

14.3 UPDATE ON PICTON TOWN CENTRE TRANSPORT MASTERPLAN 2026

File Number: 12275-2#60

Directorate: Shire Futures

EXECUTIVE SUMMARY

The purpose of this report is to provide an update on the Picton Town Centre Transport Masterplan 2026, following further traffic modelling and community consultation, and seek endorsement for some modification to the plan.

In early 2022, Council resolved to test the findings of the Picton Town Centre Transport Plan 2026, particularly in regard to the impact of COVID on traffic volumes and possible changes to development forecasts, as well as recent developments by Transport for NSW (TfNSW) with progressing options for a Picton Bypass.

Further work undertaken has included stakeholder engagement, new traffic modelling of the upgrade options, new traffic survey data, updated land use development assumptions and the testing the impact of the proposed Picton Bypass.

Recent traffic modelling reaffirms that Picton Town Centre will come under increasing traffic congestion pressure in future years, leading to poor road safety, pedestrian connectivity and negative amenity outcomes. This is consistent with previous work undertaken in 2018, and numerous studies carried out before that.

The proposed Picton Bypass will resolve these congestion issues in an unrivalled manner, compared to any other modelled scenario. The ideal outcome for Picton residents and the wider Wollondilly community would be that the design and construction of the Picton Bypass is fast tracked by the NSW Government.

However, if the Picton Bypass is not implemented very soon, additional measures will be required to allow a number of key intersections, including Menangle Street and Prince Street, to continue to function safely. From interpolating the model results, major traffic issues are more than likely to occur consistently from 2031.

Irrespective of the timing of the Picton Bypass, the modelling suggests that the intersection of Argyle Street with Barkers Lodge Road will reach poor levels of service prior to 2036, and will require a form of intervention or alleviation. This needs to be assessed as part of the future management of Picton transport issues.

The updated modelling also identifies that the Menangle Street and Prince Street intersection will perform at a satisfactory level in 2026. This change can be attributed to the impact of COVID and development forecasts on traffic volumes. As such, it is recommended that the upgrade of the intersection be placed on hold, with the view of the Picton Bypass being implemented in the medium term.

Further, the modelling shows the challenges that the town centre is expected to face and in real terms shows the benefits of a functioning Picton Bypass. This only furthers Councils support and advocacy for the Picton Bypass being pursued, critical to Picton functioning as a vibrant, safe and sustainable centre into the future.

Given the recommendation is to place significant upgrade works on hold, it will be incumbent for Council to continue to monitor and model Picton traffic on an ongoing basis and reassess intersection performance in context with progress by the State Government on the Picton Bypass. The plan should be formally reviewed in 2026 as if the Picton Bypass is not commenced by this time current modelling indicates work will need to recommence on the planned intersection upgrades prior to their failure.

RECOMMENDATION

That Council:

1. Note the content of this report and the attached report Picton Town Centre Road Improvements Future Modelling Report (Stantec, 2023), and the impacts of the updated traffic modelling on the masterplan implementation timeframe, in particular the impact of COVID on traffic volumes and changes to development forecasts.
2. Defer any upgrade work to intersections within the Picton Town Centre, including the Prince Street and Menangle Street intersection, and ensure this decision is formally reviewed in 2026 as if the Picton Bypass is not commenced by this time current modelling indicates work will need to recommence on the planned intersection upgrades prior to their failure.
3. Rescind resolution No.240/2020 of 17 November 2020 (Road Widening and Acquisition of Land No.213 Menangle Street, Picton) under s372 of the *Local Government Act 1993* on the basis of the Picton Town Centre Road Improvements Future Modelling Report (Stantec, 2023).
4. Write to the NSW Premier, Minister for Roads, Member for Wollondilly and Commonwealth Member for Hume reconfirming Councils position for the Picton Bypass.
5. Note the issues projected to be experienced at the intersection of Barkers Lodge Rd and Argyle St in medium term noting that options will have to be explored as how to address.
6. Consider the allocation of budget to regularly monitor and model Picton Town Centre traffic to continue to assess the road network and projected levels of service, noting this may require further consideration of upgrade options.
7. Update Council's webpage with the technical report and findings.
8. Acknowledge and warmly thanks the community for the participation in the process and writes to all active stakeholders noting the findings of the modelling and the Resolution of Council.

