Transport for NSW

Mr Mick Fallon
Manager
Transport Assessments
Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

Re: SSI-10055; Albury to Illabo (A2I) Inland Rail Project; EIS Submission 28 September 2022

Dear Mick,

Ref: SWT20/00080 | SF2020/128085

Thank you for your referral to Transport for NSW (Transport) received via the Major Projects Planning Portal seeking comments in relation to SSI-10055. Reference is made to Transport's previous submissions in relation to this proposal dated 28 July 2020, 03 December 2021, and 24 January 2022. Transport acknowledges and appreciates the efforts of the ARTC A2I project team in working collaboratively to address the concerns raised by Transport.

New South Wales has shifted focus over the last few years towards ensuring the resilience of the classified road network. As this network provides essential services, especially in times of natural disasters and other major weather and/or climate events (such as bushfires), resilience is now seen to be an imperative. The classified road network provides rapid, versatile responses when required, something that trains cannot do. To carry these responsibilities with an adequate level of duty of care, the network needs to be fit for purpose - that is, safe and functional at all times.

Transport has reviewed the Environmental Impact Statement (EIS) and considers that a number of operational matters require further investigation. These issues are outlined in Appendix A. Additional information is to be provided by the proponent before a final assessment is undertaken and comments are made in relation to the proposal.

Transport also expects improvements to be made to the Traffic and Transport assessment. In particular, further modelling should be undertaken to examine the efficiency and safety implications of increased freight rail movements and local traffic diversions at key road crossings. Appendix B provides further detail of this requirement.

Please confirm with Transport that the application will not be determined until such a time as Transport has had an opportunity to comprehensively assess the application following provision of information addressing the above-mentioned matters. Should you have any queries in relation to this matter, please email cindy.pappin@transport.nsw.gov.au or contact Manager Transport Strategy, Cindy Pappin on 0481 054 453.

Yours sincerely,

Sam Knight
Regional Director South

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APPENDIX A: Issues identified in the EIS

Chapter	Topic	Issue	Transport Position and Submission Request
• Chapter 4 • Chapter 9 • Tech Paper 01 • Appendix C	Maritime Requirements	• The project includes crossing the Murray and Murrumbidgee Rivers, which are Navigable Waters under Maritime legislation. The *Marine Safety Act 1998* states: navigable waters mean all waters (whether or not in the State) that are from time to time capable of navigation and are open to or used by the public for navigation, whether on payment of a fee or otherwise. • Any works on or over a navigable waterway where safety, environmental and access outcomes may be adversely affected require the formulation of a Marine Traffic Management Plan (MTMP) to ensure that any adverse outcomes to navigation for commercial and recreational vessels are minimised as much as is practical. • References to Water ski school and users for the Murray River is inaccurate.	• Transport is the lead state government agency responsible for delivering safety, environmental and access outcomes related to vessel operations throughout NSW under the *Marine Safety Act 1998*. The *Marine Safety Act 1998* must be mentioned in the legislative requirements. • Transport is the relevant authority for approval of works on structures in, on or over the bed of any waters under the *Ports & Maritime Administration Act 1995*. The *Ports & Maritime Administration Act 1995*. must be mentioned in the legislative requirements. • Transport requires the Maritime Traffic Management Plan be submitted and approved a minimum of 6 weeks prior to commencing works in, on or over navigable waters. • The bridge over the Murray River in Albury is located in an existing 4 knot speed restriction zone (4 knots equates to 7km per hour, i.e., walking pace) and a "Towing of Persons Prohibited" zone. Therefore, no towing activities such as water skiing / tubing / wake boarding etc are permitted. As such references to 'water ski school and users' may be removed.
• Chapter 9 • Tech Report 01	Traffic & Transport (Traffic Impacts)	• The traffic and transport assessment adopted for the proposal fails to adequately assess the anticipated construction and operational impacts. • There are several issues with modelling. In general, SIDRA may be acceptable to use for much of this modelling, however has some	• There are numerous inconsistencies across the reported results which require review by the proponent. • Further information is requested on how the qualitative assessment was undertaken including justification as to why a quantitative assessment was not undertaken. • See Appendix B for further clarification.

