

Pro Pine Sawmill - 256 Old Esk Road | Taromeo

Traffic Impact Assessment

Client Pro Pine Pty Ltd Project Number 24E-0202

Document Set ID: 3360203 Version: 1, Version Date: 19/09/2025



REPORT CONTROL SHEET

Report Details	
Report Title:	Traffic Impact Assessment – 256 Old Esk Road Taromeo
Project No.:	24E-0202
Site:	256 Old Esk Road Taromeo
Author:	Christian Tedman

Document Control									
Revision	Author	Reviewer	Approved for Issue						
Kevision	Autiloi	IVEAICACI	Name	Signature	Date				
1	C Tedman	A Gwatking	Adam Gwatking	NER, CPENG, RPEQ: 15158	26 / 02 / 2025				
2	C Tedman	A Gwatking	Adam Gwatking	NER, CPENG, RPEQ: 15158	07 / 03 / 2025				

Copyright © 2025 by RMA Engineers:

All rights reserved. This report or any portion thereof may not be reproduced or used in any manner whatsoever without the express written permission of RMA Engineers Pty Ltd.

Disclaimer:

RMA Engineers has undertaken this report based on accepted traffic engineering practices, standards, and information available at the time of writing. It is not intended as a quote, guarantee or warranty and does not cover any latent defects. RMA Engineers do not accept any responsibility for the authentication of accuracy of supplied information or validation of data that is outside the scope of works. RMA Engineers are not accountable for any changes to the standards, physical infrastructure conditions or planning impacts that occur after the completion date of the assessment.

The conclusions in this report should not be read in isolation. We recommend that its contents be reviewed in person with the author so that the assumptions and available information can be discussed in detail to enable the reader to make their own risk assessment in conjunction with information from other sources.

The document is produced by RMA Engineers for the sole benefit and use by the client in accordance with the contracted terms. RMA Engineers does not assume responsibility or liability to any third party arising from any use or reliance on the content of this document.



Contents

REPORT C	CONTROL SHEET	
1.	Introduction	4
1.1	Report objectives and scope	4
1.2	Reference material	4
2.	Proposed development	5
2.1	Location and descriptions	5
2.2	Development details	5
2.3	Development access	6
2.4	Operational details	€
3.	Existing transport environment	8
3.1	Transport routes	8
3.2	Key roads	10
3.2.1	D'Aguilar Highway	10
3.2.2	Old Esk Road	10
3.3	Key intersections	12
3.3.1	D'Aguilar Highway / Old Esk Road	12
3.3.2	Old Esk Road / Site Access	12
3.4	Crash data	14
4.	Future road network planning	16
4.1	Local government planning	16
4.2	State government planning	16
5.	Traffic operation	17
5.1	Existing traffic	17
5.1.1	Site traffic	17
5.1.2	Old Esk Road	17
5.1.3	D'Aguilar Highway	18
5.1.4	Peak hour background traffic summary	19
5.2	Anticipated future traffic	20
5.2.1	Site traffic	20
5.2.2	Background traffic	21
5.2.3	Peak hour background and future site traffic summary	22
6.	Traffic impact	23
6.1	Intersection modelling	23
6.2	SIDRA intersection analysis	23
6.2.1	D'Aguilar Highway / Old Esk Road	23
7.	Pavement impact assessment	25
7.1	State controlled road (D'Aguilar Highway)	25
7.2	Council road (Old Esk Road)	26
8.	Internal layout review	27
8.1	Internal road layout	27



8.2	Parking	27
9.	Safety considerations	28
9.1	Crash data review	28
9.2	Turn warrant assessment	28
9.2.1	D'Aguilar Highway / Old Esk Road	28
9.2.2	Old Esk Road / Site Access	29
9.3	Safe intersection sight distance assessment	30
9.4	Suitability of surrounding road network	32
9.4.1	Old Esk Road	32
9.5	Suitability of key intersections	33
9.5.1	D'Aguilar Highway / Old Esk Road	33
9.5.2	Old Esk Road / Site Access	33
9.6	Risk assessment	33
10.	Summary and recommendations	35
Appendix A	Development layout	38
Appendix B	Traffic count data	39
Appendix C	SIDRA intersection analysis results	40
Annendiy D	Turn warrant assessment	/1



1. Introduction

RMA Engineers has been engaged by Pro Pine Pty Ltd to undertake a Traffic Impact Assessment (TIA) in support of a development application for an expansion of an existing timber milling facility. The subject site is located on Old Esk Road, Taromeo, and is formally referred to as Lots 228 and 229 on SP136942, within the South Burnett Regional Council (SBRC) local government area.

It is understood that current operations of the site comprise milling of 30,000 tonnes (t) of timber per annum. The proposed development is expected to increase milling capacity to a maximum of 60,000t of timber per annum, and is anticipated to be operating at this capacity by 2036.

This assessment has been undertaken generally in accordance with the road transport related requirements identified in the Department of Transport and Main Roads (DTMR) Guide to Traffic Impact Assessment (GTIA) (2018) and the SBRC Planning Scheme (2017).

1.1 Report objectives and scope

The purpose of this report is to document an investigation of traffic and transport impacts of the proposed development.

This report considers:

- The existing transport operation and environment of the surrounding road network.
- Estimation of development traffic and distribution.
- Review of any potential operational and pavement impacts at the access intersection and surrounding road network.
- Safety considerations (including review of historical crash data, turn warrants and desktop sight distance)
 and commentary on required mitigation measures (if any).

Where required, this report makes recommendations for the mitigation of development impacts.

1.2 Reference material

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

- Austroads Guide to Road Design, Part 4A: Unsignalised and Signalised Intersections (2023)
- Austroads Guide to Traffic Management Part 12: Integrated Transport Assessments for Developments (2020)
- Austroads Guide to Traffic Management Part 6: Intersections, Interchanges & Crossings (2020)
- DTMR Guidelines for Traffic Impact Assessment (GTIA) (2018)
- DTMR Road Planning and Design Manual (RPDM) (2021)
- SBRC Planning Scheme (2017)
- Queensland Road Safety Technical User Volume (QRSTUV): Guide to Speed Management (2024)



2. Proposed development

2.1 Location and descriptions

The subject site is located on Old Esk Road, Taromeo, and is formally referred to as Lots 228 and 229 on SP136942, within the South Burnett Regional Council (SBRC) local government area. The site is bounded by Old Esk Road to the west and Bernakin State Forest/National Park to the east.

The site is zoned as rural, as per SBRC mapping, and is surrounded by environmental management and conservation zoning as well as rural residential land uses.

The subject site and its environs are illustrated on the locality plan in Figure 2-1 below.

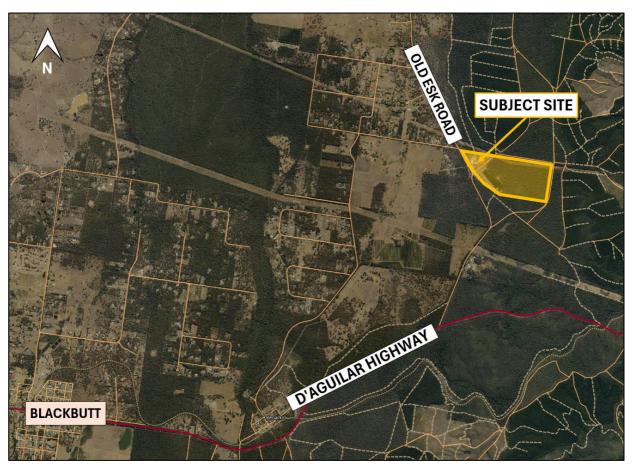


Figure 2-1: Locality plan

2.2 Development details

The proposed development layout is shown below in **Figure 2-2** and in detail in **Appendix A**. Key areas of interest include:

- Two pine milling workshops
- Drying workshop
- Storage shed
- Storage for saw dust, pine chips, scrap timber





Figure 2-2: Development layout

As shown in the layout, the internal road network is predominantly arranged as anti-clockwise circulation aisles through various sections of the site.

Further considerations and recommendations regarding the internal layout are provided in Section 8.

2.3 Development access

The existing access to the site will be retained as part of the development. The existing form of the site access is described in **Section 3.3.2**.

2.4 Operational details

It is understood that the sawmill currently operates at 30,000 tonne milling per annum and proposes to expand to a total of 60,000 tonne milling per annum, operating Monday through Friday (6:00am – 6:00pm). It is noted that Saturday is a designated site maintenance day each week and therefore, there are no heavy vehicles movements expected.

Under current operations, 20 staff are employed to oversee operations of the site. An additional 20 staff are expected to be employed as part of the expansion (60,000t milling), totalling 40 staff members. Expansion of the site is expected to be completed and operational by 2036.

Table 2-1 summarises the types of vehicles that the site currently uses. It is understood that the site intends to retain the type of vehicles used, however is expected to increase the total number. Traffic generation of the existing site and the proposed future expansion is detailed in **Section 5.1.1** and **Section 5.2.1** respectively.



Table 2-1: Vehicle details

Trip type	Vehicle	Loading		
Inbound deliveries	Semi-trailer (Class 9)	Loaded in / Unloaded out		
Outbound deliveries	25/26m B-Double (Class 10)	Unloaded in / Loaded out		
Staff	General light vehicles	-		



3. Existing transport environment

3.1 Transport routes

The principal heavy vehicle (HV) transport route is predominantly to and from Kilcoy, which is located to the east of the subject site.

All staff travel to and from the site via light vehicles (LV). Approximately 60% of staff travel to and from suburb localities to the north of the site, such as Benarkin North, Taromeo, and Teelah. It is understood that the remainder of the staff (40%) reside in localities to the south such as Blackbutt and Moore.

The key transport routes are illustrated in **Figure 3-2** and **Figure 3-2**, and key roads and intersections on this route are described further in the following sections.

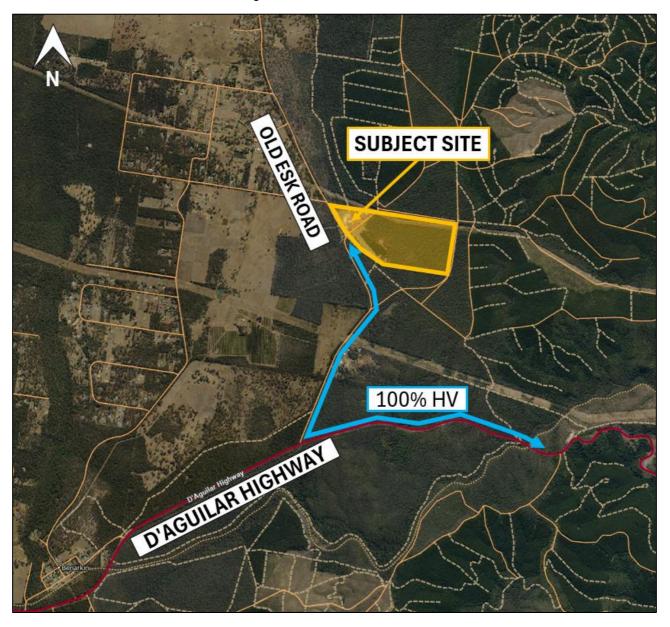


Figure 3-1: Heavy vehicle transport route



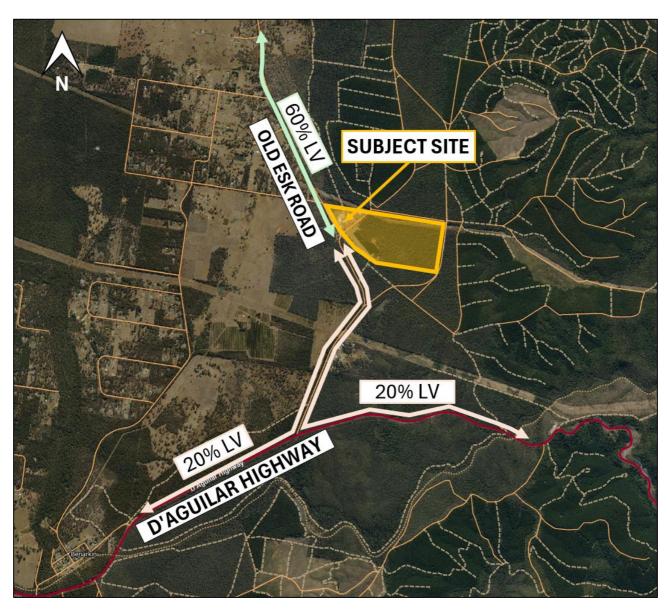


Figure 3-2: Staff light vehicle (LV) transport routes



3.2 Key roads

3.2.1 D'Aguilar Highway

The D'Aguilar Highway (40B) is a state controlled road (SCR) under the jurisdiction of the Department of Transport and Main Roads (DTMR), which generally runs east-west from Caboolture to Nanango, and has the following characteristics in the vicinity of the site:

- Two-way, two-lane undivided road with centre and edge line markings
- Pavement width of approximately 7m
- Road reserve width of approximately 60m
- Posted speed limit of 100km/h
- Gazetted as a 25m/26m B-Double route

The general form of the D'Aguilar Highway within the vicinity of the intersection with Old Esk Road is shown below in **Figure 3-3**.



