8	24.9	0.1	sealed	GN	10.22
GYMPIE - BROOLOO ROAD	483	1	1	24.9	25	0.1	sealed	GN	14.38
GYMPIE - BROOLOO ROAD	483	1	1	25	25.1	0.1	sealed	GN	9.28
GYMPIE - BROOLOO ROAD	483	1	1	25.1	25.2	0.1	sealed	GN	10.29
GYMPIE - BROOLOO ROAD	483	1	1	25.2	25.3	0.1	sealed	GN	26.64
GYMPIE - BROOLOO ROAD	483	1	1	25.3	25.4	0.1	sealed	GN	29.78
GYMPIE - BROOLOO ROAD	483	1	1	25.4	25.5	0.1	sealed	GN	17.34
GYMPIE - BROOLOO ROAD	483	1	1	25.5	25.6	0.1	sealed	GN	8.31
GYMPIE - BROOLOO ROAD	483	1	1	25.6	25.7	0.1	sealed	GN	8.31
GYMPIE - BROOLOO ROAD	483	1	1	25.7	25.8	0.1	sealed	GN	13.87
GYMPIE - BROOLOO ROAD	483	1	1	25.8	25.9	0.1	sealed	GN	23.68
GYMPIE - BROOLOO ROAD	483	1	1	25.9	26	0.1	sealed	GN	26.77
GYMPIE - BROOLOO ROAD	483	1	1	26	26.1	0.1	sealed	GN	25.67
GYMPIE - BROOLOO ROAD	483	1	1	26.1	26.2	0.1	sealed	GN	20.58
GYMPIE - BROOLOO ROAD	483	1	1	26.2	26.3	0.1	sealed	GN	18.99
GYMPIE - BROOLOO ROAD	483	1	1	26.3	26.4	0.1	sealed	GN	14.44
GYMPIE - BROOLOO ROAD	483	1	1	26.4	26.5	0.1	sealed	GN	23.39
GYMPIE - BROOLOO ROAD	483	1	1	26.5	26.6	0.1	sealed	GN	18.56
GYMPIE - BROOLOO ROAD	483	1	1	26.6	26.7	0.1	sealed	GN	20.94
GYMPIE - BROOLOO ROAD	483	1	1	26.7	26.8	0.1	sealed	GN	26.71
GYMPIE - BROOLOO ROAD	483	1	1	26.8	26.9	0.1	sealed	GN	26.64
GYMPIE - BROOLOO ROAD	483	1	1	26.9	27	0.1	sealed	GN	27.15
GYMPIE - BROOLOO ROAD	483	1	1	27	27.1	0.1	sealed	GN	26.69
GYMPIE - BROOLOO ROAD	483	1	1	27.1	27.2	0.1	sealed	GN	26.54
GYMPIE - BROOLOO ROAD	483	1	1	27.2	27.3	0.1	sealed	GN	19.73
GYMPIE - BROOLOO ROAD	483	1	1	27.3	27.4	0.1	sealed	GN	3.45
GYMPIE - BROOLOO ROAD	483	1	1	27.4	27.5	0.1	sealed	GN	3.35
GYMPIE - BROOLOO ROAD	483	1	1	27.5	27.6	0.1	sealed	GN	25.07
GYMPIE - BROOLOO ROAD	483	1	1	27.6	27.7	0.1	sealed	GN	3.33
GYMPIE - BROOLOO ROAD	483	1	1	27.7	27.8	0.1	sealed	GN	9.78
GYMPIE - BROOLOO ROAD	483	1	1	27.8	27.9	0.1	sealed	GN	11.96
GYMPIE - BROOLOO ROAD	483	1	1	27.9	28	0.1	sealed	GN	13.88
GYMPIE - BROOLOO ROAD	483	1	1	28	28.1	0.1	sealed	GN	20.91
GYMPIE - BROOLOO ROAD	483	1	1	28.1	28.2	0.1	sealed	GN	9.99
GYMPIE - BROOLOO ROAD	483	1	1	28.2	28.3	0.1	sealed	GN	8.19
GYMPIE - BROOLOO ROAD	483	1	1	28.3	28.4	0.1	sealed	GN	8.27
GYMPIE - BROOLOO ROAD	483	1	1	28.4	28.5	0.1	sealed	GN	19.13
GYMPIE - BROOLOO ROAD	483	1	1	28.5	28.6	0.1	sealed	GN	28.45
GYMPIE - BROOLOO ROAD	483	1	1	28.6	28.7	0.1	sealed	GN	16.76
GYMPIE - BROOLOO ROAD	483	1	1	28.7	28.8	0.1	sealed	GN	17.63
GYMPIE - BROOLOO ROAD	483	1	1	28.8	28.9	0.1	sealed	GN	21.48
GYMPIE - BROOLOO ROAD	483	1	1	28.9	29	0.1	sealed	GN	10.01
GYMPIE - BROOLOO ROAD	483	1	1	29	29.1	0.1	sealed	GN	7.59
GYMPIE - BROOLOO ROAD	483	1	1	29.1	29.2	0.1	sealed	GN	9.54
GYMPIE - BROOLOO ROAD	483	1	1	29.2	29.3	0.1	sealed	GN	10.53
GYMPIE - BROOLOO ROAD	483	1	1	29.3	29.4	0.1	sealed	GN	8.95
GYMPIE - BROOLOO ROAD	483	1	1	29.4	29.5	0.1	sealed	GN	3.54
GYMPIE - BROOLOO ROAD	483	1	1	29.5	29.6	0.1	sealed	GN	27.33
GYMPIE - BROOLOO ROAD	483	1	1	29.6	29.7	0.1	sealed	GN	17.05
GYMPIE - BROOLOO ROAD	483	1	1	29.7	29.8	0.1	sealed	GN	4.65
GYMPIE - BROOLOO ROAD	483	1	1	29.8	29.9	0.1	sealed	GN	10.95
GYMPIE - BROOLOO ROAD	483	1	1	29.9	30	0.1	sealed	AC	12.75
GYMPIE - BROOLOO ROAD	483	1	1	30	30.1	0.1	sealed	GN	9.84
GYMPIE - BROOLOO ROAD	483	1	1	30.1	30.2	0.1	sealed	GN	2.75
GYMPIE - BROOLOO ROAD	483	1	1	30.2	30.3	0.1	sealed	GN	2.95
GYMPIE - BROOLOO ROAD	483	1	1	30.3	30.4	0.1	sealed	GN	2.78
GYMPIE - BROOLOO ROAD	483	1	1	30.4	30.5	0.1	sealed	GN	2.81
GYMPIE - BROOLOO ROAD	483	1	1	30.5	30.6	0.1	sealed	GN	1.97
GYMPIE - BROOLOO ROAD	483	1	1	30.6	30.7	0.1	sealed	GN	1.93
GYMPIE - BROOLOO ROAD	483	1	1	30.7	30.8	0.1	sealed	GN	1.93
GYMPIE - BROOLOO ROAD	483	1	1	30.8	30.9	0.1	sealed	GN	1.94

Table 3
Marginal cost data for sealed segments of the selected road sections

GYMPIE - BROOLOO ROAD	483	1	1	30.9	31	0.1	sealed	GN	1.52
GYMPIE - BROOLOO ROAD	483	1	1	31	31.1	0.1	sealed	GN	7.6
GYMPIE - BROOLOO ROAD	483	1	1	31.1	31.2	0.1	sealed	GN	2.27
GYMPIE - BROOLOO ROAD	483	1	1	31.2	31.3	0.1	sealed	GN	2.6
GYMPIE - BROOLOO ROAD	483	1	1	31.3	31.4	0.1	sealed	GN	2.32
GYMPIE - BROOLOO ROAD	483	1	1	31.4	31.5	0.1	sealed	GN	5.87
GYMPIE - BROOLOO ROAD	483	1	1	31.5	31.6	0.1	sealed	GN	2.66
GYMPIE - BROOLOO ROAD	483	1	1	31.6	31.7	0.1	sealed	GN	2.23
GYMPIE - BROOLOO ROAD	483	1	1	31.7	31.8	0.1	sealed	GN	7.58
GYMPIE - BROOLOO ROAD	483	1	1	31.8	31.9	0.1	sealed	GN	2.65
GYMPIE - BROOLOO ROAD	483	1	1	31.9	32	0.1	sealed	GN	2.27
GYMPIE - BROOLOO ROAD	483	1	1	32	32.1	0.1	sealed	GN	2.91
GYMPIE - BROOLOO ROAD	483	1	1	32.1	32.2	0.1	sealed	GN	2.02
GYMPIE - BROOLOO ROAD	483	1	1	32.2	32.3	0.1	sealed	GN	1.9
GYMPIE - BROOLOO ROAD	483	1	1	32.3	32.4	0.1	sealed	GN	2.1
GYMPIE - BROOLOO ROAD	483	1	1	32.4	32.5	0.1	sealed	GN	2.29
GYMPIE - BROOLOO ROAD	483	1	1	32.5	32.6	0.1	sealed	GN	2.57
GYMPIE - BROOLOO ROAD	483	1	1	32.6	32.7	0.1	sealed	GN	3.27
GYMPIE - BROOLOO ROAD	483	1	1	32.7	32.8	0.1	sealed	GN	7.95
GYMPIE - BROOLOO ROAD	483	1	1	32.8	32.9	0.1	sealed	GN	9.07
GYMPIE - BROOLOO ROAD	483	1	1	32.9	33	0.1	sealed	GN	6.82
GYMPIE - BROOLOO ROAD	483	1	1	33	33.1	0.1	sealed	GN	6.17
GYMPIE - BROOLOO ROAD	483	1	1	33.1	33.2	0.1	sealed	GN	9.46
GYMPIE - BROOLOO ROAD	483	1	1	33.2	33.3	0.1	sealed	GN	9.65
GYMPIE - BROOLOO ROAD	483	1	1	33.3	33.4	0.1	sealed	GN	16.62
GYMPIE - BROOLOO ROAD	483	1	1	33.4	33.5	0.1	sealed	GN	23.13
GYMPIE - BROOLOO ROAD	483	1	1	33.5	33.6	0.1	sealed	GN	20.79
GYMPIE - BROOLOO ROAD	483	1	1	33.6	33.7	0.1	sealed	GN	20.12
GYMPIE - BROOLOO ROAD	483	1	1	33.7	33.8	0.1	sealed	GN	20.61
GYMPIE - BROOLOO ROAD	483	1	1	33.8	33.9	0.1	sealed	GN	20.84
GYMPIE - BROOLOO ROAD	483	1	1	33.9	34	0.1	sealed	GN	18.76
GYMPIE - BROOLOO ROAD	483	1	1	34	34.1	0.1	sealed	GN	15.9
GYMPIE - BROOLOO ROAD	483	1	1	34.1	34.2	0.1	sealed	GN	20.57
GYMPIE - BROOLOO ROAD	483	1	1	34.2	34.3	0.1	sealed	AC	12.44
GYMPIE - BROOLOO ROAD	483	1	1	34.3	34.4	0.1	sealed	AC	10.43
GYMPIE - BROOLOO ROAD	483	1	1	34.4	34.5	0.1	sealed	AC	16.75
GYMPIE - BROOLOO ROAD	483	1	1	34.5	34.6	0.1	sealed	GN	19.37
GYMPIE - BROOLOO ROAD	483	1	1	34.6	34.7	0.1	sealed	GN	14.07
GYMPIE - BROOLOO ROAD	483	1	1	34.7	34.8	0.1	sealed	GN	24.72
GYMPIE - BROOLOO ROAD	483	1	1	34.8	34.9	0.1	sealed	GN	22.95
GYMPIE - BROOLOO ROAD	483	1	1	34.9	35	0.1	sealed	GN	23.01
GYMPIE - BROOLOO ROAD	483	1	1	35	35.1	0.1	sealed	GN	18
GYMPIE - BROOLOO ROAD	483	1	1	35.1	35.2	0.1	sealed	GN	23.8
GYMPIE - BROOLOO ROAD	483	1	1	35.2	35.3	0.1	sealed	GN	18.93
GYMPIE - BROOLOO ROAD	483	1	1	35.3	35.4	0.1	sealed	GN	20.29
GYMPIE - BROOLOO ROAD	483	1	1	35.4	35.5	0.1	sealed	GN	2.38
GYMPIE - BROOLOO ROAD	483	1	1	35.5	35.6	0.1	sealed	GN	6.86
GYMPIE - BROOLOO ROAD	483	1	1	35.6	35.7	0.1	sealed	GN	2.31
GYMPIE - BROOLOO ROAD	483	1	1	35.7	35.8	0.1	sealed	GN	2.99
GYMPIE - BROOLOO ROAD	483	1	1	35.8	35.9	0.1	sealed	GN	18.89
GYMPIE - BROOLOO ROAD	483	1	1	35.9	36	0.1	sealed	GN	15.41
GYMPIE - BROOLOO ROAD	483	1	1	36	36.1	0.1	sealed	GN	16.58
GYMPIE - BROOLOO ROAD	483	1	1	36.1	36.2	0.1	sealed	GN	14.78
GYMPIE - BROOLOO ROAD	483	1	1	36.2	36.3	0.1	sealed	GN	16.93
GYMPIE - BROOLOO ROAD	483	1	1	36.3	36.4	0.1	sealed	GN	16.58
GYMPIE - BROOLOO ROAD	483	1	1	36.4	36.5	0.1	sealed	GN	15.05
GYMPIE - BROOLOO ROAD	483	1	1	36.5	36.6	0.1	sealed	GN	3.25
GYMPIE - BROOLOO ROAD	483	1	1	36.6	36.7	0.1	sealed	GN	17.03
GYMPIE - BROOLOO ROAD	483	1	1	36.7	36.8	0.1	sealed	GN	15.89
GYMPIE - BROOLOO ROAD	483	1	1	36.8	36.9	0.1	sealed	GN	17.85
GYMPIE - BROOLOO ROAD	483	1	1	36.9	37	0.1	sealed	GN	15.43
GYMPIE - BROOLOO ROAD	483	1	1	37	37.1	0.1	sealed	GN	14.75
GYMPIE - BROOLOO ROAD	483	1	1	37.1	37.2	0.1	sealed	GN	17.36
GYMPIE - BROOLOO ROAD	483	1	1	37.2	37.3	0.1	sealed	GN	18.58
GYMPIE - BROOLOO ROAD	483	1	1	37.3	37.37	0.07	sealed	GN	15.63
YABBA CREEK ROAD	4832	1	1	0	0.1	0.1	sealed	AC	8.69
YABBA CREEK ROAD	4832	1	1	0.1	0.2	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	0.2	0.3	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	0.3	0.4	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	0.4	0.5	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	0.5	0.6	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	0.6	0.7	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	0.7	0.8	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	0.8	0.9	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	0.9	1	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	1	1.1	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	1.1	1.2	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	1.2	1.3	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	1.3	1.4	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	1.4	1.5	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	1.5	1.6	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	1.6	1.7	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	1.7	1.8	0.1	sealed	AC	8.69
YABBA CREEK ROAD	4832	1	1	1.8	1.9	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	1.9	2	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	2	2.1	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	2.1	2.2	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	2.2	2.3	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	2.3	2.4	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	2.4	2.5	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	2.5	2.6	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	2.6	2.7	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	2.7	2.8	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	2.8	2.9	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	2.9	3	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	3	3.1	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	3.1	3.2	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	3.2	3.3	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	3.3	3.4	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	3.4	3.5	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	3.5	3.6	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	3.6	3.7	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	3.7	3.8	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	3.8	3.9	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	3.9	4	0.1	sealed	AC	11.35
YABBA CREEK ROAD	4832	1	1	4	4.1	0.1	sealed	AC	11.35

Table 3
Marginal cost data for sealed segments of the selected road sections

YABBA CREEK ROAD	4832	1	1	4.1	4.2	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	4.2	4.3	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	4.3	4.4	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	4.4	4.5	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	4.5	4.6	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	4.6	4.7	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	4.7	4.8	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	4.8	4.9	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	4.9	5	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	5	5.1	0.1	sealed	GN	8.69
YABBA CREEK ROAD	4832	1	1	5.1	5.2	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	5.2	5.3	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	5.3	5.4	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	5.4	5.5	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	5.5	5.6	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	5.6	5.7	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	5.7	5.8	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	5.8	5.9	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	5.9	6	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	6	6.1	0.1	sealed	AC	8.69
YABBA CREEK ROAD	4832	1	1	6.1	6.2	0.1	sealed	AC	8.69
YABBA CREEK ROAD	4832	1	1	6.2	6.3	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	6.3	6.4	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	6.4	6.5	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	6.5	6.6	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	6.6	6.7	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	6.7	6.8	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	6.8	6.9	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	6.9	7	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	7	7.1	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	7.1	7.2	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	7.2	7.3	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	7.3	7.4	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	7.4	7.5	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	7.5	7.6	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	7.6	7.7	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	7.7	7.8	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	7.8	7.9	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	7.9	8	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	8	8.1	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	8.1	8.2	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	8.2	8.3	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	8.3	8.4	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	8.4	8.5	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	8.5	8.6	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	8.6	8.7	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	8.7	8.8	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	8.8	8.9	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	8.9	9	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	9	9.1	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	9.1	9.2	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	9.2	9.3	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	9.3	9.4	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	9.4	9.5	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	9.5	9.6	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	9.6	9.7	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	9.7	9.8	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	9.8	9.9	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	9.9	10	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	10	10.1	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	10.1	10.2	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	10.2	10.3	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	10.3	10.4	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	10.4	10.5	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	10.5	10.6	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	10.6	10.7	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	10.7	10.8	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	10.8	10.9	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	10.9	11	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	11	11.1	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	11.1	11.2	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	11.2	11.3	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	11.3	11.4	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	11.4	11.5	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	11.5	11.6	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	11.6	11.7	0.1	sealed	AC	8.69
YABBA CREEK ROAD	4832	1	1	11.7	11.8	0.1	sealed	AC	8.69
YABBA CREEK ROAD	4832	1	1	11.8	11.9	0.1	sealed	AC	8.69
YABBA CREEK ROAD	4832	1	1	11.9	12	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	12	12.1	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	12.1	12.2	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	12.2	12.3	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	12.3	12.4	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	12.4	12.5	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	12.5	12.6	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	12.6	12.7	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	12.7	12.8	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	12.8	12.9	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	12.9	13	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	13	13.1	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	13.1	13.2	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	13.2	13.3	0.1	sealed	GN	11.35
YABBA CREEK ROAD	4832	1	1	13.3	13.35	0.05	sealed	GN	11.35
KILCOY - MURGON ROAD	491	1	2	0	0.06	0.06	sealed	AC	4.88
KILCOY - MURGON ROAD	491	1	1	0.09	0.1	0.01	sealed	AC	4.88
KILCOY - MURGON ROAD	491	1	1	0.1	0.2	0.1	sealed	AC	4.88
KILCOY - MURGON ROAD	491	1	1	0.2	0.3	0.1	sealed	AC	4.88
KILCOY - MURGON ROAD	491	1	1	0.3	0.4	0.1	sealed	AC	4.88
KILCOY - MURGON ROAD	491	1	1	0.4	0.5	0.1	sealed	AC	4.88
KILCOY - MURGON ROAD	491	1	1	0.5	0.6	0.1	sealed	AC	4.88
KILCOY - MURGON ROAD	491	1	1	0.6	0.7	0.1	sealed	AC	4.88
KILCOY - MURGON ROAD	491	1	1	0.7	0.8	0.1	sealed	AC	4.88
KILCOY - MURGON ROAD	491	1	1	0.8	0.9	0.1	sealed	AC	4.88
KILCOY - MURGON ROAD	491	1	1	0.9	1	0.1	sealed	AC	4.88
KILCOY - MURGON ROAD	491	1	1	1	1.1	0.1	sealed	AC	4.88
KILCOY - MURGON ROAD	491	1	1	1.1	1.2	0.1	sealed	AC	4.88