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		limitations for modelling select sections and scenarios along the 180+km study area of this EIS. Transport notes numerous inconsistencies across the reported results which demonstrate SIDRA is not the appropriate tool for undertaking the impact assessment for all intersections and level crossings within each precinct. There are a few locations where SIDRA networks should have been used, and other locations where a microsimulation model is warranted.	
• Chapter 9	Traffic & Transport (Safety)	• Transport for NSW notes the commitment to undertake road safety audits (RSAs) and risk assessments prior to the commencement of construction where changes to the road network is required under mitigation measure TT7.	• Transport for NSW requests that the Road Safety Audit team include appropriately qualified Transport for NSW representatives independent of the proponent's project team for enhancement sites where changes to the road network are proposed.
• Chapter 6 • Chapter 9	Traffic & Transport (Level Crossings)	• Level crossings are proposed at interfaces with State roads. There are significant safety risks associated with level crossings. • The EIS states (page 6-16) that it is ARTC policy to automatically grade separate any rail-road interfaces where four rail tracks exist. The level crossing on the Olympic Highway at Junee (LX607) has four operational rail lines.	• Transport has consistently stated its position that all interfaces with State roads be grade separated to provide the maximum safety to road users and eliminate delays created by level crossings. • TfNSW requires the proponent to include the Safe System Framework into considerations of level crossing safety. • The proponent to justify why LX607 Olympic Highway at Junee has not been considered for grade separation as part of the proposal.
• Chapter 9 • Chapter 27	Traffic & Transport (Management)	• There is no mention in the EIS of how the Construction Traffic, Transport and Access Management Plan (CTTAMP) is to be developed or implemented.	• Transport requests that the conditions of approval require Construction Traffic, Transport and Access Management Plan (CTTAMP) be accepted by Transport prior to any works commencing.

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• Chapter 6 • Chapter 7	Traffic & Transport (Track Lowering)	• Track lowering will impact the existing rail over bridges. • Track lowering figure 7.2 is misleading as it does not show protection wall at minimum depth as per AS5100, does not show how far the new piles from the existing bridge abutment and does not accurately reflect the depth of track lowering required. • Bridge replacement has been considered at each bridge enhancement site along the proposal. The EIS does not provide any justification as to why this option was not considered at the Pearson Street bridge enhancement site	• An assessment of the existing structure is necessary for drainage and location of new piles in the vicinity of the abutment. • Proponent to provide additional information on how the risk of overland water flow would be managed, including specific details on proposed pumped drainage solutions, at enhancement sites where track lowering is the preferred option and similar site constraints exist. • AS5100 section 15.3.4 (e) specifies that the "Protection Wall" shall extend a minimum of 1.2 m below ground level. The proponent to confirm that the protection wall will conform to Australian Standards. • Proponent to provide justification for track lowering rather than bridge replacement at Pearson Street enhancement site. • Proponent to provide justification for bridge replacement rather than track lowering at Edmondson Street enhancement site.
• Chapter 7 • Chapter 9 • Tech paper 01 • Tech paper 07	Traffic & Transport (Train Volumes)	• Inconsistent language is used in the EIS and Technical Reports to describe the change in train volumes as a result of the proposal. Ch 7.5.1 states up to 18 trains a day in 2025, while 9.5.1 states volumes would increase by up to 18 trains per day in 2025, then increasing to 20 trains per day in 2040. • No information is provided on how future train volumes have been determined. • It is unclear how the project results in the daily number of freight trains on the mainline at night (10pm to 7am) increasing by only 2 freight trains (i.e., approx. 25% increase) over	• The EIS does not address the SEARS (2-K and 3-D) as it inadequately describes the type, volume, frequency, and daily profile of train movements as a result of the proposal. • After accounting for length changes the number of freight trains at night with the project (2025-2040) appears to be low relative to daytime, and noting the 24/7 operations between Brisbane and Melbourne, timing through this section may have greater spread through day and night-time. Proponent to review night-time freight train numbers proposed for project to ensure they accurately represent likely operating scenarios.

