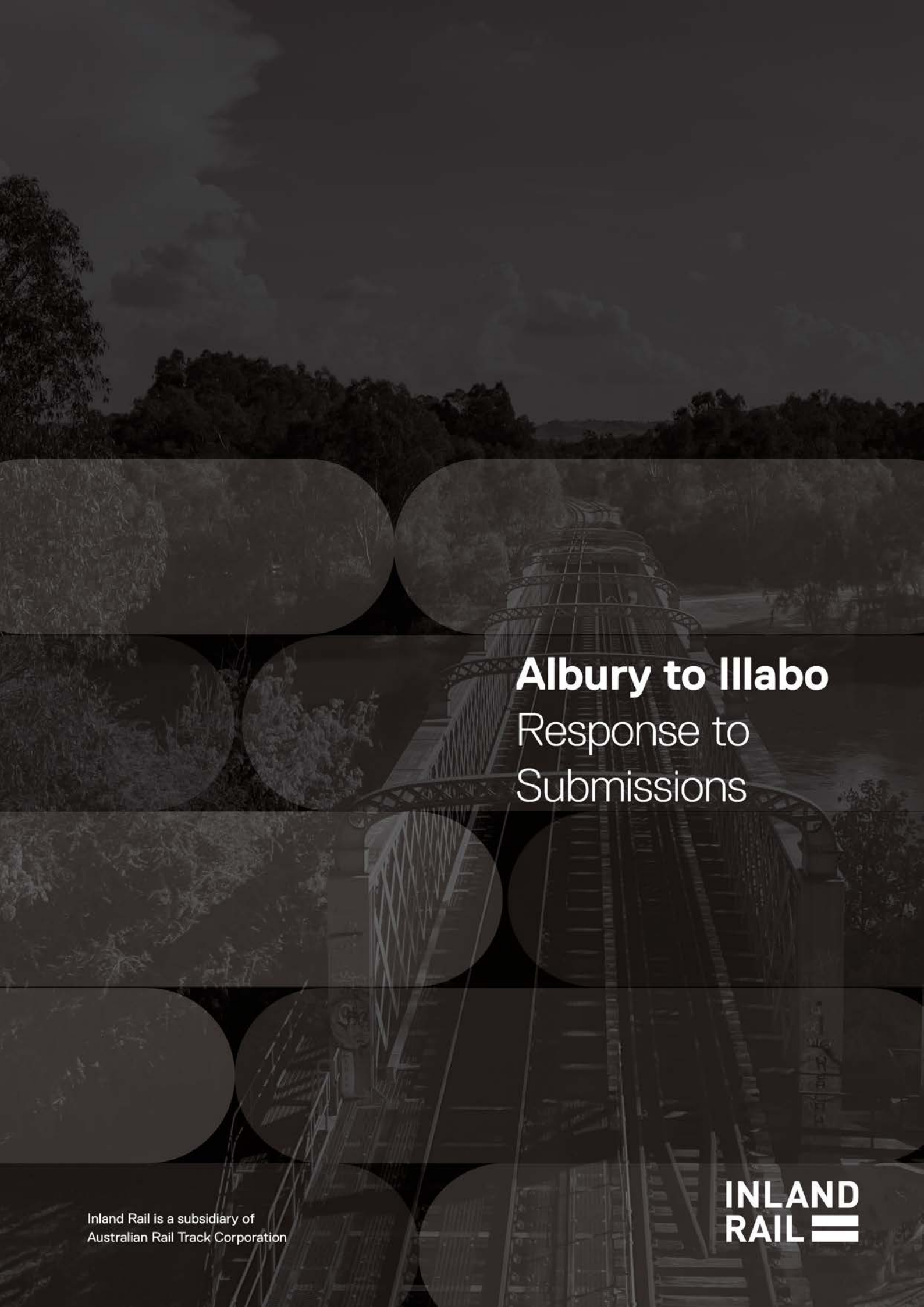

Albury to Illabo
Response to Submissions

Inland Rail is a subsidiary of
Australian Rail Track Corporation

INLAND RAIL

COVER IMAGE
Aerial overview of the Murray River Railway Bridge facing west.

ACKNOWLEDGEMENT OF COUNTRY

Inland Rail acknowledges the Traditional Custodians of the land on which we work and, pay our respect to their Elders past, present and emerging.

Contents

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Appendices

Glossary

Specific terms and acronyms used throughout this Submissions Report are listed and described in the table following.

	Acronym	Definition
	A2I	Albury to Illabo section of Inland Rail
Active level crossing		At-grade road crossing of the rail corridor that uses flashing lights and boom barriers for motorists and automated gates for pedestrians. These devices are activated prior to, and during, the passage of a train through a level crossing.
Approval authority		The approval authority for a state significant infrastructure (SSI) application or SSI modification request. This will be the Minister for Planning and Public Spaces or the Minister's delegates in the Department of Environment and Planning.
Australian Rail Track Corporation Ltd	ARTC	
Construction environmental management plan		A site-specific plan developed for the construction phase of a project to ensure that all contractors and sub-contractors comply with the environmental conditions of approval for the project and manage environmental risks properly.
Critical state significant infrastructure	CSSI	
Department	DPE	NSW Department of Planning and Environment
	DPIE	the former NSW Department of Planning, Industry and Environment, now the NSW Department of Planning and Environment
Determination		A decision by an approval authority for an SSI application to either approve the application subject to modifications or conditions or refuse to approve the application.
Enhancement site		Discrete sites within the proposal site that are proposed for infrastructure enhancement.
Environmental impact statement	EIS	The Inland Rail Albury to Illabo Environmental Impact Statement (ARTC, 2022)
Environmental Planning and Assessment Act 1979	EP&A Act	
Environmental Planning and Assessment Regulation 2021	EP&A Regulation	
Environment Protection Licence	EPL	
Gantry		An overhead metal structure with a frame supporting equipment such as a signals, lighting or cameras
Inland Rail program		The Inland Rail program comprises the design and construction of a new Inland Rail connection between Melbourne and Brisbane, via Wagga, Parkes, Moree and Toowoomba. The route for Inland Rail is about 1,700 km in length. Inland Rail will involve a combination of enhancements of existing rail track and the provision of new track.
Local Government Area	LGA	
kilometre	km	
kilometres per hour	km/h	
Main South Line		A major rail line between Sydney and Albury, passing through the Southern Highlands, Southern Tablelands, South West Slopes and Riverina regions of NSW.
Major projects website		**pp.planningportal.nsw.gov.au/major-projects**
Matter		An element of the environment that may be affected by an SSI (e.g. air, amenity, biodiversity, economic, social).
Microsimulation model		A model that simulates traffic operations at a vehicle level and replicates vehicular behaviour in a virtual transport network environment.

	Acronym	Definition
Minister		NSW Minister for Planning and Public Spaces
Metre	m	
Mitigation		Actions or measures to reduce the impacts of the project.
Noise Catchment Area	NCA	
Noise Management Level	NML	
	ONRSR	Office of the National Rail Safety Regulator
Passive level crossing		At-grade road crossing of the rail corridor that uses stop or give-way signs for motorists and 'Look for trains' signs for pedestrians.
Pedestrian bridge		A bridge designed solely for pedestrians to cross a watercourse, rail corridor or road.
Planning Secretary		Secretary of the Department of Planning and Environment
Preferred infrastructure report		The report prepared at the request of the Planning Secretary that outlines any proposed changes to the proposal to minimise its environmental impact or to deal with any other issue raised during the assessment of the application concerned (see the *State Significant Infrastructure Guidelines—Preparing a Preferred Infrastructure Report*)
The proposal		Proposed enhancement works to structures and sections of track along 185 km of the existing operational standard-gauge railway between Albury and Illabo for the purpose of meeting Inland Rail specifications. This includes the proposal as described in the EIS and the proposed changes described in the Preferred Infrastructure Report.
The proposal site		The areas that would be directly impacted by the enhancement works for the Albury to Illabo section of Inland Rail. The proposal site includes the location of construction worksites, operational rail infrastructure, track realignment, new bridge structures, level crossings and other ancillary infrastructure.
Passenger car unit	PCU	
Rail possession		A period of time during which a rail line is blocked to trains to permit work to be carried out on or near the line.
Secretary's Environmental Assessment Requirements	SEARs	The Planning Secretary's Environmental Assessment Requirements for the preparation of an EIS for the proposal.
Sensitive receivers		People and land uses in the study area that are sensitive to potential noise, air and visual impacts, such as residential properties, schools and hospitals.
Short stacking		Refers to when a vehicle does not clear the track at a level crossing as the distance between the level crossing and the nearby intersection is insufficient to accommodate the expected (or design) vehicle length with a safety factor of 5 m.
State significant infrastructure	SSI	Infrastructure that is declared to be SSI under section 5.12 of the EP&A Act.
Submission		A written response from an individual or organisation that is submitted to DPE during the public exhibition of an EIS, amendment report, preferred infrastructure report or modification report for SSI.
Submissions Report		A report prepared by the proponent to respond to the issues raised in submissions.

Executive summary

Overview

Inland Rail is an approximate 1,600 kilometres (km) freight rail network that will connect Melbourne and Brisbane via regional Victoria, New South Wales and Queensland. The Inland Rail route would involve using approximately 1,000 km of existing track (with enhancements and upgrades where necessary) and 600 km of new track, passing through 30 local government areas. Inland Rail will accommodate double-stacked freight trains up to 1,800 metres (m) long and 6.5 m high.

The Australian Government has confirmed that Inland Rail is an important project to meet Australia's growing freight task, improve road safety and help decarbonise the economy. Inland Rail will enhance our national freight and supply chain capabilities, connecting existing freight routes through rail, roads and ports, and support Australia's growth.

Comprising 12 sections, a staged approach is being undertaken to deliver Inland Rail. Each of these projects can be delivered and operated independently with tie-in points to the existing railway. Work south of Parkes has been prioritised, which will enable Inland Rail to initially connect to existing rail networks between Melbourne, Sydney, Perth and Adelaide, via Parkes and Narromine. The Parkes to Narromine (P2N) and Narrabri to North Star Phase 1 (N2NS P1) sections are complete.

ARTC is seeking approval to carry out enhancement works to structures and sections of track along 185 km of the existing operational standard-gauge railway in the Albury to Illabo (A2I) section of the Inland Rail program (the proposal). Enhancement works are required to provide the increased vertical and horizontal clearances required for double-stacked freight trains. Works would include track realignment, lowering and/or modification within the existing rail corridor, modification, removal or replacement of bridge structures (rail, road and/or pedestrian bridges), raising or replacing signal gantries, level-crossing modifications and other associated works.

As the alignment is presently operational, the proposal does not extend to those existing sections of the alignment where no works are required.

Approval process and EIS

The proposal is declared state significant infrastructure (SSI) and critical state significant infrastructure (CSSI) under Division 5.2 of the *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act). The proposal is permissible without development consent and is subject to assessment and approval by the NSW Minister for Planning and Public Spaces.

An environmental impact statement (EIS) was prepared to support ARTC's application for approval of the proposal in accordance with the requirements of the EP&A Act and the environmental assessment requirements of the Secretary of the (then) NSW Department of Planning, Industry and Environment (DPIE) (the SEARs) (now the Department of Planning and Environment (DPE)).

The EIS was placed on public exhibition by DPE for a period of 42 days, commencing on 17 August 2022 and concluding on 28 September 2022. During the exhibition period, interested stakeholders and members of the community were able to review the EIS online, participate in consultation and engagement activities held by ARTC and make a written submission to the DPE for consideration in its assessment of the proposal.

Purpose of this report

This Submissions Report documents and considers the issues raised in community, government agencies, organisations and other submissions received by DPE during public exhibition of the EIS, in accordance with the requirements of Division 5.2 of the EP&A Act and as directed by the Secretary of the DPE.

ARTC has considered the content of the submissions and has prepared responses to the issues raised. The report also describes the actions taken since the EIS was placed on public exhibition and provides updated mitigation measures, which incorporate changes made to respond to issues raised in submissions and/or take into account additional information.

Overview of submissions

145

Submissions received in total

which included:

134
Submissions from the community

3
Submissions from public authorities

8
Submissions from organisations

Of the 142 community and organisation submissions

3
Submissions provided support for the proposal

96
Submissions objected to the proposal

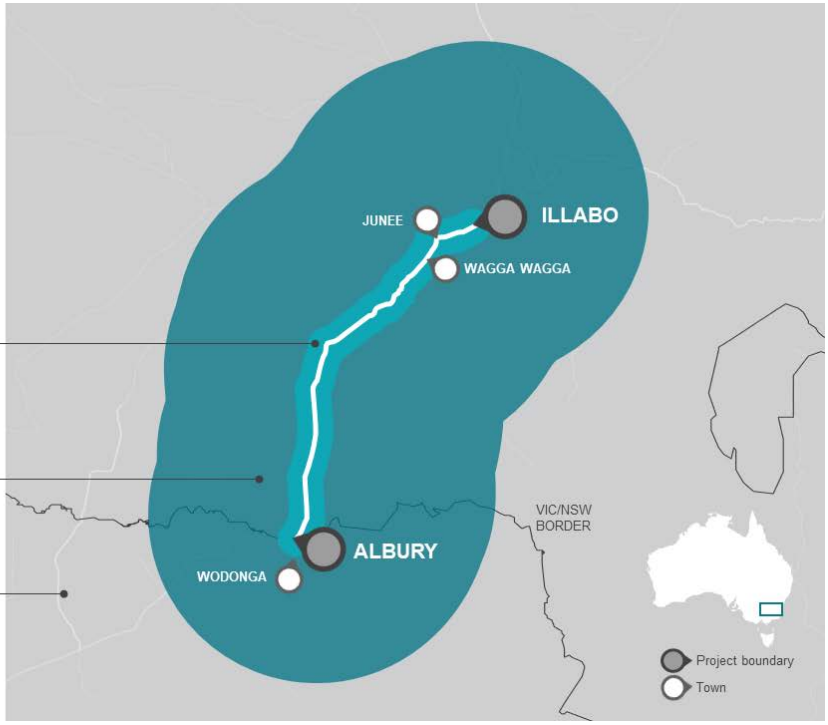
43
Submissions provided comments on the proposal

Distance of submissions from proposal site

64%
WITHIN 5KM

25%
5KM – 100KM

11%
OVER 100KM

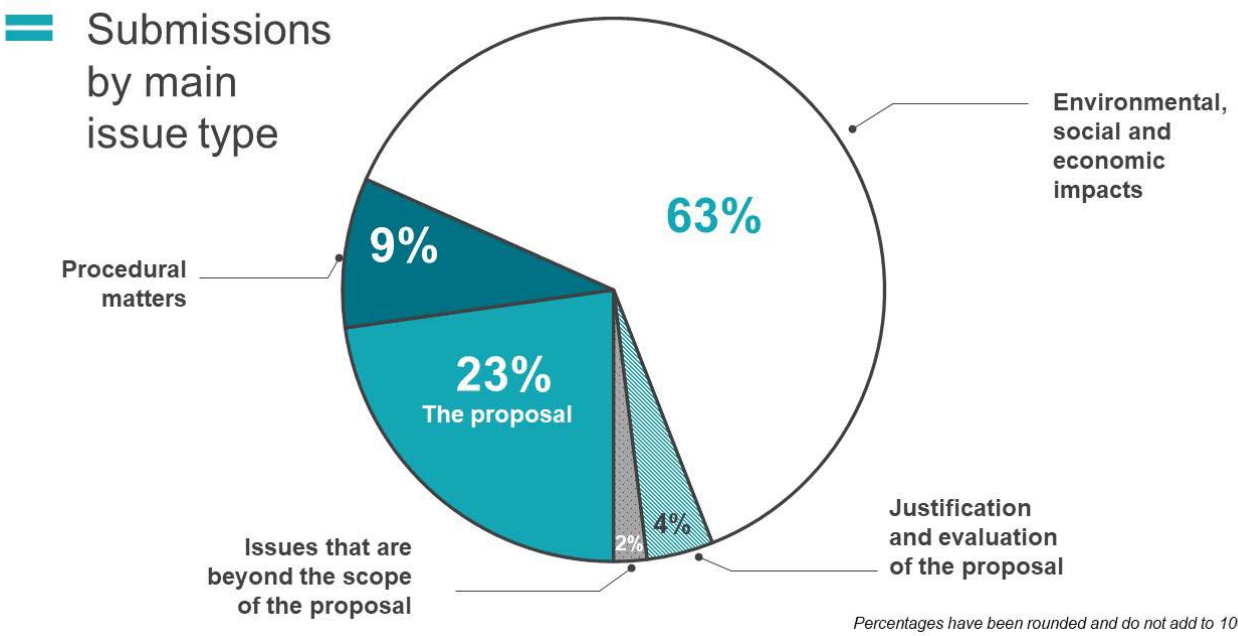


Note: Eighty-nine of the 142 submissions provided a location.

Issues raised

The key issues raised in submissions from the community and organisations included:

- The proposal:
  - Options and alternatives
  - Construction of the proposal
  - Operation of the proposal
- Procedural matters:
  - Engagement
  - Impact assessment
- Environmental, social and economic impacts:
  - Transport and traffic
  - Land use and property
  - Social
  - Noise and vibration
  - Air quality
- Justification and evaluation of the proposal:
  - Strategic need
  - Justification of the proposal
- Issues that are beyond the scope of the proposal:
  - Out of scope—rail infrastructure
  - Out of scope—other issues.



Percentages have been rounded and do not add to 100%

From the three submissions received from public authorities, two provided commentary on the proposal, specific to the focus of their agency or assets, but did not indicate an objection to the proposal. One submission from a public authority supported the proposal. Comments provided in the public authority submissions included the following key aspects:

- issues with the approach of the EIS
- level of engagement during and after the EIS
- operational rail noise impacts and assessment

- general operational concerns
- level crossing impacts
- options assessment
- impacts to traffic and transport.

Advice from NSW Government departments or agencies

Advice was also received from eight NSW Government departments and agencies, some of which provided more than one letter. The issues raised were largely dependent on each stakeholder's technical discipline area and/or assets.

Changes to the proposal

Since the exhibition of the EIS, changes have been made to the proposal design in response to concerns raised by the community and in response to further development of the proposal design and the manner in which ARTC has addressed the issues. These changes are detailed in chapter 3 of the Preferred Infrastructure Report, and an updated proposal description is also provided in Appendix A of the Preferred Infrastructure Report.

The following changes have been made to the proposal and are described in more detail in the topic areas associated with the relevant submissions:

- The design of the pedestrian bridges has been amended and two new pedestrian bridges are proposed to be constructed adjacent to Edmondson Street road bridge and Kemp Street road bridge.
- The proposal site has been changed to accommodate proposed design changes, respond to stakeholder consultation and include additional construction areas.
- The construction schedule has been refined to reflect further detailed construction planning. Changes to the proposal are discussed in section 3.2.2 of the Preferred Infrastructure Report.
- Modifications to Shire and Carter Property access road level crossing (LX605) would be undertaken to accommodate the realigned track and be upgraded from a passive to an active level crossing.

Mitigation measures

The EIS identified the proposed approach to environmental management and the mitigation measures that would be implemented to avoid or minimise the potential impacts of the proposal. After consideration of the issues raised in the submissions, and additional work undertaken since the exhibition of the EIS, the mitigation measures have been updated to make additional commitments to respond to the issues raised and to the findings of further assessments. Some new measures have been added, and the wording of some measures has been amended.

The updated mitigation measures are in Appendix B: Updated Mitigation Measures of this Submissions Report and supersede those presented in the EIS.

Conclusion

A copy of this Submissions Report will be published by DPE on the Major Projects NSW Planning Portal website (Planning Portal website) (**pp.planningportal.nsw.gov.au/major-projects/projects/inland-rail-albury-illabo**).

On behalf of the NSW Minister for Planning and Public Spaces, DPE will review the EIS, this Submissions Report, ARTC's Preferred Infrastructure Report and the accompanying technical report revisions and prepare a draft Environmental Assessment Report for the Planning Secretary, which may include recommended conditions of approval in accordance with the EP&A Act. The Planning Secretary's Environmental Assessment Report will be provided to the Minister, who will then approve the proposal with conditions, or refuse to approve the proposal. The Environmental Assessment Report and the Minister's determination will be published on the Planning Portal website following determination, including conditions of approval, should the proposal be approved.

Subject to approval of the proposal, the detailed design would be developed with the objective of minimising potential impacts on the environment and the community. The design and construction methodology would continue to be developed with this objective in mind, considering the input of stakeholders and the local community, and the conditions of approval.

1. Introduction

This Submissions Report has been prepared for the Albury to Illabo (A2I) section of the Inland Rail program (the proposal). The Submissions Report addresses the direction made by the Planning Secretary in accordance with section 5.17(6)(a) of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and has been prepared with regard to the *State significant infrastructure guidelines: Preparing a submissions report* (DPE, 2022a). It is to be read in conjunction with the Preferred Infrastructure Report, which provides further assessment of traffic and transport, noise and vibration and air quality impacts from the proposal and considers changes to the exhibited proposal.

1.1 Inland Rail program

Inland Rail is an approximate 1,600 kilometres (km) freight rail network that will connect Melbourne and Brisbane via regional Victoria, New South Wales and Queensland. The Inland Rail route would involve using approximately 1,000 km of existing track (with enhancements and upgrades where necessary) and 600 km of new track, passing through 30 local government areas. Inland Rail will accommodate double-stacked freight trains up to 1,800 metres (m) long and 6.5 m high.

The Australian Government has confirmed that Inland Rail is an important project to meet Australia's growing freight task, improve road safety and help decarbonise the economy. Inland Rail will enhance our national freight and supply chain capabilities, connecting existing freight routes through rail, roads and ports and support Australia's growth.

Australian Rail Track Corporation Ltd (ARTC) is the proponent for Inland Rail. ARTC is fully owned by the Australian Government and was created after the Australian and state governments agreed in 1997 to the formation of single entity to manage and operate the national interstate rail network. Following the release of the findings of the Independent Review of Inland Rail in April 2023, Inland Rail Pty Ltd was established as a subsidiary of ARTC to build Inland Rail on behalf of the Australian Government. Further information on ARTC and Inland Rail can be found at artc.com.au and inlandrail.com.au.

Comprising 12 sections, a staged approach is being undertaken to deliver Inland Rail. Each of these projects can be delivered and operated independently with tie-in points to the existing railway. Work south of Parkes has been prioritised, which will enable Inland Rail to initially connect to existing rail networks between Melbourne, Sydney, Perth and Adelaide via Parkes and Narromine. The Parkes to Narromine (P2N) and Narrabri to North Star Phase 1 (N2NS P1) sections are complete.

An overview of Inland Rail is shown in Figure 1-1.

This Submissions Report relates to the A2I section of the Inland Rail program (the proposal).

FIGURE 1-1: PROPOSED ALIGNMENT FOR THE INLAND RAIL PROGRAM

1.2 The proposal

The proponent is seeking approval to carry out enhancement works to structures and sections of track along 185 km of the existing operational standard-gauge railway between Albury and Illabo, to accommodate double-stacked freight trains up to 1,800 m long and 6.5 m high.

Enhancement works are needed to provide the increased vertical and horizontal clearances required for double-stacked freight trains. Works include track realignment; lowering and/or modification within the existing rail corridor; modification, removal or replacement of bridge structures (rail, road and/or pedestrian bridges); raising or replacing signal gantries; level crossing modifications; and other associated works.

As the alignment is presently operational, the proposal does not extend to those existing sections of the alignment where no works are required.

The land required for construction comprises the existing railway corridor at the work sites with additional areas at these locations to accommodate construction activities and ancillary facilities, which would be removed on construction completion, along with particular infrastructure. The proposal's final land requirement would maintain the existing operational railway corridor, with additions to accommodate any revised infrastructure and associated operational requirements. Clearing of the proposal site would occur as necessary to accommodate works and to maintain the safe operational area of the railway.

1.2.1 Location

The proposal is generally within the existing rail corridor (the Main South Line) extending from the town of Albury on the Victoria–NSW border to around 3 km to the north-east of Illabo. The Main South Line links Sydney with Melbourne with the A2I sections opened between 1877 and 1881.

The alignment passes through two major regional towns—Albury and Wagga Wagga in NSW—and several smaller regional towns. Works are proposed at 24 locations along the Main South Line corridor, described as 'enhancement sites'. The name and location of these enhancement sites are identified in Figure 1-2.

Further information on the location of the proposal and the enhancement sites is in EIS chapter 3: Location and setting.

1.2.2 Key features as exhibited

The key features of the proposal as exhibited in the EIS include:

- adjustments to approximately 44 km of track across 14 enhancement sites to accommodate the vertical and horizontal clearances according to Inland Rail specifications, comprising:
  - realignment of track within the rail corridor at 14 enhancement sites
  - lowering of track up to 1.6 m at three enhancement sites
- changes to bridges and culverts at enhancement sites to allow track realignment as follows:
  - replacement of two road bridges and adjustment to adjoining intersections
  - replacement of three pedestrian bridges
  - demolition of two redundant pedestrian bridges
  - modifications to four rail bridges
- ancillary works, including adjustments to nine level crossings, modifications to drainage and road infrastructure, signalling infrastructure, fencing, signage, and services and utilities.

Construction of the proposal would require:

- construction compounds (including laydown areas) and other areas needed to facilitate construction works
- temporary changes to the road network, including roads closures to undertake works on road bridges and level crossings
- other ancillary works.

No additional works would be required outside the enhancement sites identified in Figure 1-2 as they meet the clearance requirement for the Inland Rail program.

A full description of the updated proposal is in Appendix A of the Preferred Infrastructure Report.

Figure 1-2 Enhancement sites of the proposal

Data Sources: ARTC, NSWSS

Coordinate System: GDA 1994 MGA Zone 55
Scale: 1:750,000
Paper size: A3
Date: 10/12/2021

210_EAP_F0102_KeyFeatures_r1v5.mxd

1.2.3 Operation

The proposal would form part of the rail network managed and maintained by ARTC. Train services would be provided by a variety of operators. Current train services run 24-hours per day on this part of the rail network; there is no current restriction on the length of trains other than infrastructure limitations.

1.2.3.1 Train speeds and lengths

The proposal would enable the use of double-stacked trains along its entire length. Inland Rail would operate 24-hours per day and would accommodate double-stacked freight trains up to 6.5 m high and up to 1,800 m in length (see Figure 1-3).

Inland Rail freight trains would travel at speeds up to 115 km/h, which is consistent with current freight train maximum speeds. Trains may travel at speeds less than 115 km/h for operational or safety reasons, including rollingstock capability and performance, management of braking and acceleration on steep grades, and occupancy of the line by other trains.

The approval would limit Inland Rail train operations to 1,800 m, with rail infrastructure built having regard to that limitation.

FIGURE 1-3: INDICATIVE HEIGHT AND LENGTH OF A DOUBLE-STACKED INLAND RAIL FREIGHT TRAIN

1.2.3.2 Train numbers

The average number of freight train movements between Albury and Illabo varies in different sections of the line as there are several connections to other routes, along with terminals at sites along the alignment. For example, north of the Junee yard, the freight train numbers are slightly higher as regional freight trains connect from the Junee to Griffith rail line onto the Main South Line. Currently, there are up to 12 freight trains per day (combined total of freight trains in both directions). There is some seasonality effect on train numbers due to agricultural commodity shipments.

Anticipated train numbers remain as reported in the EIS and have not been revised, with 2040 retained as the design year for assessment purposes. It is estimated that the operation of Inland Rail would increase freight train movements to a total of 18 freight trains per day in the early phase of Inland Rail's operation, when all projects are completed, and up to a total of 20 freight trains per day over the following years on further take up of the service (see Table 1-1 for further information). Train numbers are not expected to immediately increase on completion of construction of the A2I project, given the staged delivery of Inland Rail. A schematic diagram of Inland Rail and the interstate and regional freight rail networks is in Figure 1-4, showing the significant connection points.

TABLE 1-1: BREAKDOWN OF TRAIN NUMBERS BY SECTION OF THE PROPOSAL

		Daily train numbers		
Section of the proposal	**Train service**	**Current**	**2025**	**2040**
Albury yard to Junee yard	Freight	12	15	18
	Passenger	4[1]	4[1]	4[1]
Junee yard to Illabo	Freight	**12**[2]	**18**[2]	**20**[2]
	Passenger	4	4	4

Note:

1. Melbourne to Albury V/Line services that terminate at Albury yard have not been included. It is assumed there is no growth in passenger services.
2. Bold font represents the highest freight train number in each year.

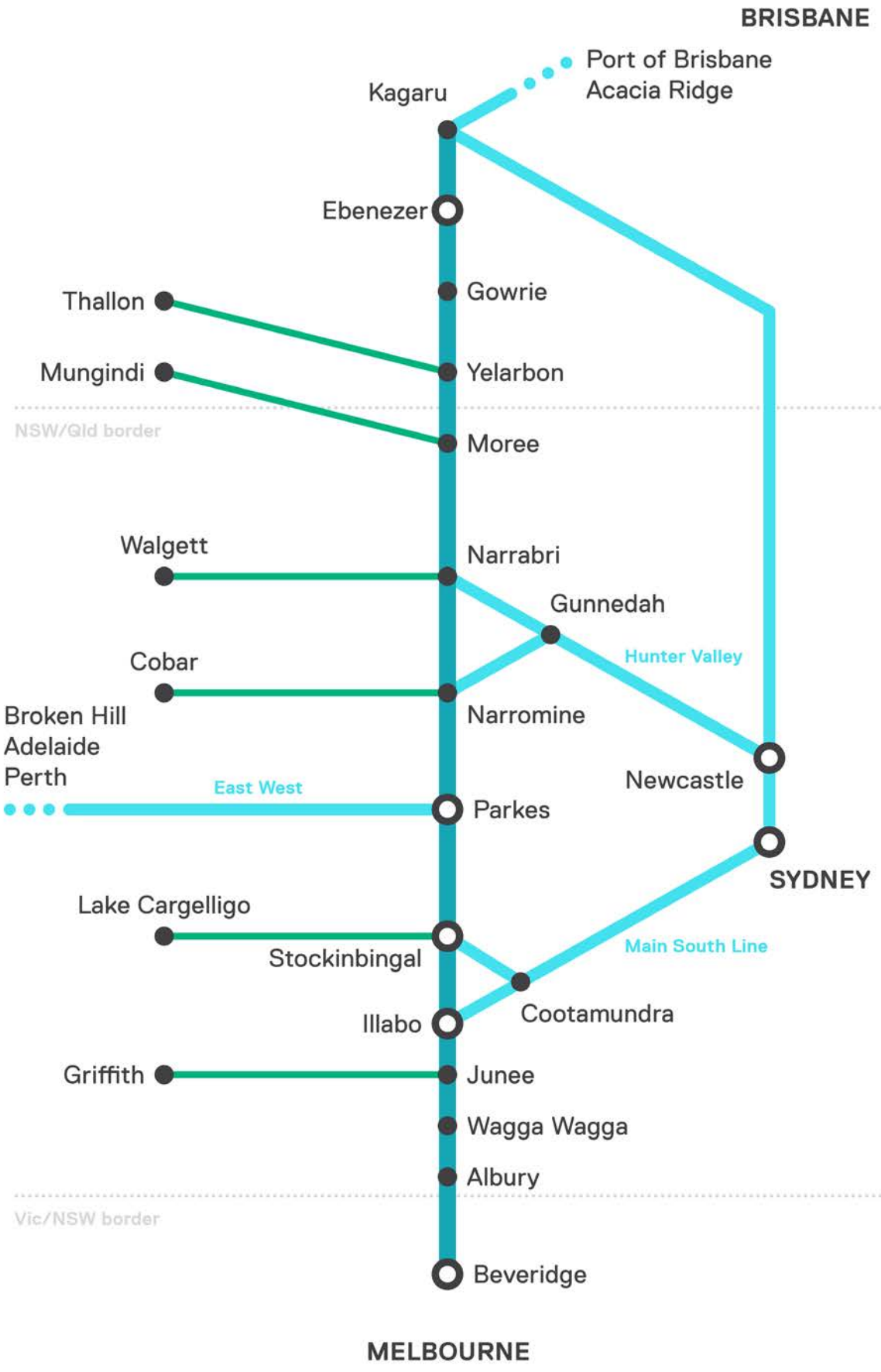


FIGURE 1-4 SCHEMATIC DIAGRAM OF INLAND RAIL, AND THE INTERSTATE AND REGIONAL RAIL NETWORK

1.2.3.3 Maintenance

ARTC would continue to maintain the line during operations. Maintenance would typically involve minor works, such as bridge and culvert inspections, rail grinding and track tamping, through to major maintenance, such as reconditioning of track and topping up ballast as required. Maintenance works and schedules are not proposed to change as a result of the proposal. Approval is not sought for such operational maintenance activities, as other planning and environmental approval controls apply and these activities would continue in accordance with the existing Environment Protection Licence that applies to the rail corridor (EPL 3142).

1.2.4 Timing

In response to the Independent Review of Inland Rail, the Australian Government has prioritised completing the sections of Inland Rail between Beveridge in Victoria and Narromine in New South Wales by 2027. In line with the government's response to the review, ARTC is now taking a staged approach to Inland Rail, with a focus south of Parkes on construction and delivery to progressively unlock the benefits of Inland Rail ahead of end-to-end completion. North of Parkes, attention is on obtaining approvals, securing the route and refining cost and delivery arrangements ahead of commitments for construction.

Subject to approval, detailed design and construction planning for A2I would commence shortly after, in mid-2024. Due to the nature of the works, construction of some elements would also commence shortly after approval (notably the removal of structures to provide the necessary clearance for the double-stacked trains where replacement of these structures is not required). Construction is expected to take about 30 months for completion by the end of 2026, with enhancement sites progressively commissioned on completion of construction. Rail operations would continue throughout construction.

1.3 Statutory context

The proposal is declared state significant infrastructure (SSI) and critical state significant infrastructure (CSSI) under Division 5.2 of the EP&A Act. The proposal is permissible without development consent and is subject to approval by the NSW Minister for Planning and Public Spaces under Division 5.2, Part 5 of the EP&A Act.

An EIS was prepared to support ARTC's application for approval of the proposal in accordance with the requirements of Division 5.2 of the EP&A Act. The EIS addressed the Secretary's environmental assessment requirements (SEARs) for the proposal, which were issued by the (then) Department of Planning, Industry and Environment (DPIE) on 14 October 2020. In 2022, the department changed its name to the Department of Planning and Environment (DPE).

1.4 EIS exhibition

The EIS was placed on public exhibition by DPE for a period of 42 days, commencing on 17 August 2022 and concluding on 28 September 2022.

During the exhibition period, interested stakeholders and members of the community were able to review the EIS online, participate in consultation and engagement activities (as described in section 1.5.1), and make a submission to DPE for consideration in the assessment of the proposal.

1.5 Engagement

1.5.1 Engagement undertaken during the EIS exhibition

The EIS was placed on public exhibition and made publicly available on the Planning Portal website by DPE between 17 August 2022 to 28 September 2022 (available at: **planningportal.nsw.gov.au/major-projects/projects/inland-rail-albury-illabo**).

A summary of the engagement activities and tools used by ARTC during public exhibition of the EIS is in Table 1-2.

TABLE 1-2: CONSULTATION DURING THE EIS EXHIBITION PERIOD

Activity	Detail
Website updates	▸ An update of the proposal-specific part of the Inland Rail website, including a link to the EIS on the DPE website and the closing date for submissions (available at: **inlandrail.artc.com.au/where-we-go/projects/albury-to-illabo/**) ▸ There were a total of 1,474 visits to proposal-specific parts of the Inland Rail website during the EIS exhibition period.
Community e-news	A community e-news was sent to the proposal-specific stakeholder mailing list on 17 August 2022. This comprehensive database of stakeholders includes contact details of affected and non-affected landowners, interested community members and business groups. The email blast provided an overview of the EIS and exhibition process, where to find more information and the process by which to make a formal submission to DPE. A community e-news was sent to the Wagga Wagga-specific component of the proposal stakeholder mailing list, including those who live within 200 m of the proposal site who signed up to receive notifications. The community e-news provided detail about the online information session held on 13 September 2022.
Letters	A letter was sent to noise- and property-affected residents, elected representatives and local councils advising of the release of the EIS, ongoing consultation activities and the formal submission process on 10 August 2022.
Advertisements	An advertisement was placed in the Wagga Daily Advertiser, the Border Mail and the Junee Independent newspapers on 11 August 2022 advertising details of the drop-in sessions planned by ARTC during the EIS public exhibition period. An advertisement was placed in the Wagga Daily Advertiser newspaper on 6 September 2022 advertising details of the online information session planned by ARTC during the EIS public exhibition period. The following campaigns were subject to targeted advertising on Facebook: ▸ community drop-in sessions were advertised between 12 August 2022 and 18 August 2022 with a total reach of 16,470 individuals ▸ general information regarding the public exhibition was advertised between 17 August and 13 September 2022 with a total reach of 18,897 individuals ▸ a podcast series was advertised between 24 August 2022 to 14 September 2022 with a total reach of 8,054 individuals ▸ noise and traffic episodes of the podcast were advertised in the Wagga Wagga area between 23 August 2022 and 30 August 2022 with a total reach of 4,889 individuals ▸ Wagga Wagga online information session was advertised between 7 September 2022 and 13 September 2022 with a total reach of 7,948 individuals.
Phone and email	▸ ARTC published the community engagement contact details (phone and email) on all public exhibition advertising. This included the community engagement hotline (phone: 1800 732 761) and email **inlandrailnsw@artc.com.au**. ▸ Ongoing engagement via the Inland Rail community engagement hotline (phone: 1800 732 761) and email address (**inlandrailnsw@artc.com.au**).
Newspapers	▸ An ARTC letter to the editor was published on 12 September 2022 in direct repsonse to letters published in the Wagga Daily Advertiser.
Summary document	▸ A Summary of Findings document was made available, which is a document prepared by ARTC to distil key impacts as described in the EIS. The Summary of Findings is structured into four precincts (Albury, Lockhart–Greater Hume, Wagga Wagga and Junee) to enable the reader to easily view the information most relevant to them based on geographic information (available at: **inlandrail.artc.com.au/a2i-eis-summary-of-findings/**). The Summary of Findings document was placed on a USB and sent via post to 36 stakeholders who registered to receive it at the beginning of the exhibition period, and to the Community Consultative Committee members on 19 August 2022. ▸ Hard copies of the Summary of Findings document, along with directions on how to make a submission, were provided to the Albury Library Museum, Henty Library, Wagga Wagga Library and the Junee Library for the community to access and collect.