Figure 3-3: D'Aguilar Highway facing west

3.2.2 Old Esk Road

Old Esk Road is a council controlled road that generally runs north-south extending from the D'Aguilar Highway (in the south) and terminating in the north-west near the suburb of Teelah.

Old Esk Road has the following characteristics within the vicinity of the subject site:

- Two-way, two-lane undivided road with no line marking
- Sealed pavement width of approximately 4-5m
- Traversable gravel shoulders varying in width, approximately 1-2m on each side
- Road reserve width of approximately 60m
- Dense non-frangible vegetation on either side of the road
- Posted speed limit of 80km/h



The general form of Old Esk Road near the subject site is shown below in Figure 3-4.



Figure 3-4: Old Esk Road facing south

It is noted that southern-most corridor of Old Esk Road and its intersection with the D'Aguilar Highway is within the Somerset Regional Council (SRC) local government area, as illustrated in **Figure 3-5**.

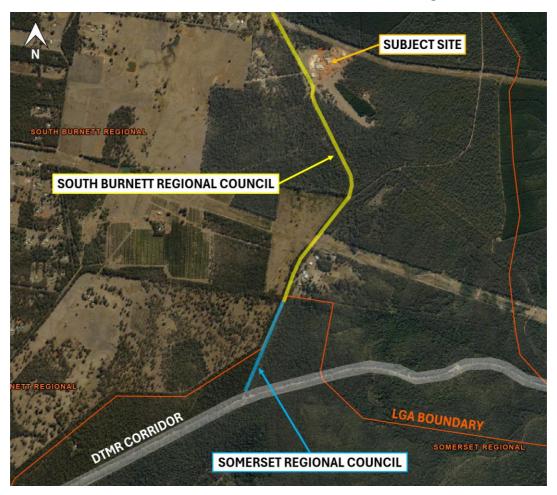


Figure 3-5: LGA boundaries with respect to subject site



3.3 Key intersections

3.3.1 D'Aguilar Highway / Old Esk Road

Old Esk Road intersects with the D'Aguilar Highway approximately 2.5km south of the subject site as a priority controlled T-intersection. The existing form of the intersection features an auxiliary right turn (AUR) lane and a channelised left turn lane. The intersection is controlled by 'Give-Way' line marking on the Old Esk Road approach. It is noted that there are also intersection warning signs on the D'Aguilar Highway approaches. Due to the rural highway nature of the intersection, there are no pedestrian footpaths or crossings.

The existing form of the D'Aguilar Highway / Old Esk Road intersection is shown in Figure 3-6.



Figure 3-6: D'Aguilar Highway / Old Esk Road

3.3.2 Old Esk Road / Site Access

The subject site gains access to the external network via an all movement access to Old Esk Road, controlled by 'Give-Way' signage on the site access approach. The existing form of the intersection does not feature any dedicated turn lanes. Due to the rural nature of the subject site, there are no pedestrian footpaths or crossings within the vicinity of the site.



The existing form of the Old Esk Road / Site Access intersection is shown in Figure 3-7 and Figure 3-8.



Figure 3-7: Old Esk Road / Site Access intersection aerial





Figure 3-8: Site Access approach to the Old Esk Road intersection

3.4 Crash data

Queensland Government crash data was reviewed for the previous five years of available data from 1 January 2018 until 30 June 2023. Data was obtained from Queensland Globe (transportation – road crash locations). It should be noted that, at the time of writing this report, crash data is usually recorded up to the following dates:

• Fatal, Hospital, Medical, and Minor Injury Crashes – 30 June 2023

Two crashes have been recorded along the key roads and intersections during the most recent five-year period.

The approximate location of each crash and corresponding description is shown in **Figure 3-9** and **Table 3-1** respectively.



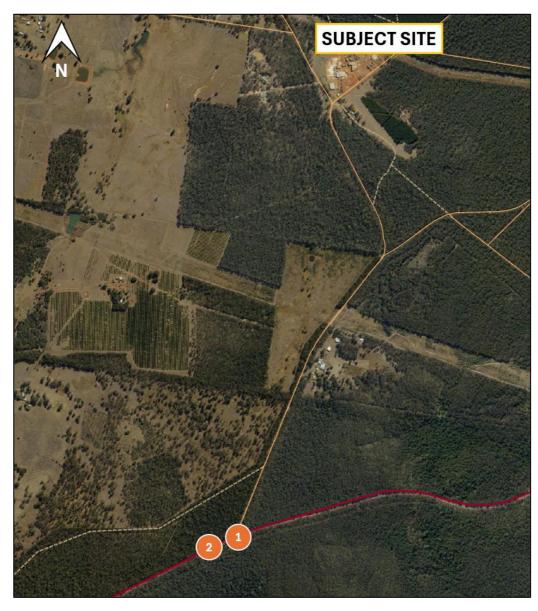


Figure 3-9: Road crash locations

Table 3-1: Road crash descriptions

Ref	Crash Year	Severity	DCA code	Crash type	DCA description	Atmospheric condition
1	2021	Hospitalisation	901	Single vehicle	Pass & Misc: Fell In/From Vehicle	Clear / Darkness – not lighted
2	2021	Hospitalisation	704	Single vehicle	Off Path-Straight: Right Off Cway Hit Obj	Clear / Darkness – not lighted

As indicated above, both crashes were single vehicle crashes with different crash types. Therefore, no patterns or mitigation measures could be determined from the data.



4. Future road network planning

4.1 Local government planning

The SBRC Local Government Infrastructure Planning mapping does not include any planned road upgrades in the vicinity of the subject site.

4.2 State government planning

DTMR *Queensland Transport and Roads Investment Program* (QTRIP) includes one planned upgrade in the vicinity of the subject site, as illustrated in **Figure 4-1**.

The upgrade will aim to improve road safety between the townships of Blackbutt and Yarraman and is budgeted at approximately \$2.5 million dollars.

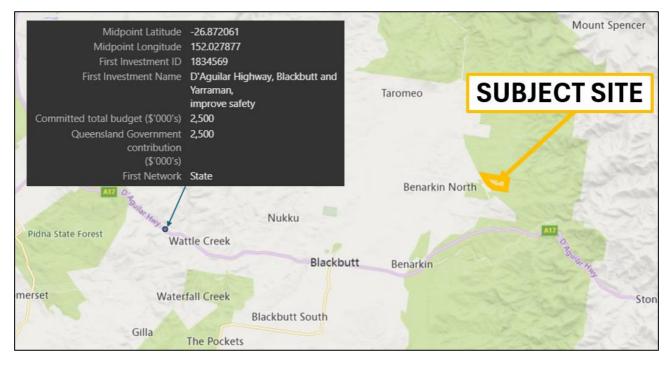


Figure 4-1: QTRIP mapped upgrade



5. Traffic operation

5.1 Existing traffic

To understand the traffic generated by existing operations of the site, a weekly traffic survey was undertaken from Monday 18 November 2024 through Sunday 24 November 2024. The traffic survey captured vehicles travelling to and from the site as well as vehicles on Old Esk Road travelling past the site frontage. Detailed count data is included in **Appendix B**.

5.1.1 Site traffic

A summary of the count data at the Site Access is shown below in **Table 5-1**.

Weekly Total Volume (Monday - Friday) **Light vehicles Heavy vehicles** Site Milling (tonnes) Year IN OUT OUT **Site Access** 2024 30,000t 100 98 47 46 Total movements (combined in and out) 198 93

Table 5-1: Existing site traffic

From the above data, the following is concluded:

- Average daily staff movements equate to 40 movements (combined in and out)
- Average daily heavy vehicle movements equate to 19 movements (combined in and out)
- Peak hour movements are expected to comprise a maximum of 20 staff movements in both AM and PM peak hours (totalling 40 daily movements), as heavy vehicle deliveries are expected to be evenly dispersed throughout the day

It is noted that no vehicles were recorded travelling in and out of the site on Saturday and Sunday.

5.1.2 Old Esk Road

A summary of the count data on Old Esk Road (at the Site Access) is shown below in Table 5-2.

Table 5-2: Existing background traffic on Old Esk Road

		Milling (tonnes)	Weekly total volume (Monday – Friday)					
Site	Year		Light v	ehicles	Heavy vehicles			
			NB	SB	NB	SB		
Old Esk Road	2024	30,000t	466	492	50	52		
Total mover	nbined directions)	958		102				



From the above data, the following is concluded:

- Average daily light vehicle movements equate to 192 vehicles (combined north and southbound)
- Average daily heavy vehicle movements equate to 21 vehicles (combined north and southbound)

As identified in **Section 5.1.1**, peak hour movements are expected to comprise a maximum of 20 staff movements in both AM and PM peak hours, as heavy vehicle deliveries are expected to be dispersed throughout the day.

The count data at the Site Access indicates that currently, most staff members leave the site at 4:00pm. However, it is understood that the development will be operational between 6:00am – 6:00pm (Mon-Fri). For a conservative assessment, count data on Old Esk Road was examined for the hours 5:00am – 6:00am and 4:00pm – 5:00pm, which represents the peak staff travel periods. It is also noted that traffic volumes on the external road network from 6:00pm – 7:00pm are lower than those between 4:00pm – 5:00pm.

Average peak hour background traffic volumes on Old Esk Road are summarised below in Table 5-3.

Average peak hour volume (Monday - Friday) AM peak hour PM peak hour Site Year Milling (tonnes) NB SB NB SB Old Esk Road 2024 30,000t 2 13 13 4 Total movements (combined directions) 15 17

Table 5-3: Average peak hour volume on Old Esk Road

From a review of aerial imagery, one rural residential property exists south of the subject site. Traffic associated with this residential property is expected to be minimal and therefore, the count data collected on Old Esk Road at the site frontage has been used to estimate volumes at the D'Aguilar Highway / Old Esk Road intersection.

5.1.3 D'Aguilar Highway

Midblock traffic count data with hourly breakdown was obtained from DTMR along the D'Aguilar Highway (40B) (undertaken in 2022). The traffic survey site (Count Site ID. 30090) is located approximately 2.4km west of the D'Aguilar Highway / Old Esk Road intersection.

Table 5-1 below details the 2022 D'Aguilar Highway (40B) peak hour volumes, which were adopted for this assessment. For a conservative assessment, count data on the D'Aguilar Highway was examined for the hours 5:00am – 6:00am and 4:00pm – 5:00pm, which represents the peak staff travel periods. It is also noted that traffic volumes on the external road network from 6:00pm – 7:00pm are lower than those between 4:00pm – 5:00pm.



Table 5-4: D'Aguilar Highway (40B) DTMR data

Road		Description	Year	Development site peak hour volume					
	DTMR Site			Eastbound (against gazettal)			Westbound (gazettal)		
	No.			AM	PM	Daily peak	AM	PM	Daily peak
D'Aguilar Highway	30090	40B - 300m West of Scott Street	2022	88	229	251	83	234	280

As indicated above, volumes during the AM site peak hour are lower than those in the PM peak hour. Data also indicates a general 50/50 directional split.

A review of historic AADT data for this count site indicates a 10-year compound annual growth rate of 1%, which will be adopted to estimate future volumes.

5.1.4 Peak hour background traffic summary

As stated in **Section 3.1**, approximately 60% of staff travel to and from suburb localities to the north of the site, such as Benarkin North, Taromeo, and Teelah. It is understood that the remainder of the staff (40%) reside in localities to the south such as Blackbutt and Moore.

Background traffic volumes on Old Esk Road and the 50/50 directional split derived from a review of volumes on the D'Aguilar Highway has been used to estimate the number of turning movements at the D'Aguilar Highway / Old Esk Road intersection.

Combining the volumes from the subject site (30,000t milling), Old Esk Road and the D'Aguilar Highway, the peak hour background traffic volumes are illustrated in **Figure 5-1**. It is noted that the volumes on the D'Aguilar Highway have been increased, based on a historic 10-year compound annual growth rate of 1%.



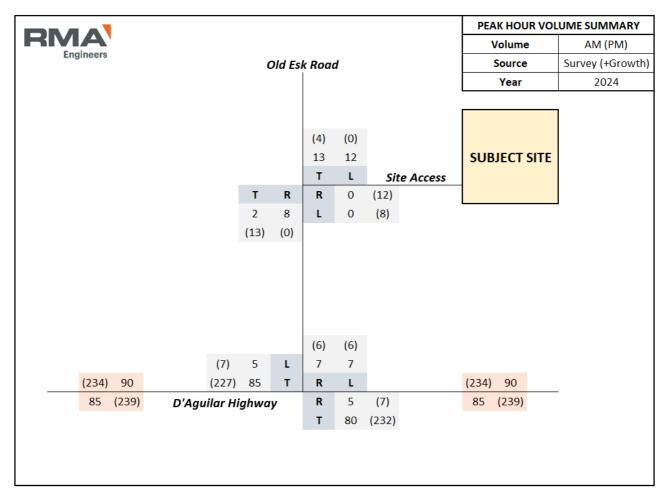


Figure 5-1: 2024 background traffic volumes

5.2 Anticipated future traffic

5.2.1 Site traffic

The anticipated future traffic has been estimated through extrapolating the existing survey data, which was collected while milling approximately 30,000t per annum. Therefore, to estimate the volumes for 60,000t milling per annum, volumes have been doubled and are summarised below in **Table 5-5**.