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		15 years from project commencement, when the daytime number of freight trains is forecast to increase by approximately 100% over the same period. • The assessment of operational traffic impacts at level crossings does not consider the year of opening impacts associated with freight train volumes increasing from 12 trains per day now to 18 trains per day in 2025.	• Transport requests additional information on the volume, daily profile, length, and type of trains required to meet the anticipated freight task over the forecast period.
• Chapter 7 • Chapter 9	Traffic & Transport (Intersections)	• The proposal indicates a storage lane on the Olympic Highway and restricted movements to left in left out at Private Level Crossing (LX605). • The proposal will require the road surface to be raised 2.8m above the existing road surface at Edmondson Street bridge. This height is significant (more than 10%) with the permanent 60km/h speed zone. • Future capacity issues are anticipated at the intersection of the Sturt Highway and Edmondson Street which may require right turn bays for the northbound and southbound legs of the intersection. • The proposal will require the road surface to be raised 2.6m above the existing road surface at Kemp Street bridge. The adjoining intersection does not appear to be compliant with current road safety standards.	• Road works are not to decrease the level of safety and functionality of the public road network. • The Olympic Highway is outside of the proponent's study area and jurisdiction. Can the proponent please provide evidence of acceptance by Transport of a proposal to add a storage lane on Olympic Highway. Proponent to provide further information regarding the location and design of required U-turn facilities and consultation undertaken with existing users of LX605 with respect to the additional travel time and distance that will be required to access the private property. • Proponent to provide further information regarding the anticipated operational impacts to road safety on the Edmondson Street adjoining road network and intersections (Sturt Highway/Edward Street) and the proposed measures to mitigate these impacts. Consideration needs to be given to any additional width requirements on Edmondson Street Bridge which may be required to allow for this upgrade. • The raising of Kemp Street Bridge is not to decrease the level of safety and functionality of the Olympic Highway (HW78) and the intersection design must meet current safety standards. Proponent to provide further information regarding the anticipated operational

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			impacts to road safety on the adjoining Kemp Street road network and intersections (Olympic Highway / Seignior Street) and the proposed measures to mitigate these impacts.
• Chapter 9 • Tech paper 01 • Tech paper 04	Traffic & Transport (Active Transport)	• Pedestrian routes will be disrupted during construction at several sites. • There is a requirement to understand the needs of the Cassidy Parade pedestrian bridge users in Wagga. A 2km pedestrian diversion for six months may be unacceptable to users of this infrastructure. • There does not appear to be any discussion in relation to the impact on pedestrian and cycle facilities due to the additional grade required to increase the height of road over rail bridges such as Edmondson Street. • Pedestrian routes at Edmondson Street and Kemp Street do not appear to be DDA compliant	• Transport requests further consideration of alternative access arrangements during the closure/replacement of Cassidy Parade pedestrian bridge. • Proponent to confirm all new pedestrian access will be DDA compliant. Proponent is to consider the additional grade in the context of the relevant standards and guidelines and potential mitigation measures. • Transport for NSW has recently released the Wagga Wagga Transport Plan (2022). The proponent to include Transport in consultation related to integrating active transport links to align with the Wagga Wagga Active Travel Plan (WWSC 2016) and Wagga Wagga Transport Plan (2022) under mitigation measure TT16.
• Chapter 1 • Chapter 9	Traffic & Transport (Public Transport)	• There will be impacts to Albury station parking which may impact the distance to the station for alternative parking. There is no provision for temporary staff parking at Albury Station. • There are pedestrian impacts at all major stations. • The EIS is unclear on the operational impacts clearance works will have at identified yards used by Transport (NSW Trainlink).	• Can the proponent please provide assurance that adequate staff parking will be provided for during construction at Albury Station. • Plans for diversions must be elaborated on so Transport can discuss with our coach operators what this means for them and what plans can be put in place for the diversion to eliminate/minimise customer impact. • Transport requires further information on the clearance works to understand if concurrent Transport operational activities will be affected. This is important so the project can design controls to maintain or enhance

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			Transport operational activities i.e., tanking, decanting, access for direct to loco refuelling etc.
• Chapter 7 • Chapter 8 • Chapter 9 • Tech paper 01	Traffic & Transport (Construction)	• The EIS contains conflicting information about the typical duration of track possessions, listing both 60 hours and 72 hours as "typical" in the EIS and Tech Paper respectively. • There are no details of traffic management for displaced vehicles and residents at Erin Street, Railway Street and Edmondson Street in Wagga Wagga. • It is unclear how the proponent proposes to stage replacement of Edmondson Street and Kemp Street road bridges (and associated tie-in works) in order to minimise traffic and community impacts	• 72-hour possessions are not typical on the Main South Line but are however required by the proposal. Current possession windows are 60 hours, not 72 hours as proposed. Further detailed information around track possession and track lowering are required prior to construction commencement with the proponent to confirm application for 72-hour track possession on the Interstate Network. • Further information on traffic management in Erin Street, Railway Street and Edmondson Street in Wagga Wagga is requested. • Transport expects to see proposed staging plans that show how ARTC will minimise traffic and community impacts over the extended construction period.
• Chapter 5 • Chapter 6	Traffic & Transport (Consultation)	• The EIS is inadequate and does not address SEARs 4-2. • Transport for NSW has previously raised several key issues with respect to the proposal's design and features and its potential impacts on existing Transport assets, road safety, traffic efficiency, active and public transport, and place as well as the need for grade separation of Inland Rail's interfaces with the NSW classified road network. The EIS does not outline how the proposal responds to the issues raised by Transport for NSW during the proposal's design and development of the EIS.	• Transport requests additional information be provided in the EIS to identify the key issues raised and demonstrate how the proposal has responded to the inputs so far received from Transport for NSW. • Transport for NSW recommends community consultation be undertaken with the community and key stakeholders such as Transport for NSW to inform the assessment of potential staging options at the Edmondson Street bridge and Kemp Street bridge enhancements sites.