Activity	Detail
Podcast	▸ An audio podcast was released with six episodes covering areas of the EIS that are of key interest to stakeholders. Each episode is up to eight minutes long and is hosted on the Inland Rail website as well as on other podcast streaming services (available at: **inlandrail.artc.com.au/where-we-go/projects/albury-to-illabo/status/#podcast**). ▸ There were roughly 300 downloads across the six episodes of the podcast series during the EIS exhibition period.
Community drop-in sessions	▸ Four community drop-in sessions were held across the Albury to Illabo alignment by ARTC to provide interested stakeholders with an opportunity to access further information, the Summary of Findings document and to receive guidance on how to make a submission to DPE. Community information sessions were held at the following locations (see Figure 1-5): ▸ Albury Library Museum on 17 August 2022 (5 attendees) ▸ Henty Library on 17 August 2022 (2 attendees) ▸ Wagga Wagga Library on 18 August 2022 (150 attendees) ▸ Junee Library on 18 August 2022 (30 attendees).
Online community information session	▸ An online community information session was held via Microsoft Teams with the Wagga Wagga community to discuss the findings of the EIS on 13 September 2022.

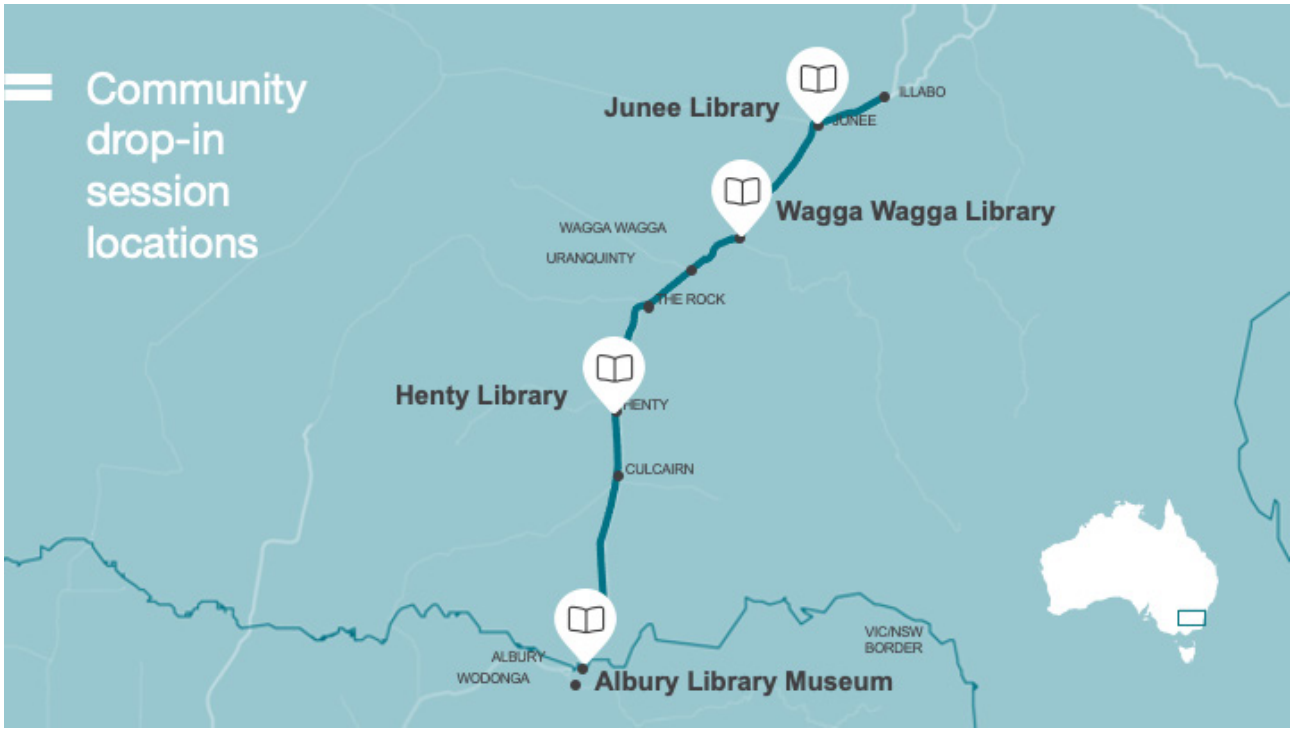


FIGURE 1-5: LOCATIONS OF THE COMMUNITY DROP-IN SESSIONS

1.5.2 Engagement undertaken since the exhibition of the EIS

General engagement with stakeholders since the exhibition of the EIS is outlined in Table 1-3. Refer to section 3.4 for engagement activities related to closing out issues raised in submissions and agency advice.

TABLE 1-3: ENGAGEMENT CARRIED OUT SINCE THE EXHIBITION OF THE EIS

Date	Activity	Stakeholder	Purpose
18 January 2023	Meeting	Junee railway operators	Address operational concerns
1 March 2023	Community survey	General community	Community feedback
2 March 2023	Meeting	Yarpa	First Nations business and employment opportunities
16 March 2023	Meeting	Business NSW	Project update

Date	Activity	Stakeholder	Purpose
6 April 2023	Email update: Inland Rail Review release	Key stakeholders	Update stakeholders on the release of the review
17 April 2023	Website update	General community	Project and program updates
17 April 2023	Email update: Preferred Infrastructure Report announcement	Key stakeholders	Update stakeholders on the Preferred Infrastructure Report announcement
3 May 2023	Meeting	Wagga Wagga City Council	Monthly project update meeting
11 May 2023	Meeting	Landowner LX605	Consultation on LX605
22 May 2023	Meeting	Junee Shire Council	Consultation on LX605 and project update
1 June 2023	Meeting	Wagga Wagga City Council	Third party agreements meeting
14 June 2023	Meeting	Wagga Wagga City Council	Monthly project update
14 June 2023	Community newsletter	General community and subscribers	Community update
27 June 2023	Meeting	Kildare Catholic College	Project update and property consultation
4 July 2023	Email update: contract award	Key stakeholders	Update key stakeholders on the A2I/S2P contract award
26 July 2023	Meeting	Albury City Council	Third-party agreement meeting and project update
2 August 2023	Meeting	Wagga Wagga City Council	Monthly project meeting
4 August 2023	Meeting	Dr Joe McGirr MP	Project update
4 August 2023	Meeting	Wagga Wagga City Council	Engineering consultation
9 August 2023	Meeting	Michael McCormack MP	Project update
23 August 2023	Community Consultative Committee (CCC) meetings	CCC members	Project, environmental approvals, and community update
30 August 2023	Community survey	General community	Community feedback
6 September 2023	Project factsheets	General community	Community update
11 September 2023	Meeting	Junee Shire Council	Project update
12 September 2023	Website and Social PinPoint update	General community	Community information update
13 September 2023	Meeting	Wagga Wagga City Council	Monthly project meeting
19, 20, 21 September 2023	Henty Field Days community information stand	General community	Community event
27 September 2023	Community Newsletter	General community and subscribers	Community information and update
12 October 2023	Meeting	Emergency services extended to NSW Ambulance, NSW Police, NSW Rural Fire Service (RFS), Fire NSW, NSW State Emergency Service, Junee Local Emergency Management Committee (LEMC) and Riverina Murray LEMC. Attended by NSW Ambulance, NSW Police and NSW RFS.	Consultation on the proposal, with specific focus on traffic and transport (such as level crossing ad bridge closures), and flooding related matters
16 October 2023	Meeting	Wagga Wagga City Council councillors	Project update

Date	Activity	Stakeholder	Purpose
18 October 2023	CCC meetings	CCC members	Project, environmental approvals, and community update
23 October 2023	Meeting	NSW Farmers	Project and program updates
30 October 2023	Meeting	Henty Community Development Committee	Discussion on committee's submission on the proposal
31 October 2023	Meeting	ErinEarth	Discussion on organisation's submission on the proposal
31 October 2023	Meeting	Committee4Wagga	Discussion on committee's submission on the proposal
1 November 2023	Meeting	Scots School Albury	Discussion on school's submission on the proposal

1.5.3 Ongoing engagement

Ongoing consultation with the community and key stakeholders will be held in association with the exhibition of the Preferred Infrastructure Report, and subsequently in the lead up to, and during, construction (should the proposal be approved). The consultation activities will ensure that:

- landowners, community and stakeholders have a high level of awareness of all processes and advanced notice of activities associated with the proposal
- accurate and accessible information is made available
- a timely response is given to issues and concerns raised by the community
- feedback from the community is encouraged
- opportunities for input are provided.

During construction, a comprehensive communication plan will be developed and implemented. This will include the Inland Rail community engagement hotline and email address, along with a 24-hour construction response line. Targeted consultation methods, such as letters, notifications, signage and face-to-face communications, will continue. The Inland Rail website and social media platforms will also include updates on the progress of the proposal.

A complaints management system would also be implemented prior to the commencement of construction. It would be maintained throughout the construction period and for a minimum of 12 months after construction finishes.

1.6 Purpose and structure of this report

DPE provided ARTC with copies of the submissions received on the proposal during public exhibition of the EIS. On 4 October 2022, ARTC was requested to prepare a written response to all issues raised in submissions and agency advice, in accordance with section 5.17(6)(a) of the EP&A Act.

This Submissions Report has regard for the *State significant infrastructure guidelines* (DPE, 2022b), including the form and content requirements for submission reports as outlined in *State significant infrastructure guidelines—preparing a submissions report* (DPE, 2022a). Table 1-4 is an outline of the report structure.

TABLE 1-4: REPORT STRUCTURE

Guideline requirement	Where addressed in this Submissions Report
Introduction to the proposal and the assessment that has been carried out to date	Chapter 1: Introduction
Breakdown of submissions and categorisation of the issues raised	Chapter 2: Analysis of submissions
A summary of the changes to the proposal, further engagement that was carried out and the further assessment of impacts that has been carried out since public exhibition	Chapter 3: Actions taken since exhibition
A summary of the issues raised in submissions and ARTC's response to the issues raised	Chapter 4: Response to submissions

Guideline requirement	Where addressed in this Submissions Report
A summary of the advice received from NSW Government departments or agencies and ARTC's response to the issued raised	Chapter 5: NSW Government department or agency advice
Updated justification of the proposal and conclusion	Chapter 6: Conclusion
Appendices including	▸ Appendix A Submissions Register ▸ Appendix B Updated Mitigation Measures ▸ Appendix C Outline Construction Environmental Management Plan ▸ Appendix D Detailed Response to Hydrology and Flooding Matters ▸ Appendix E Detailed Response to Aboriginal Cultural Heritage Matters ▸ Appendix F Detailed Response to Non- Aboriginal Heritage Matters ▸ Appendix G Detailed Response to Non-rail Noise Matters

1.7 Preferred Infrastructure Report

Section 5.17(6)(b) of the EP&A Act provides that the Planning Secretary may require the proponent to submit to the Secretary a Preferred Infrastructure Report that outlines any proposed changes to the state significant infrastructure to minimise its environmental impact or to deal with any other issue raised during the assessment of the application concerned.

On 13 April 2023, the Planning Secretary directed ARTC to prepare a Preferred Infrastructure Report. The additional assessment focuses on the potential impacts of the proposal associated with traffic and transport (construction and operation), noise and vibration (operation), and air quality (operation) as described in section 3.2.

As described in section 3.4 of this Submissions Report, further assessment has been carried out since the EIS that was publicly exhibited. Information about the scope and contents of the further assessment, and the requested additional information is in the Preferred Infrastructure Report.

The Preferred Infrastructure Report will be made publicly available on the Major Projects NSW Planning Portal website (Planning Portal website) and should be read in conjunction with this Submissions Report. Issues raised in submissions are, in many instances, addressed in the further assessments undertaken with the Preferred Infrastructure Report.

In addition, ARTC is proposing a number of changes to the proposal in accordance with section 5.17(6) of the EP&A Act. The aim of these changes is to address issues raised during consultation and in submissions, and to minimise the potential impacts of the proposal. A summary of the proposed changes is in section 3.3 of this Submissions Report. Further information is in section 3 of the Preferred Infrastructure Report, which is available separately.

The proposal description chapters in the EIS (chapters 7 and 8) have been updated, taking into account the amendments. The updated proposal description is summarised in section 3.3 of this Submissions Report and provided in detail in Appendix A of the Preferred Infrastructure Report.

2. Analysis of submissions and agency advice

This chapter provides an analysis of the submissions received, including a breakdown by submitter type and key issues raised.

2.1 Submissions and agency advice received

During the exhibition period of the EIS (17 August 2022 to 28 September 2022), submissions were invited from the community and other stakeholders. The receipt of submissions was coordinated and managed by DPE. Submissions were received and registered by DPE and uploaded onto the Planning Portal website (available at: **pp.planningportal.nsw.gov.au/major-projects/projects/inland-rail-albury-illabo**). Submissions were received by electronic online submission or via post and were provided to ARTC for review and consideration.

A total of 145 submissions were received and registered on the Planning Portal website according to three categories:

- community — 134 submissions
- organisations — 8 submissions.
- public authorities — 3 submissions.

Advice was also received from eight NSW Government departments and agencies, some of which provided more than one letter.

A breakdown of the 145 submissions and the advice (total of 155) received is registered on the Planning Portal website by category type as shown in Table 2-1 and Figure 2-1.

TABLE 2-1: BREAKDOWN OF SUBMISSIONS OR ADVICE REGISTERED ON THE PLANNING PORTAL WEBSITE BY TYPE

Category	Group	Total
Community	Members of the community	134
Organisations	Representative groups, including community groups	8
Public authorities	Local councils	3
NSW Government department and agency advice	Divisions of DPE and other NSW Government departments or agencies	10
Total		**155**

FIGURE 2-1: BREAKDOWN OF SUBMISSIONS BY SUBMITTER TYPE

2.2 Approach to analysis of submissions

2.2.1 Community and organisation submissions

The analysis of community and organisation submissions involved three levels of categorisation in the following order:

- categorisation of main issue type
- categorisation of key issue type
- categorisation of sub-issue type.

Issues raised in each submission were assigned a main issue type according to the five main issue types identified by the *State significant infrastructure guidelines—preparing a submissions report* (DPE, 2022a):

- the proposal
- procedural matters
- environmental, social and economic impacts
- justification and evaluation of the proposal
- issues that are outside of the scope of the proposal.

Each type of issue was then categorised into key issues and then further categorised into sub-issue categories. For example, a submission relating to construction noise impacts at a residential receiver would be categorised as: main issue—environmental, social and economic impacts; and the key issue—noise and vibration; and the sub-issue—construction noise (see Figure 2-2).

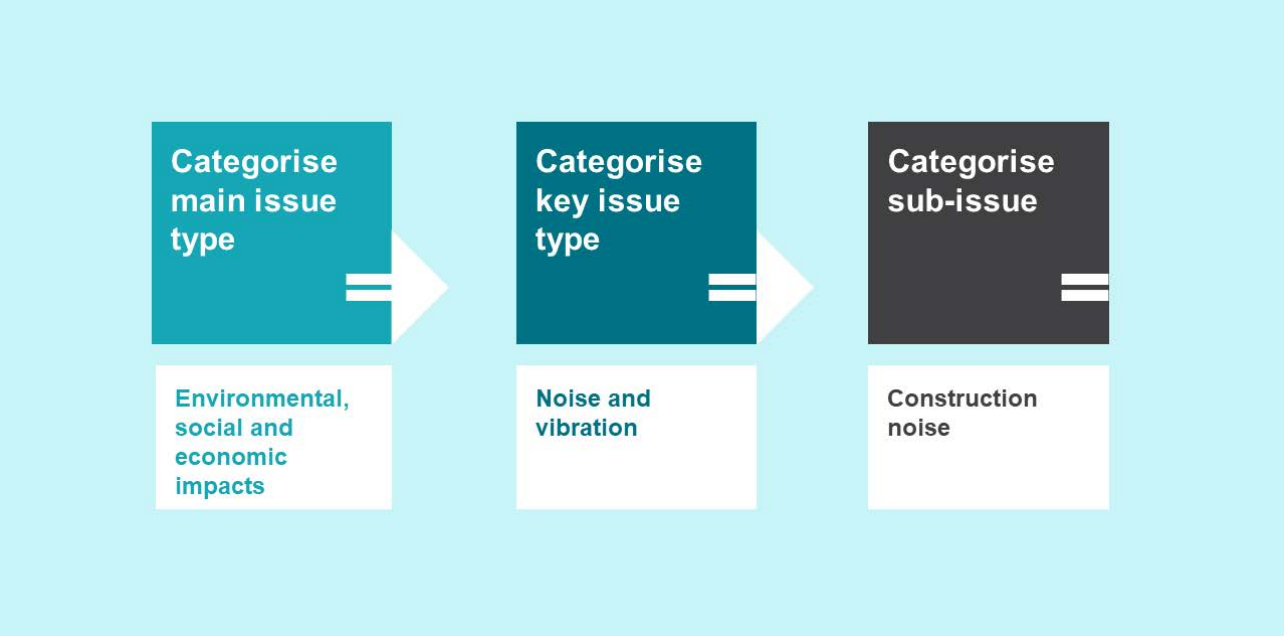


FIGURE 2-2: APPROACH FOR CATEGORISATION OF ISSUES

Responses to the issues raised in submissions from the community, organisations and public authorities are in Chapter 4: Response to Submissions, according to the key issue and sub-issue categories. Where relevant, input to the responses was sought from the technical specialists who assisted with preparing the EIS.

Each issue identified in chapter 4 is presented as a summary of the issues raised by individual submissions. This means that, while the exact wording of a particular submission may not be present in the summary of the issue, the intent of issues raised has been captured. A response has been provided to each grouped issue summary, which may be relevant across multiple submissions.

Appendix A: Submissions Register contains a table identifying community and organisation submissions using a unique identifier. For each submission, the table presents a cross reference to where the issues have been addressed in chapter 4 of this Submissions Report. All submissions are available to view on the Planning Portal website (**pp.planningportal.nsw.gov.au/major-projects/projects/inland-rail-albury-illabo**).

2.2.2 Public authority submissions and NSW Government department or agency advice

An assessment of each local council's submission or NSW Government department or agency advice was undertaken, with each submission individually reviewed to understand the issues, and a summary was prepared for each key issue. Issues raised in the submissions or advice were not further categorised into sub-issues as the issues raised were largely dependent on each stakeholder's technical discipline area and/or assets; instead, a direct response to each public authority submission and NSW Government department or agency is provided in section 4.3 and chapter 5, respectively. Where relevant, input to the responses was sought from the specialists who assisted with preparation of the EIS.

2.2.3 Support, comment or objection

Of the three submissions received from public authorities, one indicated support for the proposal while the other two provided commentary on the proposal. All of the NSW Government department or agency advice received provided commentary on the proposal, but did not indicate an objection to the proposal.

Of the 142 submissions received from the community and organisations:

- 3 submissions (2 per cent) provided support for the proposal
- 43 submissions (30 per cent) of submissions provided comments on the proposal
- 96 submissions (68 per cent) objected to the proposal.

A breakdown of the submissions from the community and organisations providing support, objection and comments is in Figure 2-3.

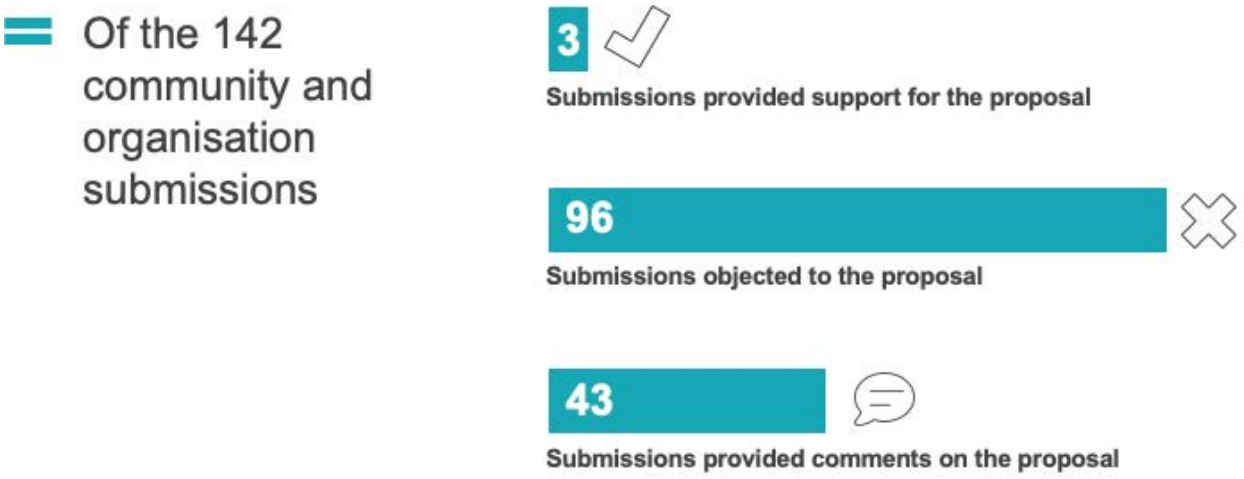


FIGURE 2-3: BREAKDOWN OF SUPPORT AND OBJECTION FROM THE COMMUNITY AND ORGANISATIONS' SUBMISSIONS

2.3 Community and organisations' submissions

2.3.1 Summary of submissions

Submissions received from the community and organisations are categorised by the main issue type in Figure 2-4 and by key issue type in Figure 2-5. The key issue types are further categorised in Table 2-2 by sub-issue.

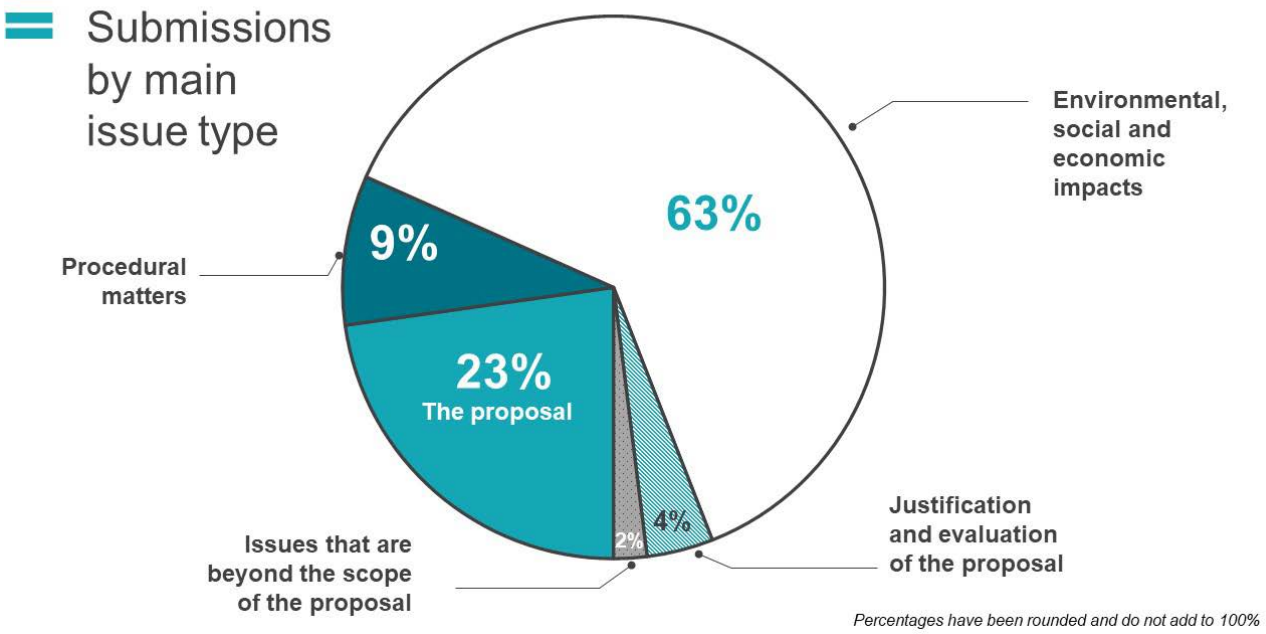


FIGURE 2-4: MAIN ISSUE TYPE CATERGORIES FOR COMMUNITY AND ORGANISATION SUBMISSIONS

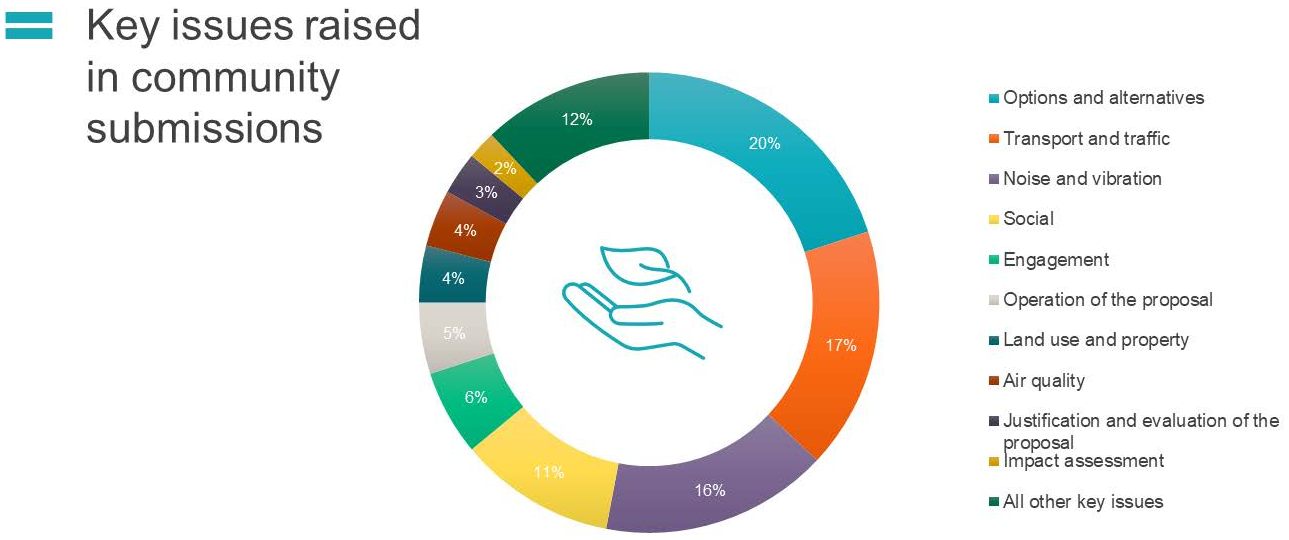


FIGURE 2-5: KEY ISSUES RAISED IN COMMUNITY AND ORGANISATION SUBMISSIONS

TABLE 2-2: SUMMARY OF KEY ISSUES AND SUB-ISSUES RAISED IN SUBMISSIONS FROM THE COMMUNITY AND ORGANISATIONS

Category	Key issue	Sub-issue	Number of submissions issue was raised in	Percentage of the total number of issues [1]
Justification and evaluation of the proposal	Strategic need	Justification and need for Inland Rail program	7	1%
		Subtotal	**7**	**1%**
The proposal	Options and alternatives	N/A	105	16%
		Subtotal	**105**	**16%**
Procedural matters	Engagement	Adequacy of consultation (prior to EIS display)	16	2%
		Community's level of influence on the proposal	5	1%
		Engagement with local councils	2	<1%
		Implementation of community feedback	2	<1%
		Adequacy of consultation (during EIS display)	10	1%
		Complexity of the EIS	4	1%
		Complexity of submissions process	6	1%
		Subtotal	**45**	**7%**
The proposal	Operation of the proposal	Train numbers	4	1%
		Train operations	4	1%
		Road infrastructure	2	<1%
		Track infrastructure	2	<1%
		Bridges	14	2%
		Design changes to proposed pedestrian bridges	3	<1%
		Future proofing	4	1%
	Construction of the proposal	Construction compounds and laydown areas	2	<1%
		Construction schedule and staging	3	<1%
		Construction hours	1	<1%
		Transport and access arrangements	2	<1%
		Bridge closures and detours	2	<1%
		Site closure and rehabilitation	1	<1%
		Water supply	1	<1%
		Impacts to utilities	1	<1%
		Subtotal	**46**	**7%**
Procedural matters	Impact assessment	Adequacy of the EIS	13	2%
		Subtotal	**13**	**2%**

Category	Key issue	Sub-issue	Number of submissions issue was raised in	Percentage of the total number of issues [1]
The economic, environmental and social impacts of the proposal	Transport and traffic	Traffic and transport assessment methodology	4	1%
		Road performance impacts—construction	30	4%
		Impacts to active transport—construction	6	1%
		Impacts to car parking —construction	2	<1%
		Impacts to emergency services—construction	4	1%
		Road safety—operation	3	<1%
		Impacts to active transport—operation	3	<1%
		Road performance impacts—change in access	1	<1%
		Road performance impacts—level crossings	61	9%
		Accessibility—level crossings	1	<1%
		Impacts to emergency services—level crossings	40	6%
		Mitigation and management of impacts—transport and traffic	4	1%
	Non-Aboriginal heritage	Impacts to non-Aboriginal heritage items	6	1%
	Land use and property	Property acquisition	2	<1%
		Property values	21	3%
	Social	General amenity, health and wellbeing impacts—construction	9	1%
		General amenity, health and wellbeing impacts—operation	39	6%
		Community severance	22	3%
	Noise and vibration	Noise and vibration impact assessment approach	20	3%
		Construction noise impacts	6	1%
		Construction vibration impacts	3	<1%
		Operational rail noise and vibration impacts	59	9%
		Road noise impacts—operation	2	<1%
		Mitigation and management of impacts—noise and vibration	27	4%

Category	Key issue	Sub-issue	Number of submissions issue was raised in	Percentage of the total number of issues [1]
	Economic	Local impacts to business and industry— construction	1	<1%
		Regional benefits	2	<1%
	Biodiversity	Impacts to biodiversity	1	<1%
	Landscape and visual amenity	Landscape and visual impacts—construction	1	<1%
		Privacy (operation)	4	1%
		Landscape and visual impacts—operation	8	1%
	Hydrology, flooding and water quality	Flooding impacts—operation	1	<1%
	Soils and contamination	Stockpiling (construction)	1	<1%
	Sustainability	Sustainability in design	1	<1%
	Air quality	Air quality impact assessment approach	5	1%
		Air quality impacts—construction	2	<1%
		Air quality impacts—operation	13	2%
		Mitigation and management of impacts—air quality	1	<1%
	Hazards	Rail safety	5	1%
		Bushfire risk	1	<1%
	Climate change risk adaptation and greenhouse gas emissions	Climate change risks as a result of the proposal	1	<1%
	Cumulative impacts	Cumulative social impacts	1	<1%
		Subtotal	**424**	**63%**
Justification and evaluation of the proposal	Justification of the proposal	NA	18	3%
		Subtotal	**18**	**3%**
Out of scope matters	Other	Out of scope—rail infrastructure	10	1%
		Out of scope—other issues	5	1%
		Subtotal	**15**	**2%**

1. Percentages have been rounded and do not add to 100%

2.4 Locations of community and organisations' submissions

2.4.1 Level of community and organisation interest

A total of 89 of the 142 submissions received from the community and organisations provided location or address information. Of these 89 submissions, 64 per cent were located within 5 km of the proposal site, 25 per cent were located between 5–100 km of the proposal site and 11 per cent were located more than 100 km from the proposal site. The majority (88 per cent) of these submitters were located within the Wagga Wagga local government area. A breakdown of the level of community and organisation interest based on distance of submissions from the proposal site is shown in Figure 2-6.

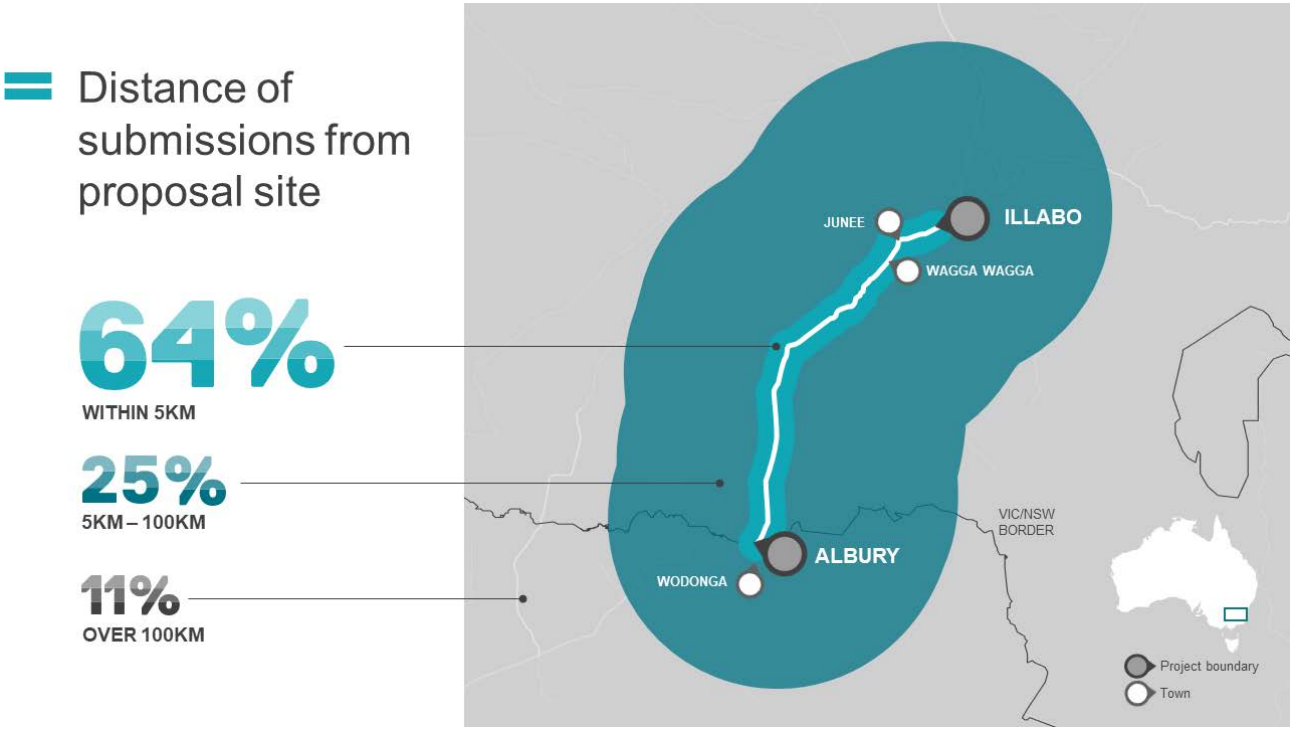


FIGURE 2-6: BREAKDOWN OF THE LEVEL OF COMMUNITY AND ORGANISATION INTEREST BASED ON DISTANCE OF SUBMISSIONS FROM THE PROPOSAL SITE

2.4.2 Key issues in each precinct

The key issues raised in the Albury, Lockhart–Greater Hume, Wagga Wagga and Junee precincts are shown in Figure 2-7.