Table 5-5: Anticipated future site traffic (60,000t milling)

Weekly

			Weekly Total Volume				
Site	Year	Milling (tonnes)	Light V	ehicles	Heavy vehicles		
			IN	OUT	IN	OUT	
Site Access	2024	30,000t	100	98	47	46	
Site Access	2036 60,000t		200	196	94	92	
Total mo	vements (co	embined in and out)	39	96	18	36	



From **Table 5-5**, it is anticipated that:

- Future daily heavy vehicle movements equate to 38 movements (combined in and out), which is an increase of 19 movements.
- Future daily light vehicle movements equate to 80 movements (combined in and out), which is an increase of 40 movements. This aligns with the additional 20 staff (additional 40 daily movements) expected to be employed to oversee operation of the expanded site.
- Peak hour movements are expected to comprise a maximum of 40 staff movements in both AM and PM peak hours, as heavy vehicle deliveries are expected to be evenly dispersed throughout the day.

5.2.2 Background traffic

Anticipated future background traffic has been estimated using a historic 10-year compound annual growth rate of 1%, which was obtained from DTMR surveys on the D'Aguilar Highway. Additionally, the same distribution assumptions at the D'Aguilar Highway / Old Esk Road (50/50) have been used to estimate future background turning volumes.

The anticipated future background traffic volumes (2036) are shown in Figure 5-2.

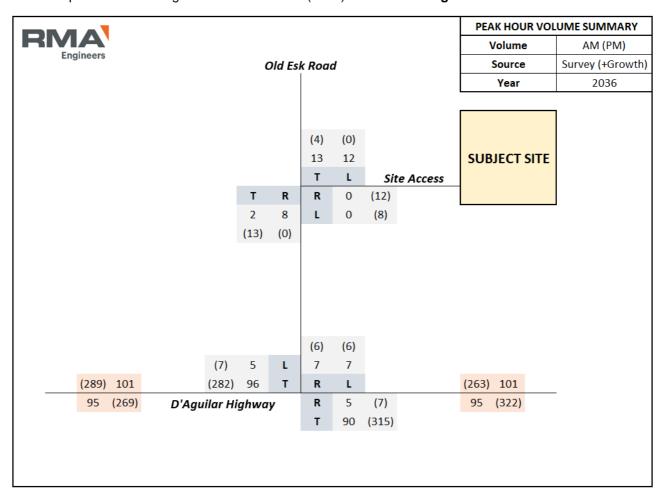


Figure 5-2: 2036 background traffic (i.e. no site expansion)



5.2.3 Peak hour background and future site traffic summary

The estimated peak 'background and future site' traffic volumes are shown below in **Figure 5-3**. These volumes correspond to the ultimate development completion year of 2036 (60,000t milling).

It is noted that the same distribution assumptions have been used to estimate future background volumes.

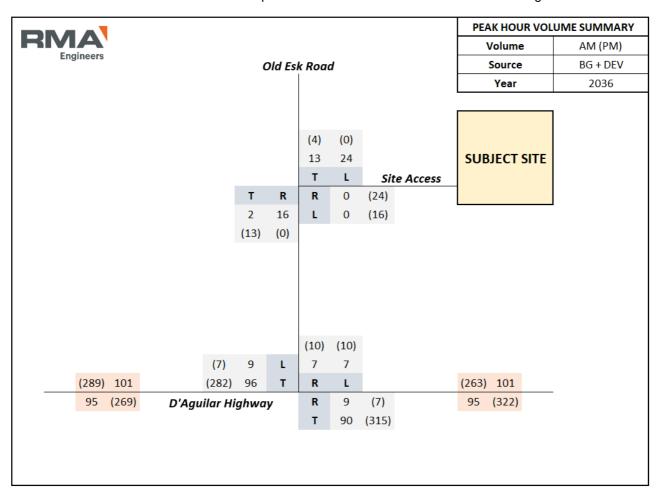


Figure 5-3: 2036 background and future site (expansion) volumes



6. Traffic impact

6.1 Intersection modelling

An assessment of the traffic impacts resulting from the proposed development has been carried out for the 2036 development opening year. The key intersection of the D'Aguilar Highway / Old Esk Road was assessed using the SIDRA 9.0 intersection analysis program.

The typical desired standards of service (DSS) values for DOS and intersection performance are summarised in **Table 6-1**. These values are also recommended by Austroads Guide to Traffic Management – Part 12. A DOS exceeding these values indicates that the intersection is exceeding its practical capacity and users of the intersection are likely to experience unsatisfactory queuing and delays.

Table 6-1: Typical acceptable DOS for intersections

Intersection type	Maximum DOS
Signalised intersection	90% (0.90)
Roundabout	85% (0.85)
Unsignalised intersections	80% (0.80)

6.2 SIDRA intersection analysis

6.2.1 D'Aguilar Highway / Old Esk Road

The D'Aguilar Highway / Old Esk Road intersection has been assessed for the 2036 opening year background and future site traffic volumes, previously shown in **Figure 5-2** and **Figure 5-3** respectively.

The intersection layout as modelled in SIDRA is shown in **Figure 6-1**. It is noted that the current form of the intersection includes an auxiliary right turn (AUR) lane, however for the purpose of this assessment and for conservativeness, the SIDRA layout does not include an AUR lane.

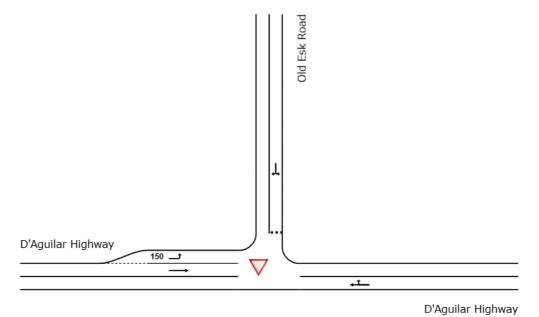


Figure 6-1: D'Aguilar Highway / Old Esk Road SIDRA layout

Page 23 of 42



The SIDRA analysis results are summarised in **Table 6-2** with detailed outputs provided in **Appendix C**.

Table 6-2: D'Aguilar Highway / Old Esk Road intersection SIDRA summary

		Peak	Volume (vph)	SIDRA output				
Scenario	Year			Degree of saturation	Avg. delay (s)	Max. average delay (s)	95%ile queue (m)	
Background traffic	2036	AM	221	0.060	0.8	7.2	0.5	
		PM	656	0.203	0.4	12.9	0.8	
Background with future site traffic		AM	229	0.064	1.0	7.3	0.7	
		PM	664	0.203	0.5	13.1	1.1	

The SIDRA model shows operation within performance standards with development traffic. Average delays are minimal with negligible increase resulting from the addition of development traffic. No individual movements exceed the 42-second delay threshold described in the GTIA for upgrade of a priority controlled intersection.

From the above, no upgrades are required from the operational assessment for the D'Aguilar Highway / Old Esk Road intersection.



7. Pavement impact assessment

7.1 State controlled road (D'Aguilar Highway)

The Guide to Traffic Impact Assessment (GTIA) indicates that a Pavement Impact Assessment (PIA) is required for developments increasing the heavy vehicle traffic on state-controlled roads (SCR), in order to ensure that there is no worsening on the pavement's condition.

The proposed development will increase the number of heavy vehicles on the external road network by an approximately 19 heavy vehicle movements (combined in and out) per day. This increase is expected to be minor and is not anticipated to have an adverse impact on the external road pavement. To further prove this, the GTIA PIA method was undertaken for the increase in development heavy vehicle traffic on the D'Aguilar Highway.

The background SAR4s (ESAs) were calculated utilising the heavy vehicle weekly volume reports provided by the Department of Transport and Main Roads (Count Site ID 30090). Using the GTIA methodology, the estimated annual number of background SAR4's along the D'Aguilar Highway in the vicinity of the subject site, in each direction, for 2036 (based on a 1% compound growth rate) is shown in **Table 7-1**.

Table 7-1: D'Aguilar Highway background SAR4s/ESAs for 2036

Road Name	TDIST	Direction	HV AADT	SAR per HV	SAR per year
D'Aquilar Highway	36.25 - 49.65	Westbound	299	3.2	349,604
D Aguilai Highway	30.23 - 49.03	Eastbound	607	3.2	708,513

As previously listed, heavy vehicle movements associated with the site comprise of Semi-trailers and B-Doubles which will access the development via the D'Aguilar Highway. The loaded and unloaded SAR4s are detailed below:

- Semi-trailer (Class 9)
 - > Unloaded SAR4s = 0.51
 - > Loaded SAR4s = 4.93
- B-Double (Class 10)
 - > Unloaded SAR4s = 0.53
 - > Loaded SAR4s = 6.30

From the above, **Table 7-2** summarises the development SAR4s and **Table 7-3** details the impacts to the D'Aguilar Highway.

Table 7-2: Future site traffic - SAR4s/ESAs

Trip type	Origin / Destination	Heavy Vehicle Split	Annual Unloaded SAR4s	Annual Loaded SAR4s	Annual Total SAR4s		
Imports (loaded in/unloaded out)	100% east	100% Semi-trailer	1,300	14.038	15,338		
Exports (unloaded in/loaded out)	100% 6431	100% B-Double	1,300	14,030	13,330		



Table 7-3: Warrego Highway development SARs impact

	Road Name	Direction	Background SARs per year	Development SARs per year	% increase
	D'Aguilar	Westbound	349,604	6,825	1.95%
D'Aguilar Highway	Eastbound	708,513	8,513	1.20%	

As indicated above, the heavy vehicle impact relating to the operation of the proposed expansion is not expected to have an adverse impact on the external road network pavement. This is because the net increase of SAR4s related to the development is less than 5.0% of the existing background SAR4s on the network.

Therefore, given the relatively low number of development heavy vehicle movements (approximately 19 heavy vehicle movements per day increase), it can be determined that the development will not have any adverse pavement impacts on the D'Aguilar Highway and surrounding road network.

7.2 Council road (Old Esk Road)

Through pre-lodgement discussions, SBRC has made reference to rates introduced to fund road maintenance activities associated with extractive industry operations. Rates have been based on existing extractive industry operations located at Wattlegrove Road, Wattlegrove Wilsons Road, and Gordonbrook and Burra Burri Road, Durong.

The amount of the special charge is stated to vary between sites, ranging from \$8,035.09 to \$10,696.77 annually. It is unclear how the amounts have been calculated.

It is noted that as per the GTIA method, contributions are typically calculated based on the:

- Number of heavy vehicle axles (SAR4s)
- Length of the subject travel route
- Marginal cost (per kilometre) to maintain the subject travel route

The special rate charge stipulated by Council does not include any of the above information and therefore, it is recommended that this information be disclosed, in order to justify a fair and reasonable outcome for the subject site.



8. Internal layout review

A high-level review of the proposed site layout has been undertaken to assess the suitability of the internal access road formation, geometry of the access and parking areas. The internal layout review is in regard to the layout shown previously in **Section 2.2** and attached in **Appendix A**. Outcomes of the review are detailed in the sections below.

8.1 Internal road layout

The internal road network is comprised of unsealed roads with compacted soil and gravel. From a site visit, some internal areas of concern were identified.

It is understood from discussions with the Client, that during a heavy rain event the ground conditions result in a muddy environment that may result in bogged vehicles. Furthermore, increases in overall heavy vehicle movement through the site may impact the condition of the circulation roads, potentially causing rutting or shoving of these unsealed roads.

It is advised that sealing internal areas of concern would reduce the impact to the natural ground surface and ensure operations can occur during rain events. Otherwise, it is recommended to maintain the internal roads through gravel re-sheeting as required.

Any ongoing nuisance areas of the internal roadway would require further investigation into suitability such as drainage, subbase/subgrade and geotechnical considerations. Following investigation, mitigation (rehabilitation or reconstruction) of the subject internal road section may be required.

Given the site has been operating for an extended period of time (since the early 1900's), the above items are minor issues that can be investigated in further detailed design stages of the development. Furthermore, it is expected that regular internal maintenance works are undertaken as part of typical operations of the sawmill.

8.2 Parking

The SBRC Planning Scheme does not specify a car parking rate for timber milling or similar. Therefore, it is recommended that there is sufficient space on site for the maximum number of staff members (40) to park their vehicles.

From a review of the proposed plans, it is recommended that staff park on the open grassed area in the north-western corner of the site where there is sufficient room, for informal staff parking.

Further considerations of the internal layout of the proposed development can be undertaken in future detailed design stages.



9. Safety considerations

9.1 Crash data review

From Section 3.4, no crash patterns or mitigation measures could be determined from the crash data review.

9.2 Turn warrant assessment

Turn warrants are used to identify the need to provide separate turning provisions from a functionality and safety perspective. The warrants are essentially the relationship between the turning volumes versus the major road traffic volumes.

In accordance with Austroads, turn warrants are based on the construction of new roads (i.e. greenfield sites) and is also used as a reference for intervention levels for updating existing intersection turn treatments. Turn warrant assessment is usually undertaken at these intersections to determine if protected turning lanes (i.e. channelisation) are required from a safety perspective.