REPORT

Background

Picton faces significant challenges to its transport network. The town is located at the intersection of three major transport corridors and forms a major hub for traffic travelling between Sydney or Wollongong and surrounding regions in the Wollondilly Shire. Combined with significant land development and population growth in the surrounding region, Picton Town Centre is expected to experience significant traffic congestion and elevated heavy vehicle volumes in the near future.

With these challenges in mind, in 2018 Council developed the Picton Town Centre Transport Plan 2026 (Transport Plan), which proposed short-term, low-cost upgrades to provide sufficient network capacity until at least 2026. The Transport Plan identified that the Menangle Street and Prince Street intersection would fail in both the AM and PM peaks in 2026. Upgrade options were proposed at six intersections in the town centre, including the signalisation of Menangle Street and Prince Street and the addition of turning lanes at Argyle Street and Prince Street.

Projected traffic congestion of Picton Town Centre and management options to address the issue, such as the proposal to signalise the intersection of Menangle Street and Prince Street or a Picton Bypass, are not new concepts. Traffic studies of the town centre have been numerous and consistent, with the signalisation of Menangle Street and Prince Street nominated as early as 1996, and included within consecutive, adopted development contributions plans as early as 2007.

In early 2022, Council resolved to test the findings of the Picton Town Centre Transport Plan 2026, particularly in regard to the impact of COVID on traffic volumes and possible changes to development forecasts. Additionally, recent momentum made by Transport for NSW (TfNSW) with progressing options for a Picton Bypass should be considered in context with the study findings, relative benefits and timings.

Further work undertaken has included stakeholder engagement, new traffic modelling of the upgrade options, new traffic survey data, updated land use development assumptions and the testing the impact of the proposed Picton Bypass.

This report serves to provide Council with an update on the projected transport challenges of Picton Town Centre, with a particular focus on the Menangle Street and Prince Street intersection.

Assessment approach

The original 2016 study and the revised 2022/23 study are reliant on two key models:

- The Macarthur Regional **Transport** Model; and
- Detailed Microsimulation **traffic** modelling.

The Macarthur Regional **Transport** Model (MRTM) is a large, broad scale regional model that forecasts existing and future traffic demands across the Macarthur metropolitan region and is based on existing and future land use and infrastructure information. MRTM outputs were used for future-year demand estimation.

Based on these outputs, further detailed Microsimulation **traffic** modelling using AIMSUM was used to assess the existing and future performance of the town centre and key intersections. The AM and PM peak periods were identified and modelled for a typical mid-year weekday.

New traffic counts were carried out in 2022 and the revised AIMSUM model was validated in consultation with TfNSW prior to assessing potential scenarios

Base modelling updates

Two key difference were found when reviewing the data in updating the model:

- 2022 traffic counts were essentially the same as those recorded in 2016, suggesting no growth in traffic volumes had occurred over that time – likely as a result to change in work patterns (e.g. COVID, working from home).
- Project traffic resulting from forecasted development would increase less quickly than modelled in 2016.

Future road network performance

Road performance is measured in various ways including 'Levels of Service' (aka LOS), which is particularly used at intersections and summarises the time taken to pass through the intersection. LOS A to C are excellent to satisfactory and require no intervention.

LOS D has tipped over into unsatisfactory during peak times but can be lived with. LOS E starts to see more consistent issues and ideally requires intervention or management. LOS F sees consistent congestion and safety issues.

Picton Town Centre is constrained with inter relationships between intersections. This means a LOS F or intervention at one intersection has broader network impacts.