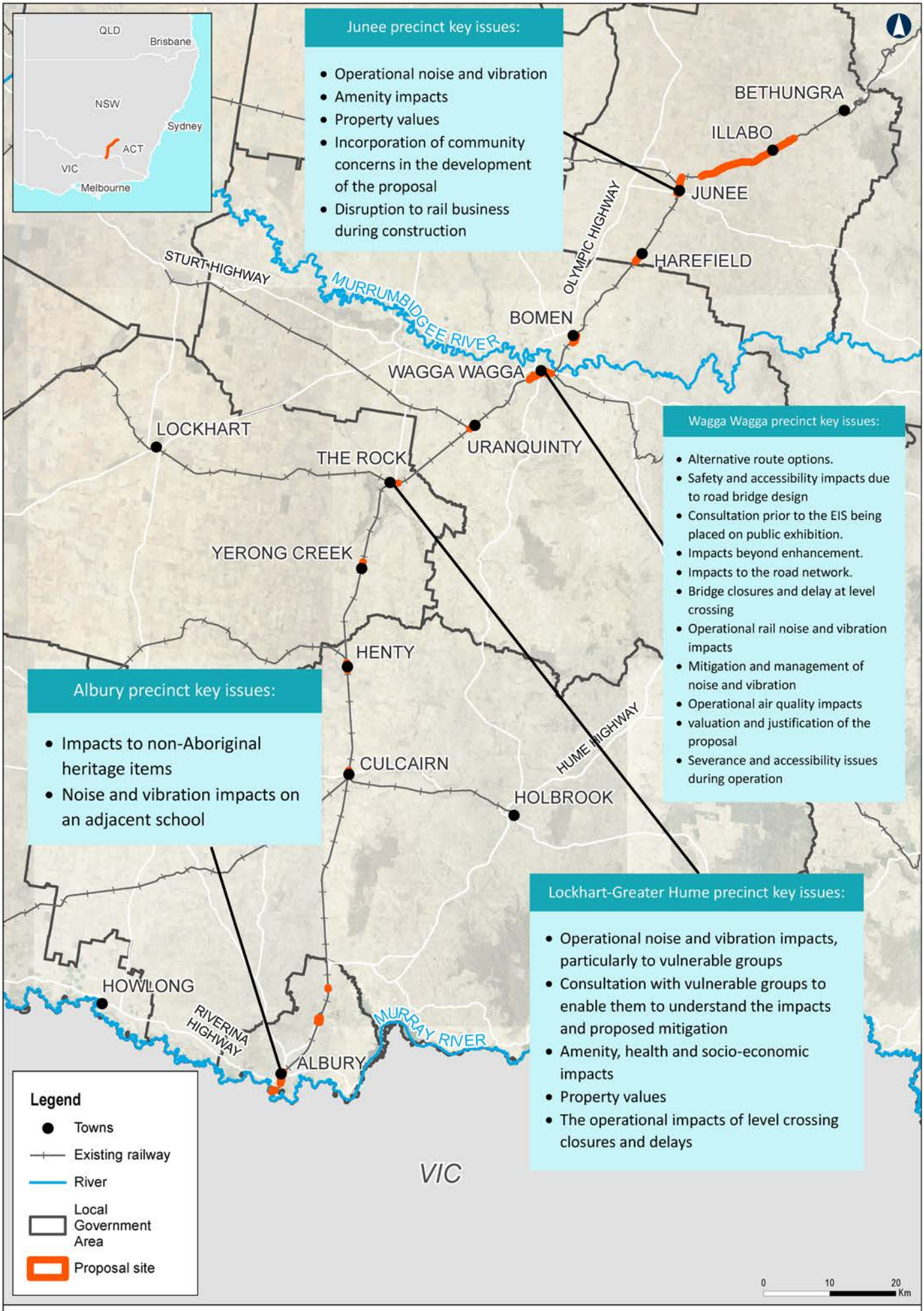


Figure 2-7 Key issues raised in each precinct

Data Sources: ARTC, NSWSS

Coordinate System: GDA 1994 MGA Zone 55
Scale: 1:750,000
Paper size: A3
Date: 24/10/2023

210_EAP_F0207_Keyissuesraisedineachprecinct_r1v1.mxd

2.5 Public authority submissions

2.5.1 Summary of submissions

Submissions were received from three local councils in response to the EIS during the exhibition period:

- Lockhart Shire Council
- Wagga Wagga City Council
- Junee Shire Council.

The submissions received from public authorities were reviewed, and each identified issue was summarised and addressed. A response to each public authority submission is in section 4.3.

2.6 NSW Government department or agency advice

Advice was received from the following eight NSW Government departments and agencies in response to the EIS during the exhibition period:

- NSW Department of Planning and Environment—Biodiversity Conservation and Science Directorate (provided separate advice for flooding and biodiversity)
- NSW Department of Planning and Environment—Crown Lands
- NSW Department of Planning and Environment—Heritage NSW (provided separate submissions for Aboriginal heritage and non-Aboriginal heritage)
- NSW Department of Planning and Environment—Water
- NSW Department of Primary Industries—Agriculture
- NSW Department of Primary Industries—Fisheries
- NSW Environmental Protection Authority
- Transport for NSW.

The advice received from these departments and agencies were reviewed and each identified matter was summarised and addressed. A response to each department and agency is provided in chapter 5: NSW Government department and agency advice.

3. Actions taken since exhibition

This chapter details the activities that have been carried out by since the public exhibition of the EIS, including changes to the proposal, further engagement and the further assessment.

3.1 Detailed responses to submissions

3.1.1 Detailed response to hydrology and flooding matters

A detailed response to hydrology and flooding matters has been prepared to address the specific matters raised by NSW Department of Planning and Environment—Biodiversity Conservation and Science Directorate (DPE—BCS) in its advice on the EIS, and is presented in Appendix D.

The response includes revised modelling for Uranquinty Yard and Wagga Wagga Yard enhancement sites, including:

- modification to the flood model approach including:
  - for Uranquinty Yard clearances

    adjustment of the rail height in the model using the proposed track lift values

    the inclusion of the proposed levee along Sandy Creek as described in The Tarcutta, Ladysmith and Uranquinty Flood Floodplain Risk Management Studies and Plans (Wagga Wagga City Council and GRC Hydro, 2021)
  - for Wagga Wagga Yard clearances

    adjustment of the rail height in the model using the proposed track lift values to accurately reflect the ridge line created by the track lift

    the inclusion of an existing culvert at the eastern end of the enhancement site
- a review of the model results for annual exceedance probability (AEP) events and the probable maximum flood (PMF) events
- assessment of the consistency of possible flood impacts with quantitative design limits (QDLs) (or impact criteria) adopted for the proposal by Inland Rail
- a peer review conducted by BMT to verify the suitability and reliability of the models
- identification of additional mitigation as required.

A full response to the matters raised in the DPE—BCS advice is provided in section 5.1.

3.1.2 Detailed response to Aboriginal cultural heritage matters

A detailed response to Aboriginal cultural heritage matters has been prepared to address specific matters raised by Heritage NSW in its advice to the DPE on the EIS and is presented as Appendix E. The detailed response includes additional consideration of Aboriginal heritage potential in the vicinity of the Billy Hughes bridge enhancement site and provides specific responses to the requirements of the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW, 2010b).

A full response to the matters raised then the Heritage NSW advice is provided in section 5.3.

3.1.3 Detailed response to non-Aboriginal heritage matters

A detailed response to non-Aboriginal cultural heritage matters has been prepared to address specific matters raised by Heritage NSW in its advice to the DPE on the EIS and is presented as Appendix F: Detailed Response to Non-Aboriginal Heritage Matters of this Submissions Report.

A full response to the matters raised in the Heritage NSW advice is provided in section 5.4.

3.1.4 Detailed response to non-rail noise matters

A detailed response for noise and vibration (non-rail) has been prepared to address the specific matters raised by the NSW Environment Protection Authority (NSW EPA) in its advice to DPE on the EIS and is presented as Appendix G. The detailed response includes:

- the correction of discrepancies noted for noise management levels in Table 4.5 of Technical Paper 6 related to Noise Catchment Area 1 and Noise Catchment Area 14, including recalculation of modelling and update of construction noise assessment results
- further discussion regarding the approach to mitigation to address construction noise and vibration impacts, specifically the use of all feasible and reasonable mitigation measures.

A full response to the matters raised in the NSW EPA advice is provided in section 5.8.

3.2 Description of directed additional assessments

Additional assessment of the proposal has been completed in response to issues raised in community and stakeholder submissions and as further directed by DPE in the Preferred Infrastructure Report request letter dated 13 April 2023. The additional assessment focuses on the potential impacts of the proposal associated with traffic and transport, noise and vibration, and air quality as described Table 3-1.

Detailed assessment reports are available in Appendix C, Appendix D and Appendix E of the Preferred Infrastructure Report.

TABLE 3-1: SUMMARY OF ADDITIONAL ASSESSMENTS

Aspect	Summary of additional assessment
Traffic and transport	▸ Further assessment of construction and operational traffic impacts and mitigation measures informed by revised traffic modelling. ▸ Further justification for proposed rail crossing treatments, considering the impacts on traffic, road safety, emergency services, and surrounding residents and business operators. ▸ Further consultation with road managers regarding the further traffic impact assessment and rail crossing and bridge design details.
Noise and vibration (operational rail)	▸ A supplementary rail operational noise assessment of the full length of the rail corridor between Albury and Illabo, to determine the extent of the impacts and identify sensitive receivers at risk of impact and assess potential mitigation measures.
Air quality	▸ A quantitative assessment of anticipated air quality impacts of the proposal, considering receivers representative of the proposal's rural and urban environments between Albury and Illabo.

3.3 Changes to the proposal

Since the exhibition of the EIS, changes have been made to the proposal design in response to concerns raised by the community and stakeholders, and in response to further development of the proposal design. The Preferred Infrastructure Report includes assessment of the changes to the proposal, and identifies any changes or additions to the mitigation measures as required.

Changes to the proposal are outlined in Table 3-2. The assessment of the proposed changes is in chapter 7 of the Preferred Infrastructure Report.

TABLE 3-2: SUMMARY OF CHANGES TO THE PROPOSAL

Proposal element	Summary of the exhibited proposal	Summary of the proposed changes
Pedestrian bridges and pedestrian access on road bridges	Replacement of existing pedestrian bridges over the rail corridor with new structures that provide *Disability Discrimination Act 1992* (DDA) compliant access, including at: ▸ Albury Station pedestrian bridge ▸ Cassidy Parade pedestrian bridge ▸ Wagga Wagga Station pedestrian bridge. Replacement of existing road bridges over the rail corridor with integrated shared paths that did not provide DDA-compliant access, including at: ▸ Edmondson Street bridge ▸ Kemp Street bridge.	To address stakeholder feedback, including the need for accessible pedestrian access on the road bridges, the designs at Edmondson Street and Kemp Street bridges have been amended to be compliant with requirements for disability access and improved connectivity to the surrounding pedestrian networks. Both the Edmondson Street and Kemp Street bridges now provide separated pedestrian structures. Updated designs of pedestrian bridges have also been provided, including update of the Albury Station pedestrian bridge in Albury and the Cassidy Parade pedestrian bridge in Wagga Wagga to improve connectivity and meet the proposal objectives.
Correction at Riverina Highway bridge	A collision protection wall was included along the eastern boundary of the rail corridor in Albury near The Scots School, in addition to those proposed at the Riverina Highway bridge where the track would be lowered.	The design does not require a collision protection wall at the eastern boundary of the rail corridor and a wall is not proposed.
Additional bund at Pearson Street bridge	There is a risk of localised flooding upstream of the railway corridor in Wagga Wagga affecting the railway at the Pearson Street bridge due to the track lowering at this location. To mitigate this risk, a 0.5 m high bund had been proposed on the south-eastern cutting of the rail corridor in the EIS.	At the request of Wagga Wagga City Council, a second bund is now proposed on the north-eastern cutting of the rail corridor and would generally have consistent dimensions with, and be parallel to, the southern bund.
Shire and Carter Property access road (LX605)	This level crossing would be modified to accommodate the realigned track and be upgraded from a passive to an active level crossing. The existing level crossing has a non-compliant sight distance and has a short stacking issue for a 26 m B-Double design vehicle. To eliminate these existing issues, the exhibited EIS proposed additional storage lanes and a concrete island to be established on the level crossing approach from the Olympic Highway to limit movements to be left-in and left-out only.	Following receipt of stakeholder feedback on this level crossing, the design solution has been revised to address the existing non-compliances. To accommodate a level crossing at this location that does not impact on the Olympic Highway, the track would be realigned. The new track would be realigned by up to 16 m from the current level crossing location. The design of the level crossing would be modified to accommodate the realigned track and upgraded from a passive to an active level crossing as previously proposed in the exhibited EIS.
Proposal site	The area that would be directly impacted by the enhancement works for the Albury to Illabo section of Inland Rail. The site includes the location of construction worksites, land needed temporarily to build the infrastructure, operational rail infrastructure, track realignment, new bridge structures, level crossings and other ancillary infrastructure.	The proposal site has been changed since exhibition of the EIS to accommodate proposed design changes, respond to stakeholder consultation and include additional construction areas. The land requirements of the proposal site have been changed through further design and construction planning. Consequently, the area needed for the proposal site has also been revised.

Proposal element	Summary of the exhibited proposal	Summary of the proposed changes
Construction schedule	Subject to planning approval and consultation with the construction contractor (once appointed), construction is planned to commence in early 2024 and will be completed by mid-2025. The staging of works is generally focused around 60-hour rail possessions, which typically occur twice a year. The duration of works at each enhancement site would vary according to the required construction activities. Enhancement sites would be progressively commissioned and rehabilitated as works are completed.	The construction schedule has been refined to reflect further detailed construction planning that has occurred since the exhibition of the EIS, and changes to the proposal discussed in the Preferred Infrastructure Report. Subject to approval, detailed design and construction planning for the proposal would now commence shortly after, in mid-2024, and is expected to take about 30 months for completion by the end of 2026, with enhancement sites progressively commissioned on completion of construction. This Submissions Report and the Preferred Infrastructure Report have retained the same assessment years as used in the EIS, being 2020 as the existing scenario, 2025 as the opening year and 2040 as the peak of Inland Rail operations, in order to maintain a consistent reference point.

3.4 Further engagement

Engagement undertaken by ARTC with key stakeholders since the exhibition of the EIS is summarised in Table 3-3.

TABLE 3-3: SUMMARY OF ENGAGEMENT UNDERTAKEN WITH KEY STAKEHOLDERS SINCE THE EXHIBITION OF THE EIS

Stakeholder	Engagement carried out	Engagement outcome
Albury City Council	A letter was sent to Albury City Council on 4 November 2022, which provided an update on the proposal following the close of the public exhibition of the EIS and confirmed ARTC's commitment to consulting with Albury City Council.	Albury City Council acknowledged the letter on 7 November 2022 and advised they will await contact from ARTC regarding further flood assessment considerations. ARTC will continue engaging with Albury City Council regarding the design and flood assessment process of the proposed stormwater storage and pump system at the Riverina Highway bridge enhancement site. ARTC has negotiated an interface agreement with Albury City Council, which details arrangements for managing design outcomes and the effects of construction on Albury City Council's infrastructure and assets. Through this agreement, and ongoing discussions and detailed design reviews, ARTC will continue to resolve issues raised by Albury City Council.
Heritage NSW—Non-Aboriginal	An email was sent to Heritage NSW on 13 December 2022, which provided a preliminary response to feedback provided to ARTC by Heritage NSW.	A response was received from Heritage NSW on 20 April 2023 that reiterated Heritage NSW's position that test excavations should be carried out pre-approval at the Albury Yard and Yerong Creek to confirm the presence of potential archaeological potential. An addendum assessment was provided to Heritage NSW on 3 May 2023, which provided further assessment of the Albury Yard and Yerong Creek enhancement sites. A meeting was held on 4 May 2023 between ARTC, Heritage NSW and DPE. Heritage NSW requested ARTC to investigate mitigation measures further and whether it would be possible to obtain any additional historic aerial photos or conduct Ground Penetrating Radar. Further assessment was carried out for the Albury Yard and Yerong Creek enhancement sites and documented in a response to Heritage NSW on 24 August 2023, including the *A2I Non-Aboriginal Heritage Addendum*, prepared by GML, dated 14 August 2023 and *A2I Yerong Creek Ground Penetrating Radar Report*, prepared by Everick Heritage, dated 14 August 2023. The assessment did not identify remnant structures at Yerong Creek and confirmed the locations of historic broad-gauge track at Albury Yard, with minimal risk of impact. The relevant mitigation measures have been revised accordingly. Feedback from Heritage NSW on the addendum and mitigation measures has not been received for inclusion in the Submission Report. Further engagement will be undertaken as appropriate.
Heritage NSW—Aboriginal	An email was sent to Heritage NSW on 13 December 2022, which provided a preliminary response to feedback provided to ARTC by Heritage NSW.	Feedback from DPE on 14 April 2023 indicated that Heritage NSW still maintains the position that test excavations should be carried out prior to construction at areas of archaeological potential. An addendum assessment was provided to Heritage NSW on 3 May 2023, which provided a detailed response to the issues raised in Heritage NSW's agency advice on the EIS. A meeting was held on 22 May 2023 between ARTC, Heritage NSW and DPE. This meeting confirmed that the mitigation measures to protect areas of archaeological potential that were presented in the meeting could be incorporated into the Heritage Management Sub-Plan of the Construction Environmental Management Plan and that no further investigation was required at this time.

Stakeholder	Engagement carried out	Engagement outcome
Junee Local Emergency Management Committee	A letter was sent to the Junee LEMC on 4 November 2022, which: ▸ provided an update on the proposal following the close of the public exhibition of the EIS ▸ outlined the flood impact assessment carried out as part of the EIS ▸ offered an online briefing to the Junee Local Emergency Management Committee on the key outcomes of the flood assessment and discussion on potential traffic impacts on emergency services ▸ a briefing has been scheduled with various Emergency Services, including members of the Junee Local Emergency Management Committee in October 2023 regarding the findings of further assessment carried out in the Preferred Infrastructure Report.	No response has been received from the Junee Local Emergency Management Committee in relation to the correspondence from 4 November 2022. Refer to section 1.5.2 for dates on consultation with emergency services.
Junee Shire Council	Junee Shire Council sent ARTC a copy of the *Junee Freight and Transport Plan—Traffic Study Report* (the Traffic Study Report) and an accompanying letter on 28 September 2022, which advised that it was on public exhibition until 27 October 2022 and sought ARTC feedback. Junee Shire Council flagged matters relating to the crew changeover at Junee Station that can close the Olympic Highway level crossing for periods of time, the potential solution to relocate this changeover area and the impacts that the increase in train numbers from Inland Rail operations would have on Junee. ARTC responded via letter to Junee Shire Council on 28 November 2022, which provided additional information and acknowledged Junee Shire Council's comments on train movements and connectivity.	ARTC has negotiated an interface agreement with Junee Shire Council that details arrangements for managing design outcomes and the effects of construction on Junee Shire Council's infrastructure and assets. Through this agreement, and ongoing discussions and detailed design reviews, ARTC will continue to resolve issues raised by Junee Shire Council. Regarding a potential relocation of the driver changeover area, ARTC has explored preliminary options and carried out consultation with rail operators. At this stage, a solution could not be reached between all involved parties. A potential relocation solution would be contingent on being compatible with the network configuration and safety of train crews in the context of an operating rail corridor. In accordance with mitigation measure SI9, ARTC will continue to investigate opportunities to reduce the duration of level crossing closures at this level crossing. Should this prove feasible, ARTC would undertake any necessary works through separate approvals, as required. To minimise impacts from an increase in train numbers during the operation of Inland Rail, ARTC will continue to monitor and manage the growth of train movements into the future, with a focus on the safe operation of the level crossing, and will maintain engagement with Junee Shire Council in this regard. With regard to the Kemp Street bridge replacement, ARTC will further engage with Junee Shire Council on the design outcomes and design vehicle requirements throughout the detailed design phase of the project, consistent with mitigation measures TT1 and TT18 (now TT12) within the A2I EIS and the arrangements within the Master Inland Rail Development Agreement.

Stakeholder	Engagement carried out	Engagement outcome
Junee Railway Workshop Qube Southern Shorthaul Railroad	A meeting was held between ARTC, Junee Railway Workshop, Qube and Southern Shorthaul Railroad on 12 October 2022 to discuss concerns regarding disruption to their businesses during construction, when their trains are unable to operate during possessions, and track occupancy authorisations. A second meeting was held onsite at the Junee Railway Workshop on 2 November 2022 with ARTC, Junee Railway Workshop and Qube.	It was confirmed that, typically, only one of the two arrival tracks to the Junee Railway Workshop would be impacted during the construction of the Kemp Street bridge. As access to the other arrival track would be maintained, impacts to both the Junee Railway Workshop and the businesses that access it would be minor. The exception is during a 60-hour rail possession where all services are stopped; however, this stoppage occurs under the existing operational arrangements. ARTC will continue to engage with Junee Railway Workshop, Qube and Southern Shorthaul Railroad throughout construction to manage potential access impacts.
NSW Department of Planning and Environment—Biodiversity Conservation and Science Directorate (DPE—BCS)	An email was sent to DPE— BCS on 11 November 2022, which provided a preliminary response to feedback provided to ARTC by DPE—BCS.	BCS noted ARTC's response on 18 November 2022 and advised that it would review the revised Biodiversity Development Assessment Report when the Submissions Report has been formally issued.
NSW Department of Planning and Environment—Crown Lands (DPE— Crown Lands)	An email was sent to DPE—Crown Lands on 11 November 2022, which provided a preliminary response to feedback provided to ARTC by DPE—Crown Lands.	DPE—Crown Lands responded via email on 31 March 2023 to confirm that the preliminary response adequately addressed the feedback.
NSW Department of Primary Industries (Fisheries) (DPI Fisheries)	An email was sent to DPI Fisheries on 11 November 2022, which provided a preliminary response to feedback provided to ARTC by DPI Fisheries.	DPI Fisheries responded via email on 14 November 2022 to confirm that the preliminary response adequately addressed the feedback.
NSW Department of Planning and Environment (Water) (DPE Water)	An email was sent to DPE Water on 15 November 2022, which provided a preliminary response to feedback provided to ARTC by DPE Water.	DPE Water responded via email on 15 November 2022 to communicate their intention to review the final Submissions Report due to time constraints.

Stakeholder	Engagement carried out	Engagement outcome
NSW State Emergency Service	A letter was sent to the NSW State Emergency Service on 4 November 2022, which: ▸ provided an update on the proposal following the close of the public exhibition of the EIS ▸ outlined the flood impact assessment carried out as part of the EIS ▸ requested assistance from the NSW State Emergency Service in connecting to relevant NSW State Emergency Service community action groups ▸ offered an online briefing to the NSW State Emergency Service on the key outcomes of the flood assessment and request feedback to be considered ▸ a briefing has been scheduled with various Emergency Services, including the NSW State Emergency Service in October 2023 regarding the findings of further assessment carried out in the Preferred Infrastructure Report.	No response has been received from the NSW State Emergency Service in relation to the correspondence from 4 November 2022.
Riverina Murray Regional Emergency Management Committee (REMC)	A letter was sent to the Riverina Murray Regional Emergency Management Committee on 4 November 2022, which: ▸ provided an update on the proposal following the close of the public exhibition of the EIS ▸ outlined the flood impact assessment carried out as part of the EIS ▸ offered an online briefing to the Riverina Murray Regional Emergency Management Committee on the key outcomes of the flood assessment and discussion on potential traffic impacts on emergency services ▸ a briefing has been scheduled with various Emergency Services, including member of the Riverina Murray Regional Emergency Management Committee in October 2023 regarding the findings of further assessment carried out in the Preferred Infrastructure Report.	No response has been received from the Riverina Murray Regional Emergency Management Committee in relation to the correspondence from 4 November 2022. Refer to section 1.5.2 for dates on consultation with emergency services.

Stakeholder	Engagement carried out	Engagement outcome
Wagga Wagga City Council	ARTC sent a letter to Wagga Wagga City Council on 4 November 2022, which: ▸ provided an update on the proposal following the close of the public exhibition of the EIS ▸ requested confirmation of details relating to Wagga Wagga City Council flood mitigation projects for consideration in further assessment within the Submissions Report ▸ confirmed ARTC's commitment to close liaison with Wagga Wagga City Council during detailed design/pre-construction to ensure complementary flooding outcomes are achieved with proposed Wagga Wagga City Council flood mitigation projects.	ARTC signed an interface agreement with Wagga Wagga City Council in June 2023, which is relevant to parts of the proposal that have a significant interface with or would impact on Council assets. Through this agreement, and ongoing discussions and detailed design reviews, ARTC will continue to resolve issues raised by Wagga Wagga City Council.
	Wagga Wagga City Council sent ARTC a letter on 8 November 2022, which: ▸ provided a summary of concerns and engagement with ARTC related to the design of the following enhancement sites: Pearson Street bridge, Cassidy Parade pedestrian bridge and Edmondson Street bridge ▸ reiterated key issues from the Wagga Wagga City Council submission on the EIS.	As above.
	▸ ARTC issued Wagga Wagga City Council a series of letters on 15 August 2023 progressing key items at Pearson Street bridge, Cassidy Parade pedestrian bridge and Edmondson Street bridge following the establishment of the interface agreement.	As above.
	▸ Wagga Wagga City Council responded on 25 and 27 September 2032 acknowledging ARTC's correspondence.	Aspects are to progress in line with the interface agreement in respect of the Pearson Street site. Council confirmed the Edmondson Street speed environment as proposed by ARTC (50 km/h design speed and 50 km/h posted speed) was consistent with Austroads guidelines and is acceptable, with ARTC to complete a site-specific safety assessment and adopt relevant safety measures in detailed design.

4. Response to submissions

4.1 Community submissions

4.1.1 Strategic need

4.1.1.1 Justification and need for the Inland Rail program

Submission ID numbers

3, 14, 91, 116, 129, 141, 143.

Summary of issues

Seven submissions provided comment on the justification for Inland Rail. One of these submissions was supportive of the need, objectives and benefits of the Inland Rail as described in the EIS.

A number of submissions questioned the need and justification for the proposal and Inland Rail. The concerns raised were that the:

- business case for Inland Rail is over seven years old and is now outdated
- return on investment of Inland Rail would not be realised until close to the end of the operational life of the project
- cost of Inland Rail has exceeded the budget and would have detrimental impacts on the taxpayer
- funding approach for this proposal and Inland Rail is unclear
- predicted freight demand may not be accurate.

One of the submissions recommended Inland Rail start with smaller trains to meet the actual freight demand and increase to double-stacked trains when required. Another submission also recommended operating smaller trains as part of Inland Rail as it would increase the number of operational jobs generated by Inland Rail. One submission raised concerns about who would use Inland Rail and the cost to operate it.

Response

The proposal, and Inland Rail more broadly, is supported and influenced by several long-term strategic plans for transport infrastructure and regional development that have been prepared at the national, state and regional levels. The vision, objectives and development of Inland Rail and the proposal have been undertaken over several years to be consistent with key national and state strategies, policies and plans (described in the EIS Appendix B: Strategic Planning Review). The purpose of the business case was to present an analysis of viability, benefits, costs and risks associated with Inland Rail to inform Australian Government decision-making processes. Inland Rail is one of the Australian Government's largest infrastructure projects and will enable a change to the way freight is moved around the country. Estimates since the *2015 Inland Rail Program Business Case* continue to forecast increases in freight demand (Bureau of Infrastructure and Transport Research Economics, 2022).

The initial investments in Inland Rail have allowed the constituent Inland Rail projects to progress from simple concept ideas to reference design and detailed designs. Each of these phases of a project change the forecast costs. Like many projects, the cost and schedule has been influenced by external factors, including pressure on skills and labour, and increased cost of materials and expertise.

Demand for freight transport between Melbourne to Brisbane via inland New South Wales is expected to grow substantially over coming decades, from approximately 4.9 million tonnes in 2016 to around 13 million tonnes, or 1.1 million containers by 2050 (Infrastructure Australia, 2018). The proposal is required to enhance and modify rail and other infrastructure along the Inland Rail corridor to allow and support the safe running of double-stacked freight trains between Albury and Illabo. By maximising the use of the existing rail corridor by providing for double-stacked trains, the proposal would minimise the potential for environmental and community impacts during construction and operation.

4.1.2 Options and alternatives

Submission ID numbers

3, 7, 9, 10, 11, 14, 15, 17, 18, 19, 21, 23, 24, 25, 27, 29, 30, 31, 32, 33, 34, 36, 37, 38, 39, 40, 41, 42, 43, 44, 47, 48, 49, 51, 52, 53, 54, 55, 58, 59, 61, 63, 64, 65, 66, 68, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 82, 83, 84, 86, 87, 89, 90, 91, 93, 94, 95, 97, 98, 100, 101, 106, 109, 111, 112, 114, 115, 116, 118, 120, 121, 122, 123, 124, 125, 126, 127, 128, 130, 131, 132, 133, 136, 137, 138, 139, 140, 141, 142, 143, 145.

Summary of issues

One hundred and one submissions commented on the options and alternatives developed for Inland Rail between Albury and Illabo. Specifically, that:

- a strategic alternative to Inland Rail be developed to address local and regional economic concerns
- the EIS does not consider alternate route options at a local level
- other route options should be considered, including:
  - a bypass of Wagga Wagga to avoid construction and operational impacts along the existing rail corridor and impacts to the viaduct over Murrumbidgee River
  - a bypass of all towns along the Albury to Illabo corridor
  - an alternate route combining Grong Grong, Narrandera and Tocumwal
  - an alternate route between Narrandera and Shepparton.

Some submissions also requested ARTC consider alternative design solutions to local issues, including:

- that the Cassidy Parade pedestrian bridge should connect to Fox Street rather than Brookong Avenue to avoid impacts to residential receivers
- further investigations into level crossing treatments at Bourke Street/Docker Street and Fernleigh Street, Wagga Wagga, including the:
  - threshold for vehicle delay and/or queuing to warrant grade-separation at the level crossings
  - need for an underpass or overpass at the level crossings to address safety and traffic-flow concerns
  - removal of all level crossings in urban areas to address safety concerns.

Response

Strategic alternatives

The strategic alternatives to Inland Rail are summarised in section 6.1 of the EIS. Three strategic options were assessed by the *2015 Inland Rail Program Business Case*:

- progressive road upgrades
- upgrade of the existing east coast railway
- development of an inland railway.

These options were subjected to a rigorous assessment consistent with *Infrastructure Australia's Reform and Investment Framework* (Infrastructure Australia, 2014). The options were assessed against seven equally weighted criteria, which included the fostering of economic growth through improved freight productivity and service quality (including improved reliability and resilience) and the enablement of regional development.

Overall, constructing an inland railway ranked highest, with an average high likelihood of improving outcomes across all criteria, including those related to regional economic growth and development.

Alternate route options, including town bypasses

The development and selection of Inland Rail alignment between Melbourne and Junee is provided in *North–South Rail Corridor Study Executive Report* (Department of Transport and Regional Services, 2006) and *Melbourne–Brisbane Inland Rail Alignment Study* (ARTC, 2010), and is summarised in section 6.2 of the EIS.

Within the *North–South Rail Corridor Study Executive Report* (Department of Transport and Regional Services, 2006), the feasibility of 136 possible route options was investigated within a 'north–south rail corridor' covering all sections of the existing rail network in Victoria, New South Wales and Queensland that currently form, or could potentially form, part of a freight route between Melbourne and Brisbane.

The *Melbourne–Brisbane Inland Rail Alignment Study* (ARTC, 2010) noted that, with the combination of numerous route options and sections, there were over 50,000 possible options for the route between Melbourne and Brisbane. As it was not feasible to analyse each possible option, two key criteria (capital cost and journey time) were used to establish a shortlist of route options for consideration.

Extensive consultation with key market participants and other industry stakeholders has been undertaken to develop the service offering and scope of Inland Rail to ensure the infrastructure meets market needs in terms of service specification and performance. The underpinning service offering of the Inland Rail program is new and upgraded infrastructure that would enable road-competitive rail services with a less than 24-hour linehaul transit time between Melbourne and Brisbane, 98 per cent reliability, competitive costs and freight availability in line with market needs.

To achieve the targets within the service offering, the *2015 Inland Rail Program Business Case* identified the scope of Inland Rail to be to:

- optimise the use of existing rail infrastructure
- be compatible and interoperable with high-productivity train operations in the east-west corridor (to Adelaide and Perth)
- bypass bottlenecks on the congested metropolitan Sydney rail network
- optimise connections with regional and local rail and road networks
- maximise value for money in meeting the needs of the market.

As such, approximately 65 per cent of the Inland Rail alignment uses existing rail corridors to make the best possible use of earlier investments in national and state rail corridors and freight networks, and minimise the environmental and community impacts associated with creating new rail corridors.

Two main route alignments were considered between Melbourne and Junee, which prioritised the use of existing rail infrastructure—one alignment was via Shepparton and the other via Albury. Either alignment would be an enhancement or upgrade project, where only some existing infrastructure is required to be modified to accommodate double-stacked freight trains, and minimise the need to establish new rail corridors.

The alignment via Albury was selected as the preferred option, as described in section 6.2 of the EIS. Routes through Albury offered superior outcomes for the key criteria of capital costs and transit time. Although the faster Shepparton route offered a transit time that would be quicker by about 30 minutes, this route attracted a significant extra capital cost (adding over $900 million to the proposal relative to Albury alternatives).

Consideration of a greenfield alignment (either in part or in entirety) for A2I is not in accordance with the objectives and Business Case of Inland Rail (ARTC, 2015), which aims to maximise the use of existing infrastructure where possible, and having an overall Inland Rail alignment with a less than 24-hour transit time between Melbourne and Brisbane. Recommendation 7 of the Independent Review of Inland Rail Report (Schott, 2023) states ‘The service offering proposed by ARTC, and supported by business, that offers a reliable 24-hour transit service on double-stacked trains of 1,800 metres length should be accepted’. The review further concluded ‘In view of the extensive studies and consideration made to choose the initial route for Inland Rail there is no reason for route change in any major way’. ARTC notes the Australian Government’s Response to the Independent Review of Inland Rail (Australian Government, 2023) for Recommendation 7, ‘The Australian Government understands that the service offering is supported by industry and business. It notes, however, that the service offering should not be supported beyond Beveridge in Victoria and Ebenezer in Queensland’.

Initial clearance assessments were carried out to determine which existing infrastructure did not provide the necessary clearances for the operation of double-stacked freight trains (referred to as enhancement sites). The options assessment for A2I involves the preferred design solution at each enhancement site (e.g. track lowering or bridge replacement), as described in section 6.3 of the EIS. Consideration and analysis of a bypass of towns was not contemplated, would not be proportional to the assessed effects of the proposal along the existing freight rail line, nor does it achieve the objective of maximising the use of existing infrastructure.

There are no plans to consider changes to the A2I alignment from that endorsed by the Australian Government. The route was agreed between the Australian and New South Wales governments in the Bilateral Agreement for Inland Rail, signed on 4 May 2018.

Cassidy Parade pedestrian bridge

Cassidy Parade pedestrian bridge would be replaced in its current location to ensure a similar level of connectivity is maintained in the long term and that it aligns with Wagga Wagga City Council’s Wagga Wagga Active Travel Plan. The bridge (and ramps on approach) would be taller than the current structure, which, in the absence of suitable mitigation measures, would impact the privacy of adjoining residences. As detailed in the Wagga Wagga landscape and urban design report (provided in EIS Technical Paper 10: Landscape and visual impact assessment), the need for privacy screens to minimise overlooking into adjoining residences has been identified, along with design responses to minimise light spill and to avoid creating places of concealment under ramp structures. These responses would be further developed in accordance with the urban design and landscape plan (mitigation measure LV2) and through the community wellbeing plan (mitigation measure SI7).

An updated design of the Cassidy Parade pedestrian bridge has been prepared as part of the Preferred Infrastructure Report. Refer to section 3.2.1.1 of the Preferred Infrastructure Report for further discussion.

Grade separation and level crossing treatments

Level crossings that require no work as a result of the project do not form part of the proposal scope. Only level crossings that are required to be modified to accommodate double-stacked freight trains are included in the proposal scope, e.g. changes to accommodate track realignment.

ARTC use a consistent safety-based methodology to develop all proposed road–rail interface treatments for all crossings within the Inland Rail scope. This is documented in Appendix A of the EIS Technical Paper 1: Transport and traffic (Technical Paper 1). This is aligned with rail safety national law and Office of the National Rail Safety Regulator (ONRSR) guidelines, which require the risks to safety to be minimised so far as is reasonably practicable. The Office of the National Rail Safety Regulator administers and regulates the safety of the Australian railway industry under rail safety national law. This methodology was audited by the Office of the National Rail Safety Regulator in June 2020 and there were no findings or recommendations. The audit report was also provided to Transport for NSW. The proposed treatments (flashing lights, bells and boom barriers) are the highest form of level crossing control available under AS1742.7-2016 *Manual of uniform traffic control devices Part 7: Railway crossings* (Standards Australia, 2016).

The Bourke Street/Docker Street level crossing and the Fernleigh Road level crossing in Wagga Wagga do not require modification and are not in the scope of the proposal. These level crossings are located on local roads and any modification considered appropriate would need to be carried out by the road authority, Wagga Wagga City Council.

The Sladen Street level crossing (LX 625) is a public level crossing in Henty. There is an existing 'short-stacking' deficiency for heavy vehicles at this level crossing and the proposed modifications at this level crossing to accommodate the realigned track does not introduce nor exacerbate this deficiency. ARTC commits to consult with Transport for NSW to determine a suitable solution at LX 625 during detailed design.

The level crossing on Shire and Carter Property access road (LX605) is a licensed, private level crossing, which provides access to a private property and to the Junee Shire Council's quarry. Following the EIS's exhibition, ARTC investigated alternative design solutions at LX605 in consultation with the landowner. As detailed in section 3.2.1.4 of the Preferred Infrastructure Report, a section of track, as well as the level crossing, would be realigned about 16 m south of the existing to address the short-stacking issue between the crossing and the Olympic Highway. The level crossing would still be upgraded from a passive to an active level crossing as previously proposed in the exhibited EIS. Refer to section 3.2.1.4 of the Preferred Infrastructure Report for further information.

The Olympic Highway at Junee level crossing (LX 607) does not require modification and is not in the scope of the proposal, and grade separation was not considered.

4.1.3 Engagement

4.1.3.1 Adequacy of consultation (prior to EIS display)

Submission ID numbers

1, 18, 27, 43, 54, 73, 91, 95, 106, 109, 122, 129, 131, 132, 133.

Summary of issues

Fifteen submissions raised concerns about the adequacy of community and stakeholder consultation prior to the display of the EIS.

Many of these submissions stated that they had little-to-no knowledge of the proposal prior to the EIS being placed on display. One submission stated that the approach of using geo-targeted online and social media advertising to reach the local community was not an adequate approach as some residents located near the proposal were missed. Two submissions raised concerns that no direct engagement had been undertaken with residents in Wagga Wagga who had been identified as being potentially impacted in the operational noise assessment.

Regarding the consultation undertaken, multiple submissions expressed that the communications received during this time lacked transparency and were confusing. One submission particularly stated that the there was no detailed explanation of the proposal and its associated impacts on the community. It was stated that there was minimal opportunity for the community to raise their concerns and make objections to the proposal in a reasonable amount of time.