The below sections summarise the turn warrant treatments required at the key intersections under the 2036 'background and future site' traffic scenario. Detailed turn warrant graphs are shown in **Appendix D**.

9.2.1 D'Aguilar Highway / Old Esk Road

It is noted that the existing configuration of the D'Aguilar Highway / Old Esk Road intersection features auxiliary right turn (AUR) and channelised left turn lanes. From a safety perspective and as per DTMR's road safety policy, it is recommended that the auxiliary right turn lane be converted into a short channelised right turn lane. This is an existing deficiency and as indicted in the following turn warrant graphs, development traffic does not increase the type of turn treatment required compared to the existing background traffic.

As shown in **Figure 9-1**, the background and future site traffic volumes trigger a short channelised right turn (CHR(s)) and a basic left turn (BAL) for the AM and PM staff peak hour periods.

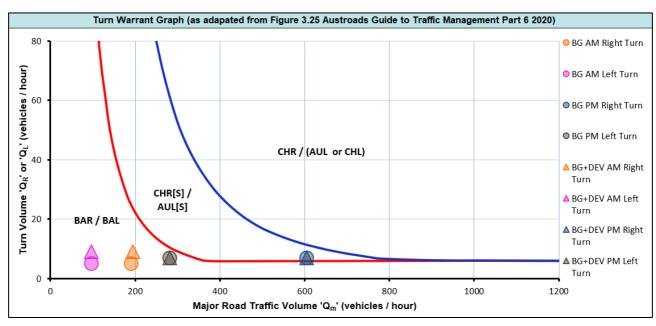


Figure 9-1: Turn warrant graph AM and PM peak hours (D'Aguilar Highway / Old Esk Road)



For a conservative assessment, a turn warrant analysis has also been undertaken using the daily peak hour volumes (between 3:00pm and 4:00pm) recorded on the D'Aguilar Highway (with a 1% compound per annum growth rate applied). Turning movements at this intersection have been sourced from traffic count data, which is attached in **Appendix B.**

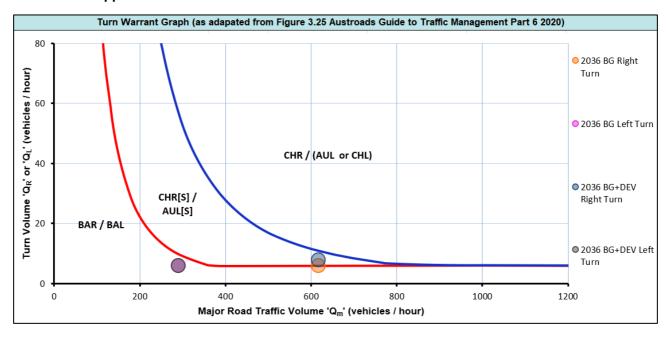


Figure 9-2: Turn warrant graph daily peak hour volumes (D'Aguilar Highway / Old Esk Road)

As indicated above, the turn treatments triggered are the same as the AM and PM staff peak hours; a short channelised right turn (CHR(s)) and a basic left turn (BAL).

From the turn warrant analysis, it is recommended that the auxiliary right turn lane be converted into a short channelised right turn lane. This is an existing safety deficiency and therefore it is DTMR's responsibility to investigate and modify the turn lane treatment at the intersection.

9.2.2 Old Esk Road / Site Access

Due to the rural nature and current geometry of the Old Esk Road / Site Access intersection, and associated low background traffic volumes, the extended design domain (EDD) turn warrant graph has been used for the intersection. The background and future site traffic volumes trigger a simple right turn lane (SR) and a simple left turn lane (SL), as shown in **Figure 9-3** (EDD), and therefore, no upgrades are warranted at this intersection.



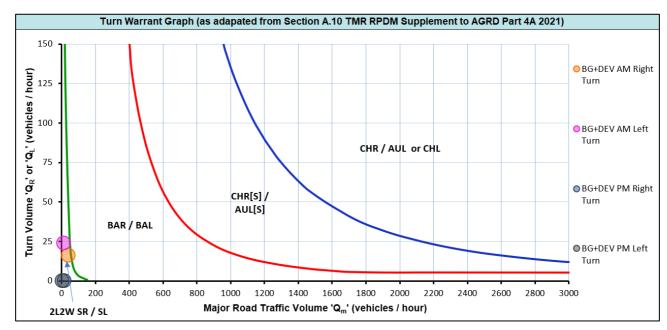


Figure 9-3: Turn warrant graph AM and PM peak hour volumes (Old Esk Road / Site Access)

9.3 Safe intersection sight distance assessment

A Safe Intersection Sight Distance (SISD) assessment has been undertaken for the site access intersection.

Table 9-1 indicates the parameters adopted for the sight distance review.

Table 9-1: Variables adopted for sight distance assessment

Variable symbol	Description	Value add	Unit of	
Syllibol		Truck	Car	measure
DT	Decision time (s) = observation time (3 s) + reaction time (s)	5	5	seconds
V	Operating (85 th percentile) speed	50 ¹	50 ¹	km/hr
d	Coefficient of deceleration for cars / trucks (Guide to Road Design – Part 3: Geometric Design (Austroads 2016))	0.29	0.36	
а	Longitudinal grade (approach) based on site visit:	NB =	%	
u	Longitudinal grade (approach) based on site visit.	SB =	70	
R _T	perception/reaction time (Guide to Road Design – Part 3: Geometric Design (Austroads 2016))	2.0	2.0	seconds
SISD	$SISD = \frac{D_{\tau} \times V}{3.6} + \frac{V^2}{254 \times (d + 0.01 \times a)}$			
	(Equation 2 Guide to Road Design - Par	rt 4a)		

¹It is noted that there are speed advisory signs on both approaches to the site access that advise motorists to travel at 40km/hr due to the road's horizontal alignment. Therefore, an operating speed of 50km/hr has been used for this assessment.

The outcomes of the assessment are summarised below in **Table 9-2**. Measurements have been based on observations from the site visit undertaken in July 2024 and are illustrated in **Figure 9-4** and **Figure 9-5**.



Table 9-2: Outcomes of sight distance assessment

Approach road	Intersection	Vehicle type	Approach	Available SISD (m)	Required SISD (m)	Compliance	
Old Esk Road	Site Access	Car			97m	Compliant	
			South	Approx. 105m	97m	Compliant	
		Truck	North	Approx. 285m	103m	Compliant	
			South	Approx. 105m	103m	Compliant	



Figure 9-4: Northern approach sight lines and distance



Figure 9-5: Southern approach sight lines and distance

As indicated in **Table 9-2**, available SISD meets the required SISD. It is recommended that the 40km/hr speed advisory signs on both approaches are retained. Furthermore, additional signage such as 'trucks turning ahead' is recommended to warn drivers of trucks accessing the road at this location and to increase driver awareness and improve reaction times.



9.4 Suitability of surrounding road network

9.4.1 Old Esk Road

As described previously in **Section 3.2.2**, Old Esk Road features a sealed pavement width of approximately 4-5m with traversable gravel shoulders (1-2m in width) either side of the pavement. The sealed pavement is in good condition without any adverse deficiencies identified. The traversable shoulders allow drivers to pass one another when mutual sight distance is sufficient however it was noted during a site visit that some sections of the Old Esk Road corridor have limited sight distance due to dense roadside vegetation. Three areas of concern were identified, which are illustrated below in **Figure 9-6**.

Where mutual sight distance cannot be established, for example around a horizontal curve, the road is widened and line marked for two lanes around the curve. Otherwise, clearing of roadside vegetation could be undertaken to extend sight lines around horizontal curves. Additionally, speed advisory signs could be placed before horizontal curves to lower the operating speed of road users to suit the curves, dependant on ballbank testing. A lower travel speed would result in a shorter mutual sight distance.

These areas of limited sight along Old Esk Road are an existing deficiency, and mitigation of these areas is required regardless of the development. Therefore, it is recommended that Council undertake further investigation and mitigation works given the inherent safety issues at these locations. Furthermore, as mentioned in **Section 7.2**, the special rate charge stipulated by Council could also contribute to upgrades along this corridor of Old Esk Road.

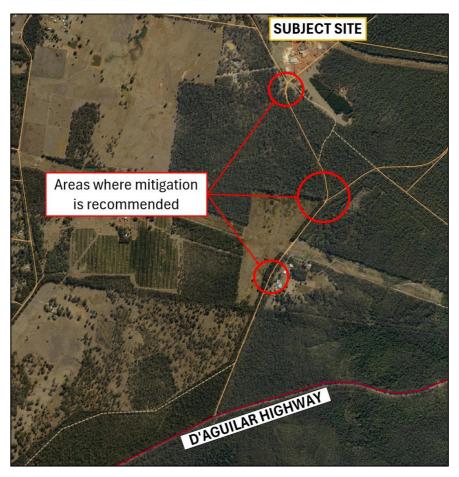


Figure 9-6: Areas with sight distance constraints



During the site visit, a posted speed limit sign of 80km/h was identified on Old Esk Road. Given the narrow pavement width of this road, and as per the Queensland Road Safety Technical User Volume (QRSTUV): Guide to Speed Management Section 4.3.3, it is not recommended that speed limit signs should be installed along this road section. Where speed limit signs are not present, drivers should drive to the conditions of the road.

9.5 Suitability of key intersections

9.5.1 D'Aguilar Highway / Old Esk Road

As derived from the turn warrant analysis, it is recommended that the auxiliary right turn lane (AUR) be converted into a short channelised right turn lane (CHR(S)). This is an existing deficiency and as indicted in the turn warrant graphs, development traffic does not increase the type of turn treatment required compared to the existing background traffic.

9.5.2 Old Esk Road / Site Access

During the site visit, it was identified that some dirt/gravel migration was present. It is recommended that staff periodically monitor and sweep the access throat to remove any loose dirt/gravel that may have accumulated on the road.

9.6 Risk assessment

A risk assessment examining the increase in traffic movements relating to the proposed development operation at the relevant key intersections and roads have been considered as per the GTIA process. The safety risk score matrix as extracted from the GTIA is shown in **Figure 9-7**.

			Potential consequence						
		Property only (1)	Minor injury (2)	Medical treatment (3)	Hospitalisation (4)	Fatality (5)			
	Almost certain (5)	М	М	н	Н	н			
Potential likelihood	Likely (4)	М	М	М	н	н н м			
	Moderate (3)	L	М	М	М				
	Unlikely (2)	L	L	М	М				
	Rare (1)	L	L	L	М	М			

Figure 9-7: Safety risk score matrix (GTIA)

The risk items examined consider the potential to increase crashes and the safety deficiencies on the road network. The identified risks and associated mitigation are shown in **Table 9-3**.



Table 9-3: Identified risk items and potential development mitigation										
		Vithou elopn		dev	With elopn	nent	With development and mitigation			
Risk item	Likelihood	Consequence	Risk score	Likelihood	Consequence	Risk score	Mitigation measures	Likelihood	Consequence	Risk score
Risk of head on crashes on Old Esk Road due to restricted sight lines and the increase of heavy vehicles on the local road network.	2	3	M	3	3	M	The risk score has not changed and therefore no mitigation is required by the developer. Where mutual sight distance cannot be established, for example around a horizontal curve, Council should evaluate the potential of road widening and line marking, or at a minimum vegetation clearing to extend sight lines around horizontal curves.	1	3	L
Risk of vehicle conflict at the D'Aguilar Highway / Old Esk Road intersection due to the lack of a channelised right turn lane.	2	3	М	3	3	М	The risk score has not changed and therefore no mitigation is required by the developer. It is noted that the existing configuration features auxiliary right turn (AUR) and channelised left turn lanes. From a safety perspective and as per DTMR's road safety policy, it is recommended that the auxiliary right turn lane be converted into a short channelised right turn lane. This is an existing safety deficiency and therefore it is DTMR's responsibility to investigate and modify the turn lane treatment at the intersection.	1	3	L
Risk of angle crashes at the site access due to limited sight distance when approaching from the south.	2	3	М	3	3	М	The risk score has not changed and therefore no mitigation is required by the developer. It is noted that there are speed advisory signs on both approaches to the site access that advise motorists to travel at 40km/hr due to the road's horizontal alignment. It is recommended that the 40km/hr speed advisory signs on both approaches are retained. Furthermore, additional signage such as 'trucks turning ahead' is recommended to warn drivers of trucks accessing the road at this location and to increase driver awareness and improve reaction times.	1	3	L

As shown, there is no change in the risk scores due to the addition of development traffic, and no high risks are identified. Therefore, no upgrades or mitigation of the road network is required by the developer.

Furthermore, the site has been operating for an extended period of time (since early 1900s) and without any known safety issues.



10. Summary and recommendations

RMA Engineers has been engaged by Pro Pine Pty Ltd to undertake a Traffic Impact Assessment (TIA) in support of a development application for an expansion of an existing timber milling facility. The subject site is located on Old Esk Road, Taromeo, and is formally referred to as Lots 228 and 229 on SP136942, within the South Burnett Regional Council (SBRC) local government area.

This assessment has been undertaken generally in accordance with the road transport related requirements identified in the Department of Transport and Main Roads (DTMR) Guide to Traffic Impact Assessment (GTIA) (2018) and the SBRC Planning Scheme (2017).