Table 3
Marginal cost data for sealed segments of the selected road sections

KILCOY - MURGON ROAD	491	1	1	1.2	1.3	0.1	sealed	AC	4.88
KILCOY - MURGON ROAD	491	1	1	1.3	1.4	0.1	sealed	AC	4.88
KILCOY - MURGON ROAD	491	1	1	1.4	1.5	0.1	sealed	AC	4.88
KILCOY - MURGON ROAD	491	1	1	1.5	1.6	0.1	sealed	AC	4.88
KILCOY - MURGON ROAD	491	1	1	1.6	1.7	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	1.7	1.8	0.1	sealed	GN	9.21
KILCOY - MURGON ROAD	491	1	1	1.8	1.9	0.1	sealed	GN	9.21
KILCOY - MURGON ROAD	491	1	1	1.9	2	0.1	sealed	GN	9.21
KILCOY - MURGON ROAD	491	1	1	2	2.1	0.1	sealed	GN	9.21
KILCOY - MURGON ROAD	491	1	1	2.1	2.2	0.1	sealed	GN	9.21
KILCOY - MURGON ROAD	491	1	1	2.2	2.3	0.1	sealed	GN	9.21
KILCOY - MURGON ROAD	491	1	1	2.3	2.4	0.1	sealed	GN	9.21
KILCOY - MURGON ROAD	491	1	1	2.4	2.5	0.1	sealed	GN	9.21
KILCOY - MURGON ROAD	491	1	1	2.5	2.6	0.1	sealed	GN	9.21
KILCOY - MURGON ROAD	491	1	1	2.6	2.7	0.1	sealed	GN	9.21
KILCOY - MURGON ROAD	491	1	1	2.7	2.8	0.1	sealed	GN	9.21
KILCOY - MURGON ROAD	491	1	1	2.8	2.9	0.1	sealed	GN	9.21
KILCOY - MURGON ROAD	491	1	1	2.9	3	0.1	sealed	GN	9.21
KILCOY - MURGON ROAD	491	1	1	3	3.1	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	3.1	3.2	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	3.2	3.3	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	3.3	3.4	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	3.4	3.5	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	3.5	3.6	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	3.6	3.7	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	3.7	3.8	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	3.8	3.9	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	3.9	4	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	4	4.1	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	4.1	4.2	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	4.2	4.3	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	4.3	4.4	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	4.4	4.5	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	4.5	4.6	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	4.6	4.7	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	4.7	4.8	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	4.8	4.9	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	4.9	5	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	5	5.1	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	5.1	5.2	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	5.2	5.3	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	5.3	5.4	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	5.4	5.5	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	5.5	5.6	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	5.6	5.7	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	5.7	5.8	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	5.8	5.9	0.1	sealed	GN	4.88
KILCOY - MURGON ROAD	491	1	1	5.9	6	0.1	sealed	GN	4.88
KILCOY - MURGON ROAD	491	1	1	6	6.1	0.1	sealed	GN	4.88
KILCOY - MURGON ROAD	491	1	1	6.1	6.2	0.1	sealed	GN	4.88
KILCOY - MURGON ROAD	491	1	1	6.2	6.3	0.1	sealed	GN	4.88
KILCOY - MURGON ROAD	491	1	1	6.3	6.4	0.1	sealed	GN	4.88
KILCOY - MURGON ROAD	491	1	1	6.4	6.5	0.1	sealed	GN	4.88
KILCOY - MURGON ROAD	491	1	1	6.5	6.6	0.1	sealed	GN	4.88
KILCOY - MURGON ROAD	491	1	1	6.6	6.7	0.1	sealed	GN	4.88
KILCOY - MURGON ROAD	491	1	1	6.7	6.8	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	6.8	6.9	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	6.9	7	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	7	7.1	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	7.1	7.2	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	7.2	7.3	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	7.3	7.4	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	7.4	7.5	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	7.5	7.6	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	7.6	7.7	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	7.7	7.8	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	7.8	7.9	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	7.9	8	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	8	8.1	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	8.1	8.2	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	8.2	8.3	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	8.3	8.4	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	8.4	8.5	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	8.5	8.6	0.1	sealed	GN	15.67
KILCOY - MURGON ROAD	491	1	1	8.6	8.7	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	8.7	8.8	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	8.8	8.9	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	8.9	9	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	9	9.1	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	9.1	9.2	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	9.2	9.3	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	9.3	9.4	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	9.4	9.5	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	9.5	9.6	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	9.6	9.7	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	9.7	9.8	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	9.8	9.9	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	9.9	10	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	10	10.1	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	10.1	10.2	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	10.2	10.3	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	10.3	10.4	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	10.4	10.5	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	10.5	10.6	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	10.6	10.7	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	10.7	10.8	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	10.8	10.9	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	10.9	11	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	11	11.1	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	11.1	11.2	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	11.2	11.3	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	11.3	11.4	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	11.4	11.5	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	11.5	11.6	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	11.6	11.7	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	11.7	11.8	0.1	sealed	GN	21.03

Table 3
Marginal cost data for sealed segments of the selected road sections

KILCOY - MURGON ROAD	491	1	1	11.8	11.9	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	11.9	12	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	12	12.1	0.1	sealed	GN	4.23
KILCOY - MURGON ROAD	491	1	1	12.1	12.2	0.1	sealed	GN	4.23
KILCOY - MURGON ROAD	491	1	1	12.2	12.3	0.1	sealed	GN	4.23
KILCOY - MURGON ROAD	491	1	1	12.3	12.4	0.1	sealed	GN	4.23
KILCOY - MURGON ROAD	491	1	1	12.4	12.5	0.1	sealed	GN	4.23
KILCOY - MURGON ROAD	491	1	1	12.5	12.6	0.1	sealed	GN	4.23
KILCOY - MURGON ROAD	491	1	1	12.6	12.7	0.1	sealed	GN	4.23
KILCOY - MURGON ROAD	491	1	1	12.7	12.8	0.1	sealed	GN	4.23
KILCOY - MURGON ROAD	491	1	1	12.8	12.9	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	12.9	13	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	13	13.1	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	13.1	13.2	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	13.2	13.3	0.1	sealed	GN	4.23
KILCOY - MURGON ROAD	491	1	1	13.3	13.4	0.1	sealed	GN	4.23
KILCOY - MURGON ROAD	491	1	1	13.4	13.5	0.1	sealed	GN	4.23
KILCOY - MURGON ROAD	491	1	1	13.5	13.6	0.1	sealed	GN	4.23
KILCOY - MURGON ROAD	491	1	1	13.6	13.7	0.1	sealed	GN	4.23
KILCOY - MURGON ROAD	491	1	1	13.7	13.8	0.1	sealed	GN	4.23
KILCOY - MURGON ROAD	491	1	1	13.8	13.9	0.1	sealed	GN	4.23
KILCOY - MURGON ROAD	491	1	1	13.9	14	0.1	sealed	GN	4.23
KILCOY - MURGON ROAD	491	1	1	14	14.1	0.1	sealed	GN	23.1
KILCOY - MURGON ROAD	491	1	1	14.1	14.2	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	14.2	14.3	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	14.3	14.4	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	14.4	14.5	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	14.5	14.6	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	14.6	14.7	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	14.7	14.8	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	14.8	14.9	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	14.9	15	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	15	15.1	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	15.1	15.2	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	15.2	15.3	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	15.3	15.4	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	15.4	15.5	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	15.5	15.6	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	15.6	15.7	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	15.7	15.8	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	15.8	15.9	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	15.9	16	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	16	16.1	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	16.1	16.2	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	16.2	16.3	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	16.3	16.4	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	16.4	16.5	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	16.5	16.6	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	16.6	16.7	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	16.7	16.8	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	16.8	16.9	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	16.9	17	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	17	17.1	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	17.1	17.2	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	17.2	17.3	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	17.3	17.4	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	17.4	17.5	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	17.5	17.6	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	17.6	17.7	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	17.7	17.8	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	17.8	17.9	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	17.9	18	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	18	18.1	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	18.1	18.2	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	18.2	18.3	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	18.3	18.4	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	18.4	18.5	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	18.5	18.6	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	18.6	18.7	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	18.7	18.8	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	18.8	18.9	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	18.9	19	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	19	19.1	0.1	sealed	GN	21.03
KILCOY - MURGON ROAD	491	1	1	19.1	19.2	0.1	sealed	GN	23.1
KILCOY - MURGON ROAD	491	1	1	19.2	19.3	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	19.3	19.4	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	19.4	19.5	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	19.5	19.6	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	19.6	19.7	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	19.7	19.8	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	19.8	19.9	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	19.9	20	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	20	20.1	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	20.1	20.2	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	20.2	20.3	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	20.3	20.4	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	20.4	20.5	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	20.5	20.6	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	20.6	20.7	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	20.7	20.8	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	20.8	20.9	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	20.9	21	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	21	21.1	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	21.1	21.2	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	21.2	21.3	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	21.3	21.4	0.1	sealed	GN	15.3
KILCOY - MURGON ROAD	491	1	1	21.4	21.5	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	21.5	21.6	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	21.6	21.7	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	21.7	21.8	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	21.8	21.9	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	21.9	22	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	22	22.1	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	22.1	22.2	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	22.2	22.3	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	22.3	22.4	0.1	sealed	GN	4.45

Table 3
Marginal cost data for sealed segments of the selected road sections

KILCOY - MURGON ROAD	491	1	1	22.4	22.5	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	22.5	22.6	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	22.6	22.7	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	22.7	22.8	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	22.8	22.9	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	22.9	23	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	23	23.1	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	23.1	23.2	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	23.2	23.3	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	23.3	23.4	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	23.4	23.5	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	23.5	23.6	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	23.6	23.7	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	23.7	23.8	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	23.8	23.9	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	23.9	24	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	24	24.1	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	24.1	24.2	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	24.2	24.3	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	24.3	24.4	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	24.4	24.5	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	24.5	24.6	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	24.6	24.7	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	24.7	24.8	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	24.8	24.9	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	24.9	25	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	25	25.1	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	25.1	25.2	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	25.2	25.3	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	25.3	25.4	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	25.4	25.5	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	25.5	25.6	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	25.6	25.7	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	25.7	25.8	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	25.8	25.9	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	25.9	26	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	26	26.1	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	26.1	26.2	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	26.2	26.3	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	26.3	26.4	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	26.4	26.5	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	26.5	26.6	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	26.6	26.7	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	26.7	26.8	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	26.8	26.9	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	26.9	27	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	27	27.1	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	27.1	27.2	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	27.2	27.3	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	27.3	27.4	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	27.4	27.5	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	27.5	27.6	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	27.6	27.7	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	27.7	27.8	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	27.8	27.9	0.1	sealed	GN	4.45
KILCOY - MURGON ROAD	491	1	1	27.9	28	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	28	28.1	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	28.1	28.2	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	28.2	28.3	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	28.3	28.4	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	28.4	28.5	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	28.5	28.6	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	28.6	28.7	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	28.7	28.8	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	28.8	28.9	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	28.9	29	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	29	29.1	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	29.1	29.2	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	29.2	29.3	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	29.3	29.4	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	29.4	29.5	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	29.5	29.6	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	29.6	29.7	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	29.7	29.8	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	29.8	29.9	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	29.9	30	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	30	30.1	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	30.1	30.2	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	30.2	30.3	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	30.3	30.4	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	30.4	30.5	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	30.5	30.6	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	30.6	30.7	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	30.7	30.8	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	30.8	30.9	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	30.9	31	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	31	31.1	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	31.1	31.2	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	31.2	31.3	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	31.3	31.4	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	31.4	31.5	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	31.5	31.6	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	31.6	31.7	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	31.7	31.8	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	31.8	31.9	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	31.9	32	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	32	32.1	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	32.1	32.2	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	32.2	32.3	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	32.3	32.4	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	32.4	32.5	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	32.5	32.6	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	32.6	32.7	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	32.7	32.8	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	32.8	32.9	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	32.9	33	0.1	sealed	GN	4.41

Table 3
Marginal cost data for sealed segments of the selected road sections

KILCOY - MURGON ROAD	491	1	1	33	33.1	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	33.1	33.2	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	33.2	33.3	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	33.3	33.4	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	33.4	33.5	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	33.5	33.6	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	33.6	33.7	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	33.7	33.8	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	33.8	33.9	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	33.9	34	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	34	34.1	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	34.1	34.2	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	34.2	34.3	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	34.3	34.4	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	34.4	34.5	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	34.5	34.6	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	34.6	34.7	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	34.7	34.8	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	34.8	34.9	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	34.9	35	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	35	35.1	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	35.1	35.2	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	35.2	35.3	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	35.3	35.4	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	35.4	35.5	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	35.5	35.6	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	35.6	35.7	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	35.7	35.8	0.1	sealed	GN	4.41
KILCOY - MURGON ROAD	491	1	1	35.8	35.9	0.1	sealed	GN	4.41

Table 5

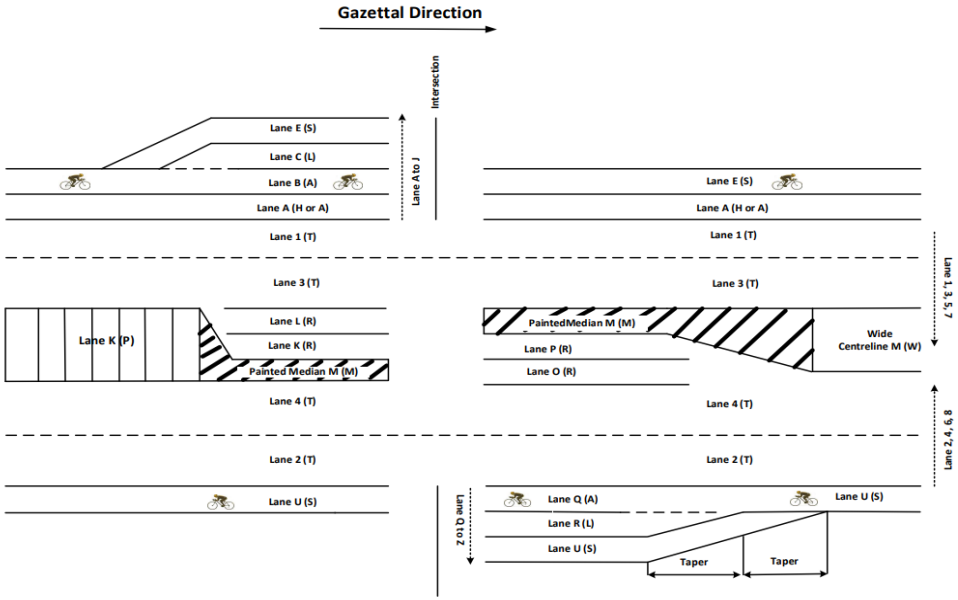
Annual average daily traffic data for sealed segments of the selected road sections

