Our Ref: NA50613047:CA
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Dear Greg,

REEVES CREEK DEVELOPMENT, PICTON NSW
TRAFFIC IMPACT ASSESSMENT
ADDENDUM TECHNICAL MEMORANDUM

1 Introduction

Cardno was commissioned in July 2014 to undertake a traffic and transport impact assessment (TIA) on behalf of Dartanyon Pty Ltd to support a rezoning application for a residential land use development named Reeves Creek (also known as Picton East) in Picton, NSW.

Following the completion of the TIA, Cardno recently completed the Picton Town Centre Transport Plan 2026 (Transport Plan) for Wollondilly Shire Council (July 2018). The scope of work included traffic modelling, detailed strategic design and cost estimation. The Transport Plan assessed the cumulative impact of background traffic growth and committed development including Reeves Creek (assumed to be 400 residential dwellings) in 2026. The Transport Plan recommended short-term road network upgrades to mitigate the impacts of traffic growth as outlined below.

Intersection	Proposed Option
Menangle Street / Argyle Street	Right turn ban on the eastern approach (Menangle Street)
Argyle Street / Margaret Street / Cliffe Street	Increase maximum green time of the signal control plan on the eastern approach from 15s to 20s
Menangle Street / Prince Street	Upgrade to traffic signals
Argyle Street / Prince Street	Reduce the northern approach (Argyle Street) to one lane southbound New continuous left turn out of Prince Street Install a 90m right turn bay on the southern approach (Argyle Street)
Argyle Street / Barkers Lodge Road	No upgrades proposed assuming the above options are implemented
Argyle Street / Lumsdaine Street	Option 1 – upgrade to traffic signals Option 2 – install pedestrian (zebra) crossing on Argyle Street south of the intersection

Given the recommendations of the Transport Plan supersede the TIA previously prepared by Cardno in July 2014, the purpose of this addendum technical memo is to detail the impact of the proposed yield reduction of the Reeves Creek development from 400 dwellings to 241 dwellings. Access arrangements to the development remains unchanged.

2 Trip Generation

Table 2-1 below shows a comparison between the previous and proposed development details.

Table 2-1 Comparison of the Previous and Proposed Development Yield

Proposed land use	Previous Development			Proposed Development		
	Area (Gross Hectares)	Gross Density Range (Dwellings/Hectare)	Yield (Number of Dwellings)	Area (Gross Hectares)	Gross Density Range (Dwellings/Hectare)	Yield (Number of Dwellings)
Environmental Conservation-E2	4.3	-		6.9966	-	
Low Density Residential – R2	22	10-15	220	21.6895	10-15	241
Medium Density Residential – R3	9.9	18-22	180		-	
Public Recreation – RE1	2.6	-			-	
E4				0.8245		
Total	38.8		400	29.5		241

The “Roads and Maritime Guide to Traffic Generating Developments TDT 2013/04a” defines the updated generation rates for the volume of generated peak hour trips per type of development. The generation rate is influenced by the type of development (high or low density), proximity to public transport and location. Based on the Roads and Maritime definition, high-density developments contain 20 or more dwellings, are close to public transport and are almost exclusively residential in nature. As there are no guidelines on trip generation for medium density residential developments the trip generation rate of low density land use was assumed across all developments (previous and proposed yield).

The RMS Guide states the following trip generation rate to be applied for a low density residential development as summarised in **Table 2-2**.

Table 2-2 Low Density Trip Generation Rates

Weekday Average Peak	Trip Generation Rate (Regional Areas)
AM Peak	0.71 / dwelling
PM Peak	0.78 / dwelling

The number of trips that will be generated by the development at each time period is calculated using the following equation:

$$Trip\ Generation(trips) = Number\ of\ Dwellings \times Trip\ Generation\ Rate$$

Based on the above rates, the trip difference between the previous and proposed development yield is 113 and 124 vehicles per hour less in the AM and PM respectively as shown in **Table 2-3**.

Table 2-3 Reeves Creek Development Trip Generation Change

Weekday Average Peak	Total Number of Dwellings		Total Trips (vehicles per hour)		
	Previous	Proposed	Previous	Proposed	Trip Change
AM Peak	400	241	284	171	**-113**
PM Peak			312	188	**-124**

3 Conclusion

Cardno previously prepared a traffic impact assessment in July 2014 for the Reeves Creek development, assumed to be of 400 residential dwellings at the time. Cardno recently completed the Picton Town Centre Transport Plan 2026 (Transport Plan), which included and assumed the Reeves Creek (also known as Picton East) development consisted of 400 residential dwellings. The Transport Plan recommended short-term upgrades to the road network to mitigate the impacts of background traffic growth and committed developments, subsequently superseding any upgrades proposed in the traffic impact assessment Cardno prepared in July 2014.

This addendum technical memo details the impact of the proposed yield reduction of Reeves Creek development from 400 residential dwellings to 241 residential dwellings. Access arrangements to the development remain unchanged. The proposed reduction to 241 residential dwellings results in about 113 less vehicular trips during the AM peak hour and 124 less vehicular trips in the PM peak hour.

Given the Transport Plan assumed the Reeves Creek development consisted of 400 residential dwellings, the proposed reduction in residential dwellings reduces vehicular peak hour trips on the road network and extends the life of the upgrades recommended in the Transport Plan.

Yours sincerely,

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