One of these submissions stated that the community consultative committee for the proposal has met six times since establishment in February 2021 and ARTC has refused requests to engage in a public meeting. Another submission stated that the community and business groups have raised complaints about the consultation process for the proposal. One submission expressed that there is insufficient evidence to show ARTC has undertaken adequate consultation with the residents in the community.

Response

A proposal to modify existing infrastructure within the rail corridor between Albury and Illabo to accommodate double-stacked freight trains has been in the public domain since 2017. Between 2017–2020, the proposal was subject to a different environmental approval pathway, which was via a Review of Environmental Factors under Division 5.1 of the EP&A Act, as opposed to an EIS via Division 5.2 of the EP&A Act. During this time, ARTC held or attended over 20 community events to provide information on the proposal and collect feedback on early designs.

The proposal was declared SSI in May 2020 and an environmental approval pathway commenced with EIS preparation under Division 5.2 of the EP&A Act. Throughout 2020–2022, ARTC conducted extensive consultation with local landowners, local communities, industry groups, elected representatives, and councils, including Albury, Greater Hume, Lockhart, Wagga Wagga and Junee councils. Engagement activities carried out in this time were used to promote awareness and seek feedback on the design and potential impacts of the proposal. All engagement activities are documented in detail in the EIS Appendix F: Engagement Report.

Geo-targeted advertising via social media was one of the multiple engagement tools that ARTC used when advertising information sessions. Advertising was carried out via varying formats to reach stakeholders through their preferred engagement format, such as the stakeholder newsletter, emails, newspaper advertisements, social media, and media releases. Where geo-targeted social media advertisements may not have reached some stakeholders located in proximity to the proposal, advertising via the other engagement formats provided additional opportunities to inform stakeholders of the proposal and information sessions.

Information regarding the scope of the proposal is available on the Inland Rail website, as well as an interactive map where stakeholders can add comments and questions, which are responded to publicly by the ARTC team. Other opportunities to raise concerns and make objections included community information sessions held to discuss the 30 per cent and 70 per cent design. The finalisation of the design as part of the 100 per cent design incorporated community feedback as far as practical, as described in section F6.2 of the EIS Appendix F: Engagement Report.

The engagement carried out until the time of the exhibition of the EIS is documented in the EIS Appendix F: Engagement Report. The engagement for the proposal has been carried out in accordance with the SEARs and relevant engagement guidelines, most notably *Undertaking Engagement Guidelines for State Significant Projects* (DPE, 2021a). A public town-hall style meeting was not held, as more targeted meetings were held on key issues with the intention to provide more detailed information on the design and potential impacts of the proposal. Stakeholders did, and continue to, have the opportunity to raise questions and concerns directly with ARTC via phone, email and the enquiry page on the Inland Rail website, with the contact information as follows:

Phone call: 1800 732 761 (toll-free)

Email: inlandrailenquiries@artc.com.au

Inland Rail website enquiry page: **inlandrail.artc.com.au/contact/**.

4.1.3.2 Community's level of influence on the proposal

Submission ID numbers

11, 99, 103, 115, 132.

Summary of issues

Five submissions raised concerns that the feedback from the local community on the proposal has not been given due consideration by ARTC—in particular, the feedback from residents along the rail corridor and in Wagga Wagga.

Response

As per DPE's *Community Participation Plan and Undertaking Engagement Guidelines for State Significant Projects* (DPE, 2021a), the preparation of the EIS involved an iterative process of impact assessment and design refinement, development of mitigation measures and consultation with the community, stakeholders and government agencies. As the proposal is an enhancement project, there are limited opportunities for substantive alterations and additions to the design at enhancement sites due to private property, environmental and engineering constraints. The level of community influence on the design of the proposal has generally encompassed changes to the design, such as changes to address amenity and pedestrian connectivity impacts. These limitations have been outlined previously in consultation information provided to the public, including residents in Wagga Wagga.

Section 5.3.2 of the EIS describes how the proposal has responded to stakeholder feedback to avoid and minimise impacts on the local and regional environment, and impacts on the community and landowners, as far as practicable. This includes how stakeholder feedback has been incorporated directly into the design process at Wagga Wagga. Engagement carried out since the exhibition of the EIS is further detailed in section 1.5 and section 3.4 of this Submissions Report.

4.1.3.3 Engagement with local councils

Submission ID numbers

32, 83.

Summary of issues

Two submissions raised concerns regarding lack of engagement with local councils. One of the submissions raised concerns that the consultation with Wagga Wagga City Council was inadequate. The submission stated that ARTC had not engaged with Wagga Wagga City Council and had provided them with insufficient information on the proposal. Another submission was concerned Wagga Wagga City Council had not attended the Community Consultative Committee meetings and community sessions.

Response

As outlined in Appendix F: Engagement Report of the EIS, a total of 22 meetings occurred with Wagga Wagga City Council in relation to the reference design and EIS between 2020 to 2022. A further 10 meetings occurred during preliminary consultation before 2020.

Wagga Wagga City Council was provided the opportunity to review and provide comments on the reference design at the three key development stages and the appointed Wagga Wagga City Council Community Consultative Committee representative was invited to attend all Community Consultative Committee meetings.

Engagement with Wagga Wagga City Council has been ongoing as part of the Preferred Infrastructure Report. Refer to section 3.4 for further information.

4.1.3.4 Implementation of community feedback

Submission ID numbers

50.

Summary of issues

One submission raised concerns that specific feedback from stakeholders, especially landowners, had not been considered by ARTC in design of the proposal and the EIS.

The submission raised the specific concern that landowner feedback on the design of the level crossing referred to as LX605 was not addressed in the proposal design nor the EIS. Further consultation with the landowner was requested to resolve design issues at LX605.

Response

Where possible, ARTC has sought to incorporate stakeholder feedback directly into the design process. As outlined in section 4.1.3.3, the proposal is an enhancement project with limited opportunities for substantive alterations and additions to the design at enhancement sites.

The concerns of the landowner regarding the design of LX605 are noted. ARTC has completed further design in consultation with the landowner, Junee Shire Council and Transport for NSW. The design of the track and level crossing has been realigned to address the short-stacking issue between the level crossing and the Olympic Highway. This design solution maintains the ability for vehicles to perform both left- and right-hand turns into and out of the level crossing, does not decrease the safety and functionality of the road network, and does not require alterations to the highway infrastructure. Further discussion is provided in section 3.2.1.4 of the Preferred Infrastructure Report.

4.1.3.5 Adequacy of consultation (during EIS display)

Submission ID numbers

18, 27, 32, 46, 75, 95, 105, 121, 139, 143.

Summary of issues

Ten submissions raised concerns about the adequacy of community consultation during display of the EIS. The majority of these submission stated that the promotion of community consultation sessions was poor, with no or late notice provided to the local community, particularly residents in Wagga Wagga near the proposal. One submission stated that although they signed up for email updates on the proposal, no updates were received.

Four of these submissions expressed that the communication approaches used were not accessible nor suitable to the wider local community. Online public sessions and email updates were considered inaccessible to those without the ability to effectively use or access a computer, such as people who are older. Submissions also stated that the timing of in-person community sessions were difficult to attend due to being during business hours. Three

submissions requested improved consultation measures be undertaken, such as one-on-one engagement with community members and a larger public forum.

A majority of these submissions raised concerns that the engagement undertaken during EIS display was not meaningful and the project information provided to the community was insufficient. One submission stated the scheduling of the community sessions did not allow enough time to review the EIS and provide a response.

Response

ARTC held four community drop-in sessions across the A2I alignment to ensure community members from each area would have the opportunity to attend a session located near them that was focused on the key issues in their area.

The community drop-in sessions were scheduled at the beginning of the EIS exhibition period with the purpose of guiding the community through the process of making a submission on the EIS. ARTC advertised these community drop-in sessions in advance (approximately 2 weeks beforehand), and in multiple formats, to provide adequate notice to the community, as outlined in section 1.5.1. ARTC understands that some community members may not use or may not have access to computers and the internet; as such, ARTC used non-computer-based engagement methods, including an advertisement in the local newspaper of the upcoming community drop in-session, and a letter was sent by mail to residents predicted to be affected by property and noise impacts. Additionally, elected representatives and local councils were advised of the release of the EIS, ongoing consultation activities and the formal submission process, on 10 August 2022.

Some community members would not have been able to attend the drop-in sessions during business hours. To share information with community members who could not attend the drop-in sessions, ARTC made the Summary of Findings document available online on the Inland Rail website, which included guidance on how to make a submission to DPE and left hard copies in the libraries where community drop-in sessions were held. Community members were also able to register to receive a copy of the Summary of Findings on a USB in the mail.

The project information ARTC shared with the community included summaries of the key findings of the EIS through the Summary of Findings document and a six-episode podcast series. This information was provided to help community members understand the key issues in their area in a quick and concise way. For those interested in more detailed project information, the EIS documents were (and still are) available to view on the DPE website.

4.1.3.6 Complexity of the EIS

Submission ID numbers

18, 71, 95, 129.

Summary of issues

Four submissions raised that the size and complexity of the EIS as a challenge for the general public to read and understand. One submission was concerned that key project information was only available in a technical paper and had been selectively included in the EIS main report—in particular, the findings of the operational noise assessment.

Response

The SEARs require the EIS to describe the proposal in sufficient detail to enable a clear understanding of it. This includes a description of the proposal, and all components and activities required to construct and operate it, along with a level of assessment of the likely impacts appropriate to the degree of impact, and sufficient detail to ensure that the community, as well as the DPE and other government agencies, can understand and assess impacts. The EIS had been structured, where logical, to identify and assess impacts by enhancement sites.

All EIS documents were written in concise, plain language in order to be understood by the general public. The main body of the EIS is intended to provide a more concise description of the impacts compared to the more detailed technical assessments that form part of the EIS. All chapters provided a clear reference to the more detailed assessments available in the technical papers should a reader wish to seek additional information to further understand the assessment, the assumptions and/or conclusions.

4.1.3.7 Complexity of submissions process

Submission ID numbers

75, 127, 129, 137, 140, 143.

Summary of issues

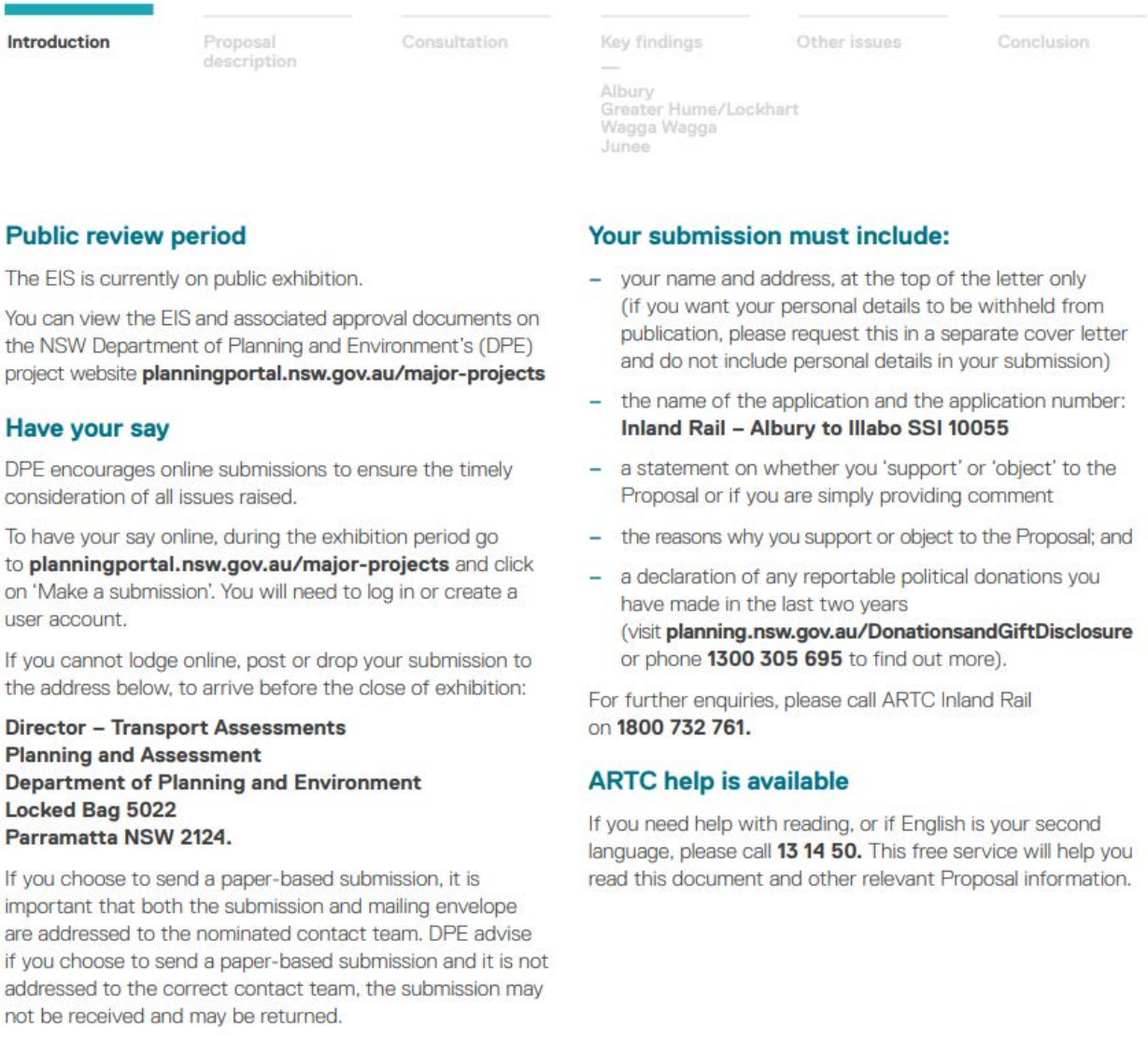
Six submissions raised concerns about the difficulty of the submissions process. The concerns were that the:

- timeframe to lodge a submission was insufficient due to the size and complexity of the EIS
- process to lodge a submission is difficult and guidance on the submission process was not clear
- online process is not suited to members of the public with no access to a computer, or who have limited computer skills.

Response

The process for exhibition and making a submission is managed by DPE. The obligations are set by the EP&A Act (and its regulations) and DPE's Undertaking Engagement Guidelines for State Significant Projects (DPE, 2021a). The EP&A Act requires EISs to be exhibited for a minimum of 28 calendar days. The EIS for the proposal was placed on public exhibition between 17 August 2022 to 28 September 2022, which provided 42 calendar days to lodge a submission.

ARTC understands that some community members may not use, or may not have access to, computers and the internet to make an online submission. While DPE encourages online submissions, submitters were able to make a paper-based submission. ARTC left hard copies of the Summary of Findings at libraries where the community drop-in sessions were held and this included details on how to make a paper-based submission (refer to Figure 4-1). The process is also outlined on DPE's website.



Introduction | Proposal description | Consultation | Key findings | Other issues | Conclusion

Albury
Greater Hume/Lockhart
Wagga Wagga
Junee

Public review period

The EIS is currently on public exhibition.

You can view the EIS and associated approval documents on the NSW Department of Planning and Environment's (DPE) project website **planningportal.nsw.gov.au/major-projects**

Have your say

DPE encourages online submissions to ensure the timely consideration of all issues raised.

To have your say online, during the exhibition period go to **planningportal.nsw.gov.au/major-projects** and click on 'Make a submission'. You will need to log in or create a user account.

If you cannot lodge online, post or drop your submission to the address below, to arrive before the close of exhibition:

Director – Transport Assessments
Planning and Assessment
Department of Planning and Environment
Locked Bag 5022
Parramatta NSW 2124.

If you choose to send a paper-based submission, it is important that both the submission and mailing envelope are addressed to the nominated contact team. DPE advise if you choose to send a paper-based submission and it is not addressed to the correct contact team, the submission may not be received and may be returned.

Your submission must include:

- your name and address, at the top of the letter only (if you want your personal details to be withheld from publication, please request this in a separate cover letter and do not include personal details in your submission)
- the name of the application and the application number: **Inland Rail – Albury to Illabo SSI 10055**
- a statement on whether you 'support' or 'object' to the Proposal or if you are simply providing comment
- the reasons why you support or object to the Proposal; and
- a declaration of any reportable political donations you have made in the last two years (visit **planning.nsw.gov.au/DonationsandGiftDisclosure** or phone **1300 305 695** to find out more).

For further enquiries, please call ARTC Inland Rail on **1800 732 761.**

ARTC help is available

If you need help with reading, or if English is your second language, please call **13 14 50.** This free service will help you read this document and other relevant Proposal information.

FIGURE 4-1: EXTRACT OF GUIDANCE ON MAKING A SUBMISSION IN THE SUMMARY OF FINDINGS DOCUMENT

4.1.4 Operation of the proposal

4.1.4.1 Train numbers

Submission ID numbers

18, 40, 119

Summary of issues

Three submissions queried the number of trains that would use Inland Rail in the future. Specifically:

- that the number of freight train movements would continue to increase once the proposal is operational. This would result in significant impacts to communities along the rail corridor
- queried the number of movements in Wagga Wagga in 2025 and 2040, and if there would be a maximum number of freight train movements allowed in Wagga Wagga
- queried why the proposal would only allow for two extra train movements per day when Inland Rail seeks to increase the use of freight train transport.

Response

As detailed in section 1.2.4, the Australian Government has prioritised completing the sections of Inland Rail between Beveridge in Victoria and Narromine in New South Wales by 2027. Anticipated train numbers remain as reported in the EIS and have not been revised, with 2040 retained as the design year for assessment purposes.

The EIS has assessed the peak rail operations of Inland Rail, which is represented as occurring in 2040 and is sustained thereafter. The EIS identified that the number of freight trains would be expected to increase up to a total of 18 freight trains per day in the early phase of Inland Rail's operation when all projects are completed (represented as 2025 in the EIS) and up to a total of 20 freight trains per day over the following years upon further take up of the service (represented as 2040 in the EIS). This is predicted to be a maximum of two trains per hour in the 2040 design year. In fact, the average number of freight trains movements between Albury and Illabo varies in different sections (see section 1.2.3.2 for further information). For example, north of Junee Yard, the freight train numbers are slightly higher, as freight trains can connect from the Junee to Griffith rail line onto the Main South Line (refer to Table 4-1).

TABLE 4-1: BREAKDOWN OF TRAIN NUMBERS BY SECTION OF THE PROPOSAL

		Train numbers		
Section of the proposal	**Train service**	**Current**	**2025**	**2040**
Albury Yard to Junee Yard	Freight	12	15	18
	Passenger	4[1]	4[1]	4[1]
Junee Yard to Illabo	Freight	**12**[2]	**18**[2]	**20**[2]
	Passenger	4	4	4

Note:

1. Melbourne to Albury V/Line services that terminate at Albury yard have not been included. It is assumed there is no growth in passenger services.
2. Bold font represents highest freight train number in each year.

The proposal would enable the use of double-stacked trains to operate, and trains of 1,800 m in length would more frequently occur once Inland Rail is operational. As such, while the number of freight trains per day on this section of rail would not significantly increase, the number of containers transported per train movement would increase as the modal shift to rail away from road progresses and the overall freight task increases.

4.1.4.2 Train operations

Submission ID numbers

25, 75, 131, 143.

Summary of issues

Four submissions queried how Inland Rail would operate, specifically:

- if Inland Rail freight services would take priority and, therefore, how Inland Rail can operate without scheduling or operational impacts to the passenger rail services to Wagga Wagga
- concerns with the current idling of trains within urban areas and how this could increase as a result of Inland Rail, given the increased frequency of freight train movements
- how delays to passenger or freight services would impact the other.

Response

The number and timing of train movements along any section of the rail line is dictated by the number of available 'windows' or paths. Inland Rail would be operated in a manner that would not change the currently planned passenger train paths (or travel times) and would utilise the remaining available paths for additional freight train movements. Dual track extends north from Junee, beyond the proposal boundary near Illabo, through to Sydney. Crossing loops are provided along the rail line to enable either faster or priority trains to continue unimpeded, or to allow trains running in opposite directions to pass where it is a single track. This is factored into the scheduling of train services, noting that priority is given to passenger trains.

In the event that a freight train or passenger service is delayed, ARTC would implement its internal procedures, which have a priority assigned for each train type and the key objective of ensuring that trains that enter the network late do not experience further delay, with every endeavour made to recover the trains to the correct train path.

Train idling typically occurs in crossing loops and to facilitate the change of train crew at the completion of each shift. The increase in trains has the potential to increase the frequency of idling at existing crossing loops and driver changeover locations; however, no new crossing loops are proposed as part of the proposal. Inland Rail trains would receive priority of way over other train types (excluding passenger trains) and would typically be the train continuing on the main line while a lower priority train waits in the crossing loop. The idling of trains during operation of the proposal would be similar to the existing operation, noting that the rail network is a live environment that has to respond to unexpected events, delays and emergencies that may require a train to idle to allow trains to recover the correct train path.

Additional assessment of air quality has been completed as part of the Preferred Infrastructure Report. Due to the spatial extent of the proposal, a case study approach has been undertaken and assesses expected train operations in an urban setting and a rural setting to represent the urban areas and rural areas along the Albury to Illabo alignment. The assessment is provided in section 6.3 of the Preferred Infrastructure Report.

4.1.4.3 Road infrastructure

Submission ID numbers

50

Summary of issues

One submission raised design issues with the level crossing at Shire and Carter Property access road (LX605). The concerns raised include the:

- concrete island could create a traffic hazard
- concrete island would not accommodate heavy vehicles and agricultural machinery turning left or out of the level crossing.

Response

The level crossing on Shire and Carter Property access road (LX605) is a licensed, private level crossing, which provides primary access to a private property and to the Junee Shire Council's quarry. In response to stakeholder feedback on this level crossing, the design solution to address the existing non-compliances has been revised. The track would be realigned to accommodate a level crossing at this location that does not impact on the Olympic Highway. The new track and level crossing would be realigned by up to 16 m south from the current level crossing location.

The design of the level crossing would be changed to accommodate the realigned track and upgraded from a passive to an active level crossing as previously proposed in the exhibited EIS. Further detail on the revised design is provided in section 3.2.1.4 of the Preferred Infrastructure Report.

4.1.4.4 Track infrastructure

Submission ID numbers

8

Summary of issues

One submission raised questions regarding the design of track infrastructure and provided recommendations. The submission recommended that the curvature and grading of the rail corridor beyond enhancement sites be considered further, particularly between Uranquinty and Junee. It was stated that the inclusion of work to reduce the curvature of the rail and to level out sections of the track would improve the operation of double-stacked freight trains.

Response

Track works at enhancements sites have been designed to meet ARTC requirements and address the clearances required for double-stacked container freight trains to operate. Works beyond the enhancement sites, including straightening sections of track, are not required to enable Inland Rail to operate.

4.1.4.5 Bridges

Submission ID numbers

9, 19, 27, 33, 42, 58, 60, 81, 88, 98, 111, 132, 139.

Summary of issues

Thirteen submissions raised questions and concerns regarding the design of pedestrian and road bridges for the proposal.

A majority of these submissions were concerned over the design of the Edmondson Street bridge replacement. The steepness of the proposed taller road bridge was cited as a potential safety and comfort issue for pedestrians and traffic due to:

- decreased visibility of traffic conditions at the Sturt Highway (Edward Street) intersection for vehicles approaching over the bridge from the south
- decreased visibility along Edmondson Street for vehicles entering from Little Best Street or private driveways
- increased difficulty for pedestrians crossing the bridge, particularly for vulnerable groups.

One of these submissions requested multidimensional plans for Edmondson Street bridge design to understand the impact on the Sturt Highway intersection and road safety. One of these submission also recommended implementing a similar layout to the recently built overpass at Mittagong for the road tie-in works on the northern side of the bridge.

Response

The vertical grade of the Edmondson Street bridge was designed to avoid the requirement for adjustment or reconfiguration of adjacent intersections, including Sturt Highway (Edward Street), and achieves the sight distance requirements of *Austroads Guidelines Part 3: Geometric Design* (Austroads, 2021a) for a 50 km/h design speed limit. A bridge design with a lower vertical grade would have required the bridge structure to be longer in length and would have required other intersections to be moved and/or adjusted, thus increasing the area of impact and change as the track clearance requirements below the bridge remain.

Tie-in works would be required to integrate the new road bridge with the existing road network, including pavement, line-marking and road drainage. These works would extend to the Edmondson Street intersection with Edward Street and Little Best Street to the north of the bridge. The intersection arrangement with Little Best Street would remain the same and would not result in a change in sight distance for cars joining Edmondson Street from Little Best Street. For this intersection and cars entering Edmondson Steet from private driveways located south of Erin Street, the site distances would remain compliant with the requirements of the guidelines.

The design of the replacement bridges at Edmondson Street and Kemp Street are required to provide a vertical clearance of 7.1 m of the rail line to enable double-stacked container trains to safely operate. As a result, the design as presented in the EIS does not meet DDA requirements for pedestrian access.

As detailed within the Preferred Infrastructure Report, separate pedestrian bridge structures are proposed adjacent to the Edmondson Street and Kemp Street bridges to provide DDA-compliant access. Section 3.2.1.1 of the Preferred Infrastructure Report provides detail on the design of pedestrian bridges.

4.1.4.6 Design changes to proposed pedestrian bridges

Submission ID numbers

22, 44, 123.

Summary of issues

Three submissions recommended design changes to proposed pedestrian bridges including:

- Albury Station: deviate the new bridge northwards to allow greater separation from the North signal hut (also known as the Albury signal box) by pivoting the western span of the new bridge to facilitate security and maintenance of the signal box
- Cassidy Parade pedestrian bridge is either:
  - permanently removed as other pedestrian bridge are available in the vicinity, or
  - relocated closer to Wagga Wagga Station, or
  - modified so that the stairs are removed, and the gradient of the ramp increased to minimise opportunity for the public to look into neighbouring properties
- provide ramp access from two directions at each end of the pedestrian bridges in Wagga Wagga to minimise distance that pedestrians need to walk to use the bridge.

Response

The Albury Station pedestrian bridge has been designed to match the alignment of the existing pedestrian bridge and to maintain the same connectivity to Albury Station. The bridge design was adjusted to remove the nearest pier structure to the heritage-listed signal hut to avoid piling in the area, significantly reducing risk to the heritage-listed signal hut. The design also provides a DDA-compliant connection from Albury Station and at-level access to the existing pedestrian bridge across the Hume Highway. The bridge design would not prohibit the maintenance of the signal hut.

Cassidy Parade pedestrian bridge would be replaced in its current location to ensure a similar level of connectivity is maintained in the long term and that it aligns with Wagga Wagga City Council's Wagga Wagga Active Travel Plan. The bridge (and ramps on approach) would be taller than the current structure, which, without mitigation, would impact the privacy of adjoining residences. As detailed in the Wagga Wagga landscape and urban design report (provided in the EIS Technical Paper 10: Landscape and visual impact assessment), the need for privacy screens to minimise overlooking into adjoining residences has been identified, along with design responses to minimise light spill and design responses to avoid creating places of concealment under ramp structures. These responses would be further developed in accordance with the urban design and landscape plan (mitigation measure LV2) and through the community wellbeing plan (mitigation measure SI7).

The proposal would provide new DDA-compliant pedestrian bridges in Wagga Wagga. Providing ramp access in dual directions on either side of each pedestrian bridge is not warranted and would result in larger structures with increased heritage impacts and/or property impacts. A steeper ramp connection would not meet DDA requirements.

Section 3.2.1.1 of the Preferred Infrastructure Report provides detail on the design of pedestrian bridges. This includes an updated design of the Cassidy Parade pedestrian bridge.

4.1.4.7 Future proofing

Submission ID numbers

8, 25, 40, 143.

Summary of issues

Four submissions recommended consideration of the following future proofing aspects of the proposal:

- the axle load in the EIS is too low and should be increased for improved speed and weight performance of freight trains in the future
- ARTC should consider use of a 3,600 m crossing loops, rather than the current 1,800 m, to allow for increased train lengths in the future
- the proposal should address aging infrastructure along the rail corridor
- guarantees be put in place for additional assessment and approvals to be completed prior to the introduction of trains beyond 1,800 m in length along the rail corridor.

Response

The design of the track is required to be capable of a 30-tonne (t) axle load at a minimum speed of 80 km/h.

There are no changes to crossing loops as part of the scope of the proposal.

The approval sought for the proposal would limit train operations to 1,800 m, with rail infrastructure built having regard to that limitation; longer trains cannot be accommodated within the proposal design.

The scope of the proposal is limited to modifying existing infrastructure to accommodate the vertical and horizontal clearance requirements for double-stacked freight trains. Upgrades to existing rail infrastructure not within the scope of the proposal would be carried out separately by ARTC, if and when appropriate, and would be subject to separate assessment and approval.

4.1.5 Construction of the proposal

4.1.5.1 Construction compounds and laydown areas

Submission ID numbers

139

Summary of issues

One submission sought clarification on the locations of the following construction features:

- the site compounds and construction vehicle parking areas in Wagga Wagga
- the cranes for the Edmondson Street bridge enhancement works
- site perimeter fence lines in Wagga Wagga and if these would encroach on private property.

Response

The construction compounds in Wagga Wagga are shown in Figures 8-8 and 8-9 of the EIS. The number of carparking spaces at the construction compounds would be determined during construction planning. Construction-worker parking would generally be contained to the rail corridor. During rail possessions, when the number of workers would likely peak, there may be a need for temporary use of on-street and roadside parking. Measures to manage any potential parking impacts during construction are discussed in chapter 9 of the EIS.

The location of crane pads for the Edmondson Street bridge enhancement works are shown in Figure 8-9 of the EIS. These would be located within the proposal site and positioned generally on either side of the bridge within closed sections of the road corridor.

Construction would require temporary use of land outside the rail corridor for the duration of the construction period. The proposed temporary occupation and use of these areas are subject to further engagement and agreement with landowners. The final land requirements for the proposal would be confirmed during detailed design. Fencing to secure the construction area would generally not encroach on private property or impact current private property fencing. In the event that property boundary fencing is impacted, this would be managed by the construction contractor in consultation with the impacted landowner.

4.1.5.2 Construction schedule and staging

Submission ID numbers

139

Summary of issues

One submission raised concerns regarding the length and timing of the rail possessions for construction of the proposal. The submission identified references to 60-hour rail possessions and sought clarification of actual duration.

Response

Track possessions provide an opportunity to undertake extensive work on the rail corridor without the risk of train movements. Under current arrangements, there are typically two possessions of 60-hours per year, scheduled for March and September. This is the minimum number of major possessions that would occur each year during the construction of the proposal.

Due to the large extent of work required, consideration is being given to seeking additional possessions of up to 60 hours. Final staging of works and detailed possession planning would occur during the next stage in detailed design. Detailed rail possession planning would be documented in the construction environmental management plan, which would be prepared in consultation with Transport for NSW. Refer to section 8.3 and section 8.4.1 of the EIS for further detail.

Planned possessions and occupancies are scheduled ahead of time, though changes do occur due to other events and incidents, and to weather. Accordingly, it is critical to note that adequate advance notice is available to inform the community of planned possessions and track occupancy authorisations, and the associated durations of construction work. This would be addressed through the communication plan and the various sub-plans to the construction environmental management plan.

4.1.5.3 Construction hours

Submission ID numbers

139

Summary of issues

One submission expressed concern with the proposed Inland Rail standard program construction hours (referred to as primary construction hours in the EIS) (being 6 am to 6 pm, seven days a week) given the potential impacts to residents located adjacent to enhancement sites, and that would be in addition to the full track possessions.

Specific reference was made to the Edmondson Street bridge enhancement site, which has a construction program of 11 months and has works in close proximity to residences on Donnelly Avenue and Little Best Street. It was queried if concrete pours for the bridge works would be planned to occur during school holidays, public holidays or weekdays, and what engagement would occur with residents on the timing of this work.

Response

Primary construction hours (being 6 am to 6 pm, seven days a week) are proposed for work that is not subject to rail possessions or track occupancy authorisations. These are now referred to as the Inland Rail standard program construction hours, see the updated proposal description in Appendix A of the Preferred Infrastructure Report for further information. This would include typical day to day works at Edmondson Street bridge enhancement site.

Where a sensitive receiver (such as a residence, school or hospital) is predicted to be noise affected for more than three months:

- Inland Rail standard program construction hours would only apply for a maximum three-month period at that enhancement site
- no work would be undertaken every alternative week between the hours of 6 pm on Saturday and 7 am Monday.

Under the Inland Rail Standard Program Construction Hours, only low impact noise activities are permitted between 6 am and 7 am.

'Noise affected' is defined as an exceedance of the applicable noise management level as specified in the *Interim Construction Noise Guideline* (DECCW, 2009) for residential and non-residential sensitive receivers.

Where Inland Rail standard program construction hours would no longer apply, works would be conducted during the following construction hours, which are consistent with standard construction hours specified in the *Interim Construction Noise Guideline*:

- Monday to Friday: 7am to 6 pm
- Saturday: 8 am to 1 pm
- Sundays and public holidays: No works or public holidays.

There is the potential for cumulative noise impacts at sensitive receivers that are close to multiple enhancement sites. All feasible and reasonable work practices to minimise noise would be implemented, where noise is above the noise management levels, and all potentially affected receivers would be informed. If no quieter work method is feasible and reasonable, consultation would be undertaken with occupants of affected residences, including consideration of any respite periods. Consultation with the surrounding community on noise impacts and mitigation strategies would inform the final mitigation and management strategies for the proposal.

The timing for any particular stage of construction at each enhancement site, including Edmondson Street bridge enhancement site, would be confirmed during detailed construction planning and would inform site-specific measures and notification requirements that would be implemented to manage construction noise and vibration impacts. Work at the Edmondson Street bridge enhancement site is now expected to take 11 months (refer to section 3.2.2.2 of the Preferred Infrastructure Report for detail) and work for the Edmondson Street pedestrian bridge is expected to take 11 months. Work at each bridge at Edmondson Street will occur during both standard program construction hours and due to the nature of work required, during the 60-hour possession periods in order to safely work above the track as well as for activities such as the installation of bridge span beams.

A copy of ARTC's Inland Rail NSW Construction Noise and Vibration Framework, which sets out its policy for respite, is provided in Appendix F of the EIS Technical Paper 6: Noise and vibration (non-rail).

4.1.5.4 Transport and access arrangements

Submission ID numbers

139.

Summary of issues

One submission expressed concerns with disruption to access and conflicts with other users (such as pedestrians) during the construction works at Edmondson Street bridge enhancement site. Specifically:

- disruption to access and impacts to residences along Little Best Street, on the basis that the roadway would be occupied by the proposal for use as a construction compound
- conflicts between construction vehicles accessing the proposal site and/or transporting plant and equipment with general traffic and pedestrians. Specific reference was made to conflicts with pedestrians (including school children) on narrow streets such as Donnelly Avenue and Little Best Street.

Response

The footprint of the Edmondson Street bridge enhancement site includes the road and road reserve of Little Best Street; this footprint is to accommodate the adjustments required to structures within the roadway and/or to provide access to work areas during bridge works. No construction compound is proposed on Little Best Street. Construction work on Edmondson Street road bridge would be managed as to not disrupt access to properties along Little Best Street, which would remain open throughout construction.

Changes to road conditions from increased traffic and new access points to the enhancement sites from the public road network has the potential to result in impacts to road safety. To moderate any construction impacts to existing or potential safety issues associated with either construction vehicle movements, Road Safety Audits, road dilapidation report and a Construction Traffic Transport and Access Management Plan would be required to be undertaken prior to construction. With respect to Donnelly Avenue and Little Best Street, construction routes, as shown in Figure 8-9 of the EIS, do not identify these roads. Construction vehicles may use these roads on occasion but the main access/egress points for these sites is located on Best Street (at the intersection of Sturt Highway) and Fox Street.

4.1.5.5 Bridge closures and detours

Submission ID numbers

32, 123.

Summary of issues

One submission expressed concern that detours required during the closure of Edmondson Street bridge would restrict access across the rail corridor and divert traffic on roads that are already busy.

One submission expressed the view that other bridge works and detours within Wagga Wagga had required closures of roads for up to six months without objection by Wagga Wagga City Council.

Response

The closure of Edmondson Street bridge during construction of the proposal is predicted to have significant impacts on surrounding roads while temporary diversions are in place. ARTC is committed to implementing mitigation measures to manage these impacts.

Additional traffic impact assessment was undertaken by ARTC as part of the Preferred Infrastructure Report, which includes detailed traffic assessment in Wagga Wagga (refer to section 6.1 of the Preferred Infrastructure Report). The use of a microsimulation model has accounted for driver behaviour with traffic re-routing within the model based on the most efficient route. This distribution is factored into the results of the assessment provided in section 6.1 of the Preferred Infrastructure Report.

Appropriate wayfinding signage for road and pedestrian diversions will be provided, clearly articulating alternative routes. Consultation with relevant stakeholders (including Wagga Wagga City Council and Transport for NSW) would also discuss opportunities for broader diversions away from congested roads. Additional measures identified as an outcome of consultation would be implemented during construction, where practicable.

4.1.5.6 Site closure and rehabilitation

Submission ID numbers

139.

Summary of issues

One submission requested further detail on the rehabilitation of the proposal site, including when this would occur, what engagement would occur with the community, to what standard works would be designed to meet, and who determines when works are required. The submitter raised that section 8.5.3 of the EIS did not include any materials required to support rehabilitation and landscaping works.

Response

ARTC would enter into agreements with the landowners where private or public land outside the ARTC lease area is used temporarily for construction. These agreements would set out the standard to which land would be restored.