RoadName	ROAD_SECTION_ID	SUPERSET_CWAY	Direction	TDistStart	TDistEnd	SURFACE_TYPE_LABEL	AADT	AADT_YEAR	GROWTH_PC_5YR	AADT_NONHV	PERCENT_NONHV	AADT_HV	PERCENT_HV	ExistingSAR
D'AGUILAR HIGHWAY (CABOOLTU	40A	1	A	22.27	27.2	SEALED	6468	2023	3.84	5649	87.34	819	12.66	2620.8
D'AGUILAR HIGHWAY (CABOOLTU	40A	1	G	22.27	27.2	SEALED	6420	2023	3.44	3997	62.26	2423	37.74	7753.6
D'AGUILAR HIGHWAY (CABOOLTU	40A	1	A	27.2	29.71	SEALED	4275	2023	3.46	3653	85.46	622	14.54	1990.4
D'AGUILAR HIGHWAY (CABOOLTU	40A	1	G	27.2	29.71	SEALED	4193	2023	3.45	3597	85.79	596	14.21	1907.2
D'AGUILAR HIGHWAY (CABOOLTU	40A	1	A	29.71	29.9	SEALED	4275	2023	3.46	3653	85.46	622	14.54	1990.4
D'AGUILAR HIGHWAY (CABOOLTU	40A	1	G	29.71	29.9	SEALED	4193	2023	3.45	3597	85.79	596	14.21	1907.2
D'AGUILAR HIGHWAY (CABOOLTU	40A	1	A	29.9	30.035	SEALED	4461	2023	3.25	3607	80.86	854	19.14	2732.8
D'AGUILAR HIGHWAY (CABOOLTU	40A	1	G	29.9	30.035	SEALED	4289	2023	2.96	3859	89.98	430	10.02	1376
D'AGUILAR HIGHWAY (CABOOLTU	40A	1	A	30.035	47.52	SEALED	4461	2023	3.25	3607	80.86	854	19.14	2732.8
D'AGUILAR HIGHWAY (CABOOLTU	40A	1	G	30.035	47.52	SEALED	4289	2023	2.96	3859	89.98	430	10.02	1376
D'AGUILAR HIGHWAY (CABOOLTU	40A	1	A	47.52	50.41	SEALED	3851	2023	-0.61	2843	73.83	1008	26.17	3225.6
D'AGUILAR HIGHWAY (CABOOLTU	40A	1	G	47.52	50.41	SEALED	3804	2023	-0.74	3203	84.2	601	15.8	1923.2
D'AGUILAR HIGHWAY (CABOOLTU	40A	1	A	50.41	50.53	SEALED	3851	2023	-0.61	2843	73.83	1008	26.17	3225.6
D'AGUILAR HIGHWAY (CABOOLTU	40A	1	G	50.41	50.53	SEALED	3804	2023	-0.74	3203	84.2	601	15.8	1923.2
MARY VALLEY LINK ROAD	480	1	A	0	0.11	SEALED	1485	2021	9.01	1342	90.39	143	9.61	457.6
MARY VALLEY LINK ROAD	480	1	G	0	0.11	SEALED	1513	2021	10.07	1238	81.81	275	18.19	880
MARY VALLEY LINK ROAD	480	1	A	0.11	0.39	SEALED	1485	2021	9.01	1342	90.39	143	9.61	457.6
MARY VALLEY LINK ROAD	480	1	G	0.11	0.39	SEALED	1513	2021	10.07	1238	81.81	275	18.19	880
MARY VALLEY LINK ROAD	480	1	A	0.39	0.91	SEALED	1485	2021	9.01	1342	90.39	143	9.61	457.6
MARY VALLEY LINK ROAD	480	1	G	0.39	0.91	SEALED	1513	2021	10.07	1238	81.81	275	18.19	880
MARY VALLEY LINK ROAD	480	1	A	0.91	2.98	SEALED	1485	2021	9.01	1342	90.39	143	9.61	457.6
MARY VALLEY LINK ROAD	480	1	G	0.91	2.98	SEALED	1513	2021	10.07	1238	81.81	275	18.19	880
KENILWORTH - BROOLOO ROAD	481	1	A	6.75	14.21	SEALED	624	2021	18.94	564	90.46	60	9.54	192
KENILWORTH - BROOLOO ROAD	481	1	G	6.75	14.21	SEALED	607	2021	20.11	490	80.79	117	19.21	374.4
GYMPIE - BROOLOO ROAD	483	1	A	17.44	24.27	SEALED	1202	2021	7.9	1067	88.75	135	11.25	432
GYMPIE - BROOLOO ROAD	483	1	G	17.44	24.27	SEALED	1202	2021	6.8	982	81.71	220	18.29	704
GYMPIE - BROOLOO ROAD	483	1	A	24.27	29.96	SEALED	422	2021	4.51	364	86.26	58	13.74	185.6
GYMPIE - BROOLOO ROAD	483	1	G	24.27	29.96	SEALED	434	2021	4.81	377	86.9	57	13.1	182.4
GYMPIE - BROOLOO ROAD	483	1	A	29.96	34.48	SEALED	855	2021	9.01	608	71.08	247	28.92	790.4
GYMPIE - BROOLOO ROAD	483	1	G	29.96	34.48	SEALED	817	2021	8.11	761	93.1	56	6.9	179.2
GYMPIE - BROOLOO ROAD	483	1	A	34.48	37.37	SEALED	591	2021	8.83	540	91.32	51	8.68	163.2
GYMPIE - BROOLOO ROAD	483	1	G	34.48	37.37	SEALED	582	2021	8.8	543	93.26	39	6.74	124.8
YABBA CREEK ROAD	4832	1	A	0	2.14	SEALED	764	2021	9.2	695	90.93	69	9.07	220.8
YABBA CREEK ROAD	4832	1	G	0	2.14	SEALED	744	2021	8.74	511	68.62	233	31.38	745.6
YABBA CREEK ROAD	4832	1	A	2.14	3.52	SEALED	1364	2021	8.2	1267	92.89	97	7.11	310.4
YABBA CREEK ROAD	4832	1	G	2.14	3.52	SEALED	1431	2021	7.11	1075	75.14	356	24.86	1139.2
YABBA CREEK ROAD	4832	1	A	3.52	5.11	SEALED	516	2021	11.05	403	78.18	113	21.82	361.6
YABBA CREEK ROAD	4832	1	G	3.52	5.11	SEALED	517	2021	10.57	411	79.49	106	20.51	339.2
YABBA CREEK ROAD	4832	1	A	5.11	8.95	SEALED	495	2021	19.29	384	77.67	111	22.33	355.2
YABBA CREEK ROAD	4832	1	G	5.11	8.95	SEALED	500	2021	19.33	408	81.63	92	18.37	294.4
YABBA CREEK ROAD	4832	1	A	8.95	13.35	SEALED	193	2021	10.07	175	90.74	18	9.26	57.6
YABBA CREEK ROAD	4832	1	G	8.95	13.35	SEALED	192	2021	10.32	162	84.36	30	15.64	96
KILCOY - MURGON ROAD	491	1	A	0	0.06	SEALED	1007	2023	0	927	92.06	80	7.94	256
KILCOY - MURGON ROAD	491	1	G	0	0.06	SEALED	1005	2023	0	926	92.16	79	7.84	252.8
KILCOY - MURGON ROAD	491	1	A	0.06	1.32	SEALED	1007	2023	0	927	92.06	80	7.94	256
KILCOY - MURGON ROAD	491	1	G	0.06	1.32	SEALED	1005	2023	0	926	92.16	79	7.84	252.8
KILCOY - MURGON ROAD	491	1	A	1.32	2.57	SEALED	452	2023	0	408	90.28	44	9.72	140.8
KILCOY - MURGON ROAD	491	1	G	1.32	2.57	SEALED	435	2023	0	378	86.97	57	13.03	182.4
KILCOY - MURGON ROAD	491	1	A	2.57	38.42	SEALED	218	2023	0	170	78.16	48	21.84	153.6
KILCOY - MURGON ROAD	491	1	G	2.57	38.42	SEALED	222	2023	0	183	82.62	39	17.38	124.8

Table 7
Carriageway code description

CARRIAGEWAY_CODE	SUPERSET_CWAY	CARRIAGEWAY_CODE_LABEL
1	1	Primary through undivided
2	1	Primary through divided in gazettal
3	3	Primary through divided against gazettal

Figure 1
Single carriageway



Note:
For tapers, length shall be recorded as the full length of the taper and width as ½ the lane width. Lane start point is taken at the start of the taper. Lane end point is taken at the end of the taper.

Figure 2
Dual/Divided carriageway

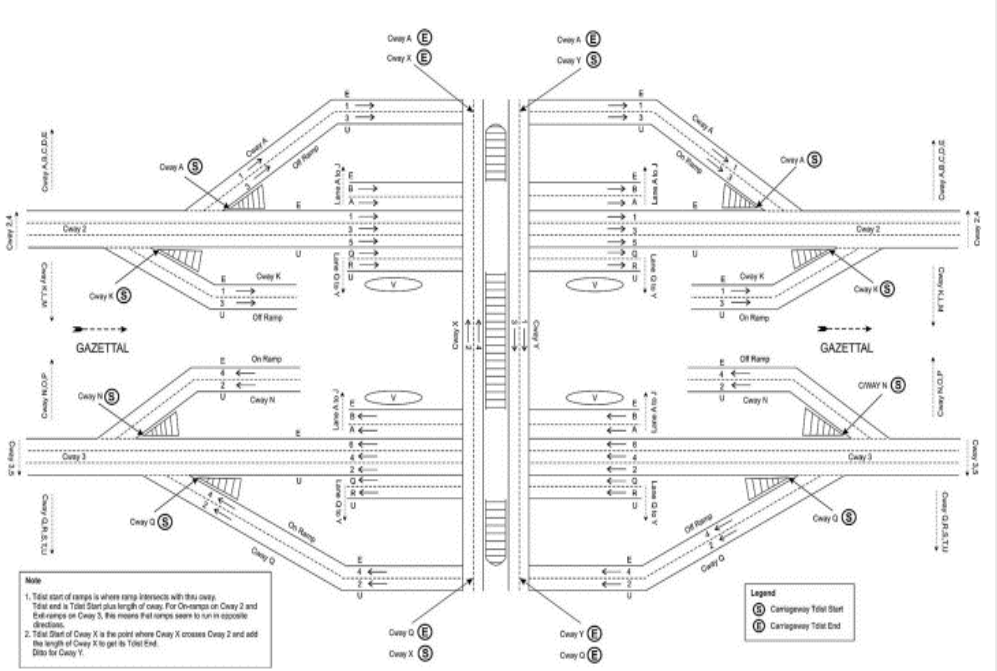


Table 8
Pavement type description

ARMIS-derived TMR pavement type	FAMLIT pavement type	Load damage exponent
Sprayed seal over flexible pavement, including cement modified and lime stabilised layer types C4 and C5	GN	4
Sprayed seal or Asphalt over flexible pavement with bitumen stabilised pavement	AC	5
Asphalt over flexible pavement, including cement modified and lime stabilised layer types C4 and C5	AC	5
Sprayed seal over semi rigid/semi rigid composite pavement	CS	12
Asphalt over semi rigid/semi rigid composite pavement	CS	12

Note meaning of other possible values of MC_COSTING_PAVEMENT_TYPE in marginal cost data:

MC - marginal cost not available

UN - unknown pavement type.

Attachment B

SAR Sensitivity Analysis

Project Specific Classified Traffic Count SAR Sensitivity Anaylsis

Traffic Count Site	SMEC Link ID	Road	Location	Direction	Day of Count	Count Period	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Daily Traffic	NHVAG	SAR4/HV	SAR5/HV
Site 3	1.1	Mary Valley Link Road	East of Mary Valley Road	Eastbound	Thursday	24 Hr	1665	80	82	21	8	1	5	1	24	6	0	0	1893	2.30	1.80	2.11
Site 3	2.1	Mary Valley Road	South of Mary Valley Link Road	Southbounc	Thursday	24 Hr	1193	46	50	10	12	0	2	2	45	3	0	1	1364	2.49	2.16	2.56
Site 5	3.1	Mary Valley Road	North of Tuchekoi Road	Southbounc	Thursday	24 Hr	313	14	15	2	7	0	1	1	7	4	0	0	364	2.47	2.23	2.68
Site 5	4.1	Mary Valley Road	South of Tuchekoi Road	Southbounc	Thursday	24 Hr	679	30	33	11	11	0	4	1	9	4	0	0	782	2.31	1.94	2.33
Site 7	5.1	Mary Valley Road	North of Yabba Creek Road	Southbounc	Thursday	24 Hr	676	30	33	11	11	0	3	2	9	4	0	0	779	2.31	1.95	2.34
Site 7	6.1	Mary Valley Road	South of Yabba Creek Road	Southbounc	Thursday	24 Hr	602	27	28	8	16	0	1	2	9	4	0	0	697	2.30	2.06	2.48
Site 8	8.1	Mary Valley Road	North of Parry Street	Southbounc	Thursday	24 Hr	450	17	22	8	16	0	1	2	10	4	0	0	530	2.34	2.17	2.62
Site 8	9.1	Mary Valley Road	South of Parry Street	Southbounc	Thursday	24 Hr	435	18	25	9	16	0	1	2	10	4	0	0	520	2.32	2.12	2.56
Site 9	10.1	Mary Valley Road	North of Moy Pocket Road	Southbounc	Thursday	24 Hr	429	18	24	9	16	0	1	2	10	4	0	0	513	2.32	2.13	2.58
Site 10	11.1	Mary Valley Road	(Imbil Island Road) East of Kandanga Imbil Road	Westbound	Thursday	24 Hr	851	33	30	9	2	0	2	0	15	0	0	0	942	2.30	1.82	2.12
Site 7	7.1	Yabba Creek Road	West of Mary Valley Road	Westbound	Thursday	24 Hr	640	31	26	8	2	1	2	0	14	0	0	0	724	2.33	1.83	2.14
Site 10	12.1	Yabba Creek Road	West of Kandanga Imbil Road	Westbound	Thursday	24 Hr	1247	36	46	11	3	0	2	0	63	0	0	0	1408	2.53	2.21	2.59
Site 11	13.1	Yabba Creek Road	East of Diggings Road	Westbound	Thursday	24 Hr	1135	35	37	10	3	0	2	0	63	0	0	0	1285	2.58	2.30	2.70
Site 11	14.1	Yabba Creek Road	West of Diggings Road	Westbound	Thursday	24 Hr	1101	32	41	10	3	0	2	0	63	0	0	0	1252	2.56	2.26	2.65
Site 12	15.1	Yabba Creek Road	East of Bella Creek Road	Westbound	Thursday	24 Hr	97	6	4	0	2	0	2	0	1	0	0	0	112	2.35	1.77	2.11
Site 12	16.1	Yabba Creek Road	West of Bella Creek Road	Westbound	Thursday	24 Hr	54	4	4	0	1	0	2	0	0	0	0	0	65	2.30	1.48	1.75
Site 13	17.1	D'Aguilar Highway	East of Winya Road	Westbound	Thursday	24 Hr	2856	173	126	34	11	8	9	6	94	80	0	0	3397	2.76	2.56	3.05
Site 13	18.1	D'Aguilar Highway	West of Winya Road	Westbound	Thursday	24 Hr	2737	168	118	28	9	7	7	5	93	80	0	0	3252	2.79	2.62	3.11
Site 14	19.1	D'Aguilar Highway	East of Mary Street	Westbound	Thursday	24 Hr	3548	182	128	37	7	6	13	1	73	97	0	0	4092	2.80	2.63	3.13
Site 14	20.1	D'Aguilar Highway	(William Street) West of Mary Street	Westbound	Thursday	24 Hr	1810	29	61	9	1	1	1	0	3	4	0	0	1919	2.16	1.46	1.70
Site 15	21.1	Kilcoy Murgon Road	South of Mount Kilcoy Road	Northbounc	Thursday	24 Hr	458	16	14	3	0	0	1	0	2	2	0	0	496	2.32	1.76	2.06
Site 15	22.1	Kilcoy Murgon Road	North of Mount Kilcoy Road	Northbounc	Thursday	24 Hr	193	13	10	3	1	0	0	1	3	1	0	0	225	2.32	1.89	2.23
Site 16	23.1	Kilcoy Murgon Road	South of Sunday Creek Road	Northbounc	Thursday	24 Hr	58	5	4	1	1	0	0	1	0	0	0	0	70	2.15	1.62	1.92
																			Average	**2.41**	**2.03**	**2.41**
																			Standard Deviation	**0.18**	**0.33**	**0.40**
																			90th Percentile	**2.72**	**2.51**	**2.98**