The following is a summary of the findings and recommendations of the TIA.

Proposed development

- It is understood that the sawmill currently operates at 30,000 tonne milling per annum and proposes to expand to a total of 60,000 tonne milling per annum, operating Monday through Friday (6:00am 6:00pm).
- Under current operations, 20 staff are employed to oversee operations of the site. An additional 20 staff are expected to be employed as part of the expansion (60,000t milling), totalling 40 staff members. Expansion of the site is expected to be completed and operational by 2036.
- The principal heavy vehicle (HV) transport route is predominantly to and from Kilcoy, which is located to the east of the subject site.
- All staff travel to and from the site via light vehicles (LV). Approximately 60% of staff travel to and from suburb localities to the north of the site, such as Benarkin North, Taromeo, and Teelah. It is understood that the remainder of the staff (40%) reside in localities to the south such as Blackbutt and Moore.

Development impacts

- Future daily heavy vehicle movements equate to 38 movements (combined in and out), which is an increase of 19 movements.
- Future daily light vehicle movements equate to 80 movements (combined in and out), which is an increase of 40 movements. This aligns with the additional 20 staff (additional 40 daily movements) expected to be employed to oversee operation of the expanded site.
- Peak hour movements are expected to comprise a maximum of 40 staff movements in both AM and PM peak hours, as heavy vehicle deliveries are expected to be evenly dispersed throughout the day.
- The SIDRA model for the D'Aguilar Highway / Old Esk Road intersection shows operation within performance standards with development traffic and therefore no upgrades are required from the operational assessment for the D'Aguilar Highway / Old Esk Road intersection.
- The GTIA PIA method was undertaken for the increase in development heavy vehicle traffic on the D'Aguilar Highway. The net increase of SAR4s related to the development is less than 5.0% of the existing background SAR4s on the network and therefore it can be determined that the development will not have any adverse pavement impacts on the D'Aguilar Highway and surrounding road network.
- Through pre-lodgement discussions, SBRC has made reference to rates introduced to fund road maintenance activities associated with extractive industry operations. Rates have been based on existing extractive industry operations located at Wattlegrove Road, Wattlegrove Wilsons Road, and Gordonbrook and Burra Burri Road, Durong.



The amount of the special charge is stated to vary between sites, ranging from \$8,035.09 to \$10,696.77 annually. It is unclear how the amounts have been calculated. It is noted that as per the GTIA method, contributions are typically calculated based on the number of heavy vehicle axles (SAR4s), length of the subject travel route, and marginal cost (per kilometre) to maintain the subject travel route.

The special rate charge stipulated by Council does not include any of the above information and therefore, it is recommended that this information be disclosed, in order to justify a fair and reasonable outcome for the subject site.

Internal layout considerations

- Given the site has been operating for an extended period of time (since the early 1900s), internal areas where mitigation may be required can be investigated in further detailed design stages of the development. Furthermore, it is expected that regular internal maintenance works are undertaken as part of typical operations of the sawmill.
- From a review of the proposed plans, it is recommended that staff park on the open grassed area in the north-western corner of the site where there is sufficient room, for informal staff parking.

Safety considerations

- No crash patterns or mitigation measures could be determined from the crash data review.
- The existing configuration of the D'Aguilar Highway / Old Esk Road intersection features auxiliary right turn (AUR) and channelised left turn lanes. From the turn warrant analysis, it is recommended that the auxiliary right turn lane be converted into a short channelised right turn lane. This is an existing safety deficiency and therefore it is DTMR's responsibility to investigate and modify the turn lane treatment at the intersection.
- From the turn warrant analysis, no additional upgrades are required for the Site Access.
- Available SISD meets the required SISD for the Site Access intersection. It is recommended that the 40km/hr speed advisory signs on both approaches are retained. Furthermore, additional signage such as 'trucks turning ahead' is recommended to warn drivers of trucks accessing the road at this location and to increase driver awareness and improve reaction times.
- During a site visit that some sections of the Old Esk Road corridor have limited sight distance due to dense roadside vegetation. Where mutual sight distance cannot be established, for example around a horizontal curve, Council should evaluate the potential of road widening and line marking, or at a minimum vegetation clearing to extend sight lines around horizontal curves. Furthermore, as mentioned in Section 7.2, the special rate charge stipulated by Council could also contribute to upgrades along this corridor of Old Esk Road.
- During the site visit, a posted speed limit sign of 80km/h was identified on Old Esk Road. Given the narrow pavement width of this road, and as per the Queensland Road Safety Technical User Volume (QRSTUV): Guide to Speed Management Section 4.3.3, it is not recommended that speed limit signs should be installed along this road section. Where speed limit signs are not present, drivers should drive to the conditions of the road.
- During the site visit, it was identified that some dirt/gravel migration was present. It is recommended that staff periodically monitor and sweep the access throat to remove any loose dirt/gravel that may have accumulated on the road.

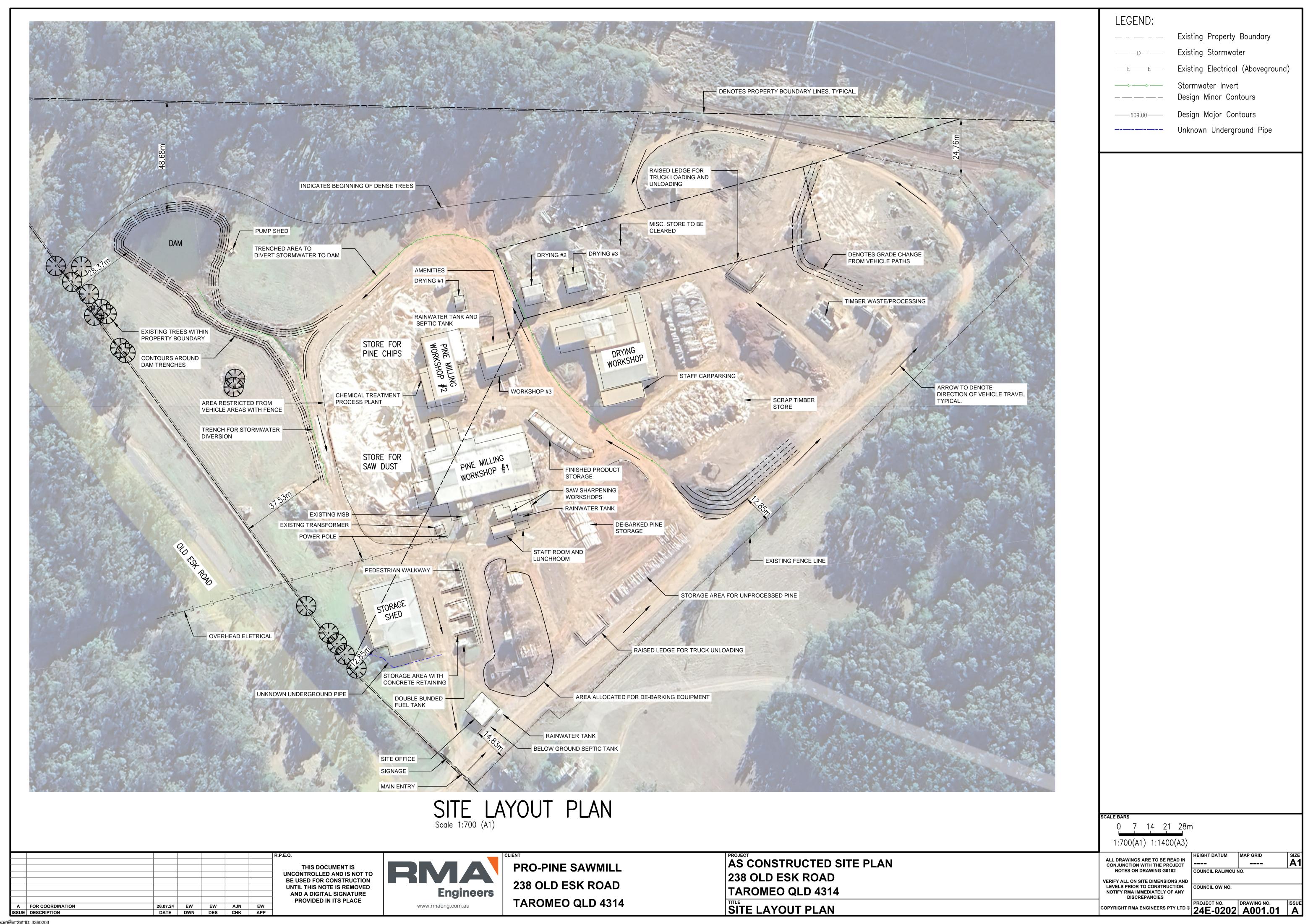
Page 36 of 42



With respect to the above findings and recommendations of this TIA report, the proposed development can proceed without any unacceptable or adverse impacts on the external road network. No traffic and transport engineering matters have been identified that should preclude approval of the proposed development at this location.



Appendix A Development layout





Appendix B Traffic count data

 Site No.:
 1
 Weather: Fine

 Location:
 258 Old Esk Road, Taromeo

 Day/Date:
 Monday, 18 November 2024

 AM Peak:
 Hour ending - 6:30 AM

 PM Peak:
 Hour ending - 4:45 PM



258 Old Esk Road (east)

Camera Position

		Eastbou	-		_	Westbou	-			Vorthbou	-		-	outhbou		a
(1/4 hr end)	50	55	Vehicles		_	97 65	Vehicles		,,	Se	Vehicles		_ [59 65	Vehicles	
	Vehicles	y Vehicle	Owner V		Vehicles	y Vehicle	Owner V		Vehicle	y Vehicle.	Owner V		Vehicles	y Vehicles	Owner V	
	Light	Невиу	S/te	Total	Light	Heavy	S/te	Total	туди	Невиу	S/te	Total	Light	Heavy	S/te	
12:15 AM 12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:00 AM 1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2:15 AM 2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
3:30 AM 3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	Ö	0	0	
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	
4:45 AM 5:00 AM	3	0	0	3	0	0	0	0	0	0	0	0	1 3	0	0	
5:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 AM	2	0	0	2	0	0	1	1	0	0	0	0	3	1	0	
5:45 AM	7	2	1	10	0	0	0	0	0	0	0	0	4	0	0	
6:00 AM 6:15 AM	4	0	0	4	1 0	0	0	1	1 0	0	0	1 0	2	0	0	
6:30 AM	1	1	0	2	0	0	1	1	1	0	0	1	4	0	0	
6:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	4	1	0	
7:00 AM	1	0	0	1	0	1	0	1	0	0	0	0	4	0	0	
7:15 AM 7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	
7:45 AM	0	1	0	1	1	1	0	2	1	0	0	1	2	0	0	
8:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	2	1	0	
8:15 AM	0	1	0	1	0	1	0	1	0	0	0	0	2	0	0	
8:30 AM 8:45 AM	0	0	0	0	0	1 0	0	1 2	3 2	0	0	3 2	1	0	0	
9:00 AM	1	0	0	1	0	0	o	0	0	0	0	0	3	0	0	
9:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	
9:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	3	0	0	
9:45 AM 10:00 AM	0	0	0	0	0	0	1 0	0	0	0	0	0 2	0 2	0	0	
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	
10:30 AM	0	1	0	1	0	0	0	0	4	1	0	5	1	1	0	
10:45 AM	0	0	0	0	0	1	0	1	3	0	0	3	3	0	0	
11:00 AM 11:15 AM	1	0	0	1	0	0	0	2	1	0	0	1	1 2	0	0	
11:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	
11:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:15 PM 12:30 PM	0	1 0	1	2	0	0	0	0	1 2	1 0	0	2 2	1 3	1	0	
12:45 PM	0	1	1	2	0	0	0	0	1	0	0	1	1	0	0	
1:00 PM	0	0	0	0	2	2	1	5	0	1	0	1	2	0	0	
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:30 PM 1:45 PM	0	0	0	0	0	0	0	0	1 3	0	0	3	1	0	0	
2:00 PM	0	2	0	2	1	0	0	1	1	0	0	1	0	0	0	
2:15 PM	1	0	0	1	0	1	1	2	1	1	0	2	1	0	0	
2:30 PM	0	0	0	0	0	0	0	0	5	0	0	5	1	0	0	
2:45 PM 3:00 PM	0	0	0	0	0	1	0	1 2	1 3	0	0	3	4	0	0	
3:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	2	0	0	
3:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	
3:45 PM 4:00 PM	0	0	0	0	1 3	0	0	1 3	1 3	1	0	2	0	0	0	
4:00 PM 4:15 PM	0	0	0	1	11	0	0	11	8	1 0	0	8	4	0	0	
4:30 PM	0	0	0	0	0	0	0	0	1	1	0	2	1	0	0	
4:45 PM	0	0	0	0	0	0	0	0	3	1	0	4	0	0	0	
5:00 PM 5:15 PM	0	0	1 0	1	0	0	0	0	2	0	0	2	0	0	0	
5:15 PM 5:30 PM	0	0	0	0	1	0	0	1	3	0	0	3	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	4	0	0	4	1	0	0	
6:00 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	
6:15 PM 6:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	
6:30 PM 6:45 PM	0	0	0	0	0	0	0	0	2	0	0	2	1	0	0	
7:00 PM	0	0	0	0	0	0	0	0	3	0	0	3	1	1	0	
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 PM 7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	
7:45 PM 8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 PM 9:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:15 PM 10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:30 PM 10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	ō	0	0	
11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:45 PM 12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	52	12	9	64	25	=	-	64	68	6	0	86	86	-	0	
hr Tota																
24 hr	۵.	_			_			e	L.	_		8			L	-
AM Peak	12		-	16	1	-	-		2	0	0	2	13	0	•	
PM Peak	-	0	۰	-	41		•	4	15	е е	0	8	10	•	0	_