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		• There is no reference to consultation with community and key stakeholders regarding staging options at the Edmondson Street bridge and Kemp Street bridge enhancements sites.	
• Chapter 27	Traffic & Transport (Mitigation)	• Mitigation measures TT6 and TT10 appear to focus on potential impacts within the Junee precinct only. • There is limited consideration of temporary changes to facilitate improved traffic efficiency during construction of the proposal.	• The proponent to extent mitigation measures TT6 and TT10 to include all precincts and enhancement sites. • All temporary traffic changes to be supported by appropriate and fit for purpose traffic modelling to demonstrate the effectiveness of the proposed mitigation measures in managing delays across the transport network within each enhancement site precinct. • Mitigation measures must include strategies to encourage redistribution of traffic away from work sites and parts of the network which will have to carry extra traffic. This may include measures such as Variable Message Signs strategy, awareness campaigns and information sessions, park and ride facilities and additional public transport services.
• Chapter 3 • Chapter 10	Aboriginal Heritage	• The Waywurru Traditional Owners have been omitted from the text. The project extends into VIC however the Waywurru Traditional Owners are not acknowledged in the EIS. • To improve outcomes for Cultural Heritage, there needs to be a mechanism to ensure all workers on site understand how to care for Aboriginal Heritage and what to do if unexpected finds occur.	• Proponent to acknowledge the Waywurru [Waveroo] people as the Traditional Owners of the lands south of the Murray River. • The proponent to consider development of a toolbox video to ensure that Project teams understand the importance of Aboriginal sites and what to do if any artefacts are found (unexpected finds). • Proponent to implement Cultural Awareness for staff and develop up tools to ensure all staff have knowledge and understanding of the importance of caring for Aboriginal Heritage.

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		• Some Registered Aboriginal Parties (RAPs) do not appear to be Traditional Owners of the project locations.	• The proponent to ensure that going forward site surveys, engagement of RAPs are knowledge holders from Country.
• Chapter 12	Land Use & Property	• A number of property Acts are missing from the EIS. Where it is necessary for TfNSW to acquire land by the Compulsory Acquisition Process, the relevant statutory framework for property acquisitions includes a number of acts and policies in addition to the *Land Acquisition (Just Terms Compensation) Act 1991 (NSW).*	• Proponent to include additional relevant acts and policy documents include NSW Government Property Acquisition Standards, TfNSW Property Acquisition Policy, Transport *Administration Act 1988, Roads Act 1993, Public Works and Procurement Act 1912* and the Transport for NSW Property Acquisition Process (December 2021)
• Chapter 13 • Tech report 04	Social Impacts (Aboriginal Community)	• There is a lack of detail about how to maximise outcomes for the Aboriginal community. • There is no evidence of shared decision making with local Aboriginal communities.	• NSW Government policy under Closing the Gap is to increase shared decision making with Aboriginal communities, peak bodies, Local Decision Makers, and Aboriginal businesses. • Consultation on Aboriginal Cultural Heritage Assessment needs to be uplifted to meaningful engagement on the whole project and shared decision making consistent with NSW Government policy under Closing the Gap. • Sections of the Social Impact Management Plan covering 'way of life' and 'health and wellbeing' and 'social impact' sections need to adequately capture the impact of this project on local Aboriginal people. • The Local and Indigenous Industry Participation Plan for this project should be co-designed with NSW Government, local Aboriginal LDMs, peaks and businesses in a holistic way that also considers cultural heritage values and other impacts on the broader Aboriginal community