Attachment C

Contribution Calculation Summary

ROAD SECTION AND MARGINAL COST RATES								TO DEVELOPMENT											FROM DEVELOPMENT										
TMR Road ID	Road Name	Ch. Start	Ch. End	Length	Pavement Type	Marginal Cost Rate (cents per km per SAR)	Adjusted Marginal Cost Rate (cents per SAR for segment length)	Forecast AADHV (2025)	Background SAR4 / Pass	Background SAR5 / Pass	Background SAR4 (2025)	Background SAR5 (2025)	Development SAR4	Proportion to Background SAR4	SAR4 Contribution	Development SAR5	Proportion to Background SAR5	SAR5 Contribution	Forecast AADHV (2025)	Background SAR4 / Pass	Background SAR5 / Pass	Background SAR4 (2025)	Background SAR5 (2025)	Development SAR4	Proportion to Background SAR4	SAR4 Contribution	Development SAR5	Proportion to Background SAR5	SAR5 Contribution
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	26.6	26.7	0.1	AC	4.52	0.452	2,593	2.32	2.75	2,195,388	2,602,292			$ -	68,530	2.6%	$ -	883	2.32	2.75	747,815	886,419			$ -	4,071	0.5%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	26.7	26.8	0.1	AC	4.5	0.45	2,593	2.32	2.75	2,195,388	2,602,292			$ -	68,530	2.6%	$ -	883	2.32	2.75	747,815	886,419			$ -	4,071	0.5%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	26.8	26.9	0.1	AC	4.03	0.403	2,593	2.32	2.75	2,195,388	2,602,292			$ -	68,530	2.6%	$ -	883	2.32	2.75	747,815	886,419			$ -	4,071	0.5%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	26.9	27	0.1	AC	4.3	0.43	2,593	2.32	2.75	2,195,388	2,602,292			$ -	68,530	2.6%	$ -	883	2.32	2.75	747,815	886,419			$ -	4,071	0.5%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	27	27.1	0.1	AC	4.28	0.428	2,593	2.32	2.75	2,195,388	2,602,292			$ -	68,530	2.6%	$ -	883	2.32	2.75	747,815	886,419			$ -	4,071	0.5%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	27.1	27.2	0.1	AC	4.42	0.442	2,593	2.32	2.75	2,195,388	2,602,292			$ -	68,530	2.6%	$ -	883	2.32	2.75	747,815	886,419			$ -	4,071	0.5%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	27.2	27.3	0.1	GN	3.45	0.345	638	2.32	2.75	540,117	640,225	60,872	11.3%	$ 210			$ -	666	2.32	2.75	563,788	668,284	5,137	0.9%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	27.3	27.4	0.1	GN	3.24	0.324	638	2.32	2.75	540,117	640,225	60,872	11.3%	$ 197			$ -	666	2.32	2.75	563,788	668,284	5,137	0.9%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	27.4	27.5	0.1	AC	4.62	0.462	638	2.32	2.75	540,117	640,225			$ -	68,530	10.7%	$ 317	666	2.32	2.75	563,788	668,284			$ -	4,071	0.6%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	27.5	27.6	0.1	AC	4.28	0.428	638	2.32	2.75	540,117	640,225			$ -	68,530	10.7%	$ 293	666	2.32	2.75	563,788	668,284			$ -	4,071	0.6%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	27.6	27.7	0.1	GN	3.92	0.392	638	2.32	2.75	540,117	640,225	60,872	11.3%	$ 239			$ -	666	2.32	2.75	563,788	668,284	5,137	0.9%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	27.7	27.8	0.1	GN	4.02	0.402	638	2.32	2.75	540,117	640,225	60,872	11.3%	$ 245			$ -	666	2.32	2.75	563,788	668,284	5,137	0.9%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	27.8	27.9	0.1	GN	3.4	0.34	638	2.32	2.75	540,117	640,225	60,872	11.3%	$ 207			$ -	666	2.32	2.75	563,788	668,284	5,137	0.9%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	27.9	28	0.1	GN	3.3	0.33	638	2.32	2.75	540,117	640,225	60,872	11.3%	$ 201			$ -	666	2.32	2.75	563,788	668,284	5,137	0.9%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	28	28.1	0.1	GN	3.34	0.334	638	2.32	2.75	540,117	640,225	60,872	11.3%	$ 203			$ -	666	2.32	2.75	563,788	668,284	5,137	0.9%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	28.1	28.2	0.1	GN	3.5	0.35	638	2.32	2.75	540,117	640,225	60,872	11.3%	$ 213			$ -	666	2.32	2.75	563,788	668,284	5,137	0.9%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	28.2	28.3	0.1	GN	3.68	0.368	638	2.32	2.75	540,117	640,225	60,872	11.3%	$ 224			$ -	666	2.32	2.75	563,788	668,284	5,137	0.9%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	28.3	28.4	0.1	GN	4.35	0.435	638	2.32	2.75	540,117	640,225	60,872	11.3%	$ 265			$ -	666	2.32	2.75	563,788	668,284	5,137	0.9%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	28.4	28.5	0.1	GN	3.24	0.324	638	2.32	2.75	540,117	640,225	60,872	11.3%	$ 197			$ -	666	2.32	2.75	563,788	668,284	5,137	0.9%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	28.5	28.6	0.1	GN	3.34	0.334	638	2.32	2.75	540,117	640,225	60,872	11.3%	$ 203			$ -	666	2.32	2.75	563,788	668,284	5,137	0.9%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	28.6	28.7	0.1	GN	4.22	0.422	638	2.32	2.75	540,117	640,225	60,872	11.3%	$ 257			$ -	666	2.32	2.75	563,788	668,284	5,137	0.9%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	28.7	28.8	0.1	AC	5.16	0.516	638	2.32	2.75	540,117	640,225			$ -	68,530	10.7%	$ 354	666	2.32	2.75	563,788	668,284			$ -	4,071	0.6%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	28.8	28.9	0.1	AC	5.16	0.516	638	2.32	2.75	540,117	640,225			$ -	68,530	10.7%	$ 354	666	2.32	2.75	563,788	668,284			$ -	4,071	0.6%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	28.9	29	0.1	AC	5.16	0.516	638	2.32	2.75	540,117	640,225			$ -	68,530	10.7%	$ 354	666	2.32	2.75	563,788	668,284			$ -	4,071	0.6%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	29	29.1	0.1	AC	5.16	0.516	638	2.32	2.75	540,117	640,225			$ -	68,530	10.7%	$ 354	666	2.32	2.75	563,788	668,284			$ -	4,071	0.6%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	29.1	29.2	0.1	AC	5.16	0.516	638	2.32	2.75	540,117	640,225			$ -	68,530	10.7%	$ 354	666	2.32	2.75	563,788	668,284			$ -	4,071	0.6%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	29.2	29.3	0.1	AC	5.16	0.516	638	2.32	2.75	540,117	640,225			$ -	68,530	10.7%	$ 354	666	2.32	2.75	563,788	668,284			$ -	4,071	0.6%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	29.3	29.4	0.1	AC	5.14	0.514	638	2.32	2.75	540,117	640,225			$ -	68,530	10.7%	$ 352	666	2.32	2.75	563,788	668,284			$ -	4,071	0.6%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	29.4	29.5	0.1	AC	5.24	0.524	638	2.32	2.75	540,117	640,225			$ -	68,530	10.7%	$ 359	666	2.32	2.75	563,788	668,284			$ -	4,071	0.6%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	29.5	29.6	0.1	AC	5.12	0.512	638	2.32	2.75	540,117	640,225			$ -	68,530	10.7%	$ 351	666	2.32	2.75	563,788	668,284			$ -	4,071	0.6%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	29.6	29.7	0.1	AC	5.36	0.536	638	2.32	2.75	540,117	640,225			$ -	68,530	10.7%	$ 367	666	2.32	2.75	563,788	668,284			$ -	4,071	0.6%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	29.7	29.71	0.01	AC	5.17	0.0517	638	2.32	2.75	540,117	640,225			$ -	68,530	10.7%	$ 35	666	2.32	2.75	563,788	668,284			$ -	4,071	0.6%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	30.035	30.1	0.065	AC	5.01	0.32565	456	2.32	2.75	385,999	457,542			$ -	68,530	15.0%	$ 223	910	2.32	2.75	770,937	913,826			$ -	4,071	0.4%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	30.1	30.2	0.1	AC	5.04	0.504	456	2.32	2.75	385,999	457,542			$ -	68,530	15.0%	$ 345	910	2.32	2.75	770,937	913,826			$ -	4,071	0.4%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	30.2	30.3	0.1	AC	5.09	0.509	456	2.32	2.75	385,999	457,542			$ -	68,530	15.0%	$ 349	910	2.32	2.75	770,937	913,826			$ -	4,071	0.4%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	30.3	30.4	0.1	AC	5.02	0.502	456	2.32	2.75	385,999	457,542			$ -	68,530	15.0%	$ 344	910	2.32	2.75	770,937	913,826			$ -	4,071	0.4%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	30.4	30.5	0.1	AC	5.15	0.515	456	2.32	2.75	385,999	457,542			$ -	68,530	15.0%	$ 353	910	2.32	2.75	770,937	913,826			$ -	4,071	0.4%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	30.5	30.6	0.1	AC	5.07	0.507	456	2.32	2.75	385,999	457,542			$ -	68,530	15.0%	$ 347	910	2.32	2.75	770,937	913,826			$ -	4,071	0.4%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	30.6	30.7	0.1	GN	3.87	0.387	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 236			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	30.7	30.8	0.1	GN	1.91	0.191	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 116			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	30.8	30.9	0.1	GN	1.93	0.193	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 117			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	30.9	31	0.1	GN	1.93	0.193	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 117			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	31	31.1	0.1	GN	1.94	0.194	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 118			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	31.1	31.2	0.1	GN	1.9	0.19	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 116			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	31.2	31.3	0.1	GN	1.93	0.193	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 117			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	31.3	31.4	0.1	GN	1.96	0.196	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 119			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	31.4	31.5	0.1	GN	1.99	0.199	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 121			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	31.5	31.6	0.1	GN	1.99	0.199	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 121			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	31.6	31.7	0.1	GN	1.97	0.197	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 120			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	31.7	31.8	0.1	GN	1.97	0.197	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 120			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	31.8	31.9	0.1	GN	1.88	0.188	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 114			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	31.9	32	0.1	GN	2.08	0.208	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 127			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	32	32.1	0.1	GN	2.16	0.216	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 131			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	32.1	32.2	0.1	GN	1.98	0.198	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 121			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	32.2	32.3	0.1	GN	1.98	0.198	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 121			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	32.3	32.4	0.1	GN	1.99	0.199	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 121			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	32.4	32.5	0.1	GN	1.99	0.199	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 121			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	32.5	32.6	0.1	GN	1.99	0.199	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 121			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	32.6	32.7	0.1	GN	1.98	0.198	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 121			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	32.7	32.8	0.1	GN	1.91	0.191	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 116			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	32.8	32.9	0.1	GN	1.89	0.189	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 115			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	32.9	33	0.1	GN	1.93	0.193	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 117			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	33	33.1	0.1	GN	1.91	0.191	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 116			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	33.1	33.2	0.1	GN	1.92	0.192	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 117			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	33.2	33.3	0.1	GN	1.92	0.192	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 117			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	33.3	33.4	0.1	GN	1.93	0.193	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 117			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	33.4	33.5	0.1	GN	1.89	0.189	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 115			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	33.5	33.6	0.1	GN	1.9	0.19	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 116			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	33.6	33.7	0.1	GN	1.87	0.187	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 114			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	33.7	33.8	0.1	GN	1.94	0.194	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 118			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	33.8	33.9	0.1	GN	1.91	0.191	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 116			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	33.9	34	0.1	GN	1.88	0.188	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 114			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	34	34.1	0.1	GN	1.98	0.198	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 121			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	34.1	34.2	0.1	GN	3.59	0.359	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 219			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	34.2	34.3	0.1	GN	3.35	0.335	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 204			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	34.3	34.4	0.1	GN	3.72	0.372	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 226			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	34.4	34.5	0.1	GN	1.92	0.192	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 117			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	34.5	34.6	0.1	GN	1.97	0.197	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 120			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	34.6	34.7	0.1	GN	1.98	0.198	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 121			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	34.7	34.8	0.1	GN	1.99	0.199	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 121			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	34.8	34.9	0.1	GN	1.99	0.199	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 121			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	34.9	35	0.1	GN	1.9	0.19	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 116			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	35	35.1	0.1	GN	1.98	0.198	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 121			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	35.1	35.2	0.1	GN	1.97	0.197	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 120			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	35.2	35.3	0.1	GN	1.99	0.199	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 121			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	35.3	35.4	0.1	GN	1.93	0.193	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 117			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	35.4	35.5	0.1	GN	1.9	0.19	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 116			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	35.5	35.6	0.1	GN	1.94	0.194	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 118			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	35.6	35.7	0.1	GN	3.72	0.372	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 226			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	35.7	35.8	0.1	GN	3.9	0.39	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 237			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	35.8	35.9	0.1	GN	3.72	0.372	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 226			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	35.9	36	0.1	GN	3.88	0.388	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 236			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	36	36.1	0.1	GN	3.86	0.386	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 235			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	36.1	36.2	0.1	GN	3.87	0.387	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 236			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	36.2	36.3	0.1	GN	3.91	0.391	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 238			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	36.3	36.4	0.1	GN	3.73	0.373	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 227			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	36.4	36.5	0.1	GN	3.72	0.372	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 226			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	36.5	36.6	0.1	GN	3.72	0.372	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 226			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	36.6	36.7	0.1	GN	1.88	0.188	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 114			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	36.7	36.8	0.1	GN	1.91	0.191	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 116			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	36.8	36.9	0.1	GN	1.9	0.19	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 116			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	36.9	37	0.1	GN	1.83	0.183	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 111			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	37	37.1	0.1	GN	1.83	0.183	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 111			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	37.1	37.2	0.1	GN	1.93	0.193	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 117			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	37.2	37.3	0.1	GN	1.94	0.194	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 118			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	37.3	37.4	0.1	GN	1.93	0.193	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 117			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	37.4	37.5	0.1	GN	1.92	0.192	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 117			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	37.5	37.6	0.1	GN	1.83	0.183	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 111			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	37.6	37.7	0.1	GN	1.83	0.183	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 111			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	37.7	37.8	0.1	GN	1.83	0.183	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 111			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -

ROAD SECTION AND MARGINAL COST RATES								TO DEVELOPMENT											FROM DEVELOPMENT										
TMR Road ID	Road Name	Ch. Start	Ch. End	Length	Pavement Type	Marginal Cost Rate (cents per km per SAR)	Adjusted Marginal Cost Rate (cents per SAR for segment length)	Forecast AADHV (2025)	Background SAR4 / Pass	Background SAR5 / Pass	Background SAR4 (2025)	Background SAR5 (2025)	Development SAR4	Proportion to Background SAR4	SAR4 Contribution	Development SAR5	Proportion to Background SAR5	SAR5 Contribution	Forecast AADHV (2025)	Background SAR4 / Pass	Background SAR5 / Pass	Background SAR4 (2025)	Background SAR5 (2025)	Development SAR4	Proportion to Background SAR4	SAR4 Contribution	Development SAR5	Proportion to Background SAR5	SAR5 Contribution
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	37.8	37.9	0.1	GN	1.83	0.183	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 111			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	37.9	38	0.1	GN	1.87	0.187	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 114			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	38	38.1	0.1	GN	1.83	0.183	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 111			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	38.1	38.2	0.1	GN	1.79	0.179	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 109			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	38.2	38.3	0.1	GN	3.43	0.343	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 209			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	38.3	38.4	0.1	GN	3.37	0.337	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 205			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	38.4	38.5	0.1	GN	3.5	0.35	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 213			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	38.5	38.6	0.1	GN	3.52	0.352	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 214			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	38.6	38.7	0.1	GN	3.3	0.33	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 201			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	38.7	38.8	0.1	GN	3.62	0.362	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 220			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	38.8	38.9	0.1	AC	4.36	0.436	456	2.32	2.75	385,999	457,542			$ -	68,530	15.0%	$ 299	910	2.32	2.75	770,937	913,826			$ -	4,071	0.4%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	38.9	39	0.1	GN	3.96	0.396	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 241			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	39	39.1	0.1	GN	6.46	0.646	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 393			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	39.1	39.2	0.1	GN	5.6	0.56	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 341			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	39.2	39.3	0.1	GN	4.66	0.466	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 284			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	39.3	39.4	0.1	GN	3.84	0.384	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 234			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	39.4	39.5	0.1	GN	3.81	0.381	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 232			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	39.5	39.6	0.1	GN	4.1	0.41	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 250			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	39.6	39.7	0.1	GN	4.98	0.498	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 303			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	39.7	39.8	0.1	GN	5.05	0.505	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 307			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	39.8	39.9	0.1	GN	3.92	0.392	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 239			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	39.9	40	0.1	GN	3.85	0.385	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 234			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	40	40.1	0.1	GN	3.88	0.388	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 236			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	40.1	40.2	0.1	GN	3.86	0.386	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 235			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	40.2	40.3	0.1	GN	3.9	0.39	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 237			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	40.3	40.4	0.1	GN	3.81	0.381	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 232			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	40.4	40.5	0.1	GN	3.88	0.388	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 236			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	40.5	40.6	0.1	GN	3.86	0.386	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 235			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	40.6	40.7	0.1	GN	3.83	0.383	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 233			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	40.7	40.8	0.1	GN	3.98	0.398	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 242			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	40.8	40.9	0.1	GN	3.85	0.385	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 234			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	40.9	41	0.1	GN	3.77	0.377	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 229			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	41	41.1	0.1	GN	3.73	0.373	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 227			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	41.1	41.2	0.1	GN	3.7	0.37	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 225			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	41.2	41.3	0.1	GN	3.85	0.385	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 234			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	41.3	41.4	0.1	GN	3.87	0.387	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 236			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	41.4	41.5	0.1	GN	3.81	0.381	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 232			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	41.5	41.6	0.1	GN	3.68	0.368	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 224			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	41.6	41.7	0.1	GN	3.78	0.378	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 230			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	41.7	41.8	0.1	GN	3.78	0.378	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 230			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	41.8	41.9	0.1	GN	3.81	0.381	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 232			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	41.9	42	0.1	GN	3.8	0.38	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 231			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	42	42.1	0.1	GN	3.76	0.376	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 229			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	42.1	42.2	0.1	GN	3.82	0.382	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 233			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	42.2	42.3	0.1	GN	3.83	0.383	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 233			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	42.3	42.4	0.1	GN	3.58	0.358	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 218			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	42.4	42.5	0.1	GN	3.53	0.353	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 215			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	42.5	42.6	0.1	GN	3.48	0.348	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 212			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	42.6	42.7	0.1	GN	3.51	0.351	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 214			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	42.7	42.8	0.1	GN	3.51	0.351	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 214			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	42.8	42.9	0.1	GN	3.58	0.358	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 218			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	42.9	43	0.1	GN	3.52	0.352	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 214			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	43	43.1	0.1	GN	3.64	0.364	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 222			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	43.1	43.2	0.1	GN	3.36	0.336	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 205			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	43.2	43.3	0.1	GN	3.43	0.343	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 209			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	43.3	43.4	0.1	GN	3.49	0.349	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 212			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	43.4	43.5	0.1	GN	3.65	0.365	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 222			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	43.5	43.6	0.1	GN	3.61	0.361	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 220			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	43.6	43.7	0.1	GN	3.69	0.369	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 225			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	43.7	43.8	0.1	GN	3.56	0.356	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 217			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	43.8	43.9	0.1	GN	3.44	0.344	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 209			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	43.9	44	0.1	GN	3.27	0.327	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 199			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	44	44.1	0.1	GN	3.38	0.338	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 206			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	44.1	44.2	0.1	GN	3.53	0.353	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 215			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	44.2	44.3	0.1	GN	3.69	0.369	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 225			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	44.3	44.4	0.1	GN	3.63	0.363	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 221			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	44.4	44.5	0.1	GN	3.46	0.346	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 211			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	44.5	44.6	0.1	GN	3.41	0.341	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 208			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	44.6	44.7	0.1	GN	3.64	0.364	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 222			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	44.7	44.8	0.1	GN	3.65	0.365	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 222			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	44.8	44.9	0.1	GN	3.97	0.397	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 242			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	44.9	45	0.1	GN	3.97	0.397	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 242			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	45	45.1	0.1	GN	3.88	0.388	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 236			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	45.1	45.2	0.1	GN	3.91	0.391	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 238			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	45.2	45.3	0.1	GN	3.9	0.39	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 237			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	45.3	45.4	0.1	AC	4.4	0.44	456	2.32	2.75	385,999	457,542			$ -	68,530	15.0%	$ 302	910	2.32	2.75	770,937	913,826			$ -	4,071	0.4%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	45.4	45.5	0.1	GN	3.53	0.353	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 215			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	45.5	45.6	0.1	AC	4.36	0.436	456	2.32	2.75	385,999	457,542			$ -	68,530	15.0%	$ 299	910	2.32	2.75	770,937	913,826			$ -	4,071	0.4%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	45.6	45.7	0.1	GN	3.75	0.375	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 228			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	45.7	45.8	0.1	GN	3.85	0.385	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 234			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	45.8	45.9	0.1	GN	4.18	0.418	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 254			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	45.9	46	0.1	GN	4.31	0.431	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 262			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	46	46.1	0.1	GN	3.62	0.362	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 220			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	46.1	46.2	0.1	GN	3.68	0.368	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 224			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	46.2	46.3	0.1	GN	3.94	0.394	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 240			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	46.3	46.4	0.1	GN	3.99	0.399	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 243			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	46.4	46.5	0.1	GN	3.18	0.318	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 194			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	46.5	46.6	0.1	GN	3.28	0.328	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 200			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	46.6	46.7	0.1	GN	3.29	0.329	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 200			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	46.7	46.8	0.1	GN	3.15	0.315	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 192			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	46.8	46.9	0.1	GN	3.15	0.315	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 192			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	46.9	47	0.1	GN	3	0.3	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 183			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	47	47.1	0.1	GN	3.03	0.303	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 184			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	47.1	47.2	0.1	GN	2.99	0.299	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 182			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	47.2	47.3	0.1	GN	2.96	0.296	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 180			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	47.3	47.4	0.1	GN	2.94	0.294	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 179			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	47.4	47.5	0.1	GN	4.28	0.428	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 261			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	47.5	47.6	0.1	GN	3.28	0.328	456	2.32	2.75	385,999	457,542	60,872	15.8%	$ 200			$ -	910	2.32	2.75	770,937	913,826	5,137	0.7%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	47.6	47.7	0.1	AC	4.11	0.411	592	2.32	2.75	501,423	594,359			$ -	68,530	11.5%	$ 282	996	2.32	2.75	843,193	999,474			$ -	4,071	0.4%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	47.7	47.8	0.1	GN	2.98	0.298	592	2.32	2.75	501,423	594,359	60,872	12.1%	$ 181			$ -	996	2.32	2.75	843,193	999,474	5,137	0.6%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	47.8	47.9	0.1	GN	2.95	0.295	592	2.32	2.75	501,423	594,359	60,872	12.1%	$ 180			$ -	996	2.32	2.75	843,193	999,474	5,137	0.6%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	47.9	48	0.1	GN	3.1	0.31	592	2.32	2.75	501,423	594,359	60,872	12.1%	$ 189			$ -	996	2.32	2.75	843,193	999,474	5,137	0.6%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	48	48.1	0.1	GN	3.09	0.309	592	2.32	2.75	501,423	594,359	60,872	12.1%	$ 188			$ -	996	2.32	2.75	843,193	999,474	5,137	0.6%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	48.1	48.2	0.1	GN	2.88	0.288	592	2.32	2.75	501,423	594,359	60,872	12.1%	$ 175			$ -	996	2.32	2.75	843,193	999,474	5,137	0.6%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	48.2	48.3	0.1	GN	3.51	0.351	592	2.32	2.75	501,423	594,359	60,872	12.1%	$ 214			$ -	996	2.32	2.75	843,193	999,474	5,137	0.6%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	48.3	48.4	0.1	GN	2.88	0.288	592	2.32	2.75	501,423	594,359	60,872	12.1%	$ 175			$ -	996	2.32	2.75	843,193	999,474	5,137	0.6%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	48.4	48.5	0.1	GN	4.72	0.472	592	2.32	2.75	501,423	594,359	60,872	12.1%	$ 287			$ -	996	2.32	2.75	843,193	999,474	5,137	0.6%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	48.5	48.6	0.1	GN	3.66	0.366	592	2.32	2.75	501,423	594,359	60,872	12.1%	$ 223			$ -	996	2.32	2.75	843,193	999,474	5,137	0.6%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	48.6	48.7	0.1	GN	3	0.3	592	2.32	2.75	501,423	594,359	60,872	12.1%	$ 183			$ -	996	2.32	2.75	843,193	999,474	5,137	0.6%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	48.7	48.8	0.1	GN	3.3	0.33	592	2.32	2.75	501,423	594,359	60,872	12.1%	$ 201			$ -	996	2.32	2.75	843,193	999,474	5,137	0.6%	$ -			$ -