Future road network performance of the town centre was assessed for a base case (i.e. 'Do Nothing') scenario and four upgrade scenarios in 2026 and 2036. The base case scenario with Picton Bypass was also modelled for 2036.

The Picton Town Centre Road Improvements – Future Modelling Report’ by Stantec is provided at **Attachment 1** to this report.

A summary of the scenarios is provided below.

Base case scenario

The base case scenario indicates that in 2026, most assessed intersections in the study area will operate satisfactorily in all modelled peaks and hours, including:

- Menangle Street and Prince Street
- Argyle Street and Prince Street

In the original 2016 study, the modellings suggested that both intersections would fail and require upgrading.

However, the intersection of Argyle Street and Barkers Lodge Road starts to experience levels of service D peak by 2026.

In 2036, several intersections within the town centre operate unsatisfactorily in one or more peak hours, including: Menangle Street and Argyle Street; Argyle Street and Prince Street; Menangle Street and Prince Street; and, Argyle Street and Barkers Lodge Road

A summary of the level of service for key intersections under the base case scenario at 2036 is provided in Table 1.

Intersection	7:15am-8:15am	8:15am-9:15am	3:15pm-4:15pm	4:15pm-5:15pm
	LOS	LOS	LOS	LOS
Regreme Rd / Argyle St	A	A	A	A
Margaret St / Argyle St	A	B	B	B
Manolis Ln / Argyle St	A	A	A	A
Walton Ln / Argyle St	A	A	B	A
Argyle St/ Menangle St	C	B	E	C
Menangle St / Walton St	A	A	A	A
Cliffe St / Walton St	A	A	A	A
Colden St / Menangle St	A	B	B	A
Colden St / Manolis Ln	A	A	A	A
Colden St / Margaret St	A	A	A	A
Margaret St / Manolis Ln	A	A	A	A
Argyle St / Barkers Lodge Rd	C	F	F	E
Argyle St/ Lumsdaine St	A	B	B	B
Argyle St/ View St	A	B	A	A
Lumsdaine St / Prince St	C	B	C	B
Argyle St/ Prince St	B	B	E	C
Prince St / Menangle St	F	F	D	C

Menangle St / Station St	A	A	A	A
Menangle St / Webster St	A	B	B	B
Argyle St/ Thirlmere Way	A	A	A	A
Baxter Ln / Menangle St	A	A	A	A

Table 1: 2036 base case scenario performance.

Upgrade scenarios

Picton Bypass

Transport for NSW are developing options for a future bypass of Picton Town Centre. The proposed bypass would connect Remembrance Driveway with Picton Road. The base case with Picton Bypass scenario assesses the operation of the Picton Town Centre road network with the proposed Picton Bypass operational. The model outputs of this scenario indicate that in 2036 it:

- Provides the highest network average speeds out of all future scenarios.
- Allows all assessed intersections in the study area will operate satisfactorily in all modelled peaks and hours, with the exception of Argyle Street and Barkers Lodge Road which operates at a LOS D.
- Provides the most benefits to travel time, including on the Prince Street eastbound and westbound routes, when compared with the other modelled scenarios.

Prince Street Roundabout

An elliptical roundabout upgrade connecting Menangle Street, Prince Street and Station Street generally provides the second-best network, intersection and travel time performance, behind the base case with Picton Bypass scenario. This scenario:

- Achieves the second-best network trip length and congestion benefits.
- Records the best performance at the Menangle Street and Prince Street intersection, and second-best intersection performance across the network.
- Provides the second-best Prince Street eastbound travel times.

However, a roundabout has a significant impact, including:

- Largest footprint requiring acquisition and likely demolition of private property.
- Poor pedestrian connectivity – particularly near Picton’s main public transport hub.
- Poor amenity impacts including 24hr braking noise.
- Loss of on-street parking.