Key works would also be guided by the urban design and landscape plan. This plan would be prepared in consultation with relevant stakeholders, including councils and the community (refer to section 7.5 of the EIS). It would build on the urban design, and landscaping objectives and opportunities that have been identified during design development for the proposed road and pedestrian bridges (refer to Technical Paper 10: Landscape and visual). As detailed in section 7.5 of the EIS, the plan would be prepared in accordance with a range of guidelines, policies and strategies. Mitigation measure LV3 also requires that the final urban design treatments at Kildare Park (Wagga Wagga) and Endeavour Park (Junee) is informed by community engagement.

The rehabilitation of disturbed areas within the rail corridor would be designed to meet ARTC standards and policies so that it is consistent with operational and rail maintenance requirements, as well as relevant guidelines (such as *Managing Urban Stormwater—Soils and Construction: Volume 1* (Landcom, 2004)).

The rehabilitation of the proposal site would occur progressively as new or modified infrastructure is commissioned, and construction work has concluded (refer to section 8.2.7 of the EIS and mitigation measure LV5). Landscaping works would be monitored and maintained until vegetation has been established in accordance with ARTC's procedures or as agreed with the relevant landowner (mitigation measure LV5).

The materials listed in section 8.5.3 of the EIS is focused on the key materials required to construct the rail infrastructure, road bridges, pedestrian bridges and other ancillary operational infrastructure. A suggested plant list is provided in Appendix A to Appendix C of the EIS Technical Paper 10: Landscape and visual. In addition to this, a number of mitigation measures or management plans would also require additional rehabilitation or landscaping works. This includes:

- the biodiversity rehabilitation strategy (refer to the Preferred Infrastructure Report)
- tree plantings to offset removed trees (that are not subject to biodiversity offsets) at a 2:1 ratio (mitigation measure LV10)
- opportunities to screen the rail corridor and enhance the local landscape character through the provision of additional trees and shrubs within local parks and streets in locations such as Culcairn, Henty, Yerong Creek and Uranquinty (mitigation measure LV11).

4.1.5.7 Impacts to utilities

Submission ID numbers

139.

Summary of issues

One submission requested that affected residents are provided a list of services that would be disrupted during construction (e.g. water, communication and power).

Response

A list of utilities that would require relocation or protection is provided in EIS Appendix D: Utilities management framework. As discussed in section 8.9 of the EIS, some utility relocation or protection works may occur before commencement of construction of the proposal, and separate environmental assessments and approvals would be obtained, where required. This could include utility work as described in EIS Appendix D: Utilities management framework.

Short-term disruptions that may occur during this work would be managed by the utility owner in consultation with ARTC.

4.1.6 Impact assessment

4.1.6.1 Adequacy of the EIS

Submission ID numbers

23, 35, 43, 47, 60, 72, 74, 75, 78, 119, 129, 132, 145.

Summary of issues

Thirteen submissions raised concerns regarding the adequacy of the EIS. Specifically, that the EIS did not:

- provide sufficient detail on how the proposal would operate or its impacts
- adequately identify all of the environmental risks associated with the proposal and unidentified risks would remain, irrespective of the implementation of mitigation measures
- address the guidelines for EISs in NSW as it only considered impacts at the enhancement sites
- assess the impacts for the full length of the rail line between Albury and Illabo, which has meant that impacts beyond enhancement sites and any required mitigation measures have not been accounted for
- properly assess the impacts on Wagga Wagga, due to the limited scope of the EIS, limited consultation with Wagga Wagga City Council and/or inadequate data used in impact assessments.

One of these submissions also expressed the view that the detailed design of the proposal should take into account and fully respond to the agreed recommendations of the relevant environmental impact assessments and submissions on the proposal.

Response

The EIS addresses the requirements of Part 8 Division 5 of the Environmental Planning and Assessment Regulation 2021 and the environmental assessment requirements for the proposal issued October 2020 (refer to Appendix A of the EIS: Secretary's Environmental Assessment Requirements). The Secretary's environmental assessment requirements require the EIS to describe the proposal in sufficient detail to enable a clear understanding of it. This includes a description of the proposal, and all components and activities required to construct and operate it, along with a level of assessment of the likely impacts appropriate to the degree of impact, and sufficient in detail to ensure that the community as well as the DPE and other government agencies can understand and assess its impacts.

Chapter 27 of the EIS provides a consolidated summary of the key potential impacts and residual risks, a description of the proposed approach to environmental management, a compilation of the mitigation measures and performance outcomes, proposal uncertainties, and the proposed approach to the design changes during future stages.

ARTC lodged the SSI application and Scoping Report for the proposal with DPE in May 2020. The Scoping Report indicated that ARTC was seeking approval to upgrade sections where enhancements are required to operate the Albury to Illabo section of Inland Rail. The SEARs for the proposal were issued from DPE on this basis. The EIS addresses the guideline for EIS' in NSW as it was prepared with regard to the *State significant infrastructure guidelines—preparing an environmental impact statement* (DPE, 2022c) as documented in the EIS Appendix H: RAF checklist.

The declaration of the proposal as CSSI in the now repealed State Environmental Planning Policy (State and Regional Development) 2011 (as replaced by the State Environmental Planning Policy (Planning Systems) 2021), the Scoping Report and EIS made clear that the proposal comprises of enhancement works and that works beyond the enhancement sites do not form part of the proposal given the rail corridor has the same operations as it would when Inland Rail commences.

The EIS assessed impacts within a particular area where enhancement sites are in proximity to one another, such as Wagga Wagga. In these instances, sites were assessed at a precinct level to consider broader impacts beyond enhancement sites. Assessment of social impacts were also considered at a local and regional scale.

Additional assessments have been completed as part of the Preferred Infrastructure Report. This includes additional assessment of operational noise and vibration for the full length of the Albury to Illabo corridor, operational air quality assessments (using a case study approach to represent the urban areas and rural areas along the Albury to Illabo alignment) and traffic impact assessments (including the microsimulation modelling of Wagga Wagga and Junee). Refer to chapter 6 of the Preferred Infrastructure Report and its supporting appendices for further detail.

The EIS was informed by site surveys and investigations across multiple disciplines, including traffic surveys, noise, biodiversity and heritage. Where surveys or investigations were not completed:

- any relevant data collected or completed by others (including Transport for NSW and/or local councils) was applied in the relevant assessments
- assumptions have been applied and clearly stated in the relevant technical assessment.

The detailed design for the proposal would take into account the outcomes of the EIS, the Preferred Infrastructure Report and the Submissions Report.

4.1.7 Transport and traffic

4.1.7.1 Assessment methodology

Submission ID numbers

29, 127, 139.

Summary of issues

Three submissions queried the traffic data used, the growth rates applied to traffic counts or the engagement with NSW Government agencies during the preparation of the impact assessment. Specifically:

- how the EIS can conclude that COVID-19 was unlikely to affect the results of the traffic survey given the disruption to regional tourism and the work-from-home arrangements for workers within the region
- the assessment lacks proper traffic data and, as a result, does not reflect conditions in Wagga Wagga. The assessment was also not informed by input from NSW Government agencies and does not consider their understanding of the potential impacts
- why the growth rates assigned to the Olympic Highway within the Junee LGA are lower in comparison to highways in the other LGAs. It was highlighted that a higher growth rate had been assigned to the Olympic Highway in other LGAs within the proposal site and that this highway also passes through the Junee LGA
- that the assessment did not appear to account for the increase in heavy vehicles associated with intermodal hubs and special activation precincts.

Response

As noted in the EIS Technical Paper 1, traffic volumes have been affected in many areas by changes in travel behaviour due to COVID-19. Predominantly this occurred during periods when travel restrictions were enforced; however, traffic surveys for the proposal were completed during June 2021, a period when no travel restrictions were in place. Broader changes to travel behaviour may have occurred in the period during and following the commencement of travel restrictions, including a higher proportion of the workforce choosing to work from home at least part of the time. There has been no study into the proportion of this trend in relation to total vehicle movements; however, it is noted that traffic surveys completed in years prior to and following COVID-19 have been reviewed. These results are generally consistent and indicate that traffic volumes and movements have not significantly changed during this period.

Traffic data was compiled from a variety of sources, including the Transport for NSW online traffic volumes viewer, volumes provided by local councils and surveys completed for the proposal. Where traffic volume data was not available for specific roads, traffic volumes used for the assessment were estimated based on reasonable assumptions, including recorded traffic volumes on adjacent road segments, roads within the study area that have a similar configuration and serve a similar function, or as proportions of higher order roads nearby (considering road type, connectivity and surrounding land uses). This approach follows common traffic impact assessment practice, such that the traffic data sourced for the proposal was considered sufficient to inform the assessment.

Where additional traffic assessment has been completed as part of the Preferred Infrastructure Report, additional traffic surveys have been completed in 2023. These traffic surveys are summarised in section 6.1 of the Preferred Infrastructure Report.

Growth rates were developed based on review of historical traffic data and advice from Transport for NSW and relevant local councils. A growth rate of 1.5 per cent was applied for Junee LGA based on advice provided by Junee Shire Council. The growth rates applied were relevant to each LGA, as the factors that contribute to traffic growth vary between these areas. Local knowledge from councils was also relied on. Variation in assumed traffic growth for arterial roads, where they pass between multiple LGAs, is considered to be appropriate, as motorists use these roads within an LGA, as well as for travelling regionally. The lower growth rate assigned to the Olympic Highway within the Junee LGA is considered appropriate.

Assumptions used in the development of growth rates allows for increases in traffic due to planned development in the area, including intermodal hubs and special activation precincts. As part of the cumulative impact assessment, traffic from construction and operation of known and approved developments, including the Wagga Wagga Special Activation precinct and Riverina Intermodal Freight and Logistics Hub, were considered. Development of additional intermodal hubs and other facilities will be subject to approval, including the assessment and consideration of further traffic generation and the impacts of those proposals. Such considerations are beyond the scope of this assessment.

4.1.7.2 Road performance impacts—construction

Submission ID numbers

7, 9, 11, 13, 14, 16, 17, 25, 27, 32, 36, 41, 58, 64, 68, 71, 75, 86, 88, 103, 106, 111, 118, 121, 127, 128, 132, 138, 139.

Summary of issues

Twenty-nine submissions raised concerns regarding the road network impacts that would occur during the closure of the Edmondson Street bridge and the consequences to the broader Wagga Wagga community. Specifically, that:

- Edmondson Street bridge is one of three main roads into the Wagga Wagga Central Business District and serves an important role in providing access to areas to the north and south of the rail corridor, including access to services, childcare centres and education facilities. Closure of this bridge would cause significant disruption to the community due to congestion along detour routes and increased travel time (including delays to school buses)
- detour routes are already congested (particularly during at the start and finish of the school day) and the detoured traffic would further contribute to congestion. This includes impacts at:
  - Bourke/Docker Street, including intersections along Bourke/Docker Street
  - Lake Albert Road and intersection with the Sturt Highway
  - Railway Street/Lake Albert Road, Urana Street/Bourke Street, Coleman Street/Bourke Street and Sturt Highway/Docker Street intersections
  - the Macleay Street/Coleman Street intersection, which was not assessed in the EIS, where queuing has been observed under current conditions (with particular reference to school related traffic). Use of this intersection should be reconsidered
- the EIS identifies intersections in Wagga Wagga would temporarily drop to a level of service of D or F at some locations, and fears that the impacts could be greater
- the EIS identifies that diverted traffic would seek alternative routes but does not identify what routes or identify how the assessment has reached this conclusion
- the proposal would result in cumulative road network impacts due to works on both Edmondson Street bridge and Pearson Street bridge
- an independent review should be conducted on the road network impacts at Wagga Wagga.

Two of these submissions raised concerns with general road or personal safety due to construction vehicles and/or temporary changes to the road network at Wagga Wagga, or increased surveillance of private spaces due to increased foot or vehicular traffic.

One submission queried if traffic surveys had been completed to inform the impact assessment of the detoured traffic during the closure of the Kemp Street bridge. The submission stated that the EIS assumes all traffic that would have used Kemp Street would travel to Main Street and continue north; however, this does not take into account:

- vehicles with destinations in areas south of Main Street (such as businesses along Humphrys Street)
- heavy vehicles that would need to connect to Byrnes Road.

Response

Closure of Edmondson Street bridge and suitability of detour routes

The closure of Edmondson Street bridge during construction of the proposal is predicted to have significant impacts on surrounding roads while temporary diversions are in place. ARTC is committed to implementing mitigation measures to manage these impacts.

Additional traffic impact assessment was undertaken by ARTC as part of the Preferred Infrastructure Report, which includes detailed traffic assessment in Wagga Wagga. Further information about the impacts of the proposal, is provided in section 6.1 of the Preferred Infrastructure Report.

During the replacement of the Edmondson Street bridge, motorists would be diverted to other rail corridor crossings including Docker Street and Edward Street. The proposal would also generate construction traffic during construction.

The temporary closure of the Edmondson Street bridge and the additional construction traffic volumes would put high strains on the intersections of Docker Street and Lake Albert Road with the Sturt Highway, as well as Railway Street with Lake Albert Road as diverted traffic from the temporary bridge closure cause increases on some of the approaches to these intersections. These pressures are most prevalent in the morning and afternoon peak traffic periods.

To alleviate some of the traffic impacts from construction, additional mitigation measures have been identified and tested in a microsimulation model. A review of intersection performance, and key constraints, was completed to identify feasible mitigation, which could be implemented in consultation with the relevant road authorities. Major intersection upgrades such as road widening or creation of additional capacity were not considered appropriate for the mitigation of temporary impacts during construction of the proposal.

The mitigation identified and modelled in the assessment included:

- optimising signal timings for key intersections at the following locations:
  - Sturt Highway/Docker Street
  - Sturt Highway/Best Street
  - Sturt Highway/Lake Albert Road
  - Railway Street/Lake Albert Road.
- lengthening and demarcation of the left turn lane on Railway Street at Lake Albert Road (western approach turn).

A summary of the mitigation and traffic performance is provided in section 6.1 of the Preferred Infrastructure Report. Intersection performance is also driven by the broader network, and mitigation has down-stream impacts in the network, which may worsen results at adjacent intersections.

The mitigation measures have most influence in the morning peak, where queues and delays are improved. The afternoon peak is more challenging with optimisations proving difficult to cater for high volumes from all approaches on the intersections of Docker Street with Sturt Highway and Lake Albert Road with Sturt Highway. Detailed results are provided in the Preferred Infrastructure Report.

Due to the levels of delay predicted at some intersections in the AM and PM peak, the implementation of mitigation measures would not significantly reduce the increase in delay and delays greater than 20 per cent are still predicted.

In addition to the specific mitigations modelled in the assessment, other potential mitigations will be further considered during detailed design and construction planning for the proposal. These potential mitigations include, but are not limited to:

- local area traffic management plans
- turn restrictions at selected locations
- removal of on-street parking/creating clearways at particular times.
- improved lane delineations.

This is reflected in a new mitigation measure TT2, which would be implemented alongside the traffic and transport management sub-plan and the mitigation measures identified in the EIS (refer to Appendix B: Updated Mitigation Measures of this Submissions Report). The final suite of mitigations would be determined in consultation with relevant stakeholders (including the relevant roads authority).

The proposal does not require the closure of Pearson Street bridge. Works at this enhancement site involve track lowering the rail line below the bridge. Vehicles could continue to use Pearson Street to cross the rail line during the closure of the Edmondson Street bridge.

The EIS identified that diverted traffic would seek alternative routes. This statement was based on general principles applied to traffic modelling and assessment, and information on traffic behaviour. The use of a microsimulation model has accounted for driver behaviour with traffic re-routing within the model based on the most efficient route. This distribution is factored into the results of the assessment provided in section 6.1 of the Preferred Infrastructure Report.

Appropriate wayfinding signage for road diversions will be provided, clearly articulating alternative routes. Consultation would also discuss opportunities for broader diversions away from congested roads. Additional measures identified as an outcome of consultation would be implemented during construction where practicable.

Independent review of road network impacts in Wagga Wagga

The transport and traffic assessment has been completed in accordance with relevant guidelines (these are referred to in section 2.3 of Technical Paper 1). The *Guide to Traffic Generating Developments Version 2.2* (RTA, 2002) does not specify requirements for an independent review. The assessment has also been completed in accordance with the SEARs (section 1.3 of EIS Technical Paper 1), which does not require the completion of an independent review. The road network impacts predicted for Wagga Wagga would be further reviewed during detailed design and construction of the proposal.

Additional traffic impact assessment was undertaken by ARTC, which includes detailed traffic assessment in Wagga Wagga as part of the Preferred Infrastructure Report. The additional assessment involved developing a microsimulation traffic model using data collected from traffic surveys from 8 June 2023 and future traffic demands for 2025 and 2040 based on the Wagga Wagga Strategic Transport Model provided by Wagga Wagga City Council. The impacts of construction and operation of the proposal were modelled and assessed. Further information about the impacts of the proposal, is provided in Appendix C of the Preferred Infrastructure Report.

Road safety and privacy matters

Changes to road conditions from increased traffic, temporary diversions and new access points (locations where construction vehicles access enhancement sites to and from the public road network) to the enhancement sites from the public road network has the potential to result in impacts to road safety. To moderate any construction impacts to existing or potential safety issues associated with either construction vehicle movements or the additional traffic on local roads from diversions, road safety audits (mitigation measure TT10), road dilapidation report (mitigation measure TT15) and construction traffic transport and access management plans (mitigation measure TT14 and Appendix B: Updated Mitigation Measures of this Submissions Report) would be required to be undertaken prior to construction.

Kemp Street bridge closure and impacts from detoured traffic in Junee

As outlined in section 4.1.7.1, traffic data was compiled from a variety of sources, including the Transport for NSW online traffic volumes viewer, volumes provided by local councils, and surveys completed for the proposal. Where traffic volume data was not available for specific roads, traffic volumes used for the assessment were estimated based on reasonable assumptions, including recorded traffic volumes on adjacent road segments, roads within the study area that have a similar configuration and serve a similar function, or as proportions of higher order roads in proximity (considering road type, connectivity and surrounding land uses).

Additional traffic impact assessment was undertaken by ARTC, which includes detailed construction traffic assessment in Junee as part of the Preferred Infrastructure Report. The additional assessment involved developing a microsimulation traffic model based on traffic count data collected from traffic surveys from 8 June 2023. Detail of the outcomes of this assessment is provided in section 6.1.2.2 and Appendix C of the Preferred Infrastructure Report.

The use of a microsimulation model has accounted for driver behaviour with traffic re-routing within the model based on the most efficient route. This distribution is factored into the results of the assessment provided in section 6.1 of the Preferred Infrastructure Report.

Kemp Street bridge presently has load limits, which prevents certain types of heavy vehicles from using the bridge. Vehicles crossing the rail line at Kemp Street, and travelling to or from Byrnes Road, would be expected to utilise the proposed diversion route via Edgar Street and one of the cross-streets connecting to Lorne Street. The nearest level crossing south of Junee is located at Harefield Road, Harefield (about 10 km south of Kemp Street). Travel via this route to the Olympic Highway would take about 15 minutes (not taking into consideration delays from potential closures at the level crossings). This is equivalent to the travel time to the same destination, without the diversion. For heavy vehicles that presently cannot use Kemp Street bridge or would be diverted during construction that have an origin or destination south of Junee, access would be via Bomen as Harfield Road is not an approved heavy vehicle route.

4.1.7.3 Impacts to active transport—construction

Submission ID numbers

63, 88, 118, 128, 139.

Summary of issues

Five submissions raised concerns about impacts to active transport in Junee and Wagga Wagga during construction. Four of these submissions were specific to Wagga Wagga, citing:

- impacts to pedestrian connectivity while Wagga Wagga Station pedestrian bridge is being built
- prolonged and unreasonable disruption to pedestrians and cyclists during construction of road and pedestrian bridges in Wagga Wagga, including school children
- safety concerns for detoured pedestrians, particularly school children.

One of these submissions queried what access would be available along Little Best Street and requested that the replacement of Wagga Wagga Station pedestrian bridge does not overlap with the closure of Edmondson Street bridge.

One of these submission queried who currently uses Kemp Street bridge, and what travel behaviours would change if school children can no longer walk to school. For example, would this generate more vehicular traffic on the road network (such as the Olympic Highway level crossing), would children continue to walk (crossing at the Olympic Highway level crossing) or would bus services be available.

Response

Wagga Wagga active transport

As detailed in section 3.2.2.2 of the Preferred Infrastructure Report, the staging of bridge closures in Wagga Wagga has changed so that Edmondson Street pedestrian bridge is open before Cassidy Parade pedestrian bridge or Wagga Wagga Station pedestrian bridge are closed. Pedestrians who use Cassidy Parade pedestrian bridge would now be primarily diverted to Edmondson Street to the east rather than Wagga Wagga Station pedestrian bridge, which is located over 200 m further east.

Additional traffic impact assessment was undertaken as part of the Preferred Infrastructure Report, which included surveys of key transport links in Wagga Wagga. The pedestrian survey conducted showed use of the bridges peaked during school starting (8:15–9:15 am) and after school finishing hours (2:45–3:45 pm). Wagga Wagga pedestrian bridge had the highest pedestrian traffic of the three bridges.

The temporary closure of the bridges in Wagga Wagga has been staged to ensure that pedestrians and cyclists can be detoured to at least one of the bridges during construction. Based on the survey, the predicted impact to students who use active transport to get to school is expected to be minimal, given only a small portion of the students would use either of the bridges (Edmonson Street bridge or Wagga Wagga Station bridge), and a detour is proposed for the duration of construction. Further analysis is provided in Appendix C of the Preferred Infrastructure Report.

A detailed mitigation and management approach would be required to minimise disruptions to pedestrians and cyclists during the works on the Cassidy Parade, Edmondson Street and Wagga Wagga Station bridges. Active travel will be managed through traffic and transport management sub-plan to ensure safe access is maintained, and this approach is outlined in Appendix C: Outline Construction Environmental Management Plan of this Submissions Report, including the purpose and requirements for the plan, and example management measures. This approach will include consideration of travel to and from schools. The traffic and transport management sub-plan is supported by the community health and wellbeing plan, including measures to minimise impacts to vulnerable groups.

ARTC is committed to minimising potential impacts to active transport. ARTC will communicate regularly with stakeholders, including schools and the community, in relation to changes to active travel, which will commence in advance of any closure. Diversion routes will be clearly defined by wayfinding signage and, where required, barriers and other measures, to ensure the safety of pedestrians and cyclists is maintained. The implementation of these measures will be guided by the traffic and transport management sub-plan, which will address active travel.

Where consultation with stakeholders and the community identifies additional mitigation measures, these measures will be considered by ARTC and the construction contractor and implemented where practical.

Access to properties along Little Best Street would be maintained for the duration of construction.

There may be the potential for minor disruptions as various construction activities are completed; these disruptions would be minimised by the construction contractor as far as practical, including consultation with relevant landowners.

Junee active transport

No substantial impacts to pedestrian access across the rail corridor are anticipated in Junee as a new pedestrian bridge is now proposed to be constructed and opened prior to the closure of Kemp Street bridge. Further detail on the new bridge is provided in section 3.2.1.1 of the Preferred Infrastructure Report. Short-term impacts on pedestrian and cyclist movements may occur during construction and will be addressed through the construction phase traffic and transport management plan.

4.1.7.4 Impacts to car parking—construction

Submission ID numbers

139.

Summary of issues

One submission raised concerns with the temporary loss of on-street car parking during construction of the proposal or the use of on-street car parking by the construction workforce. Specifically:

- at Little Best Street, near the Edmondson Street bridge enhancement site, on-street car parking is used by families or carers when dropping or picking up children from nearby schools. The temporary loss of parking would disrupt this access and require people to park at greater distances from the schools. The impact of this was not addressed in chapter 12 of the EIS

- concern that the use of on-street parking by the construction workforce would:
  - displace residents and/or people accessing home businesses. Specific mention was made to Donnelly Avenue near the Edmondson Street bridge enhancement site. It was requested that the construction workforce is prohibited from using on-street parking where parking is limited
  - pose a safety risk where on-street parking occurs in a high-speed environment (e.g. Olympic Highway underbridge and Junee to Illabo clearances enhancement sites), including passing motorists. It was queried what safety controls would be in place to manage this risk.

Response

Impacts to parking have been minimised as far as practical, including reducing the extent of the proposal site to avoid impacts to parking, containing construction-worker parking within the proposal site, and minimising the duration required where parking is impacted by the proposal.

Impact to on-street parking in Little Best Street would occur during construction of the proposal. This is required to facilitate construction on the western side of Edmondson Street bridge. Access to off-street parking for residents in Little Best Street would be maintained during construction. Impacts to parking were discussed in chapter 9 of the EIS, and in the EIS Technical Paper 1. The impacts include informal parking on the eastern side and western side of Little Best Street, from Donnelly Avenue to Edmondson Street, for nine months. ARTC and the construction contractor would continue to consult with the schools and the community regarding parking impacts in Little Best Street, including arrangements for short-term parking for school drop-off and pick-up.

All property access would be maintained for the duration of construction.

Adequate safety controls would be implemented where the proposal results in changes that may impact the parking of vehicles within and adjacent to the proposal site. Parking would be within the proposal site and, in high-speed environments, such as arterial roads, is generally not anticipated to be impacted by the proposal. Safe parking arrangements would be managed through implementation of the Traffic Management Plan.

4.1.7.5 Impacts to emergency services—construction

Submission ID numbers

64, 68, 86, 131.

Summary of issues

Four submissions raised concerns about disruption to emergency services during the closure of Edmondson Street bridge due to detours and the increase in travel times. Particular reference was made to the location of emergency services (SES, Ambulance and the Wagga Wagga Health precinct) and congestion at the Bourke Street/ Docker Street level crossing.

Response

During the replacement of the Edmondson Street bridge, emergency services would be diverted to other rail corridor crossings including Docker Street and Edward Street.

As detailed in the further assessment provided in section 6.1 of the Preferred Infrastructure Report, the temporary closure of the Edmondson Street bridge and the additional construction traffic volumes would strain the intersections of Docker Street and Lake Albert Road with the Sturt Highway, as well as Railway Street with Lake Albert Road as diverted traffic from the temporary bridge closure cause increases on some of the approaches to these intersections. These pressures are most prevalent in the morning and afternoon peak traffic periods.

Most travel times along the assessed travel routes only moderately increase or decrease as a result of the changed traffic conditions during construction. However, there are significant delays predicted at five of the routes considered in the assessment (refer to section 6.1 of the Preferred Infrastructure Report for further information).

To alleviate some of the traffic impacts from construction, additional mitigation measures have been identified and tested in a microsimulation model. While these measures provide some improvement, the mitigation measures have most influence in the morning peak, where queues and delays are improved. The afternoon peak is more challenging with optimisations proving difficult to cater for high volumes from all approaches on the intersections of Docker Street with Sturt Highway and Lake Albert Road with Sturt Highway. Detailed results are provided in section 6.1 of the Preferred Infrastructure Report.

Due to the levels of delay predicted at some intersections in the AM and PM peaks, the implementation of mitigation measures would not significantly reduce the increase in delay and delays greater than 20 per cent are still predicted.

In addition to the specific mitigations modelled in the assessment, other potential mitigations will be further considered during detailed design and construction planning for the proposal. These potential mitigations include, but are not limited to:

- local area traffic management plans
- turn restrictions at selected locations
- removal of on-street parking/creating clearways at particular times.
- improved lane delineations.

This is reflected in a new mitigation measure TT2, which would be implemented alongside the traffic and transport management sub-plan and the mitigation measures identified in the EIS (refer to Appendix B: Updated Mitigation Measures of this Submissions Report for the updated mitigation measures). The final suite of mitigations would be determined in consultation with relevant stakeholders (including the relevant roads authority).

Mitigation measures TT1, TT4 and TT17 include the requirement for engagement with Transport for NSW and/or emergency services to manage potential disruption to level crossings or other public roads as a result of construction, or required detours during construction.

The proposal does not change the location of level crossings and does not propose new level crossings.

4.1.7.6 Road safety—operation

Submission ID numbers

9, 11, 16.

Summary of issues

Three submissions expressed concern that the increased road gradient at the new Edmondson Street bridge would pose road-safety risks, given the steeper decline and interface with the Sturt Highway (Edward Street) intersection. The submissions expressed concern that this would lead to an increase in accidents. One submission raised similar concerns that the increased height of the pedestrian bridges at Wagga Wagga would also pose a hazard to road safety.

Response

The height of the new bridges has been designed to ensure the required vertical clearance of 7.1m of the rail line is achieved for the operation of the proposal.

The vertical grade of Edmondson Street bridge was designed to avoid impacts to adjacent intersections, including the Sturt Highway (Edward Street) intersection.

The Edmondson Street bridge geometry, and that of its approaches, have been designed in accordance with the relevant Austroads guidelines (Austroads, 2018-2021) for a design speed of 50 km per hour. Sight distances and grades are within the limits recommended by Austroads.

The increased height of pedestrian bridges in Wagga Wagga would make them more visually prominent (as discussed in the EIS Technical Paper 10); however, this is not considered to pose a hazard to road safety on surrounding streets as they would not obstruct sightlines for motorists to the intersection.

4.1.7.7 Impacts to active transport—operation

Submission ID numbers

19, 47, 65.

Summary of issues

Three submissions raised concerns regarding impacts to active transport in Wagga Wagga during operation. Two submissions expressed concern that accessibility had not been properly considered at the bridges proposed in Wagga Wagga, and that access across the rail corridor would be compromised due to the steep inclines and declines.

One submission raised that Wagga Wagga City Council had not finalised the plans for the cycle path near Cassidy Parade pedestrian bridge, which does not allow for an informed submission on the proposed bridge at this location.

Response

Within Wagga Wagga, the proposal as exhibited provided DDA-compliant bridges at Cassidy Parade and Wagga Wagga Station. As outlined in the Preferred Infrastructure Report, a new, separate pedestrian bridge structure adjacent to the Edmondson Street road bridge is now also proposed to provide DDA-compliant access.

To align with the proposed cycle path network of the Wagga Wagga Active Travel Plan (Wagga Wagga City Council, 2022) and, as confirmed through consultation with Wagga Wagga City Council, the direction of the ramp on the southern side of the rail corridor onto Cassidy Parade now goes towards Norman Street, rather than Kildare Street. This revised design remains DDA-compliant.

4.1.7.8 Road performance impacts—change in access

Submission ID numbers

50.

Summary of issues

One submission disputed the conclusion of the EIS, that details there would be no ongoing operational impacts to properties, and stated that the Junee to Illabo clearances enhancement site, as the provision of a concrete island on the Olympic Highway at the Shire and Carter Property access road level crossing (LX605), would restrict movements to left turn-in and left turn-out. This would increase travel time for motorists accessing or departing properties that use this level crossing.

Response

The EIS did not consider impacts from delays due to the restriction of movements to left turn-in and left turn-out only on the Olympic Highway at the Shire and Carter Property access road level crossing (LX605). However, as described in the Preferred Infrastructure Report, the design of LX605 has been amended to address existing non-compliances by realigning the track and level crossing by up to 16 m south from the current level crossing location. This design solution maintains the ability for vehicles to perform both left- and right-hand turns into and out of the level crossing and does not decrease the safety and functionality of the road network.

4.1.7.9 Road performance impacts—level crossings

Submission ID numbers

2, 5, 6 ,8 ,9, 11, 12, 14, 15, 16, 17, 19, 21, 23, 27, 29, 31, 32, 33, 35, 39, 40, 48, 51, 52, 54, 56, 64, 68, 71, 74, 75, 79, 80, 81 ,83, 84, 85, 87, 89, 97, 101, 103, 106, 109, 111, 112, 115, 118, 121, 122, 124, 125, 130, 132, 133, 137, 139, 143.

Summary of issues

Fifty-nine submissions raised concerns about the impacts at level crossings due to the increased frequency of level crossing closures and the longer wait times when Inland Rail is operational. The majority of these submissions related to level crossings in Wagga Wagga and the consequences to connectivity and liveability of the city. These concerns were often framed in the context of the growing regional city, access to the central business district and key destinations (e.g. health or educational facilities), and that delays at level crossings would divide the city. Other submissions stated that delays at level crossings in towns, such as Henty, Uranquinty and The Rock, would also impact people travelling to services, schools and places of employment.

Specific issues raised in these submissions are outlined in the following sections.

Grade separations

Submitters expressed that road–rail interfaces within state roads and/or all roads should be grade-separated, noting level crossings are located in urban and rural areas between Albury and Junee, and these communities would be impacted by the proposal. Many submissions requested that the Bourke Street/Docker Street level crossing and the Fernleigh Road level crossing in Wagga Wagga be grade-separated.

Wagga Wagga Transport Plan

Submitters raised concern that the EIS had not considered the Wagga Wagga Transport Plan (Transport for NSW, 2022a), in terms of level crossing treatments and the strategy to support growth in Wagga Wagga. Submissions were concerned that growth within Wagga Wagga, combined with increased delays at level crossings, would impact connectivity and broader network performance.

Level crossing closure time and frequency

Submitters expressed:

- increased waiting times and the increase in the frequency of closures would cause significant delays for motorists and concerns that this would result in safety issues (due to riskier driver behaviour)
- long queues already occur at level crossings (particularly the Bourke Street/Docker Street level crossing) and that this would worsen as a result of the proposal, future population growth and/or major developments in Wagga Wagga. Concern was also expressed that increased delays at these level crossings would:
  - result in delayed motorists shifting to alternative routes, which would also increase safety risks along local streets. This included Coleman Street, and some submissions requested that this road be converted to a cul-de-sac
  - cause delays across the network due to queue lengths at level crossings, particularly at intersections along these roads
  - prevent access to driveways. This included access to the Wagga Wagga health precinct
  - impact the performance of Bourke Street/Docker Street and Edmondson Street/Best Street, which have major intersections with the Sturt Highway (a major highway) and serve an important function for access to the Central Business District.

A number of submissions queried the speeds of freight trains as they pass through Wagga Wagga, specifically:

- that the EIS misrepresented how long a level crossing closure would take to allow a 1,800 m train to pass, and the likely speed of freight trains. This was often linked to speeds observed within Wagga Wagga and differences in traffic count data and closure times presented in the EIS and those times presented by Wagga Wagga City Council. Submissions expressed the view that wait times are and would be longer than what has been assessed in the EIS as freight trains travel as low as 40 km/h
- whether the Murrumbidgee River rail viaduct influences the speed of freight trains and how this contributes to longer level-crossing closures
- whether freight trains should travel at lower speeds in urban areas due to safety concerns at level crossings.

Safety risks at level crossings

Submissions raised issues including:

- safety risks for pedestrians at the Bourke Street/Docker Street level crossing and the Fernleigh Road level crossings due to risk taking behaviour. The submissions queried what controls would be in place to prevent risky behaviour, with reference to the *Victorian Railway Crossing Safety Strategy 2018–2027* (Public Transport Victoria, 2018)
- delays at level crossings would result in business and tourism impacts
- the EIS did not outline how the road network would operate during a derailment at a level crossing in Wagga Wagga
- the EIS does not identify any design solutions or mitigation measures to address the increased delay at level crossings.

Assessment of delay due to 3,600 m freight trains

Submitters raised that the EIS should assess the delays at level crossings due to 3,600 m freight trains.

Olympic Highway, Junee level crossing

With respect to the Olympic Highway, Junee level crossing, queries were raised by a submission about the assessment, specifically:

- what traffic counts were completed, why the ‘peak hour’ selected is in the middle of the afternoon and why the assessment does not consider a morning peak
- why this level crossing experiences more frequent closures and how would the operation of Inland Rail change how this level crossing operates
- requested detail on the times that trains pass through the level crossing in the proposal.

Response

Grade separations

The Office of the National Rail Safety Regulator administers and regulates the safety of the Australian railway industry under rail safety national law. ARTC uses a consistent safety-based methodology to design the road–rail interface treatments across the Inland Rail program. This is documented in the Inland Rail Road–Rail Crossing Strategy and outlined in Appendix A of the EIS Technical Paper 1. This is aligned with rail safety national law and

Office of the National Rail Safety Regulator's guidelines, which require the risks to safety to be minimised so far as is reasonably practicable. This safety-based methodology has been audited by the Office of the National Rail Safety Regulator in June 2020 and there were no findings or recommendations.

Level crossings that are within the scope of the proposal only include those that are required to be modified to accommodate double-stacked freight trains, such as modification to accommodate track realignment. Consideration of the road–rail interface treatment at level crossings that are out of scope does not form part of the proposal. Applying this safety-based methodology to the level crossings within the scope of the proposal, the outcomes indicated that grade separation at these level crossings is not justified from a cost–benefit perspective.

The Docker Street level crossing and the Fernleigh Road level crossing in Wagga Wagga do not require modification and are out of scope of the proposal. These level crossings are located on local roads and any modification considered appropriate would need to be carried out by the road manager, Wagga Wagga City Council.

ARTC will continue to work collaboratively with Transport for NSW to progress road–rail interface solutions during detailed design. In accordance with mitigation measure TT11, input would be sought from relevant stakeholders (such as local councils and Transport for NSW) prior to finalising the detailed design of those aspects of the proposal that affect the operation of road and other transport infrastructure under the management of these stakeholders.

Wagga Wagga Transport Plan

As discussed in the EIS Technical Paper 1, a growth factor has been applied to traffic volumes for Wagga Wagga to allow for relative volumes anticipated during the assessment years. The transport and traffic assessment modelled impacts with these volumes. These volumes, and associated impacts, would occur with or without the proposal.

As part of the traffic and transport assessment completed for the Preferred Infrastructure Report, a microsimulation model has been completed for Wagga Wagga. The growth rate was determined based on the Wagga Wagga Strategic Transport Model, which was used develop the model to assess the proposal. Refer to section 6.1 of the Preferred Infrastructure Report.