ROAD SECTION AND MARGINAL COST RATES								TO DEVELOPMENT											FROM DEVELOPMENT										
TMR Road ID	Road Name	Ch. Start	Ch. End	Length	Pavement Type	Marginal Cost Rate (cents per km per SAR)	Adjusted Marginal Cost Rate (cents per SAR for segment length)	Forecast AADHV (2025)	Background SAR4 / Pass	Background SAR5 / Pass	Background SAR4 (2025)	Background SAR5 (2025)	Development SAR4	Proportion to Background SAR4	SAR4 Contribution	Development SAR5	Proportion to Background SAR5	SAR5 Contribution	Forecast AADHV (2025)	Background SAR4 / Pass	Background SAR5 / Pass	Background SAR4 (2025)	Background SAR5 (2025)	Development SAR4	Proportion to Background SAR4	SAR4 Contribution	Development SAR5	Proportion to Background SAR5	SAR5 Contribution
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	48.8	48.9	0.1	GN	3.28	0.328	592	2.32	2.75	501,423	594,359	60,872	12.1%	$ 200			$ -	996	2.32	2.75	843,193	999,474	5,137	0.6%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	48.9	49	0.1	GN	3.15	0.315	592	2.32	2.75	501,423	594,359	60,872	12.1%	$ 192			$ -	996	2.32	2.75	843,193	999,474	5,137	0.6%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	49	49.1	0.1	GN	3.23	0.323	592	2.32	2.75	501,423	594,359	60,872	12.1%	$ 197			$ -	996	2.32	2.75	843,193	999,474	5,137	0.6%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	49.1	49.2	0.1	GN	3.38	0.338	592	2.32	2.75	501,423	594,359	60,872	12.1%	$ 206			$ -	996	2.32	2.75	843,193	999,474	5,137	0.6%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	49.2	49.3	0.1	AC	1.67	0.167	592	2.32	2.75	501,423	594,359			$ -	68,530	11.5%	$ 114	996	2.32	2.75	843,193	999,474			$ -	4,071	0.4%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	49.3	49.4	0.1	GN	3.44	0.344	592	2.32	2.75	501,423	594,359	60,872	12.1%	$ 209			$ -	996	2.32	2.75	843,193	999,474	5,137	0.6%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	49.4	49.5	0.1	GN	3.39	0.339	592	2.32	2.75	501,423	594,359	60,872	12.1%	$ 206			$ -	996	2.32	2.75	843,193	999,474	5,137	0.6%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	49.5	49.6	0.1	GN	3.43	0.343	592	2.32	2.75	501,423	594,359	60,872	12.1%	$ 209			$ -	996	2.32	2.75	843,193	999,474	5,137	0.6%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	49.6	49.7	0.1	GN	3.18	0.318	592	2.32	2.75	501,423	594,359	60,872	12.1%	$ 194			$ -	996	2.32	2.75	843,193	999,474	5,137	0.6%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	49.7	49.8	0.1	GN	1.63	0.163	592	2.32	2.75	501,423	594,359	60,872	12.1%	$ 99			$ -	996	2.32	2.75	843,193	999,474	5,137	0.6%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	49.8	49.9	0.1	GN	2.44	0.244	592	2.32	2.75	501,423	594,359	60,872	12.1%	$ 149			$ -	996	2.32	2.75	843,193	999,474	5,137	0.6%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	49.9	50	0.1	GN	2.48	0.248	592	2.32	2.75	501,423	594,359	60,872	12.1%	$ 151			$ -	996	2.32	2.75	843,193	999,474	5,137	0.6%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	50	50.1	0.1	GN	2.71	0.271	592	2.32	2.75	501,423	594,359	60,872	12.1%	$ 165			$ -	996	2.32	2.75	843,193	999,474	5,137	0.6%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	50.1	50.2	0.1	GN	2.67	0.267	592	2.32	2.75	501,423	594,359	60,872	12.1%	$ 163			$ -	996	2.32	2.75	843,193	999,474	5,137	0.6%	$ -			$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	50.2	50.3	0.1	AC	3.34	0.334	592	2.32	2.75	501,423	594,359			$ -	68,530	11.5%	$ 229	996	2.32	2.75	843,193	999,474			$ -	4,071	0.4%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	50.3	50.4	0.1	AC	5.45	0.545	592	2.32	2.75	501,423	594,359			$ -	68,530	11.5%	$ 373	996	2.32	2.75	843,193	999,474			$ -	4,071	0.4%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	50.4	50.41	0.01	AC	4.98	0.0498	592	2.32	2.75	501,423	594,359			$ -	68,530	11.5%	$ 34	996	2.32	2.75	843,193	999,474			$ -	4,071	0.4%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	50.41	50.5	0.09	AC	4.98	0.4482	592	2.32	2.75	501,423	594,359			$ -	68,530	11.5%	$ 307	996	2.32	2.75	843,193	999,474			$ -	4,071	0.4%	$ -
40A	D'AGUILAR HIGHWAY (CABOOLTURE - KILCOY)	50.5	50.53	0.03	AC	1.11	0.0333	592	2.32	2.75	501,423	594,359			$ -	68,530	11.5%	$ 23	996	2.32	2.75	843,193	999,474			$ -	4,071	0.4%	$ -
480	MARY VALLEY LINK ROAD	0	0.1	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	0	0.1	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	0.1	0.11	0.01	AC	4.88	0.0488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 47	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	0.1	0.11	0.01	AC	4.88	0.0488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 47	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	0.11	0.2	0.09	AC	4.88	0.4392	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 425	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	0.2	0.3	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	0.3	0.39	0.09	AC	4.88	0.4392	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 425	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	0.39	0.4	0.01	AC	4.88	0.0488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 47	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	0.39	0.4	0.01	AC	4.88	0.0488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 47	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	0.4	0.5	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	0.4	0.5	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	0.5	0.51	0.01	AC	4.88	0.0488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 47	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	0.5	0.51	0.01	AC	4.88	0.0488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 47	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	0.51	0.6	0.09	AC	4.88	0.4392	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 425	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	0.6	0.66	0.06	AC	4.88	0.2928	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 283	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	0.66	0.7	0.04	AC	4.88	0.1952	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 189	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	0.66	0.7	0.04	AC	4.88	0.1952	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 189	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	0.7	0.8	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	0.7	0.8	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	0.8	0.9	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	0.8	0.9	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	0.9	0.91	0.01	AC	4.88	0.0488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 47	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	0.9	0.91	0.01	AC	4.88	0.0488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 47	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	0.91	1	0.09	AC	4.88	0.4392	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 425	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	1	1.1	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	1.1	1.2	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	1.2	1.3	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	1.3	1.4	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	1.4	1.5	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	1.5	1.6	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	1.6	1.7	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	1.7	1.8	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	1.8	1.9	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	1.9	2	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	2	2.1	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	2.1	2.2	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	2.2	2.3	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	2.3	2.4	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	2.4	2.5	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	2.5	2.6	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	2.6	2.7	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	2.7	2.8	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	2.8	2.9	0.1	AC	4.88	0.488	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 472	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
480	MARY VALLEY LINK ROAD	2.9	2.98	0.08	AC	4.88	0.3904	404	1.8	2.11	265,200	310,874			$ -	96,767	31.1%	$ 378	202	1.8	2.11	132,668	155,517			$ -	5,749	3.7%	$ -
481	KENILWORTH - BROOLOO ROAD	13.8	13.9	0.1	GN	15.3	1.53	244	2.06	2.11	183,089	187,533	72,195	39.4%	$ 1,105			$ -	120	2.06	2.11	90,287	92,478	6,093	6.7%	$ 93			$ -
481	KENILWORTH - BROOLOO ROAD	13.9	14	0.1	GN	15.3	1.53	244	2.06	2.11	183,089	187,533	72,195	39.4%	$ 1,105			$ -	120	2.06	2.11	90,287	92,478	6,093	6.7%	$ 93			$ -
481	KENILWORTH - BROOLOO ROAD	14	14.1	0.1	GN	15.3	1.53	244	2.06	2.11	183,089	187,533	72,195	39.4%	$ 1,105			$ -	120	2.06	2.11	90,287	92,478	6,093	6.7%	$ 93			$ -
481	KENILWORTH - BROOLOO ROAD	14.1	14.2	0.1	GN	15.3	1.53	244	2.06	2.11	183,089	187,533	72,195	39.4%	$ 1,105			$ -	120	2.06	2.11	90,287	92,478	6,093	6.7%	$ 93			$ -
481	KENILWORTH - BROOLOO ROAD	14.2	14.21	0.01	GN	15.3	0.153	244	2.06	2.11	183,089	187,533	72,195	39.4%	$ 110			$ -	120	2.06	2.11	90,287	92,478	6,093	6.7%	$ 9			$ -
483	GYMPIE - BROOLOO ROAD	17.4	17.5	0.1	AC	8.81	0.881	286	2.06	2.11	215,213	220,436			$ -	96,767	43.9%	$ 853	120	2.06	2.11	90,287	92,478			$ -	5,749	6.2%	$ 51
483	GYMPIE - BROOLOO ROAD	17.5	17.6	0.1	AC	11.78	1.178	286	2.06	2.11	215,213	220,436			$ -	96,767	43.9%	$ 1,140	183	2.06	2.11	137,588	140,927			$ -	5,749	4.1%	$ -
483	GYMPIE - BROOLOO ROAD	17.6	17.7	0.1	AC	11.8	1.18	286	2.06	2.11	215,213	220,436			$ -	96,767	43.9%	$ 1,142	183	2.06	2.11	137,588	140,927			$ -	5,749	4.1%	$ -
483	GYMPIE - BROOLOO ROAD	17.7	17.8	0.1	AC	9.19	0.919	286	2.06	2.11	215,213	220,436			$ -	96,767	43.9%	$ 889	183	2.06	2.11	137,588	140,927			$ -	5,749	4.1%	$ -
483	GYMPIE - BROOLOO ROAD	17.8	17.9	0.1	GN	3.7	0.37	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 318			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 27			$ -
483	GYMPIE - BROOLOO ROAD	17.9	18	0.1	GN	4.18	0.418	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 359			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 30			$ -
483	GYMPIE - BROOLOO ROAD	18	18.1	0.1	GN	3.96	0.396	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 340			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 29			$ -
483	GYMPIE - BROOLOO ROAD	18.1	18.2	0.1	GN	3.76	0.376	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 323			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 27			$ -
483	GYMPIE - BROOLOO ROAD	18.2	18.3	0.1	GN	3.28	0.328	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 282			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 24			$ -
483	GYMPIE - BROOLOO ROAD	18.3	18.4	0.1	GN	3.8	0.38	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 327			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 28			$ -
483	GYMPIE - BROOLOO ROAD	18.4	18.5	0.1	GN	3.64	0.364	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 313			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 26			$ -
483	GYMPIE - BROOLOO ROAD	18.5	18.6	0.1	GN	2.74	0.274	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 236			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 20			$ -
483	GYMPIE - BROOLOO ROAD	18.6	18.7	0.1	AC	7.14	0.714	286	2.06	2.11	215,213	220,436			$ -	96,767	43.9%	$ 691	183	2.06	2.11	137,588	140,927			$ -	5,749	4.1%	$ -
483	GYMPIE - BROOLOO ROAD	18.7	18.8	0.1	GN	5.59	0.559	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 480			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 41			$ -
483	GYMPIE - BROOLOO ROAD	18.8	18.9	0.1	GN	6.17	0.617	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 530			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 45			$ -
483	GYMPIE - BROOLOO ROAD	18.9	19	0.1	GN	5.28	0.528	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 454			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 38			$ -
483	GYMPIE - BROOLOO ROAD	19	19.1	0.1	GN	12.41	1.241	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 1,067			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 90			$ -
483	GYMPIE - BROOLOO ROAD	19.1	19.2	0.1	GN	2.86	0.286	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 246			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 21			$ -
483	GYMPIE - BROOLOO ROAD	19.2	19.3	0.1	GN	2.75	0.275	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 236			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 20			$ -
483	GYMPIE - BROOLOO ROAD	19.3	19.4	0.1	GN	3.08	0.308	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 265			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 22			$ -
483	GYMPIE - BROOLOO ROAD	19.4	19.5	0.1	GN	2.74	0.274	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 236			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 20			$ -
483	GYMPIE - BROOLOO ROAD	19.5	19.6	0.1	GN	9.73	0.973	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 836			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 71			$ -
483	GYMPIE - BROOLOO ROAD	19.6	19.7	0.1	GN	12.42	1.242	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 1,068			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 90			$ -
483	GYMPIE - BROOLOO ROAD	19.7	19.8	0.1	GN	13.38	1.338	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 1,150			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 97			$ -
483	GYMPIE - BROOLOO ROAD	19.8	19.9	0.1	GN	10.18	1.018	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 875			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 74			$ -
483	GYMPIE - BROOLOO ROAD	19.9	20	0.1	GN	3.53	0.353	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 303			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 26			$ -
483	GYMPIE - BROOLOO ROAD	20	20.1	0.1	GN	3.87	0.387	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 333			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 28			$ -
483	GYMPIE - BROOLOO ROAD	20.1	20.2	0.1	GN	9.51	0.951	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 817			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 69			$ -
483	GYMPIE - BROOLOO ROAD	20.2	20.3	0.1	GN	9.92	0.992	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 853			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 72			$ -
483	GYMPIE - BROOLOO ROAD	20.3	20.4	0.1	GN	3.45	0.345	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 297			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 25			$ -
483	GYMPIE - BROOLOO ROAD	20.4	20.5	0.1	GN	2.69	0.269	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 231			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 20			$ -
483	GYMPIE - BROOLOO ROAD	20.5	20.6	0.1	GN	3.43	0.343	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 295			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 25			$ -
483	GYMPIE - BROOLOO ROAD	20.6	20.7	0.1	GN	2.72	0.272	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 234			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 20			$ -
483	GYMPIE - BROOLOO ROAD	20.7	20.8	0.1	GN	2.64	0.264	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 227			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 19			$ -
483	GYMPIE - BROOLOO ROAD	20.8	20.9	0.1	GN	9.1	0.91	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 782			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 66			$ -
483	GYMPIE - BROOLOO ROAD	20.9	21	0.1	GN	2.82	0.282	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 242			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 20			$ -
483	GYMPIE - BROOLOO ROAD	21	21.1	0.1	GN	3.35	0.335	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 288			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 24			$ -
483	GYMPIE - BROOLOO ROAD	21.1	21.2	0.1	GN	2.71	0.271	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 233			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 20			$ -
483	GYMPIE - BROOLOO ROAD	21.2	21.3	0.1	GN	9.94	0.994	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 854			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 72			$ -
483	GYMPIE - BROOLOO ROAD	21.3	21.4	0.1	GN	3.27	0.327	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 281			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 24			$ -
483	GYMPIE - BROOLOO ROAD	21.4	21.5	0.1	AC	3.11	0.311	286	2.06	2.11	215,213	220,436			$ -	96,767	43.9%	$ 301	183	2.06	2.11	137,588	140,927			$ -	5,749	4.1%	$ -
483	GYMPIE - BROOLOO ROAD	21.5	21.6	0.1	AC	2.84	0.284	286	2.06	2.11	215,213	220,436			$ -	96,767	43.9%	$ 275	183	2.06	2.11	137,588	140,927			$ -	5,749	4.1%	$ -