 Site No.:
 1
 Weather: Fine

 Location:
 258 Old Esk Road, Taromeo

 Day/Date:
 Tuesday, 19 November 2024

 AM Peak:
 Hour ending - 6:15 AM

 PM Peak:
 Hour ending - 2:15 PM

Old Esk Road (north)

SB			
NB			
EB	WB	WB	WB



258 Old Esk Road (east)

Camera Position

					Α.						,	Un-nam	ed Roa	d (south	1)	
TIME	-	Eastbou	nd Traffi			Westbou	nd Traffi	ic	,	Vorthbou	ınd Traff			Southbou	ınd Traff	ic
(1/4 hr end)			Vehicles				Vehicles				Vehicles				Vehicles	
	Vehicles	Vehicles	Owner Vel		Vehicles	Vehicle	Owner Vel		Vehicles	Vehicles	Owner Vel		Vehicles	Vehicle		
	y Mgi	Yeavy \	S/te Ow	Tota/	y way	Heavy 1	S/te Ow	Tota/	ay Mg/	Yeavy \	S/te Ow	Tota/	y Mg/	Heavy 1	Site Owner	To ta/
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM 12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 AM 1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 AM 2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM 2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	Ö	0	0	0
2:30 AM 2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
3:15 AM 3:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM 4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
4:30 AM 4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1 0	0	0	1 0
5:00 AM	2	0	0	2	0	0	0	0	0	0	0	0	2	0	0	2
5:15 AM 5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
5:45 AM	7	3	0	10	0	0	0	0	0	0	0	0	3	0	0	3
6:00 AM 6:15 AM	4	0	0	4	1	0 2	1 0	2 2	1 0	0	0	1	5	0	0	5 2
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	5
6:45 AM 7:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	3	1	0	3 4
7:15 AM 7:30 AM	0	1	0	1	0	0	0	0	1	0	0	1	2	0	0	2
7:30 AM 7:45 AM	0	0	0	0	2	0	0	2	1	0	0	1	2	1	0	3
8:00 AM 8:15 AM	1 0	0	0	1	0	0	0	0	0 2	0	3	3 2	4 2	0	0	4 2
8:30 AM	0	0	0	0	0	0	0	0	-1	0	0	1	3	0	0	3
8:45 AM 9:00 AM	0	1	0	1 2	0	0	0	0	2	0	0	2	5	0	0	5 3
9:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1
9:30 AM 9:45 AM	0	0	1 0	1 0	0	1 0	0	1	0	0	0	0 2	0 2	0	0	2
10:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	2	1	1	4
10:15 AM 10:30 AM	0	0	0	1	0	0	0	0	0	0	0	1	0 2	0	0	2
10:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	1	0	0	1
11:00 AM 11:15 AM	0	0	0	0	4 0	0	0	5	3	0	0	3	3	0	0	3
11:30 AM 11:45 AM	0	1 0	1 0	2	0	0	0	0	0	0	0	0	1 0	0	0	1 0
12:00 PM	0	2	0	2	0	0	1	1	0	0	0	0	2	0	0	2
12:15 PM 12:30 PM	0	0	0	0	0	1 0	0	1 0	1	0	0	1	1 1	0	0	1
12:45 PM	0	0	0	0	0	1	0	1	-1	0	0	1	2	0	0	2
1:00 PM 1:15 PM	0	0	0	0	0	0	0	0	2	0	0	2 6	4 3	0	0	4 3
1:30 PM	0	1	0	1	0	0	0	0	5	1	0	6	1	1	0	2
1:45 PM 2:00 PM	0	0	0	0	0	1	1	0 2	3	0	0	3	1	0	0	1
2:15 PM	0	0	0	0	0	1	0	1	7	1	0	8	3	0	0	3
2:30 PM 2:45 PM	0	0	0	0	0	0	0	0	3	0	0	3	1	0	0	0
3:00 PM 3:15 PM	0	0	0	0	0	1 0	0	1	2 5	0	0	2 5	1 0	0	0	1 0
3:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	2	0	0	2
3:45 PM 4:00 PM	0	0	0	0	1	0	0	1 3	0	0	0	0 3	0 2	0	0	0 2
4:15 PM	0	0	0	0	9	0	0	9	7	0	0	7	1	0	0	1
4:30 PM 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1 1	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	-1	0	0	1	0	0	0	0
5:15 PM 5:30 PM	0	0	0	0	0	0	0	0	3 0	0	0	3 0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0
6:00 PM 6:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	1	0	0	1
6:30 PM 6:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0
7:15 PM 7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM 8:15 PM	0 2	0	0	0 2	0	0	0	0	0	0	0	0	0	0	0	0
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 PM 9:00 PM	1 0	0	0	0	0	0	0	0	0	0	0	0	0 2	0	0	0 2
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 PM 9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM 10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 PM 11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 PM 11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ır Total	24	15	1	43	21	4		40	96	•		100	5			109
k 24 hr	LO.	4	•	6	+	8	_	4	<u> </u>	•	•	-	~	_	•	6
AM Peak	15			19		"	`						12	,		13
'M Peak	•	е .	•	60	0	2	-	m	16	7	•	18	9	7	•	60





 Site No.:
 1
 Weather: Fine

 Location:
 258 Old Esk Road, Taromeo

 Day/Date:
 Wednesday, 20 November 2024

 AM Peak:
 Hour ending - 6:30 AM

 PM Peak:
 Hour ending - 4:15 PM

Old Esk Road (north) Old Esk Road (west)



258 Old Esk Road (east)





The t			Faethar	nd Troff		A 1	Neetha	nd Troff	ic		lorthba -	ind Traff		B Is	Southbou	ınd T
	TIME (1/4 hr end)		9	Vehicles		,		Vehicles	~	9		Vehicles				Vehicles
					ota!				ota/		eavy Ve		ota/		eavy Ve	
1.50 1.50		0	0	0	0	0	0	0	0	0		0	0	0	0	0
1550-MA 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																
1939 1339 1939						ı		1								
2005 2005						ı		1								
		0			0	0	0	0	0	0	0		0	0	0	0
250 AM																
245 MA																
3050.MM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																
3150AM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						ı		1								
3350AM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						ı		1								
400 M	3:30 AM	0	0		0	0	0	0	0	0	0	0	0	1	0	0
4:59.0M						ı		1								
4.55 M. O.																
4650AM 0 0 0 0 0 0 0 0 0						ı		1								
						ı		1								
5390AM 0						ı		1								
545 MA	5:15 AM	2	0	0		0	0	0		0	0	0		0	0	0
600 600																
6150AM			l					1							l	
6390AM 0			l					1							1	
645-760																
7.150 AM	6:45 AM	0			0	0		0	2	0			0	2		0
7.30 AM																
7.45 AM						ı		1								
800 AM						ı		1								
815 AM						ı		1							1	
### PROPAMY 0						ı		1							1	
900 AM																
9.15 AM																
930AM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0								1			l					
9.45 AM								1								
1000 1000							1									
1035 AM		0	0	0	0	0	0	1	1	1	1	0	2	3	0	0
10.45 AM											0					
11:150 AM						ı		1								
11:15 AM								1							1	
1135 AM						ı		1								
12-15 PM																
12:15 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	11:45 AM	0	0	0	0	0	0	0	0		0	0	1	1	0	0
12:30 PM																
12.45 PM 0 0 0 0 0 0 1 1 0 0 0 1 2 0 0 0 2 2 0 0 0 0																
1.00 PM																
1.15 PM						ı		1								
130 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																
220 PM 1 1 0 0 0 1 1 0 0 0 0 0 0 0 0 3 2 0 0 5 2 0 0 0 2 2 15 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0	0	0	0	0	0	0	0	2	0	0	2	1	0	0
2.15 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 1 0						ı		1								
2239 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 2 0 0 0 2 2 0 0 0 0 2 2 0						ı		1								
2.45 PM						ı		1								
3.15 PM 0 0 0 0 0 0 1 1 0 0 0 1 2 0 0 2 2 3 0 0 0 2 3 3 0 0 0 3 33 PM 0 0 0 0 0 0 1 1 0 0 0 1 2 2 0 0 0 2 2 1 0 0 0 0																
3.33 PM 0 0 0 0 0 0 1 1 0 0 0 1 2 0 0 0 2 1 1 0 0 0 0	3:00 PM	0	1	0	1	0	0	0	0		0	0	3	0	0	0
3.45 PM 0 0 0 0 0 0 1 1 0 0 0 1 4 0 0 0 4 0 0 0 0	3:15 PM	0	0	0	0	-1	0	0	1	2	0	0	2	3	0	0
4.00 PM						ı		1							1	
4:15 PM																
4.39 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 0																
### 445 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 1 0						ı										
500 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					0				0				1			
530 PM 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 1 0						ı		1						1		
SASPM 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 1 0						ı		1								
ECOPM 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0																
E15 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0																
630 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																
7.00 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6:30 PM	0		0	0	0	0	0	0	0	0	0	0	0	0	0
7.15 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																
7.30 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																
7.45 PM 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 0																
BOD PM																
8:30 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					0	ı	0	1	0		0		1		0	0
8.45 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						ı		1								
9:00 PM								1								
9.15 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																
9.30 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																
9.45 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																
1000 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					0											
1939 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																
11:05 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																
WA QUELLE COLUMN AND C						ı		1								
11.45 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						ı		1								
AMA Paga 24 T T 1		0		0	0	0	0	0		0		0		0		0
AM Pask 11 1 2 1 2 6 6 1 1 1 2 1 1 0 0 1 1 1 1 0 0 1 1 1 1 0 0 1		_														
MA PR	Total	23			33	2		4	8	8	10	•	85	8	9	°
AM 78 0 0 0 1 1 1 0 0 1 1 1 1 1 1 1 1 1 1 1	E					1										
		-	10		9	8	-	+	4	-			-	8	-	
	M Pea	+		-	÷						-			-		
	•				8	100	-		9	7	•	•	7	8		

 Site No.:
 1
 Weather: Fine

 Location:
 258 Old Esk Road, Taromeo

 Day/Date:
 Thursday, 21 November 2024

 AM Peak:
 Hour ending - 6:00 AM

 PM Peak:
 Hour ending - 4:15 PM



Camera Position

										Camera P	osition (1	ed Roa	d (south	1)	
TIME		Fasthou	nd Traffi		Α 1	Westbou	nd Traffi	ic	Ι,	iorthbou	ind Traff		В	outhbou	ınd Traff	ic
(1/4 hr end)			Vehicles				Vehicles				Vehicles				Vehicles	
	ught Vehicles	Heavy Vehicles	Site Owner Ve	To ta/	ight Vehicles	Heavy Vehicles	Site Owner Ve	Tota!	Jght Vehicles	Heavy Vehicle	Site Owner Ve	To tal	ight Vehicles	Heavy Vehicles	Site Owner Ve	To ta!
12:15 AM 12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM 1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 AM 1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 AM 2:30 AM	0	0	0	0	0	0	0	0	1 0	0	0	1 0	0	0	0	0
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM 3:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 AM 3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1 0	0	0	1 0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
4:15 AM 4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2 2
5:00 AM 5:15 AM	0	0	1	1	0	0	0	0	0	0	0	0	3	1	0	4
5:30 AM 5:45 AM	1 8	0	0	1 9	0	0	1 0	1 0	0	0	0	0 2	1 3	0	0	1 3
6:00 AM	4	1	1	6	2	0	0	2	1	0	0	1	4	0	0	4
6:15 AM 6:30 AM	1	0	0	1 0	0	0	0	0	0	0	0	0	2 2	0	0	2
6:45 AM	1	0	0	1	0	0	0	0	0	0	0	0	3	1	0	4
7:00 AM 7:15 AM	0	0	0	0	0	0	0	1	0	1	0	0	3 1	0	0	3 2
7:30 AM 7:45 AM	0	0	0	0	0 2	0	0	0 2	0 2	0	0	0 2	2	0	0	2
7:45 AM 8:00 AM	1	1	0	2	0	1	0	1	2	1	0	3	3	0	0	3
8:15 AM 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1 3	1 0	0	2
8:45 AM	0	0	0	0	0	0	0	0	4	0	0	4	4	1	0	5
9:00 AM 9:15 AM	1 0	0	0	1 0	0	0	0	0	0	1 0	0	1	4	0	0	1
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4
9:45 AM 10:00 AM	0	0	0	0	0	0	0	0	2	0	0	2 0	1 0	0	0	1
10:15 AM 10:30 AM	0	0	1 0	1	0	0	1 0	1 0	1 2	1	0	2 2	4	0	0	4
10:30 AM	1	0	0	1	1	1	1	3	3	1	0	4	7	1	0	8
11:00 AM 11:15 AM	0	0	0	0	0	0	0	0 2	0 2	0	0	0 2	2 5	0	0	2 6
11:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	1
11:45 AM 12:00 PM	0	0	0	0	0	0	0	0	1	1 0	0	2	0	1	0	1
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM 12:45 PM	0	0	0	0	0	0	0	0	3 1	0	0	3 1	1 2	0	0	1 2
1:00 PM 1:15 PM	0	0	0	0	1	0	0	1 0	0	0	0	0	1 1	0	0	1
1:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1
1:45 PM 2:00 PM	0	0	0	0	0	0	0	0	1 4	0	0	1 4	3 2	0	0	3 2
2:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1
2:30 PM 2:45 PM	0	0	0	0	0	1	0	1	2	1	0	3	2	0	0	2
3:00 PM 3:15 PM	0	0	0	0	0	0	0	0	2	0	0	2	1 2	0	0	1 2
3:30 PM	0	0	0	0	0	0	0	0	4	0	0	4	1	0	0	1
3:45 PM 4:00 PM	0	0	1 0	0	2	0	0	3	2	1 0	0	3	1	0	0	1
4:15 PM	1	0	0	1	10	0	0	10	6	0	0	6	1	0	0	1
4:30 PM 4:45 PM	0	0	0	0	0	0	0	0	3 4	0	0	3 4	1	0	0	1
5:00 PM 5:15 PM	0	0	0	0	0	0	0	0	2	0	0	2 2	3	0	0	3
5:30 PM	0	0	0	0	0	0	0	0	3	0	0	3	1	0	0	1
5:45 PM 6:00 PM	0	0	0	0	0	0	0	0	2	0	0	2	2	0	0	2
6:15 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0
6:30 PM 6:45 PM	0	0	0	0	0	0	0	0	5	0	0	5 0	0	0	0	0
7:00 PM 7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1 0	0	0	1
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 PM 8:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 PM 8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM 9:15 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0
9:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
9:45 PM 10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM 10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 PM 11:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
11:45 PM 12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	22	9	4	32	21	9	10	32	98	9	0	105	106	6	0	115
AM Peak 24 hr Total	13	7	8	17	2	•	-	е е	2	-	•	6	-	-	0	12
AM Po.	Ĺ												Ì			