The Docker Street level crossing and the Fernleigh Road level crossing in Wagga Wagga do not require modification and are out of scope of the proposal. These level crossings are located on local roads and any modification, which is considered appropriate would need to be carried out by the road authority, Wagga Wagga City Council.

Level crossing closure time and frequency

Within Wagga Wagga, four roads provide connectivity across the rail corridor, in addition to dedicated pedestrian bridges at Cassidy Parade and Wagga Wagga Station. These are level crossings at Docker Street and Fernleigh Road, and two road overbridges at Pearson Street and Edmondson Street. The rail line passes over Red Hill Road, Sturt Highway and Tarcutta Street/Lake Albert Street on a dedicated rail bridge or viaduct. A large proportion of traffic movements in Wagga Wagga are associated with north–south movements across the corridor and are served by Pearson Street, Docker Street, Edmondson Street and Lake Albert Road. The Sturt Highway is also located to the north of the rail corridor, as is the central business district and the health precinct. A number of educational facilities are located to the south of the rail corridor.

The primary change resulting from the proposal is the increased frequency of trains passing through the level crossings and the increased proportion of trains that are 1,800 m in length. Additional assessment of traffic and transport has occurred and is presented in section 6.1 of the Preferred Infrastructure Report. This assessment used observed level crossing closure times and applied a factor to account for the increased frequency of longer trains.

The assessment identified that the longer and more frequent level crossing closures at Docker Street and Fernleigh Streets would result in extended waiting times at the level crossings and associated traffic impacts at nearby intersections. Maximum queue lengths may impact access to properties, where queuing extends past driveways. The predicted impacts are greater in 2040 than 2025 due to the additional train services proposed and the increased growth in background traffic volumes. Average travel times across the Docker Street level crossings are predicted to increase by a maximum of 11.5 per cent in 2025 in the northbound direction in the afternoon peak and 17.8 per cent in the northbound direction on the in the afternoon peak. The Fernleigh Street level crossing shows moderate impacts with the highest increase in travel times in the northbound direction in 2040 by 7.0 per cent.

The viaduct across the Murrumbidgee River has a temporary speed restriction of 40 km/h. However, this temporary speed restriction, which would be removed once rectification works (that do not relate to Inland Rail) to the viaduct have been completed, is anticipated to occur by mid-2026.

Travel behaviour may change over time as a result of multiple factors, including changing road conditions, such as congestion, or other factors such as social change and preference for use of public or active transport modes. As stated previously, the delay experienced at level crossings is predicted to worsen. As this delay worsens, motorists may choose to travel by alternate means.

Consideration of changes to the broader road network, including modification of Coleman Street to a cul-de-sac, is outside the scope of the proposal.

The social and economic assessments for the proposal (EIS Technical Paper 4 and Technical Paper 5, respectively) have considered impacts from the proposal, including potential impacts to businesses and tourism. A range of mitigation measures have been identified in Appendix B: Updated Mitigation Measures of this Submissions Report to manage impacts from the proposal and maximise social and economic benefits. Further assessment of the social impacts arising from increased delays at level crossings is provided in section 6.1 of the Preferred Infrastructure Report.

Safety risks at level crossings

There would be no changes to level crossing treatments within Wagga Wagga. These level crossings are currently controlled with flashing lights and boom barriers, which is the highest form of level-crossing protection in Australia. Mitigation measure SI7 includes a commitment to identify and support activities that promote road and rail safety during operation, including school-based education programs for schools in the locality.

Additional assessment of the Docker Street and Fernleigh Road level crossings in Wagga Wagga has been completed as part of the Preferred Infrastructure Report (refer to section 6.1 of the Preferred Infrastructure Report). There were no vehicle or pedestrian collisions reported at these level crossings (no fatalities or injuries) from July 2014 to March 2022. The assessment identified that the level crossings are controlled by flashing lights and boom barriers, which is the highest form of level crossing control in the Australian Standard *AS 1742.7 Manual of Uniform traffic control devices* (Standards Australia, 2016). The level crossings are compliant for both sight distances and short stacking. No additional mitigation is proposed to address safety at these level crossings.

The proposal will be designed and constructed in accordance with relevant guidelines and standards, and industry best practice. No significant changes to operation of the existing rail line would occur as a result of the proposal. In the event of an incident such as train derailment, ARTC would respond in accordance with its safety management procedures.

Assessment of delay due to 3,600 m freight trains

As noted in chapter 7 of the EIS, Inland Rail would operate 24-hours per day and would accommodate double-stacked freight trains up to 6.5 m high and up to 1,800m long. The approval sought for the proposal would limit train operations to 1,800m, with rail infrastructure built having regard to that limitation; longer trains cannot be accommodated within the existing infrastructure or the proposal design. The possible future use of the railway between Albury and Illabo by freight trains up to 3,600m long would be subject to a separate assessment.

Olympic Highway level crossing, Junee

Traffic volumes for the Olympic Highway in Junee were informed from a traffic count completed in June 2023 at the intersection of the Olympic Highway (Seignior Street) and Broadway Street. The daily traffic volume profile was assessed based on relative traffic counts for each precinct, to determine the peak morning and afternoon travel times.

The assessment of road network performance was completed based on a peak (worst-case) hour. As detailed in the methodology for the traffic and transport assessment (section 3.1 of the EIS Technical Paper 1). Where available, the highest peak-hour period background traffic volumes have been used; this may occur during the morning or afternoon period. Where this was not available, the assessment assumed an hourly traffic volume of 10 per cent of the daily two-way traffic volumes.

Operation of the proposal would result in additional trains. Conservatively, this has been assessed based on a maximum of two train movements in any hour at peak operation of the proposal.

The existing level crossing on the Olympic Highway in Junee is not included in the proposal, and no changes in its operation are proposed. Modifications to the current configuration of LX 607 Olympic Highway at Junee are not required to accommodate double-stacked freight trains and, as such, no works are proposed to this level crossing as a result of the proposal. This level crossing was not included in the proposal site or scope of the proposal, and grade separation was not considered.

During consultation activities, the community in Junee and the Junee Shire Council has expressed that LX 607 Olympic Highway can close for excessively long periods of time, or close with no train performing a through movement through the level crossing. This is generally attributed to the changeover of drivers of some trains on the Junee station platform and shunting movements within the Junee yard. ARTC has explored preliminary options and carried out consultation with rail operators regarding a potential relocation of the driver changeover area. At this stage, a solution could not be reached between all involved parties. A potential relocation solution would be contingent on being compatible with the network configuration and safety of train crews in the context of an operating rail corridor. In accordance with mitigation measure SI9, ARTC will continue to investigate opportunities to reduce the duration of level crossing closures at this level crossing. Should this prove feasible, ARTC would undertake any necessary works through separate approvals, as required.

4.1.7.10 Accessibility—level crossings

Submission ID numbers

19.

Summary of issues

One submission raised concerns with current disability access at the Bourke Street/Docker Street level crossing and that accessibility would further deteriorate due to the increased frequency of closure and increased road congestion. This included difficulty of access for people using motorised mobility aids.

Response

The proposal only involves adjustments to gantry to achieve the required clearances for Inland Rail freight trains and does not involve works at the Bourke Street/Docker Street level crossing. The primary change resulting from the proposal is the increased frequency of trains passing through the level crossings and the increased proportion of trains that are 1,800 m in length. As highlighted in section 1.2 of this Submissions Report, the proposal would result in an additional two freight train movements per day between 2025 and 2040.

During construction of the proposal, pedestrian safety at this location would be managed as part of the traffic and transport management sub-plan.

4.1.7.11 Impacts to emergency services—level crossings

Submission ID numbers

6, 9, 16, 19, 23, 27, 29, 31, 36, 38, 39, 40, 43, 44, 49, 52, 58, 60, 65, 71, 76, 77, 78, 83, 84, 86, 89, 93, 96, 97, 100, 109, 115, 116, 122, 124, 128, 131, 132.

Summary of issues

Thirty-nine submissions raised concerns about the disruption to emergency services in Wagga Wagga and impacts to response times due to the increased frequency of level crossing closures, increased congestion at level crossings or longer level crossing closures once Inland Rail is operational. Particular reference was made to:

- the location of emergency services (the NSW SES, Ambulance and the Wagga Wagga Health precinct)
- the limited options for emergency service vehicles to cross the rail corridor when level crossings are closed
- potential longer routes that emergency service vehicles may take during a level crossing closure and the consequences of longer or delayed journeys.

Response

The longer and more frequent level crossing closures at Docker Street and Fernleigh Streets would result in extended waiting times at the level crossings and associated traffic impacts at nearby intersections. The predicted impacts are greater in 2040 than 2025 due to the additional train services proposed and the increased growth in background traffic volumes.

No new level crossings are created by the proposal, and the operation of existing level crossings would already be considered in the route planning by emergency services to manage response times during a closure.

The actual delay experienced when responding to an emergency would vary depending on the origin and destination of the emergency services vehicles. Further, these vehicles have priority right of way and would incur less delay than the maximum predicted. The traffic and transport assessment also predicted impacts based on worst-case conditions during peak travel hours, and potential delay outside these times is likely to be significantly reduced. As discussed above, route planning by emergency services would be required to consider existing level crossings, and the approach for routing vehicles during a level crossing closure is not changed by the proposal.

As detailed in section 6.1 of the Preferred Infrastructure Report, accessibility to educational, health and emergency services might change due to the changes in the frequency of level crossing closures and waiting time from the proposal. The impact to accessibility varies along the rail corridor depending on the location of residential areas and educational, health and emergency facilities in relation to the level crossings. Low impacts to accessibility from the proposal are generally expected along the rail corridor. Medium impacts on emergency services are anticipated in Wagga Wagga due to the location of the hospital.

Engagement with emergency services is documented in section 5 of the Preferred Infrastructure Report.

4.1.7.12 Mitigation and management of impacts—transport and traffic

Submission ID numbers

29, 121, 139.

Summary of issues

Three submissions queried what mitigation measures would be implemented during construction and/or operation. Specifically:

- the EIS has not presented an adequate traffic management plan to address the impacts that would occur during the temporary closure of Edmondson Street bridge during construction
- school safety impacts due to diverted traffic on Macleay Street has not been adequately mitigated, and that traffic calming measures should be implemented where school safety zones are impacted by detours and/or road closures. Suggestions included: the requirement for Erin Street to remain open during construction (if possible), or closed only for a short duration; that traffic should continue to use Mitchelmore Street between Urana and Coleman Streets; and signage should be introduced to encourage motorists to use alternative routes further south to reduce the volume of diverted traffic on Macleay Street
- what mitigation measures would be implemented to address the damage to roads located along detour routes or construction routes.

Response

Mitigation and management during closure of the Edmondson Street bridge

As part of the Preferred Infrastructure Report, additional assessment of traffic and transport impacts during closure of Edmondson Street bridge has been completed (refer to section 6.1 of the Preferred Infrastructure Report).

To alleviate some of the traffic impacts from construction, additional mitigation measures have been identified and tested in a microsimulation model. A review of intersection performance, and key constraints, was completed to identify feasible mitigation which could be implemented in consultation with the relevant road authorities. Major intersection upgrades such as road widening or creation of additional capacity was not considered appropriate for the mitigation of temporary impacts during construction of the proposal.

The mitigation identified and modelled in the assessment included:

- optimising signal timings for key intersections at the following locations:
  - Sturt Highway/Docker Street
  - Sturt Highway/Best Street
  - Sturt Highway/Lake Albert Road
  - Railway Street/Lake Albert Road.
- lengthening and demarcation of the left turn lane on Railway Street at Lake Albert Road (western approach turn).

A summary of the mitigation and traffic performance is provided in section 6.1 of the Preferred Infrastructure Report. Intersection performance is also driven by the broader network, and mitigation has down-stream impacts in the network, which may worsen results at adjacent intersections.

The mitigation measures have most influence in the morning peak, where queues and delays are improved. The afternoon peak is more challenging with optimisations proving difficult to cater for high volumes from all approaches on the intersections of Docker Street with Sturt Highway and Lake Albert Road with Sturt Highway. Detailed results are provided in the Preferred Infrastructure Report.

Due to the levels of delay predicted at some intersections, the implementation of mitigation measures would not significantly reduce the increase in delay and delays greater than 20 per cent are still predicted.

Intersections where delay is predicted to worsen greater than 20 per cent with the proposal, delay is generally still predicted to worsen greater than 20 per cent with the identified mitigation.

In addition to the specific mitigations modelled in the assessment, other potential mitigations will be further considered during detailed design and construction planning for the proposal. These potential mitigations include, but are not limited to:

- local area traffic management plans
- turn restrictions at selected locations
- removal of on-street parking/creating clearways at particular times
- improved lane delineations.

This is reflected in a new mitigation measure TT2, which would be implemented alongside the traffic and transport management sub-plan and the mitigation measures identified in the EIS (refer to Appendix B: Updated Mitigation Measures of this Submissions Report for the updated mitigation measures).

School safety

Motorists would be required to comply with relevant traffic rules, including school zones where these apply. Use of temporary traffic controls, including speed restrictions and other measures such as signage, would be further investigated as part of the traffic and transport management sub-plan. Further, road safety audits and risk assessments would be completed prior to the commencement of construction for each enhancement site, where changes to the road network are required or where increased traffic movements or diversions during the construction phase may present an increased risk for motorists or pedestrians (mitigation measure TT10). These would continue to be developed in accordance with the relevant Austroads design guidelines (Austroads, 2018-2021c), to provide for safe movements of construction vehicles on public roads, and will consider the safety of all road users.

The temporary closure of Erin Street is required for construction of the proposal; however, the extent of closure is limited to the proposal site, and access to properties within Erin Street would be maintained. No changes to Mitchelmore Street are proposed.

Mitigation for damage to roads incurred during construction of the proposal

As stated in mitigation measure TT15, a road dilapidation report will be prepared for all haul routes within each precinct. Should damage to the road occur as a result of construction, the damage will be rectified to restore the road to the pre-work condition as identified in the road dilapidation report or as otherwise agreed with the relevant road authority.

Impacts to local council assets would also be managed through the interface agreements that each council has entered into with ARTC (refer to section 3.4 of this Submissions Report).

4.1.8 Non-Aboriginal heritage

4.1.8.1 Impacts to non-Aboriginal heritage items

Submission ID numbers

19, 22, 34, 44, 98, 139.

Summary of issues

Six submissions raised concerns around heritage impacts of the proposal in Albury and Wagga Wagga.

One of these submissions raised concerns that the proposed replacement of Albury Station pedestrian bridge would impact the heritage signal box within Albury Rail Yard. The submission requested details on how the signal box would be protected or restored.

Five of the submissions focused on the proposed Edmondson Street bridge and Wagga Wagga Station pedestrian bridge. Specifically, that:

- the demolition and replacement of these bridges would have a significant detrimental impact on the heritage values of Wagga Wagga. The designs of the replacement bridges were not considered to be sympathetic to the heritage character of the existing bridges and the surrounding area
- the existing Edmondson Street bridge undergo further investigation to determine whether it deserves a heritage listing, as the style of the bridge is unusual and the bricks were sourced from Wagga Wagga
- it is inappropriate for the proposal to intersect heritage areas within Wagga Wagga, and it would introduce more frequent and larger trains that may damage surrounding heritage structures due to greater vibrations
- the visual impact of the proposed new bridges on heritage value of properties in Wagga Wagga Conservation Area was not adequately considered.

Response

The heritage impact assessment is presented in section 11.3 of the EIS and the EIS Technical Paper 3: Non-Aboriginal heritage (Technical Paper 3).

The existing Albury Station pedestrian bridge, Edmondson Street bridge and the Wagga Wagga Station pedestrian bridge (also known as Mothers bridge) have insufficient clearance for the passing of double-stacked container freight trains and must be replaced. Any new bridge is required to meet relevant design and safety standards, including rail collision protection and anti-throw screens. During stakeholder engagement, ARTC has also been requested to provide DDA-compliant pedestrian bridges where new pedestrian bridges would be constructed. This would result in more visually prominent structures and minimises the opportunity to balance the bridge in the surrounding heritage landscapes.

As presented in the EIS, the proposal would have an overall moderate impact on the Albury Railway Station and Yard Group and an overall minor impact on the Wagga Wagga Railway Station and Yard Group heritage item. The construction of larger, more prominent structures contributes to the overall impact. In doing so, it was noted that:

- approaches to minimise visual impacts have been considered in the design of the pedestrian bridges, and that this would be further explored during detailed design
- Wagga Wagga Station bridge does not have an individual heritage significance and is not a contributing element to the Wagga Wagga Railway Station and Yard Group heritage item. The removal of this bridge would have a negligible impact on the heritage significance of the Wagga Wagga Railway Station and Yard Group heritage item.

Given the requirements for clearance, collision protection and the provision of a DDA-compliant pedestrian bridge, there are practical limitations to reducing the visual impact at Wagga Wagga Station. Approaches taken to minimise the visual impact through design includes longer spans to minimise the number of piers within the rail corridor, use of colours sympathetic to the heritage precinct, and use of truss bridge design. The design of the throw screens would also aim to maximise the transparency of the bridge superstructure to reduce the visual mass of the structure overall. A number of urban design finishes have been identified so that the bridge does not detract from the heritage setting, while being clearly differentiated from the heritage fabric of the station and yard group (refer to the Wagga Wagga landscape and urban design report (provided in the EIS Technical Paper 10: Landscape and visual impact assessment)). These responses would be further developed in accordance with the urban design and landscape plan (mitigation measure LV2).

Further changes to the design of the road and pedestrian bridges would occur during detailed design in line with the following mitigation measures:

- mitigation measure NAH6, which requires incorporation of heritage interpretation into the urban design of the bridges
- mitigation measure LV2, which requires the preparation of an urban design and landscape plan to guide detailed design. The plan will include design guidelines to minimise the visual impacts of infrastructure, with consideration of the existing landscape and visual context.

To provide a clearer connection of the heritage requirements within the landscape and urban design outcomes for the proposal, mitigation measure LV4 has been amended to include consideration of relevant heritage interpretation recommendations, and the involvement of a suitably qualified heritage specialist and urban designer/architect.

At Albury Railway Station and Yard Group, the replacement pedestrian bridge would not directly impact the North Signal Hut. No bridge piling would occur directly adjacent to the structure and, as detailed in section 6.3.3 of the EIS, the preferred design for the track realignment at this enhancement site was selected to minimise interaction with the North Signal Hut during construction and operation. Works would still be required adjacent to the structure, and indirect impacts such as vibration would be managed in accordance with the mitigation measures provided in the EIS. This includes the completion of a condition assessment to inform the required vibration limits for the structure, what alternative construction methods would be used and/or what mitigation is required, as well as what monitoring would be conducted during vibration-intensive activities. In the event that damage occurs to the structure due to construction, any damage would be rectified (mitigation measure NV10).

The existing Edmondson Street bridge is not listed on a heritage register but has been assessed in the EIS as an unregistered potential heritage item. The Edmondson Street bridge is included in the Wagga Wagga Conservation Area but has not been identified specifically as a contributory item. A significance assessment against the State Heritage Register criteria was carried out for the Edmondson Street bridge (refer to Table 4.28 of the EIS Technical Paper 3). This concluded that, based on the precautionary principle and the unknown nature of the bridge design, the Edmondson Street bridge may possibly have heritage significance at a local level. Mitigation measure NAH4 requires the investigation of re-purposing salvaged bricks from the existing structure within the design of the new road bridge during detailed design.

Section 11.4.2 of the EIS and section 5.1 of the EIS Technical Paper 3 present the impact assessment for the Wagga Wagga Conservation Area. This concludes that the proposal would have an overall minor impact to the heritage significance of the conservation area. The visual characteristics of the conservation area are the intact nature of the streetscape and railway precinct. The overall characteristics would not be changed by the proposal. Contributory heritage items do not have direct views to the new bridges, or would be restricted by intervening vegetation or structures. While the construction of new bridges would contribute a modern structure in the conservation area, it would not impede on the earlier features of the conservation area; however, the railway precinct is a significant component of the conservation area. Views of the station are predominately restricted to Station Place and Railway Street. The construction of the new pedestrian bridge would alter the aesthetic and change views from the immediate street but would not change the overall character of the conservation area. During operation, vibration levels at heritage-listed structures are not predicted to significantly change from the existing levels currently experienced. The ground vibration levels would also be well within vibration levels for damage to building contents and structural (cosmetic) damage to buildings (refer to section 11.4 of the EIS).

4.1.9 Land use and property

4.1.9.1 Property acquisition

Submission ID numbers

109, 129.

Summary of issues

Two submissions raised concerns that forced land acquisitions would occur as part of this proposal, and requested further information on how ARTC plans to obtain land. The submissions related to both the displacement of residents as well as the loss of prime agricultural land.

Response

The majority of the proposal site is contained within the existing rail corridor.

Other than for track realignment work at LX605 adjacent to the Olympic Highway between Junee and Illabo, operation of the proposal would not require changes to the ARTC lease area or require the permanent acquisition of private property, including private agricultural land and residential properties. At LX605, the track realignment requires the inclusion of an area of Crown Road into the rail corridor and ultimately the ARTC lease.

The proposal would, however, require the temporary occupation of land outside the rail corridor to enable construction at some enhancement sites. The majority of these areas are associated with road and transport infrastructure or environmental management uses; however, the areas do also include private property (as discussed in section 12.4.2 of the EIS). ARTC would initially adopt its preferred approach of seeking agreement with the landowners for the temporary occupation of these areas during construction. The portions of properties that are temporarily required for the proposal are small and would not impact ongoing use, viability or productivity. An exception to this occurs at the Billy Hughes bridge enhancement site, where the total area of a private property would be required. This property is currently used for agricultural purposes. ARTC would seek agreement for the use of this site and would restore the site to a condition as determined by any agreement with the landowner.

Wherever possible, the occupation of private land during construction will be by negotiated agreement—consistent with the objectives of the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW). Where agreement cannot be reached, the compulsory land acquisition process will be followed. Any compulsory acquisition process will not commence until after making a genuine attempt to reach an agreement with each private landowner for a minimum of six months (post issue of the opening letter).

4.1.9.2 Property values

Submission ID numbers

13, 16, 18, 23, 34, 44, 46, 63, 64, 68, 79, 97, 99, 109, 115, 117, 119, 124, 131, 145.

Summary of issues

Twenty submissions raised concerns that the proposal would negatively impact property values in the vicinity of the rail corridor due to noise, vibration and air quality impacts from more frequent and larger trains. The majority of the submissions focused on properties in Wagga Wagga. Two submissions requested compensation be provided to affected properties.

Response

An additional operational noise assessment for the full length of the rail corridor between Albury and Illabo was completed (refer to section 6.2 of the Preferred Infrastructure Report). This assessment identified additional receivers that require consideration of mitigation measures to address potential exceedances of rail noise criteria.

Additional air quality assessment was also completed as part of the Preferred Infrastructure Report (refer to section 6.3 of the Preferred Infrastructure Report). Due to the spatial extent of the proposal, a case study approach has been undertaken and assesses expected train operations in an urban setting and a rural setting to represent the urban areas and rural areas along the Albury to Illabo alignment. Additional mitigation has been identified as part of this assessment (refer to section 4.1.18.3 of this Submissions Report for further detail).

Property values are driven by a range of multiple factors and impacts to property values are not a relevant consideration under the EP&A Act. The EP&A Act requires the consideration of social and economic impacts, which has been considered in the EIS chapter 13 (Social) and chapter 14 (Economic).

4.1.10 Social

4.1.10.1 General amenity, health and wellbeing due to impacts during construction

Submission ID numbers

47, 58, 81, 83, 100, 106, 116, 118, 139.

Summary of issues

Nine submissions commented on impacts to amenity, health and wellbeing during construction of the proposal. This included:

- impacts to health and wellbeing due to reduced amenity from construction, particularly due to the scale of impacts in Wagga Wagga, including:
  - noise from construction activities, construction traffic and diversions
  - lighting during night-time works
  - dust emissions
  - visual impacts from the removal of vegetation
- concern that completion of construction would be delayed, prolonging social impacts on the community
- concern that Pearson Street bridge would be closed for 16 months and would increase the burden on certain communities due to extensive detours
- potential disruption to local schools, specifically South Wagga Public and Kildare College, and the ErinEarth centre
- social impacts due to increased housing competition with the construction workforce and limited employment opportunities for local communities. As a result, it was expressed that the proposal would have long-term impacts on local communities with limited benefits.

One submission also queried the accuracy of the EIS in considering impacts on accommodation during construction, including:

- the accuracy of regional events included in the EIS, and additional events not captured, such as Wagga Wagga Gold Cup Carnival, NSW State Touch Carnival, and scheduled National Rugby League games
- the reliance on statistics on accommodation availability recorded during the COVID-19 pandemic, when travel to the region was reduced.

Response

Impacts to health and wellbeing due to reduced amenity from construction

The EIS Technical Paper 4 identified that, if unmitigated, the proposal would present a high risk to health and wellbeing as it is likely that sensitive receivers would experience a moderate to major change in amenity during construction. The severity of these impacts would vary based on construction activities being completed, with worst impacts experienced during peak construction periods, such as during scheduled rail possessions. The assessment identified the potential for major changes in amenity for residents and non-residential users (such as schools) in the vicinity of enhancement sites within the Wagga Wagga precinct due to the extent and duration of noise and air quality impacts (if unmitigated).

In addition to mitigation measures to address noise, air, traffic and visual impacts during construction, social mitigation measures have been included to specifically manage impacts to the health and wellbeing of the community (refer to Appendix B: Updated Mitigation Measures of this Submissions Report). The mitigation measures include a community health and wellbeing plan (mitigation measure SI7) to identify strategies to promote community wellbeing, local support mechanisms, and communications and engagement activities to directly support health and wellbeing. The implementation of these mitigation measures would reduce the impact level from a high risk (unmitigated) to a low risk.

Duration of construction

The type and duration of works at each enhancement site would vary, and enhancement sites would be progressively commissioned and rehabilitated as works are completed. As a result, areas impacted by construction are not likely to experience impacts for the full duration of construction at any particular enhancement site. The assessment is also conservatively focused on the impacts during peak periods (such as a rail possession) to reflect the greatest potential impact of the proposal; however, certain locations (such as Wagga Wagga Station and surrounds) would experience impacts from multiple enhancement sites.

The final staging of works and detailed possession planning would occur during detailed construction planning to be completed by the construction contractor. This will consider further opportunities to reduce the duration of

construction, particularly bridge works, to minimise the disruption to surrounding communities; however, delays to construction cannot be fully discounted as there may always be delays beyond the control of ARTC.

Social impacts due to construction at Pearson Street bridge

The proposal at Pearson Street bridge includes track lowering and realignment, and does not include an upgrade of the existing bridge. Pearson Street would remain open for the duration of construction.

Disruption of schools

Impacts to schools would include amenity impacts from emissions during construction, which were identified as a high risk in the social impact assessment (EIS Technical Paper 4). Potential safety risks for children and parents accessing schools was also identified as a high risk in the township of Wagga Wagga.

In the absence of mitigation, impacts to schools would include amenity impacts from emissions during construction, which were identified as a high risk in the social impact assessment (EIS Technical Paper 4). Unmitigated potential safety risks for children and parents accessing schools were also identified as a high risk in the township of Wagga Wagga. With the implementation of mitigation measures identified in the EIS, impacts would be reduced to a low risk.

Schools and other educational facilities are considered specifically, including the importance of schools to the community and need to consider how schools operate in the approach for mitigating potential impacts. As identified in the EIS, schools and educational facilities in Wagga Wagga are located in close proximity to the proposal, including South Wagga Public School, Kildare College and the ErinEarth centre. Impacts from construction of the proposal, including the closure of Edmondson Street bridge and pedestrian bridges would cause disruption to these schools.

ARTC is committed to implementing a comprehensive mitigation approach to reducing and managing the impacts caused by construction of the proposal at schools, to achieve a low risk rating. This includes:

- consideration of access to schools in the scheduling of bridge closures in Wagga Wagga to ensure at least one of the bridges remains open at all times during construction
- ensuring safe access to schools impacted by the proposal is maintained through implementation of the traffic and transport management sub-plan
- implementation of the community health and wellbeing plan (mitigation measure SI7), including implementing school-based education programs to promote road and rail safety
- implementation of mitigation measures to reduce emissions from construction impacting the school activities, including consideration of the operation of schools and school hours
- ongoing engagement and communication with managers of social infrastructure about the timing and duration of construction works and management of potential impacts.

Social impacts due to construction workforce

A peak workforce of up to 770 would be required for construction of the proposal, which is anticipated to occur during a planned 60-hour possession. The average workforce outside peak periods would be much lower, and is estimated to be 170 people. This is the total workforce for the proposal, and the workforce within each precinct would be much lower. For example, a peak workforce of up to 150 people is estimated for the Wagga Wagga precinct.

While the creation of employment opportunities for construction of the proposal will be positive, a high proportion of workers is likely to be required from outside the region. The temporary influx of construction workers to the region has the potential to have negative social impacts, including a reduction in accommodation availability. The influx of temporary workers to the region, and requirements for accommodation, will be managed through a workforce accommodation plan (mitigation measure SI6). The workforce accommodation plan will prioritise the use of temporary local accommodation and avoid the use of private rental housing accommodation during workforce peak periods.

The mitigation approach for the proposal seeks to maximise the potential benefits of the project for local communities. This includes a workforce management plan (mitigation measure SI1), which will seek to create local and Indigenous employment opportunities through implementing initiatives such as training and recruiting workers for the projects.

Assessment of accommodation availability

A review of regional events was completed as part of the social impact assessment to identify when key events occur, and the timing to identify how this varies through the year (refer to section 6.3.12 of the EIS Technical Paper 4). The number and type of events is subject to change, and inclusion of a comprehensive list, particularly for smaller events and those organised with short notice, is not considered to be possible. However, the key events identified are considered sufficient to inform the assessment (refer to sections 7.12, 7.1.3, 7.2.2 of the EIS Technical Paper 4) and guide the approach for further mitigation to be implemented as part of the social impact management plan during subsequent phases of the proposal.

The availability of short-term accommodation was determined through a review of accommodation available within the study area, and consultation with accommodation providers to confirm the number of rooms available, as well as typical occupancy rates.

Occupancy rates were estimated for each month as a percentage of the total rooms available based on tourism data from available sources, as well as estimations of demand from seasonal workers and visitor numbers for major events using conservative assumptions. Consultation with accommodation providers indicated differing urban and regional occupation patterns. Urban centres such as Wagga Wagga and Albury exhibit relatively stable occupancy rates during the year, while regional communities experience significant fluctuations. This may be explained by differences in tourism demand, local events and activities, as well as accommodation demand by seasonal workers.

The social impact assessment (section 6.3.9 of the EIS Technical Paper 4) identified that regional tourism is experiencing significant growth with international border closures due to the COVID-19 pandemic promoting Australians to holiday in Australia. In the year to February 2021, visitors to regional NSW increased 5 per cent to 2.7 million and overnight spend increased 11 per cent (up $206 million). The number of nights stayed was also up 12 per cent compared with the same period last year (Tourism Research Australia, 2021).

A 72 per cent occupancy rate was adopted for urban township accommodation (2,485 rooms) (this is an additional 10 per cent above the base case using NSW Tourist Accommodation December quarter 2020 data (Destination NSW, 2021) (62.3 per cent), and equivalent to 2019 occupancy rate (71.2 per cent)). A variable occupancy rate was adopted for regional accommodation (472 rooms), which varied between 40 per cent to 90 per cent of occupancy throughout the year, accounting for major events and seasonal workforce accommodation needs.

Consideration of accommodation availability also excluded certain types of accommodation, including pubs and holiday parks.

Consequently, the accommodation assessment is quite conservative.

4.1.10.2 General amenity, health and socio-economic impacts during operation

Submission ID numbers

1, 4, 5, 7, 11, 12, 15, 16, 17, 19, 21, 28, 31, 35, 46, 48, 52, 58, 64, 65, 67, 68, 71, 75, 79, 83, 88, 95, 106, 109, 115, 119, 124, 128, 138, 142, 143, 145.

Summary of issues

Thirty-eight submissions commented on social impacts from decreased amenity during operation. The majority of these comments focused on impacts to Wagga Wagga and identified issues including:

- the size of Wagga Wagga and its significance as a regional centre, its current liveability, and impacts from the proposal during operation due to increased noise, vibration, visual, safety and air quality impacts from the operation of Inland Rail trains. This includes potential declines in attracting visitors or new residents to the city.
- impact to the Wagga Wagga Special Activation Precinct as workers would not be attracted to Wagga Wagga due to the impacts of the proposal on amenity and liveability
- impacts to areas of socio-economic disadvantage, including South Wagga, and potential increases in disadvantage as a result of operation of the proposal
- consistency with strategic planning within Wagga Wagga, including future growth and development.

Response

Impacts to liveability from amenity during operation of the proposal

The importance of Wagga Wagga as a regional centre is acknowledged in the EIS. As noted in the EIS Technical Report 4, the Wagga Wagga Local Government Area (LGA) and Wagga Wagga is forecast to experience significant growth.

The Main South Line is an existing operational rail line in Wagga Wagga, and an important part of the historical development of the city. Growing the economy of Wagga Wagga is a key objective in the *Wagga Wagga Community Strategic Plan 2040* (Wagga Wagga City Council, 2016a). Under this objective, the plan includes pursuing rail and intermodal freight opportunities as a key strategy. A similar objective is included in the *Wagga Wagga Integrated Transport Strategy and Implementation Plan 2040* (Wagga Wagga City Council, 2017). The proposal would contribute to the strategic planning initiatives for the future growth and development in Wagga Wagga.

The proposal uses an existing rail line, and surrounding receivers are subject to impacts from existing rail operations, including the operation of level crossings and delays to traffic. Any change to operation of the existing rail line is outside the scope of the proposal; as such, freight and passenger trains would continue to operate within Wagga Wagga.

Operation of the proposal would result in additional trains using the rail line, which will be taller to accommodate double-stacked container wagons. Impacts from the proposal are considered in context of the additional impacts that would result from operation of the proposal. Technical assessments included in the EIS considered these impacts in accordance with relevant policy and guidelines. Where exceedances are predicted, the mitigation approach includes measures to address these impacts.

Additional assessment of social impacts from increased level crossing closures during operation of the proposal has been completed as part of the Preferred Infrastructure Report (refer to section 6.1 of the Preferred Infrastructure Report).

Where changes to road and rail infrastructure are required for the proposal, these changes have been designed in accordance with relevant design guidelines and standards. Mitigation for operation of the proposal includes an operations communication and engagement plan (mitigation measure SI12). The plan will aim to develop community awareness of the proposal's operational characteristics, including information on level crossing operations, likely daily train movements and ARTC's ongoing role after construction. A minor revision to SI12 is included to allow greater correlation in the information made available with typical train movements.

Impacts to the Wagga Wagga Special Activation Precinct

As noted, the proposal uses the existing Main South Line, including through Bomen. The Wagga Wagga Special Activation Precinct connects to the Main South Line, and the proposal presents an opportunity for the development of freight intermodal infrastructure at this location.

This opportunity is noted in strategic planning documents for Wagga Wagga, including the *Wagga Wagga Community Strategic Plan 2040* (Wagga Wagga City Council, 2016a) and the *Wagga Wagga Integrated Transport Strategy and Implementation Plan 2040* (Wagga Wagga City Council, 2017).

Impacts to areas of socio-economic disadvantage

Impacts from operation of the proposal would generally be consistent along its length and not be concentrated in any one area; however, the significance of these impacts is dependent on the receiving environment, and areas of socio-economic disadvantage are potentially more susceptible to impacts. Areas of relative socio-economic advantage and disadvantage were considered in section 6.1.5 of the EIS Technical Paper 4. Low levels of disadvantage were noted in the Wagga Wagga LGA; however, the scale of this assessment considered the LGA as a whole and did not consider individual suburbs.

Benefits of the proposal include opportunities for employment and local business to support construction of the proposal. The workforce management plan (mitigation measure SI1) will include strategies for training of local residents.

Consistency with strategic planning for Wagga Wagga

As noted above, growing the economy of Wagga Wagga is a key objective in the *Wagga Wagga Community Strategic Plan 2040* (Wagga Wagga City Council, 2016a). Under this objective, the plan includes pursuing rail and intermodal freight opportunities as a key strategy. A similar objective is included in the *Wagga Wagga Integrated Transport Strategy and Implementation Plan 2040* (Wagga Wagga City Council, 2017). The proposal will contribute to the strategic planning initiatives for the future growth and development in Wagga Wagga.

Utilisation of the existing Main South Line for the proposal will mean that additional constraints to land use and development within Wagga Wagga are not created, and the proposal will not conflict with the strategic direction for future growth.

Potential risks to safety

The proposal does not include changes such as additional level crossings, or significant changes that may result in additional safety risks during operation. Additional assessment of level crossing safety has been completed as part of the Preferred Infrastructure Report (refer to section 6.1 of the Preferred Infrastructure Report).

4.1.10.3 Community severance

Submission ID numbers

7, 12, 19, 23, 29, 32, 37, 48, 57, 65, 71, 74, 75, 77, 78, 83, 89, 96, 103, 129, 139, 143.

Summary of issues

Twenty-two submissions raised concerns that community cohesion would be impacted as the proposal severs Wagga Wagga due to the continued presence of the rail line through the centre of Wagga Wagga and/or due to delays on the road network due to level crossing closures. In particular, this would result in:

- division of the city and/or restricted access to communities, services and other destinations within the City of Wagga Wagga
- impacts to the liveability of Wagga Wagga
- constraints to future development and growth within Wagga Wagga.