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			• Further work is required to understand the impacts on local Aboriginal communities. A shared decision-making model should be adopted.
• Chapter 13 • Tech report 04	Social Impacts (Disability)	• The Social Impact Management Plan does not include employment and training targets for people with disability. • Additionally, the targeting of local businesses should also include social procurement for enterprises that employ people with disability.	• Proponent to provide inclusion of employment roles for people with disability.
• Chapter 13 • Tech report 04	Social Impacts (Procurement)	• The engagement of local suppliers and businesses should have target measures as a percentage. • Table 13-16 SI3 states that a local and Indigenous industry participation plan will be implemented	• Proponent to ensure that target values are captured for provision of supplies and services from local businesses. • There should be an economic appraisal methodology to demonstrate how benefits are being optimised and costs minimised for these local communities. • There needs to be a strategy to maximise social outcomes from this project, not just mitigate or manage social issues. • Transport to be engaged early to ensure that social procurement and Aboriginal procurement targets are consistent with or exceed NSW Government targets, and reflect local community priorities.
• Chapter 15 • Tech report 06 • Tech report 07	Noise	• There are residential concerns near and far due to proposed additional weight, frequency, and length of the trains. • Construction noise around Edmondson Street appears to be excess, particularly overnight.	• Transport recommends consideration of low-noise pavement to mitigate operational road noise close to residential areas. • Night-time noise impacts on the community must be a key consideration for freight operations which are typically 24/7. The proponent to review night-time train numbers and confirm and indicate changes to noise levels as appropriate.

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• Chapter 17 • Chapter 27	Landscape & Visual Impacts	• Design mitigation and guidelines appear elementary. • The proposal-specific performance measures do not consider the operational impacts to visual amenity.	• Transport has published guidelines for design of new road and pedestrian bridges to improve visual amenity. With respect to LV4, Transport recommends the design of new road and pedestrian bridges also be developed in accordance with TfNSW's Beyond the Pavement (2020) and Bridge Aesthetics: Design guidelines to improve the appearance of bridges in NSW in consultation with Transport for NSW and the relevant Councils. • Transport and relevant Councils should be involved in the development of the Urban Design and Landscape Plan under mitigation measure LV2. Transport recommends the Urban Design and Landscape Plan for the proposal be developed collaboratively in consultation with Transport for NSW and relevant Councils. • Transport recommends the design treatments at Endeavour Park (Junee) be developed in consultation with Transport for NSW due to its proximity to the Olympic Highway. • Transport for NSW requests additional information on how the proponent proposes to minimise adverse impacts on the visual amenity of the built and natural environment and/or improve visual amenity at the Edmondson Street bridge and Kemp Street bridge enhancement sites in addition to preparing an Urban Design and Landscape Plan under mitigation measure LV1.
• Chapter 18 • Tech Report 11	Hydrology	• Transport is not aware of any definitive Quantitative Design Limits being set for this project and have had no consultation on the matter. Transport has not agreed to the	• The assumed QDLs are not suitable for the project and should not be used. • Transport does not accept any new inundation of the State Road Network including the pavement and unsealed or unprotected road edges.

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		proposed QDLs that relate to road assets. Furthermore, the use of "practicable" may have the effect of reducing unapproved QDLs. • Hazard category is no longer relevant to the project.	• Concessions granted by Transport for increased afflux where highway upgrades were being planned are not applicable to the N2N project. The assumption that QDLs for A2I will be the same as those for the N2NS Separable Portion 1 or NS2B is not supported. • The position held by the NSW Government, and Transport, is that any road covered by water should not be driven through. The references to 'Hazard Category' can be removed as they are now redundant.
• Chapter 3 • Chapter 12	Hydrology	• The Murrumbidgee River has been omitted from the text on page 3-9. • The EIS notes on page 12-18 that "The Murray River bridge enhancement site is located over and on the eastern bank of the Murray River..."	• The Murrumbidgee River is a permanent water source which the Inland Rail crosses and needs to be included. The proponent to update the list of waters with accurate information. • The Murray Bridge works comprise the entire length of the 'Spirit of Progress' bridge. An amendment to include the western bank is required.
• Chapter 24	Emergency Services	• In Wagga Wagga delays at Level Crossings due the construction and operation of the project effectively split emergency services with NSW Ambulance Service HQ and Fire brigade to the south of the line and the NSW Police to the north. • In Wagga Wagga the hospital precinct may be isolated from southern suburbs and growth areas due to the extended periods of the closure at the Bourke Street crossing.	• Transport acknowledges the commitment to undertake consultation with emergency services to identify alternative routes to minimise travel time delays. Transport recommends this consultation include the Local Emergency Management Committee or similar for each precinct. • The communication management plan must include measures to ensure ongoing consultation with Transport, to inform emergency service providers about the locations of level crossings, and changes to access routes and road conditions.
• Chapter 25	Climate Change	• No reference is made to *Australian Rainfall and Runoff* (Geoscience Australia 2019).	• The proponent to consider inclusion of reference to *Australian Rainfall and Runoff* (Geoscience Australia