Site No.: 1 Weather: Fine Location: 258 Old Esk Road, Taromeo Day/Date: Friday, 22 November 2024 AM Peak: Hour ending - 8:00 AM PM Peak: Hour ending - 3:15 PM

Old Esk Road (north) Old Esk Road (west)



258 Old Esk Road (east)

	TIME		Eastbou	nd Traffi		A '	Westbou	nd Traffi	ic	,	Vorthbou	nd Traff		B 8	Southbou	ınd Tı	rai
	TIME (1/4 hr end)			Se				Seg				se				Se	_
			seavy Vehicle	Owner	'o ta/		feavy Vehicle	Owner	ota/		seavy Vehicle	Owner	'o ta/		feavy Vehicle	Owner	
		0	0	0	0	0	0	0	0	0	ō	0	0	0	0	0	
1450 1450															1		
2005 100						ı								ı	1		
2550.0M						ı								ı	1		
24500.MM														ı			
300 300																	
3350.M. 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0														ı	1		
3255644														ı	1		
March Marc		0	0	0	0		0	0	0		0	0	0	1	0	0	
4:55 AM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						ı								ı	1		
March Marc																	
						ı							0				
						ı									1		
Sage														ı			
S450 MA														ı			
61500AM 1 0 0 1 2 0 0 0 0 0 0 0 0 0	5:45 AM	1		0	1	0	0	0	0	0	0	0		4	0	0	
6390 6390															1		
SESSION																	
Tristama						ı								ı			
7.39AAM	7:00 AM						1	0							0	0	
145 1						ı									1		
BOOLAN						ı								ı			
8159AM						ı											
845-848														1			
900 AM														ı			
9.39 A54 AM														ı			
9.45 AM						ı					0			ı	1		
1500 1500																	
10.15 10.1						ı											
1545-54M 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						ı											
11:15:25 AM						ı								ı			
11:15 AM						ı											
1145-54M 0						ı											
12.01 PM	11:30 AM	1	-1	0		0	0	0		2	2	0	4	0	1	0	
12:15 PM														ı			
12:30 PM						ı											
1.00 PM																	
11-15 PM																	
130 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																	
145 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 2 2 2 0 0 0 0 2 2 1 0 0 0 2 2 5 0 0 0 2 2 5 0 0 0 0 2 5 0 0 0 0																	
2.15 PM	1:45 PM			0		ı								2			
239 PM						ı											
2.45 PMM						ı											
3.15 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2:45 PM				0				0					ı			
339 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																	
345 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 3 3 3 3 0 0 0 4 4 15 PM 0 0 0 0 0 1 1 0 0 0 1 1 2 0 0 0 1 4 0 0 0 0 4 4 0 0 0 0 4 4 0 0 0 0						ı									1		
4.15 PM	3:45 PM					ı											
4.45 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4:00 PM	0	0	0		0	0	0		1	0	0		3	0	0	
### 445 PM						ı											
SOPM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0														ı			
539 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 2 0 0 2 2 1 1 0 0 0 0	5:00 PM	0	0	0	0	0	0	0	0		0	0	3	ı	0	0	
S45 PM														ı			
BODPM														ı			
6:15 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0														ı			
845 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 0 1 1 1 0 0 0 7:15 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	
7.00 PM																	
7:15 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 1 2 0 0 2 1 0 0 0 0																	
7.39 PM 0 0 0 0 0 0 0 0 0 0 0 0 2 0 0 2 1 1 0 0 0 7.45 PM 0 0 0 0 0 0 0 0 0 0 0 0 2 0 0 2 1 1 0 0 0 0																	
SCOPM	7:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	1	0	0	
E-15 PM 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 0						ı								ı			
8-30 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						ı								ı			
900 PM						ı								ı			
9.15 PM 0 0 0 0 0 0 0 0 0																	
930 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																	
9.45 PM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																	
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																	
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																	
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																	
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						ı								ı			
AMP PART OF 1 0 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0																	
AMPeak After Tool			0	0	0	0	0		0							0	
AMP	otal	80	10	7	15	6	^	-	1	112	70	0	132	107	19	۰	
AM Push	Ē.																
AMPes		-	-		7	6		-	4	4	- 7	•	9	_	7	0	
# 0 + 0 + 0 + 0 + 4 + 0 0 + 0 0	P ea			-	.,	"				ľ	"	_		=	-		
						L		L		L				L	L	L	
		0	-	0	-	ı°¯		0	-	4		0	17	۔ ا	- 7	°	





 Site No.:
 1
 Weather: Fine

 Location:
 258 Old Esk Road, Taromeo

 Day/Date:
 Saturday, 23 November 2024

 AM Peak:
 Hour ending - 11:30 AM

 PM Peak:
 Hour ending - 2:45 PM

Old Esk Road (north) Old Esk Road (west)



TIME		Eastbou	nd Traffi	c		Westbou	nd Traffi	ic	,	Vorthbou	nd Traff	ic		outhbou	and Ti
(1/4 hr end)	Vehicles	Vehicles	Owner Vehicles		Vehicles	Vehicles	Owner Vehicles		Vehicles	Vehicles	Owner Vehicles		Vehicles	Vehicles	Owner Vehicles
	Light Ve	Heavy	Site Ow	Tota/	Light Ve	Heavy	S/le Ow	Tota/	Light Ve	Heavy	Site Ow	Tota/	Light Ve	Heavy	S/te Ow
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM 12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	ů	0	0
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 AM 2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	ľ	0	0
2:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM 3:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	ŏ	0	0
3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM 4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1 0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0
5:15 AM 5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1 0	0	0
5:45 AM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
6:30 AM 6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	Ö	0	0
7:15 AM	0	0	0	0	0	0	0	0	1	1	0	2	1	0	0
7:30 AM	0	0	0	0	0	0	0	0	2	0	0	2	2	0	0
7:45 AM 8:00 AM	0	0	0	0	0	0	0	0	1 0	0	0	1 0	3 0	0	0
8:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	2	1	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
8:45 AM 9:00 AM	0	0	0	0	0	0	0	0	3	0	0	3	2 2	0	0
9:00 AM 9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
9:30 AM	0	0	0	0	0	0	0	0	2	0	0	2	2	0	0
9:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	3	0	0
10:00 AM	0	0	0	0	0	0	0	0	2	0	0	2	5	0	0
10:15 AM 10:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0
10:45 AM	0	0	0	0	0	0	0	0	3	0	0	3	2	1	0
11:00 AM	0	0	0	0	0	0	0	0	4	0	0	4	3	0	0
11:15 AM 11:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	4	0	0
11:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	4	0	0
12:00 PM	0	0	0	0	0	0	0	0	4	0	0	4	1	0	0
12:15 PM	0	0	0	0	0	0	0	0	4	0	0	4	1	0	0
12:30 PM 12:45 PM	0	0	0	0	0	0	0	0	2	0	0	2	0 4	0	0
12:45 PM 1:00 PM	0	0	0	0	0	0	0	0	3	0	0	3	1	0	0
1:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	3	0	0
1:30 PM	0	0	0	0	0	0	0	0	3	1	0	4	1	0	0
1:45 PM 2:00 PM	0	0	0	0	0	0	0	0	3 2	0	0	3 2	1 3	0	0
2:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	4	1	0
2:30 PM	0	0	0	0	0	0	0	0	3	0	0	3	2	0	0
2:45 PM 3:00 PM	0	0	0	0	0	0	0	0	2	1	0	3	2 2	0	0
3:00 PM 3:15 PM	0	0	0	0	0	0	0	0	1 6	0	0	6	2 2	0	0
3:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	1	0	0
3:45 PM	0	0	0	0	0	0	0	0	3	0	0	3	2	0	0
4:00 PM 4:15 PM	0	0	0	0	0	0	0	0	7	0	0	7	1 3	0	0
4:15 PM 4:30 PM	0	0	0	0	0	0	0	0	3	0	0	3	2	0	0
4:45 PM	0	0	0	0	0	0	0	0	3	0	0	3	1	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0
5:15 PM 5:30 PM	0	0	0	0	0	0	0	0	4 2	0	0	4 2	0	0	0
5:30 PM 5:45 PM	0	0	0	0	0	0	0	0	2	0	0	2	ů	0	0
6:00 PM	0	0	0	0	0	0	0	0	2	0	0	2	3	0	0
6:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	1	0	0
6:30 PM 6:45 PM	0	0	0	0	0	0	0	0	3	0	0	3	1 0	0	0
7:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	2	0	0
7:15 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0
7:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	3	0	0
7:45 PM 8:00 PM	0	0	0	0	0	0	0	0	1 0	0	0	1 0	1	0	0
8:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0
8:30 PM	0	0	0	0	0	0	0	0	-1	0	0	1	0	0	0
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
9:00 PM 9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 PM 10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM 10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 PM 11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
otal	•	•	•	0	•	•	•	0	120	10	0	125	109	6	0
24 hr Tota					l							,			
	•			0	•	•		•	6		0	6	<u>_</u>	-	
AM Peak	۰				ľ				6		•	6	10	_	•
Peak	•	•	•	0	•	•	0	0	9	-	•	=	=	-	-





 Site No.:
 1
 Weather: Fine

 Location:
 258 Old Esk Road, Taromeo

 Day/Date:
 Sunday, 24 November 2024

 AM Peak:
 Hour ending - 9:30 AM

 PM Peak:
 Hour ending - 12:15 PM

Old Esk Road (north) Old Esk Road (west)