ROAD SECTION AND MARGINAL COST RATES								TO DEVELOPMENT											FROM DEVELOPMENT										
TMR Road ID	Road Name	Ch. Start	Ch. End	Length	Pavement Type	Marginal Cost Rate (cents per km per SAR)	Adjusted Marginal Cost Rate (cents per SAR for segment length)	Forecast AADHV (2025)	Background SAR4 / Pass	Background SAR5 / Pass	Background SAR4 (2025)	Background SAR5 (2025)	Development SAR4	Proportion to Background SAR4	SAR4 Contribution	Development SAR5	Proportion to Background SAR5	SAR5 Contribution	Forecast AADHV (2025)	Background SAR4 / Pass	Background SAR5 / Pass	Background SAR4 (2025)	Background SAR5 (2025)	Development SAR4	Proportion to Background SAR4	SAR4 Contribution	Development SAR5	Proportion to Background SAR5	SAR5 Contribution
483	GYMPIE - BROOLOO ROAD	21.6	21.7	0.1	AC	2.85	0.285	286	2.06	2.11	215,213	220,436			$ -	96,767	43.9%	$ 276	183	2.06	2.11	137,588	140,927			$ -	5,749	4.1%	$ -
483	GYMPIE - BROOLOO ROAD	21.7	21.8	0.1	AC	3.05	0.305	286	2.06	2.11	215,213	220,436			$ -	96,767	43.9%	$ 295	183	2.06	2.11	137,588	140,927			$ -	5,749	4.1%	$ -
483	GYMPIE - BROOLOO ROAD	21.8	21.9	0.1	GN	9.6	0.96	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 825			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 70			$ -
483	GYMPIE - BROOLOO ROAD	21.9	22	0.1	GN	15.02	1.502	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 1,291			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 109			$ -
483	GYMPIE - BROOLOO ROAD	22	22.1	0.1	GN	4.42	0.442	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 380			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 32			$ -
483	GYMPIE - BROOLOO ROAD	22.1	22.2	0.1	GN	3.78	0.378	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 325			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 27			$ -
483	GYMPIE - BROOLOO ROAD	22.2	22.3	0.1	GN	16.43	1.643	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 1,412			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 119			$ -
483	GYMPIE - BROOLOO ROAD	22.3	22.4	0.1	GN	15.68	1.568	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 1,348			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 114			$ -
483	GYMPIE - BROOLOO ROAD	22.4	22.5	0.1	GN	16.71	1.671	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 1,436			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 121			$ -
483	GYMPIE - BROOLOO ROAD	22.5	22.6	0.1	GN	3.56	0.356	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 306			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 26			$ -
483	GYMPIE - BROOLOO ROAD	22.6	22.7	0.1	GN	15.88	1.588	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 1,365			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 115			$ -
483	GYMPIE - BROOLOO ROAD	22.7	22.8	0.1	GN	12.13	1.213	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 1,043			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 88			$ -
483	GYMPIE - BROOLOO ROAD	22.8	22.9	0.1	GN	12.13	1.213	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 1,043			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 88			$ -
483	GYMPIE - BROOLOO ROAD	22.9	23	0.1	GN	6.33	0.633	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 544			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 46			$ -
483	GYMPIE - BROOLOO ROAD	23	23.1	0.1	GN	11.51	1.151	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 989			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 83			$ -
483	GYMPIE - BROOLOO ROAD	23.1	23.2	0.1	GN	4	0.4	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 344			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 29			$ -
483	GYMPIE - BROOLOO ROAD	23.2	23.3	0.1	GN	7.16	0.716	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 615			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 52			$ -
483	GYMPIE - BROOLOO ROAD	23.3	23.4	0.1	GN	9.47	0.947	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 814			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 69			$ -
483	GYMPIE - BROOLOO ROAD	23.4	23.5	0.1	GN	13.54	1.354	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 1,164			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 98			$ -
483	GYMPIE - BROOLOO ROAD	23.5	23.6	0.1	GN	13.66	1.366	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 1,174			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 99			$ -
483	GYMPIE - BROOLOO ROAD	23.6	23.7	0.1	GN	13.03	1.303	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 1,120			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 95			$ -
483	GYMPIE - BROOLOO ROAD	23.7	23.8	0.1	GN	11.25	1.125	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 967			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 82			$ -
483	GYMPIE - BROOLOO ROAD	23.8	23.9	0.1	GN	4.24	0.424	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 364			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 31			$ -
483	GYMPIE - BROOLOO ROAD	23.9	24	0.1	GN	28.77	2.877	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 2,473			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 209			$ -
483	GYMPIE - BROOLOO ROAD	24	24.1	0.1	GN	20.76	2.076	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 1,784			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 151			$ -
483	GYMPIE - BROOLOO ROAD	24.1	24.2	0.1	GN	20.88	2.088	286	2.06	2.11	215,213	220,436	85,954	39.9%	$ 1,795			$ -	183	2.06	2.11	137,588	140,927	7,254	5.3%	$ 151			$ -
483	GYMPIE - BROOLOO ROAD	24.2	24.3	0.1	AC	12.29	1.229	286	2.06	2.11	215,213	220,436			$ -	96,767	43.9%	$ 1,189	183	2.06	2.11	137,588	140,927			$ -	5,749	4.1%	$ -
483	GYMPIE - BROOLOO ROAD	24.3	24.4	0.1	GN	12.37	1.237	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 1,063			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 90			$ -
483	GYMPIE - BROOLOO ROAD	24.4	24.5	0.1	GN	10	1	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 860			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 73			$ -
483	GYMPIE - BROOLOO ROAD	24.5	24.6	0.1	GN	3.21	0.321	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 276			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 23			$ -
483	GYMPIE - BROOLOO ROAD	24.6	24.7	0.1	GN	8.39	0.839	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 721			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 61			$ -
483	GYMPIE - BROOLOO ROAD	24.7	24.8	0.1	GN	8.53	0.853	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 733			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 62			$ -
483	GYMPIE - BROOLOO ROAD	24.8	24.9	0.1	GN	10.22	1.022	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 878			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 74			$ -
483	GYMPIE - BROOLOO ROAD	24.9	25	0.1	GN	14.38	1.438	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 1,236			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 104			$ -
483	GYMPIE - BROOLOO ROAD	25	25.1	0.1	GN	9.28	0.928	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 798			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 67			$ -
483	GYMPIE - BROOLOO ROAD	25.1	25.2	0.1	GN	10.29	1.029	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 884			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 75			$ -
483	GYMPIE - BROOLOO ROAD	25.2	25.3	0.1	GN	26.64	2.664	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 2,290			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 193			$ -
483	GYMPIE - BROOLOO ROAD	25.3	25.4	0.1	GN	29.78	2.978	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 2,560			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 216			$ -
483	GYMPIE - BROOLOO ROAD	25.4	25.5	0.1	GN	17.34	1.734	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 1,490			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 126			$ -
483	GYMPIE - BROOLOO ROAD	25.5	25.6	0.1	GN	8.31	0.831	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 714			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 60			$ -
483	GYMPIE - BROOLOO ROAD	25.6	25.7	0.1	GN	8.31	0.831	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 714			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 60			$ -
483	GYMPIE - BROOLOO ROAD	25.7	25.8	0.1	GN	13.87	1.387	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 1,192			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 101			$ -
483	GYMPIE - BROOLOO ROAD	25.8	25.9	0.1	GN	23.68	2.368	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 2,035			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 172			$ -
483	GYMPIE - BROOLOO ROAD	25.9	26	0.1	GN	26.77	2.677	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 2,301			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 194			$ -
483	GYMPIE - BROOLOO ROAD	26	26.1	0.1	GN	25.67	2.567	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 2,206			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 186			$ -
483	GYMPIE - BROOLOO ROAD	26.1	26.2	0.1	GN	20.58	2.058	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 1,769			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 149			$ -
483	GYMPIE - BROOLOO ROAD	26.2	26.3	0.1	GN	18.99	1.899	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 1,632			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 138			$ -
483	GYMPIE - BROOLOO ROAD	26.3	26.4	0.1	GN	14.44	1.444	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 1,241			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 105			$ -
483	GYMPIE - BROOLOO ROAD	26.4	26.5	0.1	GN	23.39	2.339	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 2,010			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 170			$ -
483	GYMPIE - BROOLOO ROAD	26.5	26.6	0.1	GN	18.56	1.856	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 1,595			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 135			$ -
483	GYMPIE - BROOLOO ROAD	26.6	26.7	0.1	GN	20.94	2.094	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 1,800			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 152			$ -
483	GYMPIE - BROOLOO ROAD	26.7	26.8	0.1	GN	26.71	2.671	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 2,296			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 194			$ -
483	GYMPIE - BROOLOO ROAD	26.8	26.9	0.1	GN	26.64	2.664	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 2,290			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 193			$ -
483	GYMPIE - BROOLOO ROAD	26.9	27	0.1	GN	27.15	2.715	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 2,334			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 197			$ -
483	GYMPIE - BROOLOO ROAD	27	27.1	0.1	GN	26.69	2.669	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 2,294			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 194			$ -
483	GYMPIE - BROOLOO ROAD	27.1	27.2	0.1	GN	26.54	2.654	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 2,281			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 193			$ -
483	GYMPIE - BROOLOO ROAD	27.2	27.3	0.1	GN	19.73	1.973	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 1,696			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 143			$ -
483	GYMPIE - BROOLOO ROAD	27.3	27.4	0.1	GN	3.45	0.345	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 297			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 25			$ -
483	GYMPIE - BROOLOO ROAD	27.4	27.5	0.1	GN	3.35	0.335	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 288			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 24			$ -
483	GYMPIE - BROOLOO ROAD	27.5	27.6	0.1	GN	25.07	2.507	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 2,155			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 182			$ -
483	GYMPIE - BROOLOO ROAD	27.6	27.7	0.1	GN	3.33	0.333	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 286			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 24			$ -
483	GYMPIE - BROOLOO ROAD	27.7	27.8	0.1	GN	9.78	0.978	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 841			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 71			$ -
483	GYMPIE - BROOLOO ROAD	27.8	27.9	0.1	GN	11.96	1.196	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 1,028			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 87			$ -
483	GYMPIE - BROOLOO ROAD	27.9	28	0.1	GN	13.88	1.388	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 1,193			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 101			$ -
483	GYMPIE - BROOLOO ROAD	28	28.1	0.1	GN	20.91	2.091	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 1,797			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 152			$ -
483	GYMPIE - BROOLOO ROAD	28.1	28.2	0.1	GN	9.99	0.999	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 859			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 72			$ -
483	GYMPIE - BROOLOO ROAD	28.2	28.3	0.1	GN	8.19	0.819	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 704			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 59			$ -
483	GYMPIE - BROOLOO ROAD	28.3	28.4	0.1	GN	8.27	0.827	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 711			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 60			$ -
483	GYMPIE - BROOLOO ROAD	28.4	28.5	0.1	GN	19.13	1.913	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 1,644			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 139			$ -
483	GYMPIE - BROOLOO ROAD	28.5	28.6	0.1	GN	28.45	2.845	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 2,445			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 206			$ -
483	GYMPIE - BROOLOO ROAD	28.6	28.7	0.1	GN	16.76	1.676	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 1,441			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 122			$ -
483	GYMPIE - BROOLOO ROAD	28.7	28.8	0.1	GN	17.63	1.763	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 1,515			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 128			$ -
483	GYMPIE - BROOLOO ROAD	28.8	28.9	0.1	GN	21.48	2.148	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 1,846			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 156			$ -
483	GYMPIE - BROOLOO ROAD	28.9	29	0.1	GN	10.01	1.001	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 860			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 73			$ -
483	GYMPIE - BROOLOO ROAD	29	29.1	0.1	GN	7.59	0.759	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 652			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 55			$ -
483	GYMPIE - BROOLOO ROAD	29.1	29.2	0.1	GN	9.54	0.954	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 820			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 69			$ -
483	GYMPIE - BROOLOO ROAD	29.2	29.3	0.1	GN	10.53	1.053	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 905			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 76			$ -
483	GYMPIE - BROOLOO ROAD	29.3	29.4	0.1	GN	8.95	0.895	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 769			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 65			$ -
483	GYMPIE - BROOLOO ROAD	29.4	29.5	0.1	GN	3.54	0.354	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 304			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 26			$ -
483	GYMPIE - BROOLOO ROAD	29.5	29.6	0.1	GN	27.33	2.733	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 2,349			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 198			$ -
483	GYMPIE - BROOLOO ROAD	29.6	29.7	0.1	GN	17.05	1.705	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 1,466			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 124			$ -
483	GYMPIE - BROOLOO ROAD	29.7	29.8	0.1	GN	4.65	0.465	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 400			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 34			$ -
483	GYMPIE - BROOLOO ROAD	29.8	29.9	0.1	GN	10.95	1.095	69	2.06	2.11	51,718	52,974	85,954	166.2%	$ 941			$ -	69	2.06	2.11	52,026	53,289	7,254	13.9%	$ 79			$ -
483	GYMPIE - BROOLOO ROAD	29.9	30	0.1	AC	12.75	1.275	69	2.06	2.11	51,718	52,974			$ -	96,767	182.7%	$ 1,234	69	2.06	2.11	52,026	53,289			$ -	5,749	10.8%	$ 73
483	GYMPIE - BROOLOO ROAD	30	30.1	0.1	GN	9.84	0.984	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 846			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	30.1	30.2	0.1	GN	2.75	0.275	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 236			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	30.2	30.3	0.1	GN	2.95	0.295	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 254			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	30.3	30.4	0.1	GN	2.78	0.278	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 239			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	30.4	30.5	0.1	GN	2.81	0.281	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 242			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	30.5	30.6	0.1	GN	1.97	0.197	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 169			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	30.6	30.7	0.1	GN	1.93	0.193	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 166			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	30.7	30.8	0.1	GN	1.93	0.193	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 166			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	30.8	30.9	0.1	GN	1.94	0.194	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 167			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	30.9	31	0.1	GN	1.52	0.152	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 131			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	31	31.1	0.1	GN	7.6	0.76	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 653			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	31.1	31.2	0.1	GN	2.27	0.227	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 195			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	31.2	31.3	0.1	GN	2.6	0.26	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 223			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	31.3	31.4	0.1	GN	2.32	0.232	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 199			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	31.4	31.5	0.1	GN	5.87	0.587	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 505			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	31.5	31.6	0.1	GN	2.66	0.266	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 229			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	31.6	31.7	0.1	GN	2.23	0.223	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 192			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	31.7	31.8	0.1	GN	7.58	0.758	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 652			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	31.8	31.9	0.1	GN	2.65	0.265	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 228			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	31.9	32	0.1	GN	2.27	0.227	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 195			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	32	32.1	0.1	GN	2.91	0.291	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 250			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	32.1	32.2	0.1	GN	2.02	0.202	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 174			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	32.2	32.3	0.1	GN	1.9	0.19	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 163			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	32.3	32.4	0.1	GN	2.1	0.21	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 181			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	32.4	32.5	0.1	GN	2.29	0.229	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 197			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	32.5	32.6	0.1	GN	2.57	0.257	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 221			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -

ROAD SECTION AND MARGINAL COST RATES								TO DEVELOPMENT											FROM DEVELOPMENT										
TMR Road ID	Road Name	Ch. Start	Ch. End	Length	Pavement Type	Marginal Cost Rate (cents per km per SAR)	Adjusted Marginal Cost Rate (cents per SAR for segment length)	Forecast AADHV (2025)	Background SAR4 / Pass	Background SAR5 / Pass	Background SAR4 (2025)	Background SAR5 (2025)	Development SAR4	Proportion to Background SAR4	SAR4 Contribution	Development SAR5	Proportion to Background SAR5	SAR5 Contribution	Forecast AADHV (2025)	Background SAR4 / Pass	Background SAR5 / Pass	Background SAR4 (2025)	Background SAR5 (2025)	Development SAR4	Proportion to Background SAR4	SAR4 Contribution	Development SAR5	Proportion to Background SAR5	SAR5 Contribution
483	GYMPIE - BROOLOO ROAD	32.6	32.7	0.1	GN	3.27	0.327	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 281			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	32.7	32.8	0.1	GN	7.95	0.795	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 683			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	32.8	32.9	0.1	GN	9.07	0.907	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 780			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	32.9	33	0.1	GN	6.82	0.682	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 586			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	33	33.1	0.1	GN	6.17	0.617	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 530			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	33.1	33.2	0.1	GN	9.46	0.946	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 813			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	33.2	33.3	0.1	GN	9.65	0.965	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 829			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	33.3	33.4	0.1	GN	16.62	1.662	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 1,429			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	33.4	33.5	0.1	GN	23.13	2.313	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 1,988			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	33.5	33.6	0.1	GN	20.79	2.079	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 1,787			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	33.6	33.7	0.1	GN	20.12	2.012	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 1,729			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	33.7	33.8	0.1	GN	20.61	2.061	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 1,772			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	33.8	33.9	0.1	GN	20.84	2.084	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 1,791			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	33.9	34	0.1	GN	18.76	1.876	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 1,613			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	34	34.1	0.1	GN	15.9	1.59	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 1,367			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	34.1	34.2	0.1	GN	20.57	2.057	76	2.06	2.11	57,519	58,915	85,954	149.4%	$ 1,768			$ -	349	2.06	2.11	262,254	268,620	7,254	2.8%	$ -			$ -
483	GYMPIE - BROOLOO ROAD	34.2	34.3	0.1	AC	12.44	1.244	76	2.06	2.11	57,519	58,915			$ -	96,767	164.2%	$ 1,204	349	2.06	2.11	262,254	268,620			$ -	5,749	2.1%	$ -
483	GYMPIE - BROOLOO ROAD	34.3	34.4	0.1	AC	10.43	1.043	76	2.06	2.11	57,519	58,915			$ -	96,767	164.2%	$ 1,009	349	2.06	2.11	262,254	268,620			$ -	5,749	2.1%	$ -
483	GYMPIE - BROOLOO ROAD	34.4	34.5	0.1	AC	16.75	1.675	76	2.06	2.11	57,519	58,915			$ -	96,767	164.2%	$ 1,621	349	2.06	2.11	262,254	268,620			$ -	5,749	2.1%	$ -
483	GYMPIE - BROOLOO ROAD	34.5	34.6	0.1	GN	19.37	1.937	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 1,665			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 141			$ -
483	GYMPIE - BROOLOO ROAD	34.6	34.7	0.1	GN	14.07	1.407	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 1,209			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 102			$ -
483	GYMPIE - BROOLOO ROAD	34.7	34.8	0.1	GN	24.72	2.472	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 2,125			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 179			$ -
483	GYMPIE - BROOLOO ROAD	34.8	34.9	0.1	GN	22.95	2.295	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 1,973			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 166			$ -
483	GYMPIE - BROOLOO ROAD	34.9	35	0.1	GN	23.01	2.301	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 1,978			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 167			$ -
483	GYMPIE - BROOLOO ROAD	35	35.1	0.1	GN	18	1.8	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 1,547			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 131			$ -
483	GYMPIE - BROOLOO ROAD	35.1	35.2	0.1	GN	23.8	2.38	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 2,046			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 173			$ -
483	GYMPIE - BROOLOO ROAD	35.2	35.3	0.1	GN	18.93	1.893	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 1,627			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 137			$ -
483	GYMPIE - BROOLOO ROAD	35.3	35.4	0.1	GN	20.29	2.029	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 1,744			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 147			$ -
483	GYMPIE - BROOLOO ROAD	35.4	35.5	0.1	GN	2.38	0.238	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 205			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 17			$ -
483	GYMPIE - BROOLOO ROAD	35.5	35.6	0.1	GN	6.86	0.686	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 590			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 50			$ -
483	GYMPIE - BROOLOO ROAD	35.6	35.7	0.1	GN	2.31	0.231	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 199			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 17			$ -
483	GYMPIE - BROOLOO ROAD	35.7	35.8	0.1	GN	2.99	0.299	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 257			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 22			$ -
483	GYMPIE - BROOLOO ROAD	35.8	35.9	0.1	GN	18.89	1.889	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 1,624			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 137			$ -
483	GYMPIE - BROOLOO ROAD	35.9	36	0.1	GN	15.41	1.541	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 1,325			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 112			$ -
483	GYMPIE - BROOLOO ROAD	36	36.1	0.1	GN	16.58	1.658	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 1,425			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 120			$ -
483	GYMPIE - BROOLOO ROAD	36.1	36.2	0.1	GN	14.78	1.478	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 1,270			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 107			$ -
483	GYMPIE - BROOLOO ROAD	36.2	36.3	0.1	GN	16.93	1.693	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 1,455			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 123			$ -
483	GYMPIE - BROOLOO ROAD	36.3	36.4	0.1	GN	16.58	1.658	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 1,425			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 120			$ -
483	GYMPIE - BROOLOO ROAD	36.4	36.5	0.1	GN	15.05	1.505	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 1,294			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 109			$ -
483	GYMPIE - BROOLOO ROAD	36.5	36.6	0.1	GN	3.25	0.325	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 279			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 24			$ -
483	GYMPIE - BROOLOO ROAD	36.6	36.7	0.1	GN	17.03	1.703	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 1,464			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 124			$ -
483	GYMPIE - BROOLOO ROAD	36.7	36.8	0.1	GN	15.89	1.589	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 1,366			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 115			$ -
483	GYMPIE - BROOLOO ROAD	36.8	36.9	0.1	GN	17.85	1.785	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 1,534			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 129			$ -
483	GYMPIE - BROOLOO ROAD	36.9	37	0.1	GN	15.43	1.543	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 1,326			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 112			$ -
483	GYMPIE - BROOLOO ROAD	37	37.1	0.1	GN	14.75	1.475	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 1,268			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 107			$ -
483	GYMPIE - BROOLOO ROAD	37.1	37.2	0.1	GN	17.36	1.736	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 1,492			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 126			$ -
483	GYMPIE - BROOLOO ROAD	37.2	37.3	0.1	GN	18.58	1.858	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 1,597			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 135			$ -
483	GYMPIE - BROOLOO ROAD	37.3	37.37	0.07	GN	15.63	1.0941	55	2.06	2.11	41,090	42,088	85,954	209.2%	$ 940			$ -	72	2.06	2.11	53,793	55,099	7,254	13.5%	$ 79			$ -
4832	YABBA CREEK ROAD	0	0.1	0.1	AC	8.69	0.869	326	1.98	2.11	235,435	250,893			$ -	178,044	71.0%	$ 1,547	98	1.98	2.11	70,908	75,564			$ -	10,577	14.0%	$ 92
4832	YABBA CREEK ROAD	0.1	0.2	0.1	GN	11.35	1.135	326	1.98	2.11	235,435	250,893	158,149	67.2%	$ 1,795			$ -	98	1.98	2.11	70,908	75,564	13,347	18.8%	$ 151			$ -
4832	YABBA CREEK ROAD	0.2	0.3	0.1	GN	11.35	1.135	326	1.98	2.11	235,435	250,893	158,149	67.2%	$ 1,795			$ -	98	1.98	2.11	70,908	75,564	13,347	18.8%	$ 151			$ -
4832	YABBA CREEK ROAD	0.3	0.4	0.1	GN	11.35	1.135	326	1.98	2.11	235,435	250,893	158,149	67.2%	$ 1,795			$ -	98	1.98	2.11	70,908	75,564	13,347	18.8%	$ 151			$ -
4832	YABBA CREEK ROAD	0.4	0.5	0.1	GN	11.35	1.135	326	1.98	2.11	235,435	250,893	158,149	67.2%	$ 1,795			$ -	98	1.98	2.11	70,908	75,564	13,347	18.8%	$ 151			$ -
4832	YABBA CREEK ROAD	0.5	0.6	0.1	GN	11.35	1.135	326	1.98	2.11	235,435	250,893	158,149	67.2%	$ 1,795			$ -	98	1.98	2.11	70,908	75,564	13,347	18.8%	$ 151			$ -
4832	YABBA CREEK ROAD	0.6	0.7	0.1	GN	11.35	1.135	326	1.98	2.11	235,435	250,893	158,149	67.2%	$ 1,795			$ -	98	1.98	2.11	70,908	75,564	13,347	18.8%	$ 151			$ -
4832	YABBA CREEK ROAD	0.7	0.8	0.1	GN	11.35	1.135	326	1.98	2.11	235,435	250,893	158,149	67.2%	$ 1,795			$ -	98	1.98	2.11	70,908	75,564	13,347	18.8%	$ 151			$ -
4832	YABBA CREEK ROAD	0.8	0.9	0.1	GN	11.35	1.135	326	1.98	2.11	235,435	250,893	158,149	67.2%	$ 1,795			$ -	98	1.98	2.11	70,908	75,564	13,347	18.8%	$ 151			$ -
4832	YABBA CREEK ROAD	0.9	1	0.1	GN	11.35	1.135	326	1.98	2.11	235,435	250,893	158,149	67.2%	$ 1,795			$ -	98	1.98	2.11	70,908	75,564	13,347	18.8%	$ 151			$ -
4832	YABBA CREEK ROAD	1	1.1	0.1	GN	11.35	1.135	326	1.98	2.11	235,435	250,893	158,149	67.2%	$ 1,795			$ -	98	1.98	2.11	70,908	75,564	13,347	18.8%	$ 151			$ -
4832	YABBA CREEK ROAD	1.1	1.2	0.1	GN	11.35	1.135	326	1.98	2.11	235,435	250,893	158,149	67.2%	$ 1,795			$ -	98	1.98	2.11	70,908	75,564	13,347	18.8%	$ 151			$ -
4832	YABBA CREEK ROAD	1.2	1.3	0.1	GN	11.35	1.135	326	1.98	2.11	235,435	250,893	158,149	67.2%	$ 1,795			$ -	98	1.98	2.11	70,908	75,564	13,347	18.8%	$ 151			$ -
4832	YABBA CREEK ROAD	1.3	1.4	0.1	GN	11.35	1.135	326	1.98	2.11	235,435	250,893	158,149	67.2%	$ 1,795			$ -	98	1.98	2.11	70,908	75,564	13,347	18.8%	$ 151			$ -
4832	YABBA CREEK ROAD	1.4	1.5	0.1	GN	11.35	1.135	326	1.98	2.11	235,435	250,893	158,149	67.2%	$ 1,795			$ -	98	1.98	2.11	70,908	75,564	13,347	18.8%	$ 151			$ -
4832	YABBA CREEK ROAD	1.5	1.6	0.1	GN	11.35	1.135	326	1.98	2.11	235,435	250,893	158,149	67.2%	$ 1,795			$ -	98	1.98	2.11	70,908	75,564	13,347	18.8%	$ 151			$ -
4832	YABBA CREEK ROAD	1.6	1.7	0.1	GN	11.35	1.135	326	1.98	2.11	235,435	250,893	158,149	67.2%	$ 1,795			$ -	98	1.98	2.11	70,908	75,564	13,347	18.8%	$ 151			$ -
4832	YABBA CREEK ROAD	1.7	1.8	0.1	AC	8.69	0.869	326	1.98	2.11	235,435	250,893			$ -	178,044	71.0%	$ 1,547	98	1.98	2.11	70,908	75,564			$ -	10,577	14.0%	$ 92
4832	YABBA CREEK ROAD	1.8	1.9	0.1	GN	11.35	1.135	326	1.98	2.11	235,435	250,893	158,149	67.2%	$ 1,795			$ -	98	1.98	2.11	70,908	75,564	13,347	18.8%	$ 151			$ -
4832	YABBA CREEK ROAD	1.9	2	0.1	GN	11.35	1.135	326	1.98	2.11	235,435	250,893	158,149	67.2%	$ 1,795			$ -	98	1.98	2.11	70,908	75,564	13,347	18.8%	$ 151			$ -
4832	YABBA CREEK ROAD	2	2.1	0.1	GN	11.35	1.135	326	1.98	2.11	235,435	250,893	158,149	67.2%	$ 1,795			$ -	98	1.98	2.11	70,908	75,564	13,347	18.8%	$ 151			$ -
4832	YABBA CREEK ROAD	2.1	2.2	0.1	GN	11.35	1.135	326	1.98	2.11	235,435	250,893	158,149	67.2%	$ 1,795			$ -	98	1.98	2.11	70,908	75,564	13,347	18.8%	$ 151			$ -
4832	YABBA CREEK ROAD	2.2	2.3	0.1	GN	11.35	1.135	469	1.98	2.11	338,632	360,866	158,149	46.7%	$ 1,795			$ -	133	1.98	2.11	96,081	102,390	13,347	13.9%	$ 151			$ -
4832	YABBA CREEK ROAD	2.3	2.4	0.1	GN	11.35	1.135	469	1.98	2.11	338,632	360,866	158,149	46.7%	$ 1,795			$ -	133	1.98	2.11	96,081	102,390	13,347	13.9%	$ 151			$ -
4832	YABBA CREEK ROAD	2.4	2.5	0.1	GN	11.35	1.135	469	1.98	2.11	338,632	360,866	158,149	46.7%	$ 1,795			$ -	133	1.98	2.11	96,081	102,390	13,347	13.9%	$ 151			$ -
4832	YABBA CREEK ROAD	2.5	2.6	0.1	GN	11.35	1.135	469	1.98	2.11	338,632	360,866	158,149	46.7%	$ 1,795			$ -	133	1.98	2.11	96,081	102,390	13,347	13.9%	$ 151			$ -
4832	YABBA CREEK ROAD	2.6	2.7	0.1	GN	11.35	1.135	469	1.98	2.11	338,632	360,866	158,149	46.7%	$ 1,795			$ -	133	1.98	2.11	96,081	102,390	13,347	13.9%	$ 151			$ -
4832	YABBA CREEK ROAD	2.7	2.8	0.1	GN	11.35	1.135	469	1.98	2.11	338,632	360,866	158,149	46.7%	$ 1,795			$ -	133	1.98	2.11	96,081	102,390	13,347	13.9%	$ 151			$ -
4832	YABBA CREEK ROAD	2.8	2.9	0.1	GN	11.35	1.135	469	1.98	2.11	338,632	360,866	158,149	46.7%	$ 1,795			$ -	133	1.98	2.11	96,081	102,390	13,347	13.9%	$ 151			$ -
4832	YABBA CREEK ROAD	2.9	3	0.1	GN	11.35	1.135	469	1.98	2.11	338,632	360,866	158,149	46.7%	$ 1,795			$ -	133	1.98	2.11	96,081	102,390	13,347	13.9%	$ 151			$ -
4832	YABBA CREEK ROAD	3	3.1	0.1	GN	11.35	1.135	469	1.98	2.11	338,632	360,866	158,149	46.7%	$ 1,795			$ -	133	1.98	2.11	96,081	102,390	13,347	13.9%	$ 151			$ -
4832	YABBA CREEK ROAD	3.1	3.2	0.1	GN	11.35	1.135	469	1.98	2.11	338,632	360,866	158,149	46.7%	$ 1,795			$ -	133	1.98	2.11	96,081	102,390	13,347	13.9%	$ 151			$ -
4832	YABBA CREEK ROAD	3.2	3.3	0.1	GN	11.35	1.135	469	1.98	2.11	338,632	360,866	158,149	46.7%	$ 1,795			$ -	133	1.98	2.11	96,081	102,390	13,347	13.9%	$ 151			$ -
4832	YABBA CREEK ROAD	3.3	3.4	0.1	GN	11.35	1.135	469	1.98	2.11	338,632	360,866	158,149	46.7%	$ 1,795			$ -	133	1.98	2.11	96,081	102,390	13,347	13.9%	$ 151			$ -
4832	YABBA CREEK ROAD	3.4	3.5	0.1	GN	11.35	1.135	469	1.98	2.11	338,632	360,866	158,149	46.7%	$ 1,795			$ -	133	1.98	2.11	96,081	102,390	13,347	13.9%	$ 151			$ -
4832	YABBA CREEK ROAD	3.5	3.6	0.1	GN	11.35	1.135	469	1.98	2.11	338,632	360,866	158,149	46.7%	$ 1,795			$ -	133	1.98	2.11	96,081	102,390	13,347	13.9%	$ 151			$ -
4832	YABBA CREEK ROAD	3.6	3.7	0.1	GN	11.35	1.135	158	1.98	2.11	114,502	122,020	158,149	138.1%	$ 1,795			$ -	172	1.98	2.11	124,197	132,351	13,347	10.7%	$ 151			$ -
4832	YABBA CREEK ROAD	3.7	3.8	0.1	GN	11.35	1.135	158	1.98	2.11	114,502	122,020	158,149	138.1%	$ 1,795			$ -	172	1.98	2.11	124,197	132,351	13,347	10.7%	$ 151			$ -
4832	YABBA CREEK ROAD	3.8	3.9	0.1	GN	11.35	1.135	158	1.98	2.11	114,502	122,020	158,149	138.1%	$ 1,795			$ -	172	1.98	2.11	124,197	132,351	13,347	10.7%	$ 151			$ -
4832	YABBA CREEK ROAD	3.9	4	0.1	AC	11.35	1.135	158	1.98	2.11	114,502	122,020			$ -	178,044	145.9%	$ 2,021	172	1.98	2.11	124,197	132,351			$ -	10,577	8.0%	$ 120
4832	YABBA CREEK ROAD	4	4.1	0.1	AC	11.35	1.135	158	1.98	2.11	114,502	122,020			$ -	178,044	145.9%	$ 2,021	172	1.98	2.11	124,197	132,351			$ -	10,577	8.0%	$ 120
4832	YABBA CREEK ROAD	4.1	4.2	0.1	GN	11.35	1.135	158	1.98	2.11	114,502	122,020	158,149	138.1%	$ 1,795			$ -	172	1.98	2.11	124,197	132,351	13,347	10.7%	$ 151			$ -
4832	YABBA CREEK ROAD	4.2	4.3	0.1	GN	11.35	1.135	158	1.98	2.11	114,502	122,020	158,149	138.1%	$ 1,795			$ -	172	1.98	2.11	124,197	132,351	13,347	10.7%	$ 151			$ -
4832	YABBA CREEK ROAD	4.3	4.4	0.1	GN	11.35	1.135	158	1.98	2.11	114,502	122,020	158,149	138.1%	$ 1,795			$ -	172	1.98	2.11	124,197	132,351	13,347	10.7%	$ 151			$ -
4832	YABBA CREEK ROAD	4.4	4.5	0.1	GN	11.35	1.135	158	1.98	2.11	114,502	122,020	158,149	138.1%	$ 1,795			$ -	172	1.98	2.11	124,197	132,351	13,347	10.7%	$ 151			$ -
4832	YABBA CREEK ROAD	4.5	4.6	0.1	GN	11.35	1.135	158	1.98	2.11	114,502	122,020	158,149	138.1%	$ 1,795			$ -	172	1.98	2.11	124,197	132,351	13,347	10.7%	$ 151			$ -
4832	YABBA CREEK ROAD	4.6	4.7	0.1	GN	11.35	1.135	158	1.98	2.11	114,502	122,020	158,149	138.1%	$ 1,795			$ -	172	1.98	2.11	124,197	132,351	13,347	10.7%	$ 151			$ -
4832	YABBA CREEK ROAD	4.7	4.8	0.1	GN	11.35	1.135	158	1.98	2.11	114,502	122,020	158,149	138.1%	$ 1,795			$ -	172	1.98	2.11	124,197	132,351	13,347	10.7%	$ 151			$ -
4832	YABBA CREEK ROAD	4.8	4.9	0.1	GN	11.35	1.135	158	1.98	2.11	114,502	122,020	158,149	138.1%	$ 1,795			$ -	172	1.98	2.11	124,197	132,351	13,347	10.7%	$ 151			$ -
4832	YABBA CREEK ROAD	4.9	5	0.1	GN	11.35	1.135	158	1.98	2.11	114,502	122,020	158,149	138.1%	$ 1,795			$ -	172	1.98	2.11	124,197	132,351	13,347	10.7%	$ 151			$ -
4832	YABBA CREEK ROAD	5	5.1	0.1	GN	8.69	0.869	158	1.98	2.11	114,502	122,020	158,149	138.1%	$ 1,374			$ -	172	1.98	2.11	124,197	132,351	13,347	10.7%	$ 116			$ -
4832	YABBA CREEK ROAD	5.1	5.2	0.1	GN	11.35	1.135	158	1.98	2.11	114,502	122,020	158,149	138.1%	$ 1,795			$ -	172	1.98	2.11	124,197	132,351	13,347	10.7%	$ 151			$ -
4832	YABBA CREEK ROAD	5.2	5.3	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	5.3	5.4	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	5.4	5.5	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	5.5	5.6	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	5.6	5.7	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	5.7	5.8	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	5.8	5.9	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	5.9	6	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	6	6.1	0.1	AC	8.69	0.869	187	1.98	2.11	134,817	143,669			$ -	178,044	123.9%	$ 1,547	225	1.98	2.11	162,442	173,107			$ -	10,577	6.1%	$ 92
4832	YABBA CREEK ROAD	6.1	6.2	0.1	AC	8.69	0.869	187	1.98	2.11	134,817	143,669			$ -	178,044	123.9%	$ 1,547	225	1.98	2.11	162,442	173,107			$ -	10,577	6.1%	$ 92