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			2019) to consider climate change and climatic factors, particularly when undertaking hydrology studies.
• Chapter 26	Cumulative Impacts	• The chapter is incomplete. The EIS has only assessed the cumulative impacts in relation to other projects in the area. The proponent must also complete the cumulative impact assessment for 'potential material impacts on features'. Of particular relevance to Transport is the cumulative impacts on key matters such as nearby streets from construction traffic and traffic diversions in the population centres/residential areas of Wagga Wagga and Albury, and cumulative impacts on key infrastructure such as nearby State Roads.	• Proponent to complete further assessment for potential cumulative impacts on key matters. • Transport has road construction work which is scheduled to be completed within similar timeframes to the proposed construction. Transport requires ongoing consultation with the proponent to prevent cumulative impacts on our projects.
• Chapter 1 • Chapter 27	Performance Measures	• The EIS does not adequately address the proposal-specific performance outcomes.	• Transport for NSW request additional information on how the EIS addresses the proposal-specific performance outcomes, in particular: • minimising impacts on the local and regional transport network during construction and operation, as far as practicable • maintains or improves motorist and active transport safety, particularly at the Edmondson Street bridge and Kemp Street bridge enhancement sites. • minimises the use of local roads by heavy vehicles, as far as practicable, particularly with respect to medium to long term traffic diversions at the Edmondson Street bridge and Pearson Street bridge enhancement sites.
• Appendix D	Utilities	• Appendix D has not identified any utilities that services Transport stations, yards, or sidings.	• The proponent to provide further information on utilities on Transport assets. Many utilities that service Transport stations are found underneath the rail corridor and are not the responsibility of a gas or water

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			supplier but the chosen maintainer for the asset. Past track work has led to unknown leaks only identified through abnormal utility bills and in many instances the repair works are completed by Transport not the rail infrastructure operator (ARTC).
• Chapter 2	Strategic Context	• Section 2.5 refers to an outdated strategy document.	• Transport for NSW has recently updated its Future Transport Strategy: Our Vision for transport in NSW (2022). The strategic context of the proposal should be assessed against the latest Future Transport strategy and its supporting policies and plans.
• Appendix C	Spelling & Grammar	• The statutory compliance section mentions 'Womes' Gate Lane.	• Can the proponent please correct the spelling to 'Wornes' Gate Lane.
• General Comment	Construction Standards	• The EIS references only Austroads guides in relation to design standards for public roads.	• Transport requires explicit acknowledgement that the proponent must meet the standards set in Transport's published supplements in addition to those in the Austroads guides.
• General Comment	Heavy Vehicles	• The EIS uses statements related to using ALCAM.	• ALCAM is not a strategic forecasting tool, it does not take into account the growth in heavy vehicle types.

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• General Comment	Future Planning	• With the expansion of the road network available to PBS vehicles there is concern that this proposal has not adequately considered the impacts of the Inland Rail on future road use. • The EIS implies that the Inland Rail project will be reducing trucks on the road. Inland rail won't necessarily reduce trucks on the road, it may reduce the increased growth in heavy vehicles but won't take them away. • The impact of Inland Rail on truck numbers needs to be in the context of the growing freight task and that acknowledge that road/rail work in conjunction with each rather than stating that one is better or more efficient than the other. • If the preferred corridor changes, sufficient storage length for Road Trains and must be provided, and intersections may need to be realigned. • Design should consider future planning needs, particularly at Pearson Street.	• Both road and rail are needed to manage the growing freight task which is expected to be 618 million tonnes to be moved in NSW in 2036. • Transport must be consulted to ensure the strategic lens for the Inland Rail caters for heavy vehicles up to 60m long and a width for OSOM vehicles of 8 to 10m. • When upgrading a level crossing from passive to active controls on a terminating road, the vehicle stacking space between the track and the parallel road shall be adequate for the longest type vehicle using the crossings. The proponent should ensure that all new intersections have a minimum storage length of 70m, to account for current design vehicles (36.5m), plus potential for a future, larger Higher Productivity Vehicle design (60m). • Design of Pearson Street Bridge works should not preclude future duplication of the bridge. •
• General Comment	New Technologies	• The project doesn't seem to consider nor discuss new technological solutions for both road and rail.	• Consideration should be given to new and emerging technologies relating to rail and road for future assessments.

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APPENDIX B: Traffic and Transport Assessment Modelling Methodology and Review

The following information is submitted in relation to Chapter 9 and Tech report 01 (Traffic and Transport Assessment) of the Albury to Illabo Environmental Impact Statement.