Response

As noted above, the Main South Line is an existing operational rail line within Wagga Wagga. The proposal does not include new level crossings or other significant changes to the road network that would introduce a new source of community severance.

The proposal would change the frequency of trains passing through the level crossings, and would increase the proportion of trains that are 1,800 m in length during the operation of the proposal. The longer and more frequent level crossing closures at Docker Street and Fernleigh Streets would result in extended waiting times at the level crossings and associated traffic impacts at nearby intersections. The predicted impacts are greater in 2040 than 2025 due to the additional train services proposed and the increased growth in background traffic volumes.

As detailed in section 6.1 of the Preferred Infrastructure Report, further consideration has been given to the impacts of community severance due to changes at level crossings during operation. This identified that the distribution of the infrastructure where residents can meet and interact is almost equal between both sides of the city close to Docker Street level crossing and Fernleigh Road level crossing. Most events take place in the centre of the town, which is located to the north of the railway and potentially leading to the need to cross the railway at Docker Street level crossing for the residents living in the south (noting that there are also other level crossings available to get to the city centre). It is possible that increased frequency of the level crossing closures and increased travel time across the level crossings might lead to noticeable inconvenience for the residents living in the southern part close to Docker Street and Fernleigh Road level crossings, resulting in moderate magnitude of the impact. As such, the proposal would result in a medium impact.

Further discussion on transport and traffic is provided in section 4.1.7.9.

4.1.11 Noise and vibration

4.1.11.1 Impact assessment approach

Submission ID numbers

1, 3, 18, 24, 27, 31, 40, 45, 71, 73, 84, 86, 95, 99, 108, 118, 126, 140.

Summary of issues

Eighteen submissions commented on the impact assessment approach for the noise and vibration impact assessment. Specifically:

- lack of baseline noise studies at receivers impacted by the proposal
- that the requirement for further operational rail noise monitoring potentially indicates that insufficient monitoring has been completed for the EIS
- the operational rail noise and vibration assessment was limited to a 2-km radius from the proposal site and has not considered impacts for the full corridor between Albury to Illabo
- the EIS lacks detail on the predicted rail noise and vibration impacts for residences located in proximity to the rail corridor, and expressed concern given the increased frequency and increased weight of freight trains
- questioned why rail noise levels at residences along the corridor cannot be calculated now
- vibration impacts have not been adequately assessed and questions the conclusion that double-stacked container freight trains would generate similar levels of vibration and groundborne noise compared to current freight trains.

The submissions requested monitoring and/or modelling to support the assessment:

- questioned why:
  - exceedances of the rail noise trigger levels set by the NSW Rail Infrastructure Noise Guidelines (NSW EPA, 2013) is acceptable, with particular reference to Wagga Wagga and/or at nearby schools
  - different noise trigger levels are applied to schools and residential properties, and how had 'sensitive receiver' been defined in the operational rail noise assessment
  - noise trigger levels, specifically, that noise up 85 dB does not meet community expectations, and questions why noise trigger values are lower for new rail infrastructure projects
- queried the use of certain words in chapter 15 of the EIS (such as 'up to', 'unlikely', 'worst case scenario'), which questions the accuracy of the assessment, and that the assessment is based on predictions and assumptions.

Response

Baseline noise studies

The methodology required for the assessment of noise and vibration is defined in relevant guidelines. This includes completing representative background and ambient noise monitoring to inform the assessment of noise during construction and operation of the proposal.

ARTC carried out noise monitoring of freight trains using the existing rail infrastructure on the A2I section of track in January and February 2023 and this data was used in the updated operational rail noise and vibration assessment (refer to Appendix D of the Preferred Infrastructure Report).

The requirement for further monitoring once operational is a standard practice to validate the predicted noise or vibration levels. It does not call into question the accuracy of the model at the EIS stage and is provided to assure ARTC and the community that noise or vibration generated by the proposal, as built, occurs as predicted, and to confirm the effectiveness of any implemented mitigation measures. In the unlikely event that are exceedances occur, then corrective actions would be required.

Operational noise and vibration assessment (rail)

The operational noise and vibration assessment (rail) in the EIS predicted noise levels at sensitive receivers within the study area based on the reference design and the assumptions, as outlined in the EIS Technical Paper 7: Operational noise and vibration (rail).

As part of the Preferred Infrastructure Report, an updated operational noise and vibration assessment for the full length of the rail corridor between Albury and Illabo was completed and considers the increased frequency of rail traffic associated with Inland Rail, refer to section 6.2 of the Preferred Infrastructure Report. This assessment identified additional receivers where exceedances of relevant noise and vibration criteria are predicted that require consideration of mitigation measures to address potential exceedances of rail noise criteria.

Approach for assessment of double-stacked trains

The outcomes of a noise and vibration monitoring survey were included as Appendix C of the EIS Technical Paper 7, which compared noise and vibration impacts of single- and double-stacked container wagons on noise and vibration emissions from freight trains. The survey concluded that noise and vibration emissions from double-stacked compared to single-stacked freight trains was negligible. Similarly, the assessment stated that the measurements also confirmed the documented theory that the difference between single- and double-stacked freight trains is negligible. The proposal will accommodate trains up to 1,800 m long, with trains up to this length currently operating on the rail line. ARTC is not seeking approval to run 3,600 m long trains as part of the EIS approval process. The addition of double-stacked trains as part of the proposal would not change noise and vibration levels from that already experienced at receivers adjacent to the rail line.

Exceedances of noise trigger levels

The noise trigger levels in the Rail Infrastructure Noise Guideline (NSW EPA, 2013) identify when feasible and reasonable noise mitigation measures need to be considered to reduce the predicted noise levels.

The proposal is categorised as redevelopment of an existing rail line, in accordance with the Rail Infrastructure Noise Guideline.

The assessment of the redevelopment of an existing rail line considers both the predicted rail noise level, as well as the relative increase of existing rail noise levels caused by the proposal. An increase in noise levels is considered to be an exceedance, where it exceeds trigger levels associated with both of these criteria. An exceedance of these levels does not mean a non-compliance. Instead, it would trigger the need for consideration of mitigation measures that are feasible and reasonable.

Noise-sensitive receivers are defined by the Rail Infrastructure Noise Guideline as residential land uses (including aged-care facilities) and other sensitive land uses—being education facilities and childcare centres, places of worship, hospitals and open spaces (passive and active).

The Rail Infrastructure Noise Guideline sets different noise trigger levels for schools and other sensitive non-residential receivers so that these land uses would not be unduly disturbed when in use. These are not directly comparable as:

- residential criteria are set as an external noise criterion (to account for impacts to outdoor spaces) and include:
  - noise trigger level for the day (15 hour) and night-time (9 hour) periods to represent level of average noise energy over the day or night period (L_{Aeq}) and includes the maximum noise events from individual train pass-by events (L_{Amax}). More stringent levels are set for the night-time due to the greater sensitivity to noise during this period
  - a maximum noise level (85 L_{AFmax}), which is the maximum noise level not exceeded 95 per cent of individual train pass-by events on recognition that rail noise events are not adequately described when only using the L_{Aeq} descriptor
- noise trigger levels for non-residential receivers are typically for shorter durations (e.g. over one period) and have been based on speech interference and providing adequate acoustic protection to conduct the activities associated with those land uses when in operation. Where these activities occur within a building, these are set as internal noise levels.

The requirement for the investigation of feasible and reasonable noise mitigation for residential receivers is to occur when the increase in rail noise occurs above the levels set by the Rail Infrastructure Noise Guideline and where the L_{Aeq} or L_{AFmax} noise trigger value is exceeded.

The Rail Infrastructure Noise Guideline sets more stringent noise trigger, due to human response and sensitivity to a new noise source being greater than a change to an existing noise source and for new heavy rail projects as it is possible to apply a greater range of noise prevention and mitigation options during the planning stages for new rail projects in greenfield situations or on land that has not previously had a rail line than for projects in existing rail corridors. Issues concerning the noise trigger values set by the Rail Infrastructure Noise Guideline are matters for the NSW EPA.

Accuracy of the noise and vibration assessment

The noise and vibration assessment as provided in the EIS chapter 15, the EIS Technical Paper 6 and the Revised operational noise and vibration (rail) assessment (refer to Appendix D of the Preferred Infrastructure Report) provides predictions at sensitive receivers. These predictions are calculated using accepted models and apply a number of assumptions to reflect the expected construction methodology and the current reference design. These assessments use this language to reflect the predictive nature of the construction noise and vibration assessment, and the predicted maximum number of impacted receivers or noise level, noting the chapter summarises multiple scenarios and time periods (day, evening and night). A more detailed breakdown of the noise and vibration assessment results is provided in Technical Paper 6 of the EIS and the updated operational rail noise and vibration assessment (refer to Appendix D of the Preferred Infrastructure Report).

The assessment of a 'worst case' scenario has been completed for the construction noise and vibration assessment, as the construction methodology would undergo further changes during detailed design. The worst-case scenario is represented by the loudest equipment operating at the closest point to receivers. In practice, actual construction noise levels at individual receivers would be lower for most of the construction period as noise-generating activities will typically be undertaken at greater distance from receivers locations within the enhancement areas than used in the assessment, with limited time spent at the closest location to receivers as assessed, if at all.

The revised operational noise and vibration (rail) assessment (refer to Appendix D of the Preferred Infrastructure Report) provides an assessment of the full length of the Albury to Illabo alignment and captures the increased railway operations that are attributable to the proposal. The operational noise model used to predict future impacts on A2I has been validated, demonstrating that the model is an accurate representation of operational rail noise levels. Further, as set out in mitigation NV13, monitoring would be completed once Inland Rail has commenced operations to compare actual noise performance against that predicted by an operational noise and vibration review. The need for any additional feasible and reasonable mitigation measures will be identified as an outcome of the monitoring.

4.1.11.2 Construction noise

Submission ID numbers

9, 13, 27, 65, 69, 121.

Summary of issues

Six submissions raised concerns about construction noise impacts, including impacts during the night and the significance of noise impacts due to construction of the bridge works in Wagga Wagga (in particular, at South Wagga Public School, Kildare Catholic School and Wagga Wagga High School).

Response

Construction noise

Construction noise from the proposal has been conservatively assessed based on worst-case assumptions. Noise at these levels would not be experienced at all sensitive receivers and would only occur for limited periods during construction.

A range of measures will be used to reduce the impact of construction noise. Where appropriate, this would include using temporary noise barriers, using quieter equipment, staging work to avoid extended periods of disruption and providing respite periods and alternative accommodation if required.

Impacts from construction noise would be managed in accordance with the Inland Rail NSW Construction Noise and Vibration Framework. A construction noise and vibration management plan will be prepared and implemented as part of the construction environmental management plan in accordance with the Inland Rail NSW Construction Noise and Vibration Framework. An outline of the construction noise and vibration management plan is provided in Appendix C: Outline Construction Environmental Management Plan of this Submissions Report.

Monitoring and auditing of environmental performance during construction will be completed to validate predicted noise levels.

Engagement with the community and other stakeholders will occur during construction, through the communication management plan (as stated in mitigation measure SI10) to assist in managing the impacts from construction noise.

Impacts during the night and sleep disturbance

As noted in the EIS, the proposal involves enhancement works that are on, or immediately adjoin, active rail lines that need to remain operational throughout construction, with minimal disruption. During rail possessions, works may need to be carried out on a 24-hour basis. Under current arrangements, there are typically two possessions of 60-hours per year. This is the minimum number of major possessions that would occur each year during the construction of the proposal.

Due to the large extent of work required, consideration is being given to seeking additional possessions of up to 60 hours. Final staging of works and detailed possession planning would occur during the next stage in detailed design. Further information on the scheduling of rail possessions is provided in section 4.1.5.2 of this Submissions Report.

Construction hours for the proposal have been developed to:

- balance worker safety and rail corridor access, to support efficiencies in the workforce utilisation and to reduce construction durations, as far as practicable
- reduce community impacts, by minimising the overall duration of disruption and amenity impacts from construction activities and road diversions.

The Inland Rail standard program construction hours (being 6 am to 6 pm, seven days a week) are proposed for work that is not subject to rail possessions or track occupancy authorisations. Where a sensitive receiver (such as a residence, school or hospital) is predicted to be noise affected for more than three months:

- Inland Rail standard program construction hours would only apply for a maximum three-month period at that enhancement site
- no work would be undertaken every alternative week between the hours of 6 pm on Saturday and 7 am Monday.

Under the Inland Rail standard program construction hours, only low impact noise activities are permitted between 6 am and 7 am.

'Noise affected' is defined as an exceedance of the applicable noise management level as specified in the Interim Construction Noise Guideline (DECC, 2009) for residential and non-residential sensitive receivers.

Where Inland Rail standard program construction hours would not apply, works would be conducted during the following construction hours, which are consistent with standard construction hours specified in the Interim Construction Noise Guideline (DECC, 2009):

- Monday to Friday: 7 am to 6 pm
- Saturday: 8 am to 1 pm
- Sundays and public holidays: No works or public holidays.

As discussed, construction noise from the proposal has been conservatively assessed based on worst-case assumptions. Where works are required during the night, a number of sleep disturbance impacts have been identified. The actual potential for sleep disturbance from construction of the proposal would be subject to the activity and the location at which it occurs. A location- and activity-specific construction noise and vibration review will be prepared based on a more detailed understanding of the construction methods confirmed by the construction contractor. The plan will confirm predicted impacts at relevant receivers to assist with the selection of feasible and reasonable management measures for sleep disturbance.

An out-of-hours (OOH) work protocol (mitigation measure NV8) will be developed as part of the construction noise and vibration management plan to define the process for considering, approving and managing out-of-hours work, including implementation of feasible and reasonable measures and communication requirements. Measures will be aimed at proactive communication and engagement with potentially affected receivers, provision of respite periods and/or alternative accommodation for defined exceedance levels.

Construction noise at bridge sites

Additional construction work is required at enhancement sites where demolition and replacement of existing pedestrian and road bridges is required, including Albury Station pedestrian bridge, Cassidy Parade pedestrian bridge and Wagga Wagga Station pedestrian bridge, Edmondson Street bridge, Kemp Street bridge and Junee Station pedestrian bridge. Construction works at these sites includes specific activities such as demolition works, installation of crane and piling pads, piling, and lifting.

The EIS Technical Paper 6 modelled noise levels based on the construction activities required at each enhancement site. As discussed earlier in this sub-section, construction noise from the proposal has been conservatively assessed based on worst-case assumptions. The Interim Construction Noise Guideline (DECC, 2009) specifies noise management levels that guides the need to apply feasible and reasonable work practices and mitigation measures to minimise noise impacts when exceedances are identified. It is not mandatory to meet noise management levels.

Predicted exceedances of noise management levels for each enhancement site are commensurate with the proposed construction activities and hours of construction, and number of receivers in the surrounding area. While the number of receivers impacted may vary, the consideration of mitigation and management measures for the proposal would also include the level of impact predicted at individual receivers.

Construction work at some of these sites occurs close to residential properties and schools. Mitigation measures would be implemented to manage noise exceedances, with the aim of achieving the applicable noise management level (mitigation measure NV5). These measures would be informed through location- and activity-specific construction noise and vibration reviews (mitigation measure NV1) and guided by the noise and vibration management sub-plan of the construction environmental management plan (mitigation measure NV5).

4.1.11.3 Construction vibration

Submission ID numbers

64, 68, 107.

Summary of issues

Three submissions raised concerns on the impact of construction vibration, including the potential for structural damage to residential properties.

One of these submissions commented that there is no scope for the structural assessment of buildings prior to construction.

Response

Construction vibration from the proposal has been conservatively assessed based on worst-case assumptions. The assessment has considered minimum safe-working distances for different plant and equipment based on thresholds, above which impacts based on human response or cosmetic damage to structures (including heritage structures) may occur. These safe-working distances are used as a screening assessment to identify where mitigation and management may be required. A number of structures have been identified within the nominated safe working distances for construction of the proposal.

The mitigation approach for managing potential impacts to vibration includes completion of condition surveys for structures within safe working distances to confirm their condition prior to and following construction of the proposal (mitigation measure NV2). Condition surveys will confirm how susceptible the structure is to potential damage from vibration. Alternative construction methods that generate less vibration will be investigated and substituted, where practicable, and attended vibration measurements will be undertaken at the commencement of vibration-generating activities to confirm that structural vibration limits are within the acceptable range. Site activities will be modified where practicable to avoid exceeding the applicable criteria (mitigation measures NV1, NV2 and NV10).

The mitigation approach would be implemented to proactively manage the potential for vibration impacts occurring; however, in the unlikely event that vibration-related damage to a structure occurs, the damage would be rectified by the construction contractor to its pre-construction condition at no cost to the property owner (mitigation measure NV10).

4.1.11.4 Operational rail noise and vibration

Submission ID numbers

1, 2, 3, 4, 6, 9, 11, 13, 14, 15, 16, 17, 18, 25, 27, 29, 33, 36, 38, 39, 40, 44, 45, 48, 52, 54, 58, 63, 65, 71, 75, 76, 79, 84, 85, 88, 96, 97, 98, 100, 103, 107, 108, 109, 111, 115, 116, 117, 119, 122, 126, 132, 137, 138, 140, 142, 144.

Summary of issues

Fifty-seven submissions raised concerns or commented on the operational rail noise and vibration assessment. The key concerns related to the increased noise and vibration impacts to the surrounding community from more frequent trains and/or longer, larger, double-stacked trains with heavier loads. The majority of the submissions related to rail noise and vibration impacts within Wagga Wagga and that the assessment did not address the noise and vibration impacts to the regional city.

Specific rail noise and vibration issues raised in submissions related to:

- the increase in noise and vibration, given the existing noise and vibration levels already experienced by residences
- impacts of operational noise and vibration on amenity, as well as the mental health and wellbeing of surrounding residents. Submissions questioned why Inland Rail should be allowed to occur through urban areas and towns, such as Wagga Wagga and Junee
- impacts from noise and vibration during the night, including sleep disturbance and/or noise impact at night when windows are left open for ventilation during summer months
- impacts to newly constructed residential buildings that have been required to be built to manage existing rail noise, or residences that have double glazing
- impacts to non-residential receivers including:
  - schools and pre-schools, including South Wagga Primary School, Kildare College and the ErinEarth Centre, including disruption to learning
  - hospitals and other medical services
  - commercial businesses
- impacts from noise from active level crossings, including use of train horns at level crossings.

Specific to rail-generated vibration and ground-borne noise, submissions raised issues with:

- increased vibration from Inland Rail trains, particularly in relation to instances where vibration impacts from existing operation of the rail line are experienced
- impacts of vibration at South Wagga Primary School and Kildare College
- impacts to the structural integrity of buildings, including buildings of significant age and heritage listed, and options for mitigations where impacts occur
- consideration of local geotechnical conditions, specifically the influence of reactive soils types in Wagga Wagga in the transmission of vibration
- impacts to sensitive receivers from ground-borne noise, and queried why these impacts were discounted and/or within relevant criteria.

Submissions also queried:

- how the rail noise assessment accounted for the:
  - difference in noise generated from double-stacked container trains compared to single-stacked trains
  - impact of noise from trains breaking, including wheel squeal, as well as the bunching and stretching of train wagons
  - impact from trains idling in Wagga Wagga.

Response

Operational noise from increased train movements

The Revised operational noise and vibration (rail) assessment (refer to section 6.2 of the Preferred Infrastructure Report) provides an assessment of operational noise and vibration from increased train movements for the full length of the Albury to Illabo alignment and captures the increased railway operations that are directly attributable to the proposal. This was expanded from the EIS to include the areas potentially impacted by noise and vibration from operation of the proposal beyond the enhancement sites. Receivers sensitive to noise and vibration were identified within approximately 2 km either side of the rail corridor. Additional noise monitoring along the rail corridor to

measure rail noise from existing rail operations (refer to section 6.2.2.2 of the Preferred Infrastructure Report) was also undertaken to support the updated assessment.

The Rail Infrastructure Noise Guideline sets out the NSW Government's requirements for what rail projects must consider and, when feasible and reasonable, mitigation must be considered. Noise trigger levels provided in the Rail Infrastructure Noise Guideline have been set by the NSW EPA to minimise noise level exposure levels from significant redevelopments of existing rail lines and to manage impacts to the amenity and wellbeing of communities living near rail line. Railway noise is, and would be, audible at sensitive land uses adjacent to the rail corridor, both externally and internally, even where the noise trigger values are achieved.

The assessment criteria are described in section 4.1.11.1 of this Submissions Report. The assessment criteria are the same as described in chapter 15 of the EIS and the EIS Technical Paper 7: Operational noise and vibration (rail); however, the interpretation of the criteria has been varied following advice from NSW EPA. Further information regarding the assessment criteria used in the revised assessment is provided in Appendix D of the Preferred Infrastructure Report.

The updated assessment identified approximately 28,969 buildings with 2 km of the rail corridor between Albury and Illabo as being potential noise and vibration sensitive receivers, with the majority being identified as residential properties. The additional assessment considered the noise and vibration impacts due to increased number of train movements, increased number of idling events and increased operation of level crossings, including warning bells and the use of train horns.

Additional assessment inferred that the airborne noise from operation of the proposal would primarily change due to an increased frequency of train movements along the existing operational rail corridor.

Noise levels are predicted to not exceed the airborne rail noise criteria at the majority of the sensitive receivers in the study area. The daytime L_{Aeq} criteria is predicted to be exceeded at 138 residential receivers in 2025, and 190 residential receivers for 2040. The night-time L_{Aeq} criteria is predicted to be exceeded at 60 residential receivers in 2025 and 92 residences in 2040. While L_{Amax} noise levels are not predicted change as a result of the proposal, existing rail noise levels combined with project-related L_{Aeq} increases generate exceedances of the Rail Infrastructure Noise Guideline triggers at 1,219 residences in 2025 and 1,285 residences in 2040.

Where exceedances were predicted, the investigation of reasonable and feasible mitigation measures was triggered; however, options for mitigation were recommended as part of the overall strategy to minimise the potential noise and vibration impacts of the proposal, including areas where exceedances are not predicted to occur.

The airborne rail noise criteria is also predicted to be exceeded for both 2025 and 2040 at 27 non-residential sensitive receivers. This includes three medical facilities (including Henty Hospital and Health Services). It should be noted that the Rail Infrastructure Noise Guideline trigger levels for non-residential receivers are internal noise levels and are, therefore, subject to the quality of the building façade. Façade testing of non-residential receivers will be undertaken to confirm eligibility for noise mitigation.

Active and passive recreation areas have been assessed and predicted daytime noise levels for sports fields and open space associated with educational facilities adjacent to the A2I alignment are all within the 65 dBA $L_{Aeq(15hour)}$ criterion.

The Rail Infrastructure Noise Guideline does not set criteria for commercial receivers.

Responses to submissions that raised issues regarding amenity, health and wellbeing are discussed further in section 4.1.10 of this Submissions Report.

Refer to section 4.1.2 of this Submissions Report for matters relating to selection of the preferred option (being the enhancement of the existing rail corridor).

Increased vibration

A noise and vibration monitoring survey was included as Appendix C of the EIS Technical Paper 7, which compared noise and vibration impacts from single- and double-stacked freight trains on noise and vibration emissions. The survey concluded that the variation in noise and vibration emissions was negligible. The proposal would accommodate trains up to 1,800 m long, with trains up to this length currently operating on the rail line. ARTC is not seeking approval to run 3,600 m long trains as part of the EIS approval process. The addition of double-stacked trains as part of the proposal would be unlikely to change vibration levels from that already experienced at structures adjacent the rail line (as outlined above). Minor changes in the location of the track from track realignment is not significant in the context of transmission of vibration to surrounding receivers and the assessment methodology considered the increased frequency of train pass-bys associated with the proposal on human comfort.

Vibration levels would be confirmed through the completion of vibration monitoring to validate the modelled predictions (mitigation measures NV11 and NV13).

The Revised operational noise and vibration (rail) assessment (refer to Appendix D of the Preferred Infrastructure Report) and provides a conservative assessment of operational vibration from increased train movements for the full length of the Albury to Illabo alignment. The assessment is based on detailed measurement surveys completed on

existing rail corridors between Wagga Wagga and Albury in NSW and Euroa and Wallan in Victoria. Vibration levels from operation of the proposal are expected to be below the human comfort assessment criteria for a majority of sensitive receivers in the vicinity of the rail corridor. Two residential receivers in close proximity may be subject to vibration exceedances. Further investigation would be undertaken as part of the operational noise and vibration review to confirm the existing vibration levels at these receivers and whether mitigation is required.

Influence of soil types in the transmission of vibration

While soil types may influence the transmission of vibration, as noted above, the addition of Inland Rail trains as part of the proposal would not change vibration levels from that already experienced at structures adjacent the rail line.

Ground-borne noise

The assessment of ground-borne noise in the EIS Technical Paper 7 concluded that the majority of receivers are not predicted to exceed trigger levels. Receivers, including The Scots School in Albury, and three residential receivers at Henty Yard clearances were predicted to exceed trigger levels; however, at these locations airborne noise was predicted to be the dominant noise source. In accordance with the Rail Infrastructure Noise Guideline, further consideration of ground-borne is not required in these instances.

The Revised operational noise and vibration (rail) assessment (refer to Appendix D of the Preferred Infrastructure Report) provided additional assessment of ground borne noise along the length of the rail corridor. The updated assessment also indicates that that ground-borne noise levels beyond 50 m from the outer rail meet the assessment criteria (i.e. L_{ASmax} 40dBA daytime and L_{ASmax} 35dBA night-time). There are some residential receivers are located within the offset distance, however airborne noise levels during train pass-by are predicted to be the dominant noise contribution at sensitive receivers with 50m from the alignment. As per methodology listed in the Rail Infrastructure Noise Guideline, the assessment of ground-borne noise is not required when the airborne noise contribution is dominant, which is the case in this instance. Therefore, further consideration of ground-borne noise for these receivers is not required.

Other sources of rail noise, including train idling, wheel squeal, as well as the bunching and stretching of train wagons

Train idling during operation of the proposal may occur at crossing loops. The predicted noise levels from trains idling at crossing loops were within the Rail Infrastructure Noise Guideline criteria and are lower than the railway noise levels from the daily train pass-by events on the main track.

Assessment of the bunching and stretching of train wagons identified that, while these sources would contribute to noise generated by the proposal, they are not significant in the context of overall noise generated.

Corrections for potential curving noise (wheel squeal) were included in the noise modelling at locations where this is likely to occur. The noise criteria were not triggered as a result of curving noise.

Further assessment of these aspects is provided in the Revised operational noise and vibration (rail) assessment (refer to Appendix D of the Preferred Infrastructure Report).

Rail-related noise at level crossings

Noise from level crossing bells/alarms at level crossings and the use of train horns as safety and warning devices was assessed for the proposal in accordance with the Rail Infrastructure Noise Guideline. Predictions of noise from these sources was determined to meet the relevant criteria at all sensitive receivers. The Revised operational noise and vibration (rail) assessment undertaken as a part of the Preferred Infrastructure Report noted that the noise levels from trains idling on crossing loops are predicted to not exceed Rail Infrastructure Noise Guideline criteria and are lower than the noise levels from train movements on the main alignment. As the crossing loops are within proximity of the main line track, the assessment noted that the noise from crossing loops is not expected to be the primary influence on the overall daytime and night-time predicted noise levels at the sensitive receivers.

As noted in section 6.5 of the EIS Technical Paper 1, the noise from the level crossings, particularly the train horns, have the potential to be audible at sensitive receivers and recommendations were included to assist the management of noise associated with the level crossings.

4.1.11.5 Operational road noise

Submission ID numbers

13, 48.

Summary of issues

Specific to road noise impacts, two submissions raised concern on the impacts resulting from changes in road traffic noise, specifically due to the change in traffic volumes on the road network when Inland Rail is operational and noise from the new, taller road bridges.

Response

The proposal would not generate additional road traffic during operation.

The assessment of road traffic noise for Edmondson Street bridge and Kemp Street bridge during operation of the proposal was included in section 15.6.1 of the EIS and in the EIS Technical Paper 6. The results show that noise levels are predicted to reduce at properties immediately adjacent to bridges.

Decreased noise levels have been predicted for receivers located in very close proximity to the bridges. At these locations, screening from low height noise sources (tyres and engines) is provided by the bridge platform itself. Although the increase in bridge heights reduces the extent of noise absorbed by the ground for receivers close to the alignment, this loss is negligible due to the short distances to these receivers.

A minor increase was predicted for receivers at greater distances but these increases were within the assessment criteria. The presence of safety barriers was not included in the model; however, safety barriers would be included on the bridge and would provide some level of screening of road traffic noise.

4.1.11.6 Mitigation and management of noise and vibration impacts

Submission ID numbers

1, 23, 27, 29, 31 34, 40, 43, 44, 45, 46, 47, 48, 67, 69, 73, 77, 107, 108, 122, 126, 131, 132, 133, 136, 139, 142.

Summary of issues

Twenty-seven submissions raised concerns in regard to the implementation of mitigation for residential properties and other receivers impacted by construction and operational noise and vibration, including:

- how mitigation is planned, costed and funded
- queried timing for the implementation of mitigation, including a number of submissions, which raised that the timing should be prior to construction of the proposal
- responsibility for mitigation and/or compensation, including costs associated with potential maintenance and repair of damage to buildings from vibration impacts during construction or operation of the proposal, and timing for when mitigation/compensation would be received
- the independence of the completion of building condition surveys
- engagement with relevant stakeholders on mitigation, specifically referring to the ErinEarth Centre.

A number of these submissions queried the further investigation of specific types of mitigation and locations where they may be triggered, including:

- raising the rail embankment, installation of noise walls/panels or trees, double glazing, track pads, or upgrade of existing fencing to mitigate noise impacts
- clarification of mitigation for residences close to Docker/Bourke Street in Wagga Wagga
- clarification on the type of mitigation to be offered for properties impacted during operation of the proposal
- what mitigation would be provided for construction noise. This included mitigation for piling, and installation of crane pads and cranes.

One of these submissions also requested clarification of the scope and extent of the operational monitoring program.

Response

Implementation of mitigation

Subject to approval of the proposal, ARTC and the appointed construction contractor must comply with all requirements of the conditions of approval for the proposal that would be issued by the DPE. This would include the implementation of all environmental mitigation measures outlined in Appendix B: Updated Mitigation Measures of this Submissions Report.

The cost of mitigation measures, including in instances where repairs or other works to properties are required, would be managed by ARTC and the appointed construction contractor.

The required timing for the implementation of environmental mitigation measures is outlined in Appendix B: Updated Mitigation Measures of this Submissions Report, including those that are required prior to the commencement of construction of the proposal. The specific timing for implementation of mitigation would be dependent on a number of factors, including detailed scheduling and consultation with relevant stakeholders.

Operational rail noise and vibration mitigation

Identification of noise mitigation will continue to be investigated during detailed design taking into consideration landowner preferences and, in the case of non-residential receivers, informed by further investigations of internal

noise levels, building layout and building condition. This investigation would be informed by an operational noise and vibration review to confirm noise and vibration predictions based on the final design and how predicted impacts would be mitigated (mitigation measure NV3). The operational noise and vibration review would define further design work and iterative modelling required to identify the final suite of feasible and reasonable mitigation measures for operational noise and vibration. This review would follow the hierarchy shown in Figure 4-2.

The Revised operational noise and vibration (rail) assessment (refer to section 6.2 of the Preferred Infrastructure Report) provides an assessment of operational noise from increased train movements for the full length of the Albury to Illabo alignment and captures the increased railway operations attributable to the proposal. For receivers where the assessment predicts the Rail Infrastructure Noise Guideline criteria will be exceeded, mitigation would be implemented where feasible and reasonable based on the final project design.

FIGURE 4-2: HIERARCHY OF NOISE AND VIBRATION MITIGATION MEASURES

ARTC would be responsible for funding operational rail noise and vibration mitigation measures confirmed in the operational noise and vibration review.

Monitoring program

As detailed in chapter 9 of the EIS Technical Paper 7, a monitoring program will be undertaken on commencement of operation of the proposal to validate noise and vibration predictions.

The full detail of the monitoring program would be confirmed by the appointed construction contractor; however, recommendations to inform the requirements of the monitoring plan are included in the EIS Technical Paper 7.

The monitoring will inform an assessment of the effectiveness of any noise and vibration management and mitigation measures implemented for the proposal, and identify, if required, further noise and vibration mitigation measures to meet the requirements of the Rail Infrastructure Noise Guideline and relevant conditions of approval.

As a part of the Revised operational noise and vibration (rail) assessment for the Preferred Infrastructure Report, additional noise monitoring was also undertaken in January and February 2023 at representative locations within the study area between Albury and Illabo to measure operational rail noise from existing operations.

The approach to mitigation of operational noise and vibration has also been updated following the increase in assessment area (the full length of the rail corridor between Albury and Illabo) and advice from the NSW EPA on the interpretation of the Rail Infrastructure Noise Guideline trigger levels. Project-specific noise levels have been introduced to guide the selection of noise mitigation measures for residential receivers that exceed the Rail Infrastructure Noise Guideline criteria. An explanation of the project-specific noise levels and the resulting mitigation measures is included in chapter 9 of the Revised operational noise and vibration (rail) assessment (Appendix D of the Preferred Infrastructure Report). Further details on the outcomes of the monitoring is available in section 6.2.2 of the Preferred Infrastructure Report.

Compensation

Any damage to property or requirement for at-property treatment, or provision for alternative accommodation or other forms of respite, would be funded by ARTC and/or the appointed construction contractor. No other forms of compensation would be provided.

Building condition surveys

Building condition surveys will be completed before and after construction works where buildings or structures, utilities or road infrastructure are within the minimum vibration working distances for vibration (mitigation measure NV2).

The surveys would be undertaken by the construction contractor. A copy of the condition survey would be provided to property owners where requested.

Construction mitigation

As stated earlier in section 4.1.11.2 of this Submissions Report, the impact of noise and vibration from the proposal has been conservatively assessed based on worst-case assumptions. Noise at these levels would not be experienced at all sensitive receivers and would not occur throughout the duration of the construction.

Construction noise levels were modelled based on construction activities required at each enhancement site, where required, including specific activities such as piling, and installation of crane pads and cranes.

As discussed, a hierarchy of reasonable and feasible mitigation measures for noise and vibration will be implemented for the proposal in accordance with the Inland Rail Noise and Vibration Framework. While the implementation of mitigation measures considers the contribution of specific activities, mitigation measures are generally not limited to these activities and would be applied for the proposal as a whole.

For activities such as piling, and installation of crane pads and cranes, the plant and equipment with the lowest available noise and vibration emissions that can practically complete the works will be sourced where possible. This would include consideration of minimising the use of equipment that generates impulsive, tonal or irregular noise.

The construction noise and vibration management sub-plan would include community and stakeholder engagement measures in accordance with the communication management plan (mitigation measure NV5). This plan would be informed by the out-of-hours work plans that would be prepared for each construction work location and/or key works in consultation with key stakeholders (including the NSW EPA) and the community (mitigation measure NV8).

4.1.12 Economic

4.1.12.1 Local impacts to business and industry—construction

Submission ID numbers

88.

Summary of issues

One submission raised the construction access and amenity impacts on local business as a concern. The submission focused on a private business located close to the Edmondson Street bridge and Cassidy Parade pedestrian bridge enhancement sites. The key issues raised were:

- significant disruption to the operation of the business due to extensive construction hours and amenity impacts, which would adversely affect the mental health of patients and the delivery of services
- limitation of access to the business through increased construction traffic and changed access arrangements in the vicinity of the proposal site with a particular risk to convenient active transport from nearby schools and TAFE.

Response

The sequencing of the bridge works at Wagga Wagga was prepared to minimise the effect of closures and diversions to traffic and pedestrians, while minimising the overall duration of construction. The staging of the bridge closures in Wagga Wagga have been revised in response to concerns raised by the community and stakeholders (refer to section 3.2.2.2 of the Preferred Infrastructure Report). To minimise detour distances between pedestrian rail corridor crossings, Edmondson Street pedestrian bridge would be constructed first and then Cassidy Parade pedestrian bridge and Wagga Wagga Station pedestrian bridge would be constructed concurrently.

Construction staging will be planned to account for continued active transport connectivity during construction, including exploring opportunities to reduce the duration of concurrent bridge closures, in consultation with impacted stakeholders (mitigation measure TT12).

As noted in mitigation measure SI4, business and service providers whose access and/or properties will be impacted during construction would be contacted to:

- agree on feasible and reasonable property-specific measures
- ensure active communication can be maintained to inform of any changes to the construction schedule and receive feedback about the effectiveness of measures in place.

A comprehensive social impact management plan will be finalised through consultation with key stakeholders to manage and monitor the implementation of the proposed social and economic mitigation measures. The social impact management plan would review and refine the proposed monitoring and reporting framework presented in this report on an ongoing basis.

4.1.12.2 Regional benefits

Submission ID numbers

7, 17.

Summary of issues

Two submissions provided commentary on the regional benefits of the proposal. One submission expressed that undertaking this proposal alongside the development of the Riverina Intermodal Freight and Logistics hub would benefit all users of the Wagga Wagga Special Activation Precinct.

The other submission expressed concern that there would no long-term economic benefits to Wagga Wagga as the proposal would only result in the increased use of a rail corridor.

Response

The Wagga Wagga Special Activation Precinct has been designed to capitalise on the Inland Rail program, bringing manufacturing, agribusiness, and freight and logistics to Wagga Wagga. The Wagga Wagga Special Activation Precinct (Wagga Wagga precinct) Master Plan (DPE 2021b) came into effect on 21 May 2021 and the Wagga Wagga Precinct Delivery Plan (Regional Growth NSW Development Corporation, 2022) has now been endorsed. These documents are available from the Regional Growth NSW Development Corporation website at **nsw.gov.au/departments-and-agencies/department-of-regional-nsw/our-offices-agencies/rgdc**.