Prince Street Signals

A signalised intersection upgrade connecting Menangle Street, Prince Street and Station Street:

- Provides satisfactory intersection performance at Menangle Street and Prince Street.
- Records significant improvements in Prince Street eastbound travel times.
- Provides benefits to network performance and trip lengths, especially in the AM peak.

Prince Street One-Way flow

A one-way flow scenario was modelled. Westbound was chosen to divert traffic away from the Prince Street approach on Menangle Street as this is the critical failure modelled. This scenario:

- Provides disbenefits to network trip lengths, travel times and congestion levels.
- Increases traffic volumes in the Picton Town Centre and increase delay at intersections including Argyle Street and Menangle Street.

Upgrade of Argyle Street and Prince Street Intersection (to a 'Seagull')

This is the adopted future treatment of the intersection from the original Picton Town Centre Masterplan 2026. The base case with Seagull Intersection scenario includes the upgrade of the Argyle Street and Prince Street intersection to a seagull intersection layout. This scenario:

- Records the best intersection performance at Argyle Street and Prince Street out of the non-Bypass scenarios.
- Provides improvements to network trip length and congestion levels in the PM peak, and performs similarly to the base case scenario in the AM peak.
- The scenario provides the most benefits to travel times on Prince Street westbound out of the non-Bypass scenarios.

A summary of scenario performance is included below in Table 2 with a full copy of results included in **Attachment 1** to this report.

	7:15am-8:15am						8:15am-9:15am					3:15pm-4:15pm					4:15pm-5:15pm							
			Prince & Menangle		Seagull Prince&Argyle				Prince & Menangle		Seagull Prince&Argyle			Prince & Menangle		Seagull Prince&Argyle			Prince & Menangle		Seagull Prince&Argyle			
	Do Nothing	Picton Bypass	Round-about	Signals	one way		Do Nothing	Picton Bypass	Round-about	Signals	one way		Do Nothing	Picton Bypass	Round-about	Signals	one way		Do Nothing	Picton Bypass	Round-about	Signals	one way	
Regreme Rd / Argyle St	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	B	A	A
Margaret St / Argyle St	A	A	B	A	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Manolis Ln / Argyle St	A	A	A	B	B	B	A	A	A	A	B	A	A	A	A	A	B	B	A	B	B	B	B	A
Walton Ln / Argyle St	A	A	A	A	A	A	A	A	A	A	A	A	B	A	B	B	B	B	A	A	A	A	A	A
Argyle St / Menangle St	C	B	B	B	E	C	B	B	C	B	C	B	E	B	D	F	E	D	C	B	B	B	D	B
Menangle St / Walton St	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Cliffe St / Walton St	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Colden St / Menangle St	A	B	A	B	C	B	B	B	B	B	C	A	B	A	B	A	C	B	A	A	A	A	B	A
Colden St / Manolis Ln	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Colden St / Margaret St	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Margaret St / Manolis Ln	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Argyle St / Barkers Lodge	C	C	C	C	F	C	F	D	D	F	F	F	F	D	E	F	F	F	E	D	E	D	F	D
Argyle St / Lumsdaine St	A	A	A	B	B	A	B	B	B	B	C	C	B	B	B	B	B	B	B	A	B	B	B	B
Argyle St/ View St	A	A	C	A	A	A	B	A	B	D	A	C	A	B	A	B	B	A	A	A	A	A	A	A
Lumsdaine St / Prince St	C	B	B	C	A	C	B	B	B	B	A	C	C	B	B	B	B	B	B	B	B	B	A	B
Argyle St/ Prince St	B	A	A	A	A	A	B	A	B	B	A	A	E	A	E	E	F	B	C	A	C	E	C	B
Prince St / Menangle St	F	B	A	B	A	F	F	B	A	B	A	F	D	A	A	B	B	D	C	A	A	B	E	
Menangle St / Station St	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
Menangle St / Webster St	A	A	A	A	A	A	B	A	A	A	A	A	B	A	A	A	B	A	B	A	A	A	A	A
Argyle St / Thirlmere Way	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	B
Baxter Ln / Menangle St	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A

Table 2: 2036 scenario comparisons.