Assumptions

The Traffic and Transport Assessment includes several assumptions used to inform the assessment of the Proposal. Transport for NSW (Transport) notes the following with respect to the assumptions used:

1. The extent of the study area in each precinct considers the route to the nearest arterial road with the assumption that construction traffic would diminish and be distributed across the broader network to multiple origins, which would have no measurable impact in the context of background travel volumes. The impacts of construction vehicles following similar paths to different origins/destinations within the construction zone and arriving at the nearest arterial road have not been considered in full. Transport requests further information be provided regarding the development and suitability of each precinct study area rather than adopting a general rule to define the study area.

2. One-way peak hour flows for highways and rural roads are based on the measured AADT on the Hume Highway over nine months in 2018. Further justification as to why this assumption is fit for purpose for all highways and rural roads across the 187km proposal is required.

3. The assessment uses an average occupancy rate of 1.5 workers per vehicles. This assumption is not supported by Transport's *Guide to Traffic Generating Development.* Further information is requesting regarding the basis of this assumption.

4. Train speeds stated at 80km/h with published estimated impacts, but trains are actually travelling at 40km/h to 60km/h (as measured) which increases queueing times.

Methodology

The traffic and transport assessment adopted for the Proposal fails to adequately assess the anticipated construction and operational impacts. The following is noted with respect to the methodology used:

1. The assessment methodology does not refer to Transport's Traffic Modelling Guidelines 2013. Transport recommends transport modelling undertaken for the Proposal use industry standard guidelines and consider the guidance provided on model technique selection.

2. The Proponent has estimated proportional traffic volume data based on recorded traffic volumes on adjacent road segments and roads within each precinct study area where traffic data is not available (e.g., Technical Paper No. 1 - Table 4.4). The adopted methodology is considered inadequate to assess the construction and operational traffic impacts of a Proposal of this size and nature, particularly in the

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Wagga Wagga and Junee precincts. In addition, some traffic volume information is old and may not be indicative of current traffic conditions or consider the effect of the COVID pandemic on travel behaviours. The lack of recent data means that validating the modelling information provided is difficult and may not reflect currently observed traffic conditions across the wider transport network. Transport recommends volumes on adjacent roads be surveyed, verified, and modelled appropriately to assess the likely traffic diversion and delays on adjacent roads and the wider network during construction and operation of the proposal.

3. It is unclear whether static or annual growth rates have been used in the development of future traffic volumes across each precinct. Further information on the development of growth rates is requested.

Modelling

The Proponent has utilised single intersection modelling software SIDRA to assess the impacts of the Proposal across the different precincts. Transport highlights the following limitations of single intersection models and their ability to accurately model:

- Situations where the modelled intersection influences, or is influenced by, another intersection or downstream queueing;
- Operational issues such as weaving, lane changing and overtaking, and vehicle re-routing;
- Operational impacts of changes in intersection geometry (e.g., gradient, swept paths, etc.) And changes to street friction and parking;
- The impacts of construction zones; and
- Changes in arrival rates to intersections.

The SIDRA analysis undertaken shows some intersections are expected to have a poor Level of Service (LoS F) and significant queue lengths (e.g. greater than 400m) which are likely to impact adjacent intersection on key routes within each precinct.

Transport also notes numerous inconsistencies across the reported results which demonstrate SIDRA is not the appropriate tool for undertaking the impact assessment for all intersections and level crossings within each precinct. For example, the reported delay of 11 seconds at the Fernleigh Road level crossing in Wagga Wagga does not align with the reported average queue length of 724 metres at this location. All reported results must be sense checked to ensure they align with expected changes to travel behaviour, delay and queue length and are within the limits of performance for the selected modelling approach.

Justification

Transport recommends the Proponent review the adopted modelling technique across each precinct and provide clear justification as to why the selected modelling approach is fit for purpose and consistent with industry standards for each precinct and enhancement site.

1. The use of a single site model at the Borella Road and Hume Highway intersection is considered unsuitable with a network modelled recommended to assess the performance of the interchange due to the proximity of the east and west intersections. Transport has currently observed congestion occurring at this interchange during peak periods.