ROAD SECTION AND MARGINAL COST RATES								TO DEVELOPMENT											FROM DEVELOPMENT										
TMR Road ID	Road Name	Ch. Start	Ch. End	Length	Pavement Type	Marginal Cost Rate (cents per km per SAR)	Adjusted Marginal Cost Rate (cents per SAR for segment length)	Forecast AADHV (2025)	Background SAR4 / Pass	Background SAR5 / Pass	Background SAR4 (2025)	Background SAR5 (2025)	Development SAR4	Proportion to Background SAR4	SAR4 Contribution	Development SAR5	Proportion to Background SAR5	SAR5 Contribution	Forecast AADHV (2025)	Background SAR4 / Pass	Background SAR5 / Pass	Background SAR4 (2025)	Background SAR5 (2025)	Development SAR4	Proportion to Background SAR4	SAR4 Contribution	Development SAR5	Proportion to Background SAR5	SAR5 Contribution
4832	YABBA CREEK ROAD	6.2	6.3	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	6.3	6.4	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	6.4	6.5	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	6.5	6.6	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	6.6	6.7	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	6.7	6.8	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	6.8	6.9	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	6.9	7	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	7	7.1	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	7.1	7.2	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	7.2	7.3	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	7.3	7.4	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	7.4	7.5	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	7.5	7.6	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	7.6	7.7	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	7.7	7.8	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	7.8	7.9	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	7.9	8	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	8	8.1	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	8.1	8.2	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	8.2	8.3	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	8.3	8.4	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	8.4	8.5	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	8.5	8.6	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	8.6	8.7	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	8.7	8.8	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	8.8	8.9	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	8.9	9	0.1	GN	11.35	1.135	187	1.98	2.11	134,817	143,669	158,149	117.3%	$ 1,795			$ -	225	1.98	2.11	162,442	173,107	13,347	8.2%	$ 151			$ -
4832	YABBA CREEK ROAD	9	9.1	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	9.1	9.2	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	9.2	9.3	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	9.3	9.4	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	9.4	9.5	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	9.5	9.6	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	9.6	9.7	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	9.7	9.8	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	9.8	9.9	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	9.9	10	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	10	10.1	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	10.1	10.2	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	10.2	10.3	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	10.3	10.4	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	10.4	10.5	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	10.5	10.6	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	10.6	10.7	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	10.7	10.8	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	10.8	10.9	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	10.9	11	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	11	11.1	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	11.1	11.2	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	11.2	11.3	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	11.3	11.4	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	11.4	11.5	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	11.5	11.6	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	11.6	11.7	0.1	AC	8.69	0.869	44	1.98	2.11	32,114	34,223			$ -	178,044	520.3%	$ 1,547	26	1.98	2.11	19,094	20,348			$ -	10,577	52.0%	$ 92
4832	YABBA CREEK ROAD	11.7	11.8	0.1	AC	8.69	0.869	44	1.98	2.11	32,114	34,223			$ -	178,044	520.3%	$ 1,547	26	1.98	2.11	19,094	20,348			$ -	10,577	52.0%	$ 92
4832	YABBA CREEK ROAD	11.8	11.9	0.1	AC	8.69	0.869	44	1.98	2.11	32,114	34,223			$ -	178,044	520.3%	$ 1,547	26	1.98	2.11	19,094	20,348			$ -	10,577	52.0%	$ 92
4832	YABBA CREEK ROAD	11.9	12	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	12	12.1	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	12.1	12.2	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	12.2	12.3	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	12.3	12.4	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	12.4	12.5	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	12.5	12.6	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	12.6	12.7	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	12.7	12.8	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	12.8	12.9	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	12.9	13	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	13	13.1	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	13.1	13.2	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	13.2	13.3	0.1	GN	11.35	1.135	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 1,795			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 151			$ -
4832	YABBA CREEK ROAD	13.3	13.35	0.05	GN	11.35	0.5675	44	1.98	2.11	32,114	34,223	158,149	492.5%	$ 897			$ -	26	1.98	2.11	19,094	20,348	13,347	69.9%	$ 76			$ -
491	KILCOY - MURGON ROAD	2.5	2.6	0.1	GN	9.21	0.921	57	1.76	2.07	36,617	43,066	60,872	166.2%	$ 561			$ -	44	1.76	2.07	28,266	33,244	5,137	18.2%	$ 47			$ -
491	KILCOY - MURGON ROAD	2.6	2.7	0.1	GN	9.21	0.921	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 561			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 47			$ -
491	KILCOY - MURGON ROAD	2.7	2.8	0.1	GN	9.21	0.921	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 561			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 47			$ -
491	KILCOY - MURGON ROAD	2.8	2.9	0.1	GN	9.21	0.921	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 561			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 47			$ -
491	KILCOY - MURGON ROAD	2.9	3	0.1	GN	9.21	0.921	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 561			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 47			$ -
491	KILCOY - MURGON ROAD	3	3.1	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	3.1	3.2	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	3.2	3.3	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	3.3	3.4	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	3.4	3.5	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	3.5	3.6	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	3.6	3.7	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	3.7	3.8	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	3.8	3.9	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	3.9	4	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	4	4.1	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	4.1	4.2	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	4.2	4.3	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	4.3	4.4	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	4.4	4.5	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	4.5	4.6	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	4.6	4.7	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	4.7	4.8	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	4.8	4.9	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	4.9	5	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	5	5.1	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	5.1	5.2	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	5.2	5.3	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	5.3	5.4	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	5.4	5.5	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	5.5	5.6	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	5.6	5.7	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	5.7	5.8	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	5.8	5.9	0.1	GN	4.88	0.488	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 297			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 25			$ -
491	KILCOY - MURGON ROAD	5.9	6	0.1	GN	4.88	0.488	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 297			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 25			$ -
491	KILCOY - MURGON ROAD	6	6.1	0.1	GN	4.88	0.488	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 297			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 25			$ -
491	KILCOY - MURGON ROAD	6.1	6.2	0.1	GN	4.88	0.488	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 297			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 25			$ -
491	KILCOY - MURGON ROAD	6.2	6.3	0.1	GN	4.88	0.488	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 297			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 25			$ -

ROAD SECTION AND MARGINAL COST RATES								TO DEVELOPMENT											FROM DEVELOPMENT										
TMR Road ID	Road Name	Ch. Start	Ch. End	Length	Pavement Type	Marginal Cost Rate (cents per km per SAR)	Adjusted Marginal Cost Rate (cents per SAR for segment length)	Forecast AADHV (2025)	Background SAR4 / Pass	Background SAR5 / Pass	Background SAR4 (2025)	Background SAR5 (2025)	Development SAR4	Proportion to Background SAR4	SAR4 Contribution	Development SAR5	Proportion to Background SAR5	SAR5 Contribution	Forecast AADHV (2025)	Background SAR4 / Pass	Background SAR5 / Pass	Background SAR4 (2025)	Background SAR5 (2025)	Development SAR4	Proportion to Background SAR4	SAR4 Contribution	Development SAR5	Proportion to Background SAR5	SAR5 Contribution
491	KILCOY - MURGON ROAD	6.3	6.4	0.1	GN	4.88	0.488	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 297			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 25			$ -
491	KILCOY - MURGON ROAD	6.4	6.5	0.1	GN	4.88	0.488	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 297			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 25			$ -
491	KILCOY - MURGON ROAD	6.5	6.6	0.1	GN	4.88	0.488	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 297			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 25			$ -
491	KILCOY - MURGON ROAD	6.6	6.7	0.1	GN	4.88	0.488	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 297			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 25			$ -
491	KILCOY - MURGON ROAD	6.7	6.8	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	6.8	6.9	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	6.9	7	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	7	7.1	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	7.1	7.2	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	7.2	7.3	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	7.3	7.4	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	7.4	7.5	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	7.5	7.6	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	7.6	7.7	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	7.7	7.8	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	7.8	7.9	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	7.9	8	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	8	8.1	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	8.1	8.2	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	8.2	8.3	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	8.3	8.4	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	8.4	8.5	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	8.5	8.6	0.1	GN	15.67	1.567	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 954			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 81			$ -
491	KILCOY - MURGON ROAD	8.6	8.7	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	8.7	8.8	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	8.8	8.9	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	8.9	9	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	9	9.1	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	9.1	9.2	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	9.2	9.3	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	9.3	9.4	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	9.4	9.5	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	9.5	9.6	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	9.6	9.7	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	9.7	9.8	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	9.8	9.9	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	9.9	10	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	10	10.1	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	10.1	10.2	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	10.2	10.3	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	10.3	10.4	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	10.4	10.5	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	10.5	10.6	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	10.6	10.7	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	10.7	10.8	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	10.8	10.9	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	10.9	11	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	11	11.1	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	11.1	11.2	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	11.2	11.3	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	11.3	11.4	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	11.4	11.5	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	11.5	11.6	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	11.6	11.7	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	11.7	11.8	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	11.8	11.9	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	11.9	12	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	12	12.1	0.1	GN	4.23	0.423	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 257			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 22			$ -
491	KILCOY - MURGON ROAD	12.1	12.2	0.1	GN	4.23	0.423	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 257			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 22			$ -
491	KILCOY - MURGON ROAD	12.2	12.3	0.1	GN	4.23	0.423	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 257			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 22			$ -
491	KILCOY - MURGON ROAD	12.3	12.4	0.1	GN	4.23	0.423	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 257			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 22			$ -
491	KILCOY - MURGON ROAD	12.4	12.5	0.1	GN	4.23	0.423	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 257			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 22			$ -
491	KILCOY - MURGON ROAD	12.5	12.6	0.1	GN	4.23	0.423	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 257			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 22			$ -
491	KILCOY - MURGON ROAD	12.6	12.7	0.1	GN	4.23	0.423	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 257			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 22			$ -
491	KILCOY - MURGON ROAD	12.7	12.8	0.1	GN	4.23	0.423	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 257			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 22			$ -
491	KILCOY - MURGON ROAD	12.8	12.9	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	12.9	13	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	13	13.1	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	13.1	13.2	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	13.2	13.3	0.1	GN	4.23	0.423	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 257			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 22			$ -
491	KILCOY - MURGON ROAD	13.3	13.4	0.1	GN	4.23	0.423	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 257			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 22			$ -
491	KILCOY - MURGON ROAD	13.4	13.5	0.1	GN	4.23	0.423	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 257			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 22			$ -
491	KILCOY - MURGON ROAD	13.5	13.6	0.1	GN	4.23	0.423	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 257			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 22			$ -
491	KILCOY - MURGON ROAD	13.6	13.7	0.1	GN	4.23	0.423	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 257			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 22			$ -
491	KILCOY - MURGON ROAD	13.7	13.8	0.1	GN	4.23	0.423	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 257			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 22			$ -
491	KILCOY - MURGON ROAD	13.8	13.9	0.1	GN	4.23	0.423	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 257			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 22			$ -
491	KILCOY - MURGON ROAD	13.9	14	0.1	GN	4.23	0.423	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 257			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 22			$ -
491	KILCOY - MURGON ROAD	14	14.1	0.1	GN	23.1	2.31	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,406			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 119			$ -
491	KILCOY - MURGON ROAD	14.1	14.2	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	14.2	14.3	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	14.3	14.4	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	14.4	14.5	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	14.5	14.6	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	14.6	14.7	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	14.7	14.8	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	14.8	14.9	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	14.9	15	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	15	15.1	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	15.1	15.2	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	15.2	15.3	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	15.3	15.4	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	15.4	15.5	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	15.5	15.6	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	15.6	15.7	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	15.7	15.8	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	15.8	15.9	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	15.9	16	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	16	16.1	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	16.1	16.2	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	16.2	16.3	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	16.3	16.4	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	16.4	16.5	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	16.5	16.6	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	16.6	16.7	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	16.7	16.8	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	16.8	16.9	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	16.9	17	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	17	17.1	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	17.1	17.2	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	17.2	17.3	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -

								TO DEVELOPMENT											FROM DEVELOPMENT										
ROAD SECTION AND MARGINAL COST RATES																													
TMR Road ID	Road Name	Ch. Start	Ch. End	Length	Pavement Type	Marginal Cost Rate (cents per km per SAR)	Adjusted Marginal Cost Rate (cents per SAR for segment length)	Forecast AADHV (2025)	Background SAR4 / Pass	Background SAR5 / Pass	Background SAR4 (2025)	Background SAR5 (2025)	Development SAR4	Proportion to Background SAR4	SAR4 Contribution	Development SAR5	Proportion to Background SAR5	SAR5 Contribution	Forecast AADHV (2025)	Background SAR4 / Pass	Background SAR5 / Pass	Background SAR4 (2025)	Background SAR5 (2025)	Development SAR4	Proportion to Background SAR4	SAR4 Contribution	Development SAR5	Proportion to Background SAR5	SAR5 Contribution
491	KILCOY - MURGON ROAD	17.3	17.4	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	17.4	17.5	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	17.5	17.6	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	17.6	17.7	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	17.7	17.8	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	17.8	17.9	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	17.9	18	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	18	18.1	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	18.1	18.2	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	18.2	18.3	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	18.3	18.4	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	18.4	18.5	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	18.5	18.6	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	18.6	18.7	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	18.7	18.8	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	18.8	18.9	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	18.9	19	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	19	19.1	0.1	GN	21.03	2.103	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,280			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 108			$ -
491	KILCOY - MURGON ROAD	19.1	19.2	0.1	GN	23.1	2.31	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 1,406			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 119			$ -
491	KILCOY - MURGON ROAD	19.2	19.3	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	19.3	19.4	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	19.4	19.5	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	19.5	19.6	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	19.6	19.7	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	19.7	19.8	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	19.8	19.9	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	19.9	20	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	20	20.1	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	20.1	20.2	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	20.2	20.3	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	20.3	20.4	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	20.4	20.5	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	20.5	20.6	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	20.6	20.7	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	20.7	20.8	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	20.8	20.9	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	20.9	21	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	21	21.1	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	21.1	21.2	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	21.2	21.3	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	21.3	21.4	0.1	GN	15.3	1.53	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 931			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 79			$ -
491	KILCOY - MURGON ROAD	21.4	21.5	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	21.5	21.6	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	21.6	21.7	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	21.7	21.8	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	21.8	21.9	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	21.9	22	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	22	22.1	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	22.1	22.2	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	22.2	22.3	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	22.3	22.4	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	22.4	22.5	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	22.5	22.6	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	22.6	22.7	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	22.7	22.8	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	22.8	22.9	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	22.9	23	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	23	23.1	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	23.1	23.2	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	23.2	23.3	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	23.3	23.4	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	23.4	23.5	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	23.5	23.6	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	23.6	23.7	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	23.7	23.8	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	23.8	23.9	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	23.9	24	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	24	24.1	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	24.1	24.2	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	24.2	24.3	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	24.3	24.4	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	24.4	24.5	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	24.5	24.6	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	24.6	24.7	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	24.7	24.8	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	24.8	24.9	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	24.9	25	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	25	25.1	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	25.1	25.2	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	25.2	25.3	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	25.3	25.4	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	25.4	25.5	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	25.5	25.6	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	25.6	25.7	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	25.7	25.8	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	25.8	25.9	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	25.9	26	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	26	26.1	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	26.1	26.2	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	26.2	26.3	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	26.3	26.4	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	26.4	26.5	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	26.5	26.6	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	26.6	26.7	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	26.7	26.8	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	26.8	26.9	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	26.9	27	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	27	27.1	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	27.1	27.2	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	27.2	27.3	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	27.3	27.4	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	27.4	27.5	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	27.5	27.6	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	27.6	27.7	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	27.7	27.8	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	27.8	27.9	0.1	GN	4.45	0.445	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 271			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	27.9	28	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	28	28.1	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	28.1	28.2	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	28.2	28.3	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -

ROAD SECTION AND MARGINAL COST RATES								TO DEVELOPMENT										FROM DEVELOPMENT									
TMR Road ID	Road Name	Ch. Start	Ch. End	Length	Pavement Type	Marginal Cost Rate (cents per km per SAR)	Adjusted Marginal Cost Rate (cents per SAR for segment length)	Forecast AADHV (2025)	Background SAR4 / Pass	Background SAR5 / Pass	Background SAR4 (2025)	Background SAR5 (2025)	Development SAR4	Proportion to Background SAR4	SAR4 Contribution	Development SAR5	Proportion to Background SAR5	SAR5 Contribution	Forecast AADHV (2025)	Background SAR4 / Pass	Background SAR5 / Pass	Background SAR4 (2025)	Background SAR5 (2025)	Development SAR4	Proportion to Background SAR4	SAR4 Contribution	Development SAR5	Proportion to Background SAR5	SAR5 Contribution
491	KILCOY - MURGON ROAD	28.3	28.4	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	28.4	28.5	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	28.5	28.6	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	28.6	28.7	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	28.7	28.8	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	28.8	28.9	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	28.9	29	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	29	29.1	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	29.1	29.2	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	29.2	29.3	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	29.3	29.4	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	29.4	29.5	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	29.5	29.6	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	29.6	29.7	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	29.7	29.8	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	29.8	29.9	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	29.9	30	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	30	30.1	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	30.1	30.2	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	30.2	30.3	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	30.3	30.4	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	30.4	30.5	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	30.5	30.6	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	30.6	30.7	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	30.7	30.8	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	30.8	30.9	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	30.9	31	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	31	31.1	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	31.1	31.2	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	31.2	31.3	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	31.3	31.4	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	31.4	31.5	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	31.5	31.6	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	31.6	31.7	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	31.7	31.8	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	31.8	31.9	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	31.9	32	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	32	32.1	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	32.1	32.2	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	32.2	32.3	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	32.3	32.4	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	32.4	32.5	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	32.5	32.6	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	32.6	32.7	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	32.7	32.8	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	32.8	32.9	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	32.9	33	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	33	33.1	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	33.1	33.2	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	33.2	33.3	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	33.3	33.4	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	33.4	33.5	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	33.5	33.6	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	33.6	33.7	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	33.7	33.8	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	33.8	33.9	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	33.9	34	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	34	34.1	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	34.1	34.2	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	34.2	34.3	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	34.3	34.4	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	34.4	34.5	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	34.5	34.6	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	34.6	34.7	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	34.7	34.8	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	34.8	34.9	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	34.9	35	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	35	35.1	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	35.1	35.2	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	35.2	35.3	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	35.3	35.4	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	35.4	35.5	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	35.5	35.6	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	35.6	35.7	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	35.7	35.8	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -
491	KILCOY - MURGON ROAD	35.8	35.9	0.1	GN	4.41	0.441	39	1.76	2.07	25,054	29,466	60,872	243.0%	$ 268			$ -	48	1.76	2.07	30,835	36,266	5,137	16.7%	$ 23			$ -

To Development SAR4 Contribution Total	$ 676,285	To Development SAR5 Contribution Total	$ 51,749	From Development SAR4 Contribution Total	$ 51,556	From Development SAR5 Contribution Total	$ 1,007

Development Contribution Total	$ 780,598

Attachment D

Important Notice

This Technical Memorandum is confidential and is provided solely for the purposes of Queensland Hydro's Borumba Pumped Hydro Energy Storage (PHES) Project Exploratory Works (the Project). This Technical Memorandum is provided pursuant to a Consultancy Agreement between SMEC Australia Pty Limited ("SMEC") and Queensland Hydro, under which SMEC undertook to perform a specific and limited task to a pavement impact assessment. This Technical Memorandum is strictly limited to the matters stated in it and subject to the various assumptions, qualifications and limitations in it and does not apply by implication to other matters. SMEC makes no representation that the scope, assumptions, qualifications and exclusions set out in this Technical Memorandum will be suitable or sufficient for other purposes nor that the content of the Technical Memorandum covers all matters which you may regard as material for your purposes.

This Technical Memorandum must be read as a whole. Any subsequent Technical Memorandum or other such reporting on the subject matter, must be read in conjunction with this Technical Memorandum.

The Technical Memorandum supersedes all previous draft or interim Technical Memorandums, whether written or presented orally, before the date of this Technical Memorandum. This Technical Memorandum has not and will not be updated for events or transactions occurring after the date of the Technical Memorandum or any other matters which might have a material effect on its contents, or which come to light after the date of the Technical Memorandum. SMEC is not obliged to inform you of any such event, transaction or matter nor to update the Technical Memorandum for anything that occurs, or of which SMEC becomes aware, after the date of this Technical Memorandum.

Unless expressly agreed otherwise in writing, SMEC does not accept a duty of care or any other legal responsibility whatsoever in relation to this Technical Memorandum, or any related enquiries, advice or other work, nor does SMEC make any representation in connection with this Technical Memorandum, to any person other than Queensland Hydro. Any other person who receives a draft or a copy of this Technical Memorandum (or any part of it) or discusses it (or any part of it) or any related matter with SMEC, does so on the basis that he or she acknowledges and accepts that he or she may not rely on this Technical Memorandum nor on any related information or advice given by SMEC for any purpose whatsoever.

SMEC Brisbane

Level 6, 480 St Pauls Terrace
Fortitude Valley QLD 4006

PO Box 2211, Fortitude Valley QLD 4006

Phone: +61 7 3029 6600

Email: brisbane@smec.com

engineering positive change

SMEC simplifies the complex. We unlock the potential of our people to look at infrastructure differently, creating better outcomes for the future.

www.smec.com