258 Old Esk Road (east)

TIME		Eastbou	nd Traffi	c	١ - ١	Westbou	nd Traffi	С	١	lorthbou	nd Traff	ic		outhbou	nd T
(1/4 hr end)	Vehicles	Vehicles	Vehicles		Vehicles		Vehicles		Vehicles		Vehicles		Vehicles	Vehicles	Vehicles
	ight Vehi	seavy Ve	Site Owner	Total	Jght Vehi	Heavy Vehicle	Site Owner	Total	Jght Vehi	Heavy Vehicle	Site Owner	Total	ight Vehi	Heavy Ve	Site Owner
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM 12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	ō	0	0
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 AM 2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 AM 3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM 4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0		0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	c
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM 5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
5:30 AM 5:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
6:30 AM 6:45 AM	0	0	0	0	0	0	0	0	1 0	0	0	1 0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0
7:15 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
7:45 AM 8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
8:00 AM 8:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0
8:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	4	0	0
9:00 AM 9:15 AM	0	0	0	0	0	0	0	0	2	0	0	0	6	0	0
9:15 AM 9:30 AM	0	0	0	0	0	0	0	0	2	0	0	2	7	0	0
9:45 AM	0	0	0	0	0	0	0	0	-1	0	0	1	1	0	0
10:00 AM	0	0	0	0	0	0	0	0	1	1	0	2	2	1	0
10:15 AM 10:30 AM	0	0	0	0	0	0	0	0	1 2	0	0	1 2	2 5	0	0
10:45 AM	0	0	0	0	0	0	0	0	3	0	0	3	2	0	0
11:00 AM	0	0	0	0	0	0	0	0	3	0	0	3	2	0	C
11:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0
11:30 AM 11:45 AM	0	0	0	0	0	0	0	0	4	0	0	3	6 3	0	0
12:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0
12:15 PM	0	0	0	0	0	0	0	0	2	0	0	2	4	0	0
12:30 PM	0	0	0	0	0	0	0	0	4	0	0	4	5	0	0
12:45 PM 1:00 PM	0	0	0	0	0	0	0	0	3	0	0	3	3	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
1:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0
1:45 PM 2:00 PM	0	0	0	0	0	0	0	0	0 2	0	0	2	1 2	0	0
2:00 PM 2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
2:30 PM	0	0	0	0	0	0	0	0	3	0	0	3	1	0	0
2:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	5	0	0
3:00 PM 3:15 PM	0	0	0	0	0	0	0	0	4 0	0	0	4	4 2	0	0
3:30 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	2	0	0
4:00 PM	0	0	0	0	0	0	0	0	2	0	0	2	1 2	0	0
4:15 PM 4:30 PM	0	0	0	0	0	0	0	0	4	0	0	4	2 6	0	0
4:45 PM	0	0	0	0	0	0	0	0	2	0	0	2	1	0	0
5:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0
5:15 PM 5:30 PM	0	0	0	0	0	0	0	0	1 2	0	0	1 2	2	0	0
5:30 PM 5:45 PM	0	0	0	0	0	0	0	0	3	0	0	3	1	0	0
6:00 PM	0	0	0	0	0	0	0	0	3	0	0	3	1	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
6:30 PM	0	0	0	0	0	0	0	0	2	0	0	2 0	0	0	0
6:45 PM 7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 PM 8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM 8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM 9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1 0	0	0
9:15 PM 9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	0	-1	0	0	1	0	0	c
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	c
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM 10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1 0	0	0
10:45 PM 11:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	c
11:45 PM 12:00 AM	0	0	0	0	0	0	0	0	1 0	0	0	1 0	0	0	0
	0	0	0	0	0	0	0	0	8	-	0	68	=	-	0
hr Tota					1				'				-		
24 hr]					<u> </u>										_
AM Peak	0	۰	۰	0	۰	۰	۰	0	9	0	0	9	17	•	۰
5								0	10	0	0	10	4	0	
Peak	•	0	0	0	0	0	0								







Appendix C SIDRA intersection analysis results

SITE LAYOUT

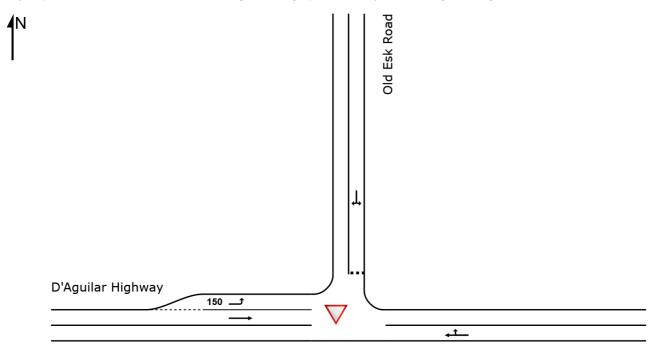
V Site: [2036 BG AM - D'Aguilar Hwy/Old Esk Rd (Site Folder:

Existing layout)]

New Site

Site Category: (None) Give-Way (Two-Way)

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



D'Aguilar Highway

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: RMA ENGINEERS PTY LTD | Licence: NETWORK / 1PC | Created: Tuesday, 18 February 2025 10:03:56 AM

Project: N:\Synergy\Projects\24E-0202 Pro-Pine Sawmill - Taromeo\4 Design\Traffic\2. DA (TIA)\Sidra\DAguilar Hwy-Old Esk Rd.sip9

V Site: [2036 BG AM - D'Aguilar Hwy/Old Esk Rd (Site Folder:

Existing layout)]

New Site

Site Category: (None) Give-Way (Two-Way)

Vehi	cle M	ovemen	t Perfo	rmance										
Mov ID	Turn	INP VOLU	MES	DEM/ FLO	WS	Deg. Satn		Level of Service	QUE	ACK OF EUE	Prop. I Que	Effective Stop	Aver. No.	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %	v/c	sec		[Veh. veh	Dist] m		Rate	Cycles	km/h
East:	D'Agu	ilar Highv	way											
5	T1	90	22.0	95	22.0	0.060	0.0	LOSA	0.0	0.4	0.03	0.03	0.03	97.1
6	R2	5	22.0	5	22.0	0.060	6.3	LOSA	0.0	0.4	0.03	0.03	0.03	68.4
Appr	oach	95	22.0	100	22.0	0.060	0.4	NA	0.0	0.4	0.03	0.03	0.03	95.0
North	n: Old E	Esk Road												
7	L2	7	22.0	7	22.0	0.015	6.2	LOSA	0.1	0.5	0.26	0.55	0.26	51.9
9	R2	7	22.0	7	22.0	0.015	7.2	LOSA	0.1	0.5	0.26	0.55	0.26	51.7
Appr	oach	14	22.0	15	22.0	0.015	6.7	LOS A	0.1	0.5	0.26	0.55	0.26	51.8
West	:: D'Agı	uilar High	way											
10	L2	5	22.0	5	22.0	0.003	5.8	LOSA	0.0	0.0	0.00	0.57	0.00	52.7
11	T1	96	22.0	101	22.0	0.059	0.0	LOSA	0.0	0.0	0.00	0.00	0.00	100.0
Appr	oach	101	22.0	106	22.0	0.059	0.3	NA	0.0	0.0	0.00	0.03	0.00	95.7
All Vehic	cles	210	22.0	221	22.0	0.060	0.8	NA	0.1	0.5	0.03	0.06	0.03	90.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

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

Queue Model: SIDRA Standard.

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

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

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com
Organisation: RMA ENGINEERS PTY LTD | Licence: NETWORK / 1PC | Processed: Tuesday, 18 February 2025 10:06:05 AM
Project: N:\Synergy\Projects\24E-0202 Pro-Pine Sawmill - Taromeo\4 Design\Traffic\2. DA (TIA)\Sidra\DAguilar Hwy-Old Esk Rd.sip9

V Site: [2036 BG PM - D'Aguilar Hwy/Old Esk Rd (Site Folder:

Existing layout)]

New Site

Site Category: (None) Give-Way (Two-Way)

Vehi	cle M	ovemen	t Perfo	rmance										
Mov ID	Turn	INP VOLU [Total		DEM. FLO [Total		Deg. Satn		Level of Service		ACK OF EUE Dist]	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
East:	D'Agu	ıilar High\	way											
5	T1	315	22.0	332	22.0	0.203	0.1	LOSA	0.1	8.0	0.03	0.01	0.03	98.5
6	R2	7	22.0	7	22.0	0.203	8.1	LOSA	0.1	8.0	0.03	0.01	0.03	69.2
Appr	oach	322	22.0	339	22.0	0.203	0.3	NA	0.1	8.0	0.03	0.01	0.03	97.6
North	n: Old I	Esk Road												
7	L2	6	22.0	6	22.0	0.022	7.1	LOSA	0.1	0.7	0.52	0.67	0.52	49.7
9	R2	6	22.0	6	22.0	0.022	12.9	LOS B	0.1	0.7	0.52	0.67	0.52	49.4
Appr	oach	12	22.0	13	22.0	0.022	10.0	LOS B	0.1	0.7	0.52	0.67	0.52	49.5
West	:: D'Ag	uilar High	way											
10	L2	7	22.0	7	22.0	0.005	5.8	LOSA	0.0	0.0	0.00	0.57	0.00	52.7
11	T1	282	22.0	297	22.0	0.174	0.0	LOSA	0.0	0.0	0.00	0.00	0.00	99.9
Appr	oach	289	22.0	304	22.0	0.174	0.2	NA	0.0	0.0	0.00	0.01	0.00	97.8
All Vehic	cles	623	22.0	656	22.0	0.203	0.4	NA	0.1	0.8	0.02	0.03	0.02	95.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

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

Queue Model: SIDRA Standard.

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

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

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com
Organisation: RMA ENGINEERS PTY LTD | Licence: NETWORK / 1PC | Processed: Tuesday, 18 February 2025 10:06:05 AM
Project: N:\Synergy\Projects\24E-0202 Pro-Pine Sawmill - Taromeo\4 Design\Traffic\2. DA (TIA)\Sidra\DAguilar Hwy-Old Esk Rd.sip9

V Site: [2036 BG+DEV AM - D'Aguilar Hwy/Old Esk Rd (Site

Folder: Existing layout)]

Site Category: (None) Give-Way (Two-Way)

Vehi	cle M	ovemen	t Perfo	rmance										
Mov ID	Turn	INP VOLU [Total	IMES HV]	DEM. FLO [Total	WS HV]	Deg. Satn	Delay	Level of Service	QUI [Veh.	ACK OF EUE Dist]	Prop. I Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
	DIA	veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
East:	: D'Agu	ıilar High	way											
5	T1	90	22.0	95	22.0	0.064	0.1	LOSA	0.1	0.7	0.05	0.06	0.05	95.1
6	R2	9	22.0	9	22.0	0.064	6.3	LOSA	0.1	0.7	0.05	0.06	0.05	67.4
Appr	oach	99	22.0	104	22.0	0.064	0.6	NA	0.1	0.7	0.05	0.06	0.05	91.7
North	n: Old E	Esk Road												
7	L2	7	22.0	7	22.0	0.015	6.2	LOSA	0.1	0.5	0.26	0.55	0.26	51.9
9	R2	7	22.0	7	22.0	0.015	7.3	LOSA	0.1	0.5	0.26	0.55	0.26	51.7
Appr	oach	14	22.0	15	22.0	0.015	6.7	LOS A	0.1	0.5	0.26	0.55	0.26	51.8
West	: D'Agı	uilar High	way											
10	L2	9	22.0	9	22.0	0.006	5.8	LOSA	0.0	0.0	0.00	0.57	0.00	52.7
11	T1	96	22.0	101	22.0	0.059	0.0	LOSA	0.0	0.0	0.00	0.00	0.00	100.0
Appr	oach	105	22.0	111	22.0	0.059	0.5	NA	0.0	0.0	0.00	0.05	0.00	92.8
All Vehic	cles	218	22.0	229	22.0	0.064	1.0	NA	0.1	0.7	0.04	0.08	0.04	87.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

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

Queue Model: SIDRA Standard.

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

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

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: RMA ENGINEERS PTY LTD | Licence: NETWORK / 1PC | Processed: Tuesday, 18 February 2025 10:06:06 AM

Project: N:\Synergy\Projects\24E-0202 Pro-Pine Sawmill - Taromeo\4 Design\Traffic\2. DA (TIA)\Sidra\DAguilar Hwy-Old Esk Rd.sip9

V Site: [2036 BG+DEV PM - D'Aguilar Hwy/Old Esk Rd (Site

Folder: Existing layout)]

Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	ovemen	t Perfo	rmance										
Mov ID	Turn	INP VOLU	MES	DEM/ FLO	WS	Deg. Satn		Level of Service	QUE	ACK OF EUE	Prop. I Que	Effective Stop		Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %	v/c	sec		[Veh. veh	Dist] m		Rate	Cycles	km/h
East:	D'Agu	ilar Highv	way											
5	T1	315	22.0	332	22.0	0.203	0.1	LOSA	0.1	8.0	0.03	0.01	0.03	98.5
6	R2	7	22.0	7	22.0	0.203	8.1	LOSA	0.1	8.0	0.03	0.01	0.03	69.2
Appr	oach	322	22.0	339	22.0	0.203	0.3	NA	0.1	8.0	0.03	0.01	0.03	97.6
North	n: Old E	Esk Road												
7	L2	10	22.0	11	22.0	0.037	7.1	LOSA	0.1	1.1	0.52	0.69	0.52	49.6
9	R2	10	22.0	11	22.0	0.037	13.1	LOS B	0.1	1.1	0.52	0.69	0.52	49.4
Appr	oach	20	22.0	21	22.0	0.037	10.1	LOS B	0.1	1.1	0.52	0.69	0.52	49.5
West	:: D'Agı	uilar High	way											
10	L2	7	22.0	7	22.0	0.005	5.8	LOSA	0.0	0.0	0.00	0.57	0.00	52.7
11	T1	282	22.0	297	22.0	0.174	0.0	LOSA	0.0	0.0	0.00	0.00	0.00	99.9
Appr	oach	289	22.0	304	22.0	0.174	0.2	NA	0.0	0.0	0.00	0.01	0.00	97.8
All Vehic	cles	631	22.0	664	22.0	0.203	0.5	NA	0.1	1.1	0.03	0.04	0.03	94.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

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

Queue Model: SIDRA Standard.

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

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

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: RMA ENGINEERS PTY LTD | Licence: NETWORK / 1PC | Processed: Tuesday, 18 February 2025 10:06:06 AM

Project: N:\Synergy\Projects\24E-0202 Pro-Pine Sawmill - Taromeo\4 Design\Traffic\2. DA (TIA)\Sidra\DAguilar Hwy-Old Esk Rd.sip9



Appendix D Turn warrant assessment