Conclusion

Recent traffic modelling reaffirms that Picton Town Centre will come under increasing traffic congestion pressure in future years, leading to poor road safety, pedestrian connectivity and negative amenity outcomes. This is consistent with previous work undertaken in 2018, and numerous studies carried out before that.

The proposed Picton Bypass will resolve these congestion issues in an unrivalled manner, compared to any other modelled scenario. The ideal outcome for Picton residents and the wider Wollondilly community would be that the design and construction of the Picton Bypass is fast tracked by the NSW Government.

However, if the Picton Bypass is not implemented very soon, additional measures will be required to allow a number of key intersections, including Menangle Street and Prince Street, to continue to function safely. From interpolating the model results, major traffic issues are more than likely to occur consistently from 2031.

Irrespective of the timing of the Picton Bypass, the modelling suggests that the intersection of Argyle Street with Barkers Lodge Road will reach poor levels of service prior to 2036, and will

require a form of intervention or alleviation. This needs to be assessed as part of the future management of Picton transport issues.

The modelling also identifies that the Menangle Street and Prince Street intersection will perform at a satisfactory level in 2026. As such, it is recommended that the upgrade of the intersection be placed on hold, with the view of the Picton Bypass being implemented in the medium term. Given the project will not proceed in the short term the recommendation also includes the rescinding of land acquisition that was required for the project.

Further, the modelling shows the challenges that the town centre is expected to face and in real terms shows the benefits of a functioning Picton Bypass. This only furthers Council's support and advocacy for the Picton Bypass being pursued, critical to Picton functioning as a vibrant, safe and sustainable centre into the future.

Given the recommendation is to place significant upgrade works on hold, it will be incumbent for Council to continue to monitor and model Picton traffic on an ongoing basis and reassess intersection performance in context with progress by the State Government on the Picton Bypass.

Consultation

The Picton Town Centre Transport Master Plan 2026 was developed in 2019 to alleviate traffic congestion in Picton Town Centre. The Master Plan was adopted by Council in August 2019. One of the intersections identified as a priority in the plan was the Prince Street and Menangle Street intersection. Traffic modelling indicated that this intersection would 'fail' and reach a critical point by 2026. This is predicted to have wider impacts for the rest of the Wollondilly Shire, including residents of areas such as Tahmoor and Thirlmere accessing the freeway.

Based on the Master Plan recommendations, Council commissioned traffic engineering studies into possible intersection treatments for the Prince Street and Menangle Street intersection. The options identified through these studies included:

- Turning Prince Street into a one-way street.
- Different forms of roundabouts.
- Signalising the intersection (traffic lights).

The traffic engineering studies indicated that signalisation was the best traffic engineering solution to address the predicted intersection failure.

Council undertook consultation on these options during 2019. Following more recent feedback (in 2021 and 2022) from community members, including those living close to the Prince and Menangle Street intersection, Council resolved at the Council meeting of 22 February 2022 to undertake additional community engagement for the intersection works. This stage of the engagement process is the focus of the attached Consultation Outcomes Report.

Financial Implications

This report has no financial impact on Council's adopted budget.

The signalisation of the Prince Street and Menangle Street intersection has been a nominated project in the Development Contributions Plan since 2007, with funds collected on a Transport category basis. Deferring the project will allow funds to be utilised on other nominated projects within the transport category. Works to Barkers Lodge Road and Argyle Street is not nominated in the Development Contributions Plan and currently has no identified funding. Funding would need to be considered in the development of future Operational Plans noting a phased approach of strategic options and design being the first stage, with subsequent construction likely to require grant funding to implement.

ATTACHMENTS

1. **Picton Future Modelling Report** 
2. **Picton Town Centre Transport consultation report** 