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2. Transport also recommends that all intersection in close proximity to each other be modelled as networked SIDRA intersections where acceptable (noting microsimulation may be required in some cases) or provide further justification as to why these intersections have not been networked in the assessment. This includes but is not limited to:

- Borella Road (four intersections)
- Wagga Road (two intersections)
- Table Top Road (two intersections)
- Balfour Street (two intersections)
- Sladen Street (two intersections)
- Plunkett Street (two intersections)

1. The assessment has considered the modelled Level of Service for the heaviest trafficked intersections and level crossings within each precinct using average delay and queue length as key metrics for the base, construction, and operational scenarios. This approach is not considered appropriate for level crossings due to the anticipated number of services in the peak hour (about 2 trains per hour). The reporting of average results from SIDRA modelling results in delay and queue length spikes being smoothed across the peak hour of analysis. This is likely to underestimate the true delay and queue lengths that may be experienced during activation of level crossings. Transport recommends the 95th percentile results be reported for all intersections and level crossings to better show the true impact of the proposal during construction and operation within each precinct. As noted above, there are numerous inconsistencies across the reported results which required review by the Proponent.

2. The assessment includes a qualitative assessment of the cumulative impacts of the proposal in conjunction with other projects within proximity to the proposal sites. Further information is requested on how the qualitative assessment was undertaken including justification as to why a quantitative assessment was not undertaken.

Wagga Wagga Precinct and Enhancement Sites

The traffic and transport assessment adopted for the Proposal fails to adequately assess the anticipated construction and operational impacts within the Wagga Wagga precinct. The following is noted with respect to the methodology used:

1. The Proponent has used single intersection modelling software SIDRA to assess the impacts of the Proposal on multiple intersections and level crossings within the Wagga Wagga precinct. This technique is considered unsuitable for the reasons listed above.

2. Transport has observed significant congestion at key intersections adjacent to Proposal area under normal traffic conditions during peak periods. Modelling undertaken by Transport suggests the intersection between the Sturt Highway and Lake Albert Road is performing worse than the results presented in Technical Paper 1 Table 5.31 with vehicle queues extending beyond Railway Street during peak periods. Significant congestion is also being observed during peak times at the Sturt Highway and Docker Street intersection. These conditions are expected to deteriorate further due to the diversion of traffic while Edmondson Street bridge

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is closed and during operation of the Proposal due to more frequent, longer, and slower trains passing through the city.

3. Transport understand that Wagga Wagga City Council may have an EMME model which may assist in the traffic and transport assessment undertaken by the Proponent.

4. The reported results indicate that performance would worsen during the proposed nine month closure of Edmondson Street bridge, with the Sturt Highway and Docker Street intersection reported as operating at LoS F. There is significant deterioration of the localised road network with many intersections reported to change from LoS A to LoS D, E and F during construction. This substantial deterioration is likely to result in re-routing in the wider transport network in order to establish a new equilibrium between available routes for the same origins/destinations. The assessment of road closures, diversions, construction traffic and associated travel times does not:

   a. consider the effect of existing strategic and demand models that exist for the Wagga Wagga precinct; or,

   b. consider the cumulative impact of rerouted vehicles on the performance of alternative routes already operating at, or near capacity.

Transport recommends that a microsimulation model which considers the proposed construction routes, road closures and diversions, and operational impacts of longer more frequent activation of level crossings be developed for the Wagga Wagga precinct in consultation with Transport and Wagga Wagga City Council due to the anticipated changes in route choice and expected delays across the wider road transport network.

Junee Precinct and Enhancement Sites

The traffic and transport assessment adopted for the Proposal fails to adequately assess the anticipated construction and operational impacts within the Junee precinct. The following is noted with respect to the methodology used:

1. The Proponent has used single intersection modelling software SIDRA to assess the impacts of the Proposal on multiple intersections and a level crossing within the Junee precinct.

2. The reported results indicate that performance would worsen during the proposed 11-month closure of Kemp Street bridge. There is significant deterioration of the localised road network with many intersections reported to change from LoS A to LoS B and C, leading to additional delay across the wider transport network.

3. The reported results in Technical Paper 1 Tables 5.42 and 5.43 indicate the one-way and two-way peak hour traffic volumes are both equal to 398 vehicles per hour. In addition to this, the assessment of level crossing impacts fails to assess wider network delay and impacts to adjoining intersections across Junee because of traffic having to divert from Kemp Street.

4. The assessment relies on heavily estimated traffic volumes as inputs into the SIDRA models due to no additional traffic data being collected.

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Transport recommends that a microsimulation model which considers the proposed construction routes, road closures and diversions, and operational impacts of longer more frequent level crossing activations on local trips be developed for the Junee precinct in consultation with Transport and Junee Shire Council due to the considerable number of construction vehicle volumes and anticipated re-routing.

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