As the proposal forms part of the Inland Rail program, the proposal is linked to delivering the benefits of the entire program. In its entirety, Inland Rail would enhance Australia's existing national rail network and serve the interstate freight market. While the proposal would contribute to the overall benefits of Inland Rail, it would not change the distances travelled by rail through the proposal and, as such, there would be no community benefits associated with the shift from road to rail, such as crash reduction, environmental externalities or road decongestion associated with the proposal as outlined in section 5.4.5 of the EIS Technical Paper 5.

The improvements to the supply chain due to the proposal and the Inland Rail program could, however, enhance the economic opportunities within regional and local communities. This, in turn, would:

- drive savings in freight costs, which would benefit producers, consumers and the regional community
- have the potential to promote local industry development by providing efficient transport access to intrastate and interstate markets (particularly in the freight and logistics sector).

The proposal also offers opportunities to improve the productivity of the local industry by reducing the distance between dispersed agricultural activities to processing and markets. Efficient supply chains support the regional and national capacity to enhance economic opportunities. The proposal will increase competition between road and rail freight modes, driving savings in freight costs which would benefit producers, consumers and the regional economic catchment area of the proposal.

Further discussion on the economic impacts is provided in chapter 5 of the EIS Technical Paper 5.

4.1.13 Biodiversity

4.1.13.1 Impacts to biodiversity

Submission ID numbers

109.

Summary of issues

One submission requested that the proposal ensure natural habitats and native species are protected as a high priority during construction and operation.

Response

The proposal has been designed to avoid and minimise impacts to biodiversity where possible, as discussed in the EIS chapter 6 and in chapter 8 of the EIS Technical Paper 8. Biodiversity impacts would be managed in accordance with the biodiversity management sub-plan, which would be prepared prior to construction and implemented as part of the CEMP. The plan would include measures to avoid and minimise the potential for impacts during construction.

Detailed design and construction planning will seek to identify changes that further avoid or minimise the need to further impact or disturb native vegetation, fauna habitat and riparian habitat (mitigation measure BD1).

4.1.14 Landscape and visual amenity

4.1.14.1 Construction landscape and visual impacts

Submission ID numbers

139.

Summary of issues raised

One submission raised concern about the disruptive nature of night-time lighting of construction sites in the Wagga Wagga precinct and the associated potential impacts to safety and security.

The submission also raised the lack of mitigation proposed at Edmondson Street bridge to address the high-adverse visual impacts during construction. The submission expressed the need for close monitoring of the trees adjacent to the construction site as there were recent sudden deaths of a row of cedar trees alongside Edmondson Street.

Response

Temporary lighting at all construction sites will be designed and sited to minimise light spill on adjacent receivers as far as practicable with consideration of *AS 4282-2019 Control of the Obtrusive Effects of Outdoor Lighting* (Standards Australia, 2019) (mitigation measure LV6).

The construction of the proposal would have moderate and high–moderate visual impacts where construction work and large-scale construction equipment are visible and:

- occur in close proximity to surrounding receivers and/or
- result in more substantial changes within public spaces, such as streets and open spaces (such as the removal of urban vegetation).

There is limited opportunity to minimise the visual impacts during construction due to the proximity of the construction works to residences to the Edmondson Street bridge enhancement site.

Opportunities to minimise the impacts on mature vegetation would be explored during detailed design (mitigation measure LV1); however, vegetation along the Edmondson Street bridge abutments within the road reserve would need to be removed to support the construction of the new bridge. Landscaping would be provided at the completion of construction as part of the urban design and landscape plan (mitigation measure LV2).

To provide protection for trees outside the proposal site, mitigation measure LV9 has been amended to include the protection and monitoring of trees directly adjacent to construction sites.

4.1.14.2 Privacy during operation

Submission ID numbers

13, 44, 47, 139.

Summary of issues raised

Four submissions raised concerns regarding the privacy and security impacts from the proposed Cassidy Parade pedestrian bridge and Edmondson Street bridge.

Two of these submissions expressed concerns from past incidents of people jumping and throwing objects off the bridge into the rail corridor and neighbouring properties. There is concern for additional privacy, security and safety risks due to the increased bridge height and proximity of the bridge's stairs and ramps to property fence lines. One submission requested adequate screens be provided on the pedestrian bridge to prevent people accessing neighbouring properties.

Two submissions raised concerns that privacy would decrease at neighbouring properties as a result of the new Edmondson Street bridge. The issue stated was that traffic would have direct views into adjacent properties over the taller bridge. One submission also questioned why anti-throw screens were not included in the Edmondson Street bridge design.

Response

Any new bridge is required to meet relevant design and safety standards, including rail collision protection and anti-throw screens. Anti-throw screens are provided on Edmondson Street bridge where the bridge crosses the rail corridor. Final anti-throw screen requirements would be confirmed during detailed design.

Measures would be implemented to address privacy and safety concerns of residents adjacent to new pedestrian or road bridges. This would be detailed in the urban design and landscape plan (mitigation measure LV2) as well as the community wellbeing plan (mitigation measure SI7), and could include:

- vegetation to filter views into residences where possible or privacy screens
- lights to disperse people accessing rail line and properties, while also minimising light spill into adjoining residences.

These responses are detailed in the Wagga Wagga landscape and urban design report (provided in the EIS Technical Paper 10: Landscape and visual impact assessment). Mitigation measure SI7 has been amended to include Edmondson Street bridge, to address privacy concerns for residences along Little Best Street and the Erin Street.

4.1.14.3 Operational landscape and visual impacts

Submission ID numbers

42, 47, 71, 88, 107, 118, 139.

Summary of issues

Seven submissions raised issues with the operational visual impacts of the proposal. The majority of these issues related to the proposed bridge replacements in Wagga Wagga, landscaping and noise walls. Specifically:

- the proposed designs of the Cassidy Parade and Wagga Wagga Station pedestrian bridges are not sympathetic to the surrounding environment and heritage character, and would result in greater adverse impacts to surrounding properties than those identified in the EIS. One submission requested an artist impression be generated for a neighbouring property to show the change to the skyline from the Wagga Wagga Station pedestrian bridge design
- the increased bulk and height of the Edmondson Street bridge is a concern. Submissions were concerned with increased overshadowing of nearby properties and reduction in vegetation along the Edmondson Street and Little Best Street
- request for trees along Little Best Street be included in the proposal
- request for an artist's impression of the proposed Edmondson Street bridge be generated from property viewpoints on Donnelly Street, including any proposed landscaping.

One of these submission also raised concerns that the proposal would result in the establishment of unsightly concrete noise walls along the rail corridor between Albury and Illabo to attenuate noise impacts during operation.

Response

The existing road and pedestrian bridges have insufficient clearance for the passing of double-stacked container freight trains and must be replaced. Any new bridge is required to meet relevant design and safety standards, including rail collision protection and anti-throw screens. ARTC has also been requested during stakeholder engagement to provide DDA-compliant bridges at all enhancement sites. The proposal as exhibited provided DDA-compliant bridges at all new bridges, except at Edmondson and Kemp Street bridges. This has resulted in more visually prominent structures and minimises the opportunity to balance the bridge in the surrounding heritage landscapes. Since the exhibition of the EIS, separate DDA-compliant pedestrian bridges are now proposed as part of the proposal (refer to section 3.2.1.1 of the Preferred Infrastructure Report and section 7.2.7 for an updated visual impact assessment at these locations).

Overshadowing also has the potential to occur on some properties on Erin and Little Best streets in winter, due to the increased height of Edmondson Street road and pedestrian bridges.

Further changes to the design would occur during detailed design, in line with the following mitigation measures:

- mitigation measure NAH6, which requires incorporation of heritage interpretation into the urban design of the bridges
- mitigation measure LV2, which requires the preparation of an urban design and landscape plan to guide detailed design. The plan will include design guidelines to minimise the visual impacts of infrastructure, with consideration of the existing landscape and visual context. Indicative landscaping is provided alongside Edmondson Street bridge in the urban design for the proposal (refer to Appendix B in the EIS Technical Paper 10).

To provide a clearer connection of the heritage requirements within the landscape and urban design outcomes for the proposal, mitigation measure LV4 has been amended to include consideration of relevant heritage interpretation recommendations and the involvement of a suitably qualified heritage specialist.

The viewpoints selected for the assessment, and associated photomontages, were prepared for views representative of the site. These views include areas where the largest number of viewers are likely to congregate, such as lookouts, major roads and scenic routes, as well as locations in sensitive recreational and natural areas. While these views do not capture all vantage points, they have been selected to highlight the key potential visual impacts. In accordance with the *Guideline for landscape character visual impact assessment —Environmental impact assessment practice note EIAN04* (Transport for NSW, Centre for Urban Design, 2020) and where a location is not publicly available (such as a private property), a view from the nearest accessible point was assessed generally and using views from publicly accessible locations within local streets and parks.

Consideration of landscape treatment of areas within and adjacent to construction sites would be undertaken during detailed design in accordance with the urban design objectives developed for the design, the urban design and landscape plan, the Inland Rail Landscape and Rehabilitation Framework, Landscape Rehabilitation Strategy, and Landscape Specification. Landscape treatments within the rail corridor are not considered a feasible method of noise attenuation. Noise attenuation would be provided consistent with the measures outlined in chapters 15 and 17 of the EIS.

Design guideline to approve the appearance of noise walls in NSW (Transport for NSW, 2021a) has been included for consideration as a part of design and landscaping as a part of this proposal (refer to section 6.2.4.2 of the Preferred Infrastructure Report).

4.1.15 Hydrology, flooding and water quality

4.1.15.1 Flooding impacts—Pearson Street bridge enhancement site

Submission ID numbers

83.

Summary of issues

One submission raised concern that the proposal during construction and operation at the Pearson Street bridge enhancement site would alter water flows and change flood risk around Fernleigh Street though to Sturt Highway (Edward Street).

Response

Quantitative flooding assessment was carried out for the Pearson Street bridge enhancement site, including flood modelling. The assessment in chapter 18 of the EIS concluded that there may be temporary redistribution of overland flows and stormwater due to construction infrastructure at the enhancement site. Further consideration of flood risk will be carried out to develop the staging of works to minimise impacts of the proposal and ensure proper management of a flood event at all stages of construction.

During operation, the site would be compliant with the quantitative design limits set for the proposal with regard to flooding, with no change to flood levels, flow velocities and flood hazard.

Further discussion on Pearson Street bridge is provided in the response to the advice received from the NSW DPE— BCS on hydrology and flooding matters (refer to section 5.1.1).

Further consultation will be undertaken with local councils and other relevant authorities to identify opportunities to coordinate the proposal with flood mitigation works committed to as part of the council's flood management plans, or other strategies.

4.1.16 Soils and contamination

4.1.16.1 Stockpiling

Submission ID numbers

139.

Summary of issues

One submission questioned whether materials excavated during construction of the proposal would be removed from the proposal site or stockpiled within the proposal site. The submission notes that stockpiling onsite would be an eyesore with the potential to generate dust and mud.

Response

Materials excavated during construction of the proposal would be removed from the proposal site or stockpiled temporarily within the construction site. Potential dust and water quality impacts due to stockpiling would be managed in accordance with the soil and water sub-plan of the CEMP (refer to Appendix C: Outline Construction Environmental Plan of this Submissions Report).

4.1.17 Sustainability

4.1.17.1 Sustainability in design

Submission ID numbers

47.

Summary of issues

One submission expressed that the transport of sand to the proposal site is not a sustainable approach. The submission recommended incorporating water-sensitive elements into the design such as swales and rain gardens, which would retain water for cooling and to support biodiversity.

Response

Sustainability initiatives would be incorporated into the detailed design and construction to support the achievement of the Inland Rail program sustainability objectives and targets, and the targeted achievement of an 'Excellent' design and as-built rating, according to the Infrastructure Sustainability Council's IS Rating Scheme v1.2. The IS rating scheme groups initiatives into six themes, including water and resource use. These initiatives will be detailed in the Sustainability Management Plan.

Procurement of materials would be undertaken in accordance with the Inland Rail Sustainable Procurement Policy (ARTC, 2020a).

4.1.18 Air quality

4.1.18.1 Assessment approach

Submission ID numbers

18, 40, 47, 75, 122.

Summary of issues

Five submissions queried the scope and adequacy of the air quality impact assessment, specifically that:

- air quality impacts had not considered the full length of the rail line between Albury and Illabo
- the assessment had not accounted for idling trains or an increase in idling trains. Existing idling was identified in submissions within Wagga Wagga and at Bomen Yard
- the conclusions that the proposal would be below relevant assessment criteria within 50 m of the rail line was not supported by air quality monitoring data or a quantitative assessment and did not account for local characteristics.

Response

Additional assessment of air quality has been completed as part of the Preferred Infrastructure Report. Due to the spatial extent of the proposal, a case study approach has been undertaken and assesses expected train operations in an urban setting and a rural setting to represent the urban areas and rural areas along the Albury to Illabo alignment. Further detail is provided in section 6.3 of the Preferred Infrastructure Report.

4.1.18.2 Construction dust impacts

Submission ID numbers

47, 65.

Summary of issues

Two submissions raised concerns about dust impacts to adjoining residents during construction, including dust impacts during the demolition of concrete structures.

Response

Potential dust impacts would be temporary in nature and would be substantially reduced with the implementation of standard mitigation measures, as identified in chapter 22 of EIS.

4.1.18.3 Operational air quality impacts

Submission ID numbers

17, 18, 25, 58, 64, 68, 76, 77, 80, 84, 108, 142, 145.

Summary of issues

Thirteen submissions raised air quality concerns due to emissions from diesel-operated freight trains and the resulting impacts to amenity and/or health risks to the surrounding community (including schools and health facilities). Specifically, submitters expressed concern that the proposal would detrimentally impact local air quality due to:

- more frequent, heavier and/or longer freight trains
- increased train idling in urban areas
- cumulative impacts with emissions from motor vehicles on the road network.

In raising these concerns, submitters stated that:

- residences, schools and/or health facilities are located directly adjacent or in general proximity to the rail corridor
- idling can already occur for prolonged periods
- local weather conditions can limit the dispersion of emissions from freight trains
- emissions associated with diesel combustion have known health risks, such as cancer, asthma and cardiovascular and respiratory diseases.

Odour from idling trains was also identified in one submission, particularly during periods of low wind.

Response

As noted, additional assessment of air quality has been completed as part of the Preferred Infrastructure Report (refer to section 6.3 of the Preferred Infrastructure Report). Due to the spatial extent of the proposal, a case study approach has been undertaken and assesses expected train operations in an urban setting and a rural setting to represent the urban areas and rural areas along the Albury to Illabo alignment.

New mitigation measure AQ2 commits to management of operational air quality impacts in accordance with ARTC's existing Environmental Protection Licence (EPL #3142) and its standard operating procedures, including those within the ARTC Environmental Management System. ARTC's standard operating procedures, Environmental Management System and EPL #3142 provide a structured framework for the consideration, evaluation, management, regulatory compliance and reporting of environmental issues associated with ARTC's activities. The benefit of implementing ARTC's Environmental Management System for the operation of the proposal is that it ensures a coordinated approach to environmental management across the national and NSW freight network. This facilitates improved management of environmental risks and ensures that ARTC maintains compliance with the various environmental laws, statutes, regulations, policies, management plans, licences and other approvals that apply to its activities. The operation of the proposal would be consistent with the existing operating line, and as such any environmental issues and impacts which occur during operation can be effectively managed under ARTC's EMS. The community can also report any concerns to the ARTC Enviroline on 1300 550 402, which operates 24-hours a day. Additionally, rollingstock operators hold Environmental Protection Licences that include provisions relating to air quality. ARTC notes that various train operating companies are working on programs for locomotive fleet renewal and business decarbonisation.

Prior to the operation of Inland Rail, in accordance with new mitigation measure AQ3, ARTC will carry out an additional Air Quality Monitoring Program at representative train idling locations to measure existing levels of PM_{10}, $PM_{2.5}$ and NO_2 at these locations. The monitoring results will be compared against relevant air quality criteria. Where exceedances of the relevant air quality criteria occur, further investigation of the likely cause will be undertaken, including but not limited to analysis of the contribution of existing train operations or another source of pollution such as a regional bushfire or agricultural activities. Where analysis indicates exceedances related to existing train operations, a review of relevant operating procedures will be undertaken including consultation with the train operating companies to reduce train operation's contribution.

Following the completion of AQ3 and prior to operation of Inland Rail, air quality modelling will be undertaken to validate the Preferred Infrastructure Report assessment utilising data collected during the Air Quality Monitoring Program. Where exceedances of the relevant air quality criteria are predicted as a result of planned Inland Rail operations (i.e. Inland Rail trains and consequential alterations to other train services), a review of relevant operating procedures will be undertaken, including consultation with the train operating companies to reduce train operation's contribution.

4.1.18.4 Mitigation and management of air quality impacts

Submission ID numbers

29.

Summary of issues

One submission queried why the EIS did not include any operational air quality mitigation measures other than monitoring to address air quality impacts (and amenity impacts) at sensitive receivers.

Response

As noted, additional assessment of air quality has been completed as part of the Preferred Infrastructure Report (refer to section 6.3 of the Preferred Infrastructure Report). Due to the spatial extent of the proposal, a case study approach has been undertaken and assesses expected train operations in an urban setting and a rural setting to represent the urban areas and rural areas along the Albury to Illabo alignment.

New mitigation measure AQ2 commits to management of operational air quality impacts in accordance with ARTC's existing EPL #3142 and its standard operating procedures including those within the ARTC Environmental Management System. ARTC's standard operating procedures, Environmental Management System and EPL #3142 provide a structured framework for the consideration, evaluation, management, regulatory compliance and reporting of environmental issues associated with ARTC's activities. New mitigation measures AQ3 and AQ4 as discussed above propose a structure program of air quality monitoring and modelling that leads to a review of operational arrangements where exceedances of air quality criteria are predicted. Updated mitigation measures are detailed in Appendix B: Updated Mitigation Measures of this Submissions Report.

4.1.19 Hazards

4.1.19.1 Rail safety

Submission ID numbers

27, 61, 109, 131, 143.

Summary of issues

Five submissions raised concerns with the safety of the rail corridor.

Three of these submissions raised concerns with the increased risk and consequences of train derailments due to the running double-stacked trains along a rail corridor that intersects densely populated areas; in particular, trains carrying hazardous materials. One submission requested detail on what investigations have been done on the consequence of the train derailments.

One of the submissions raised concerns that the existing fencing along the rail corridor was inadequate at excluding people from the rail corridor. The submission questioned why the upgrade and restoration of fencing was not included in the proposal when the frequency of trains running along the corridor would increase.

Response

The adjustment of rail infrastructure and/or replacement of bridges is required to ensure sufficient clearances are provided for double-stacked container freight trains, and to ensure these trains can safely operate.

The hazards associated with the proposal site would generally remain the same during continued operation of the rail corridor. As the location of the rail corridor would be the same and the alignment of the track would change marginally, the number of receivers in close proximity to the rail corridor would not change. The frequency and size of freight trains travelling within the proposal site would increase, which would result in an increase in the hazard profile.

In the event of an incident such as train derailment, ARTC would respond in accordance with its safety management procedures. Potential operational hazards and risks associated with the rail corridor, including accidents involving hazardous cargo, would be managed by undertaking the design with an appropriate emphasis on safety according to relevant design standards and requirements. The transport of hazardous materials and dangerous goods would be the responsibility of the freight operators and would be undertaken in accordance with relevant standards and regulatory requirements (including the Australian Dangerous Goods Code (National Transport Commission, 2020)) and ARTC's standard operating procedures.

Concerns about rail safety and safety risks due to people crossing the rail corridor was identified during community engagement on the proposal. The replacement of rail fencing infrastructure has been incorporated into the proposal where required due to impacts by the proposal. Further upgrades to rail infrastructure does not form part of this proposal. Strategies to promote road and rail safely during construction and operation would also be implemented through the community health and wellbeing plan (mitigation measure SI7). This includes school-based education programs for schools in the local study area, and culturally appropriate approaches to rail safety education and awareness campaigns for Indigenous communities.

4.1.20 Climate change risk adaptation and greenhouse gas emissions

4.1.20.1 Climate change risks as a result of the proposal

Submission ID numbers

47.

Summary of issues

One submission raised concern that the use of large amounts of concrete used by the proposal would contribute to the local urban heat effect in Wagga Wagga, which would be exacerbated by the predicted increase in extreme weather due to climate change.

Response

Adaptation measures have been specifically identified and incorporated in the design to address specific climate change risks, including temperature increases. While uncertainty regarding future climate projections exists, particularly to 2090, the adaptation measures identified as part of the climate change risk assessment in chapter 25 of the EIS would result in a lowering of residual risks to the rail corridor across future scenarios. Residual risks would continue to be reviewed during detailed design to identify opportunities to further reduce these risks. This would be in line with proposal's target to achieve an 'Excellent' design and as built rating, according to ISC's IS rating scheme v1.2.

All trees removed for the proposal (that are not subject to biodiversity offsets) would also be replaced at a ratio of 2:1 in locations within the enhancement sites or in the general locality to the enhancement sites, as determined in consultation with stakeholders and relevant local council (mitigation measure LV10). This would contribute towards offsetting any loss in the green canopy due to the proposal.

4.1.21 Cumulative impacts

4.1.21.1 Social impacts

Submission ID numbers

81.

Summary of issues

One submission stated that there are additional major projects that were not considered in the cumulative impact assessment which may impact the availability of temporary accommodation during construction such as the Australian Government's Riverina Redevelopment Program.

Response

The assessment of potential cumulative impacts has been undertaken in accordance with the SEARs and the considered the potential for impacts, taking into account other projects in the study area. Potentially relevant projects were identified based on a search of data sources in May 2022. The projects identified were screened in relation to their potential for cumulative impacts with the proposal, based on their nature, size and proximity to the proposal site, as well as the information available for the project at the time of assessment. The construction and operation timeframes of other projects were also considered during screening.

A workforce accommodation plan will be implemented to address the potential shortages of accommodation for temporary workforce. The plan will:

- prioritise the use of temporary local accommodation
- avoid the use of private rental housing accommodation during workforce peak periods (possession)
- consider combined strategies to mitigate shortages of accommodation
- outline transport arrangement of workers to and from works site daily
- include a monitoring and management mechanism to identify the capacity of local short-term accommodation and rental housing. If accommodation supply constraints become apparent, amendments will be done to the workforce housing and accommodation plan accordingly.

4.1.22 Justification of the proposal

4.1.22.1 Justification

Submission ID numbers

3, 8, 23, 24, 32, 38, 81, 96, 98, 116, 122, 123, 125, 129, 132, 139, 143, 145.

Summary of issues

18 submissions commented on the justification of the proposal. Specifically:

- supported the need and benefits of Inland Rail as described in the EIS
- questioned the economic benefits of the Inland Rail program
- expressed that it would have been helpful for the EIS to address the reduction of land freight external costs
- requested updated data to support the benefits of the Inland Rail program including:
  - road fatality data involving articulated trucks for the Newell Highway
  - an estimate of the reduction of carbon emissions by 2030
- questioned the evaluation of proposed impacts and benefits to Wagga Wagga, including:
  - the reduction of road freight as a result of the Inland Rail program with consideration of the Riverina Intermodal Freight and Logistics Hub at Bomen
  - noting that the potential impacts were understated in the EIS
  - that the long and short-term environmental impacts of proposed works to bridges should be considered
  - that the reduction in road transport would come at the expense of the wellbeing of residents
- questioned the conclusion that the residual impacts of the proposal are outweighed by the long-term benefits, particularly around Wagga Wagga
- claimed that the EIS does not provide sufficient consideration of long-term benefits and impacts, including consideration of long-term benefits of options that may have a higher initial cost
- raising concerns on the equality of impacts, including:
  - the Inland Rail program aims to avoid impacts to the Sydney Metropolitan area that would be experienced by regional and rural communities along the Inland Rail alignment
  - the construction and operational impacts to Wagga Wagga are unjust compared to the alternative routes available.

Response

Economic benefits of the Inland Rail program

The Inland Rail program is a nationally significant transport initiative. It will respond to a forecasted increase in demand for freight transport between Melbourne and Brisbane, and provide long-term benefits, including improved productivity, improved network efficiency and reliability, safety improvements, sustainability benefits, and reduced lifecycle costs.

The economic benefits of the Inland Rail program were outlined in the *2015 Inland Rail Program Business Case* (ARTC, 2015), which determined the project to be economically viable. In 2016, Infrastructure Australia completed an evaluation of the business case (Infrastructure Australia, 2016), which concluded that, on balance, the proposal is anticipated to provide net positive benefits to the Australian economy.

External costs of rail compared to road freight were considered in the business case. External costs include fuel emissions (air pollution and greenhouse gas emissions), water pollution, and nature and landscape costs, as well as accident cost savings. The external cost of road freight is far greater compared to rail, in particular related to fuel emissions and start–stop conditions.

Projections of the rail freight demand with Inland Rail were provided in chapter 7 of the business case and are based on a number of inputs and assumptions. The business case was used as the basis for the economic assessment for the proposal provided in the EIS Technical Paper 5. Inland Rail's share of the Melbourne to Brisbane inter-capital freight market is forecast to increase from 26 per cent to 62 per cent by 2049─50.

Benefits compared to impacts of Inland Rail in Wagga Wagga, including residual impacts

Impacts from construction and operation of the proposal are outlined in the EIS. Potential impacts on the environment were identified early in the proposal development, and approaches to avoid or reduce impacts were identified during the options assessment and reference design; however, not all impacts can be avoided, and these impacts are assessed in chapters 9 to 26 of the EIS, and relevant technical papers, and the additional assessments

presented in the Preferred Infrastructure Report. A summary of impacts that could not be avoided is also provided in section 28.2.2 of the EIS. The assessments were based on worst case assumptions, which would continue to be refined during further planning of the proposal.

Impacts from the proposal range in scale depending on the type of impact and location. The more significant impacts to the community in Wagga Wagga during construction are predicted to be from noise, particularly during out-of-hours work on the rail corridor, and from traffic diversions during road bridge closures. Other lesser amenity impacts during construction include dust and visual impacts; however, as noted above, these construction impacts would be temporary and mitigation measures have been identified to reduce them (refer to Appendix B).

During operation of the proposal, amenity impacts would consist primarily of noise and air quality impacts from more frequent and longer trains along the rail corridor and visual impacts from changes to three bridges. Traffic impacts would also occur as a result of longer and more frequent level crossing closures in Wagga Wagga. Further assessment of operational noise and vibration, air quality, traffic and visual impacts in Wagga Wagga is provided in the Preferred Infrastructure Report. Additional and revised mitigation measures have been identified to address impacts of the proposal as result of issues raises in submissions, additional assessment outcomes and proposed changes to the proposal.

During construction of the proposal, local economies would likely experience increased employment and training opportunities, with an estimated workforce of up to 770 personnel required during the peak construction period. Flow-on local and regional economic benefits would also be generated, as the proposal would create opportunities for the supply of materials and services in the regional study area. As noted in Technical Paper 5, the economic benefits assessment estimates that the proposal will provide a total of $179.80 million ($2021) in incremental benefits to the proposal area (at a 7 per cent discount rate), and the proposal will promote regional economic growth across the region.

Justification compared to alternative options and routes

Chapter 6 of the EIS included discussion of the alternatives and proposal options considered during development of the proposal. Early planning for the Inland Rail program included consideration of alternative route options. This included a coastal route (Department of Transport and Regional Services, 2006); however, a western route was selected as it provided the shortest transit distance from north to south of the sub-options considered, while also avoiding the congested Sydney metropolitan area. Route options were subject to detailed technical, financial and economic assessment. The preferred option selected included utilisation of the existing Main South Line between Albury and Illabo.

In development of the proposal, options were considered at locations where upgrade of the existing Main South Line was required to facilitate Inland Rail trains. Track lowering was considered at locations where existing structures did not achieve the minimum clearance requirements; however, this option was not always feasible due to engineering constraints, such as the proximity to nearby stations or other railway infrastructure, which would require significant modifications with this option. In these cases, the impacts from the option to lower the track were considered too significant to outweigh its potential benefits, including over the long term.

There are no plans to consider changes to the A2I alignment from that endorsed by the Australian Government. This commitment was reinforced within the recent Independent Review of Inland Rail (Schott, 2023), with the Australian Government prioritising construction south of Parkes, including A2I. Recommendation 12 of the Inland Rail Review recognises that if and when Inland Rail train traffic increases significantly, the possibility to bypass the town should be investigated and easements protected for a new by-pass corridor. In current estimates, rail traffic is expected to increase by around eight additional services per day and not until 2040. Accordingly, consideration of a bypass of Wagga Wagga is not contemplated by government and is not a necessity for this planning approval or assessment of the proposal.

Further discussion regarding options and alternatives considered for the proposal is included in section 4.1.2.

Data supporting the justification compared to alternative options and routes

Consideration of crash data for the Newell Highway was provided in the Business Case. In total, there were 828 crashes reported between 2007 and 2011; of these, heavy vehicles were involved in 165 crashes. Of the 828 crashes, 463 were casualty crashes, which caused either an injury or fatality. Of the 463 fatality crashes, 36 were fatal and 427 resulted in an injury. This data was sourced from the Newell Highway Corridor Strategy which, at the time of reference, was exhibited in draft form. It was subsequently finalised and published in 2015 (Transport for NSW, 2015). A review of the final strategy confirmed that the same data has been referenced. Update of the data for the purposes of the proposal is not considered to be warranted, as the proposal does not directly impact the Newell Highway, and reference to this data is only made in considering the justification of the proposal, which was informed by the Business Case completed in 2015.

The *2015 Inland Rail Program Business Case* (ARTC, 2015) noted the program would result in more than 750,000 fewer tonnes of carbon from reducing truck movements in 2050 annually. This estimate was based on several assumptions, including consideration of the efficiency of rail compared to road transport, and projected number of vehicles required to meet the projected freight demand with additional capacity for rail freight created by Inland Rail. It was estimated that up to 275,000 heavy vehicles will be required per year to meet the forecast freight demand.

The Australian Government has confirmed that Inland Rail is an important project to meet Australia's growing freight task, improve road safety and help decarbonise our economy. The modal shift from road to Inland Rail will reduce the carbon emissions of Australia's freight industry. As Inland Rail sections come online, carbon emissions would be proportionately reduced as freight movements via rail increases.

While these conclusions are considered to remain valid, estimates provided in the business case are subject to change, and a detailed review of the data would be required to estimate the proportion of carbon emission reduction expected to be created by the program in 2030; however, this level of detail is not considered to be warranted.

4.1.23 Out of scope

4.1.23.1 Out of scope—rail infrastructure

Submission ID numbers

7, 8, 10, 21,122, 123, 132, 143, 145.

Summary of issues

Nine submissions made comment or identified out-of-scope matters relating to rail infrastructure or impacts from rail operations in the region. These included:

- Inland Rail should be designed to cater for passenger services
- use of the existing rail corridor may limit the possibility of higher speed trains in the future
- freight trains should use Whyalla steel wheels instead of imported rubber tyres
- the Oatlands to The Rock railway line should be reinstated to provide an alternative crossing to the Murray River in the event the current crossing is unavailable
- the ongoing viability of the Murrumbidgee River rail viaduct in Wagga Wagga, and/or demonstration that the viaduct is capable of handling Inland Rail freight trains
- reduction in the curvature of the rail track between Stockinbingal to Forbes to improve rail efficiencies
- noise mitigation for future development in South Albury as areas transition from industrial to residential.

Response

The proposal relates to carrying out of enhancement works to structures and sections of track along 185 km of the existing operational standard-gauge railway between Albury and Illabo, to accommodate double-stacked freight trains up to 1,800 m long and 6.5 m high. The suggestions identified in the submissions are beyond the scope of this proposal.

4.1.23.2 Out of scope—other issues

Submission ID numbers

21, 67, 83, 123, 132.

Summary of issues

Five submissions made comment on matters not relevant to the proposal. These included:

- road improvements within Wagga Wagga, including the duplication of the Gobbagombalin bridge and road network changes to allow through traffic to bypass the city centre
- alternative location for the Wagga Wagga Special Activation Precinct to avoid conflict with the urban areas of Wagga Wagga
- changes to car parking standards in rural areas to account for larger vehicles
- concerns that lack of stormwater detention infrastructure in urban developments will compromise a railway culvert at Red Hill Road bridge
- perceived lack of transparent engagement with the Wagga Wagga community on broader development decisions in the region.

Response

The subject of the EIS relates to the carrying out of enhancement works to structures and sections of track along 185km of the existing operational standard-gauge railway between Albury and Illabo to accommodate double-stacked freight trains up to 1,800 m long and 6.5 m high. The development of other projects and proposals as raised are beyond the scope of this proposal.

4.2 Organisation and community group submissions

4.2.1 Junee Railway Workshop

4.2.1.1 Business access

Summary of issue

This submission noted that the Junee Railway Workshop maintains and services freight locomotives and wagons, and supplies provisions for operators on the rail line (e.g. Qube, Southern Shorthaul Railway, Grain Corp, Railfirst, SCT and Sydney Rail Service), at the Railway Roundhouse at the southern end of Junee. Access to the business premises is via the road network under the Kemp Street bridge. Demolition and construction of the new Kemp Street bridge is proposed to occur over 9-hour possessions over a 10-month period. Closures of this section of track during daytime hours under track occupancy authorisations (for nine hours), as envisioned in the EIS, would detrimentally impact the Junee Railway Workshop and freight operators. Additionally, the closures during periodical 60-hour long weekend closures will also affect this business.

The Junee Railway Workshop stated that its concerns about access were raised during engagement with ARTC but these were not considered in the EIS.

Response

Track possessions provide an opportunity to undertake extensive work on the rail corridor without the risk of train movements. Under current arrangements, there are typically two possessions of 60-hours each per year, scheduled for March and September. This is the minimum number of major possessions that would occur each year during the construction of the proposal. During this time, all trains services are stopped and access to operational businesses on the corridor is not available. This reflects the current arrangements, and operating businesses already work with ARTC on these arrangements.

Due to the large extent of work required, consideration is being given to seeking additional possessions of up to 60 hours. Final staging of works and detailed possession planning would occur during the next stage in detailed design. Further information on the scheduling of rail possessions is provided in section 4.1.5.2 of this Submissions Report.

Train access to the Junee Railway Workshop and the sidings leased by Qube in the Junee Yard (including associated shunting operations) would be maintained during construction. Typically, only one of the two arrival tracks to the Junee Railway Workshop would be impacted during the construction of the Kemp Street bridge. As access to the other arrival track would be maintained, impacts to both the Junee Railway Workshop and the businesses that access it would be minor. The exception is during a 60-hour rail possession where all services are stopped, however this occurs under the existing operational arrangement.

It is expected that access to the operating businesses during smaller possessions and track occupancy authorisations (nominally for 9 hours) would be able to be maintained with access negotiated between ARTC and the operating businesses. ARTC will work with operating businesses on the corridor to ensure access impacts to their operation are minimised during detailed construction planning and the construction period.

ARTC will continue to engage with Junee Railway Workshop, Qube and SSR throughout construction to manage potential access impacts and suitable arrangements.

4.2.2 Qube Logistics (Rail) Pty Ltd

4.2.2.1 Weekend possessions

Summary of issue

This submission noted that the proposal includes contradictory statements regarding the length of track possessions with the EIS making reference to work being undertaken within both 60-hour possessions and 72-hour track possessions. Qube does not support any extension to the existing weekend possession arrangements (i.e. two annual 60-hour possessions).

Response

The EIS Technical Paper 1 incorrectly identified the duration of possessions as full three-day possessions (or 72-hour possessions). This was an error and ARTC does not propose any extension to the existing 60-hour possession regime currently in place. This error has not impacted the conclusions of the assessment.

Track possessions provide an opportunity to undertake extensive work on the rail corridor without the risk of train movements. Under current arrangements, 60-hour rail possessions are scheduled twice per year (March and September, typically) and would still occur without the construction of the proposal. Due to the large extent of work required, consideration is being given to seeking additional possessions of up to 60-hours. Final staging of works

and detailed possession planning would occur during detailed design planning. Detailed rail possession planning would be documented in the CEMP, which would be prepared in consultation with rail operators such as Qube.

Planning is carried out well in advance for 60-hour rail possessions and requires an extensive notice period to inform affected communities, engage relevant stakeholders, and requires overall approval by the ARTC business. Changes do occur due to other events and incidents, or weather. Accordingly, it is critical to note that adequate advance notice is available to inform the community of planned possessions, and the associated durations of construction work. This would be addressed through the communication plan and the various sub-plans to the CEMP.

4.2.2.2 Business access

Summary of issue

This submission noted that within Junee Yard, Qube requires access to two sidings to support day-to-day operations, for train shunting. In addition, Qube also requires regular access to the Junee Railway Workshop for locomotive provisioning. Demolition and construction of the new Kemp Street bridge is proposed to occur over 9-hour possessions over a 10-month period. Qube does not support 9-hour possession windows which adversely affect shunting operations within Junee yard or access to the Junee Railway Workshops. Qube seeks confirmation that ARTC will not adversely impact its operations during construction.

Response

Train access to the Junee Railway Workshop and the sidings leased by Qube in the Junee Yard (including associated shunting operations) would be maintained during construction. Typically, only one of the two arrival tracks to the Junee Railway Workshop would be impacted during the construction of the Kemp Street bridge. As access to the other arrival track would be maintained, impacts to both the Junee Railway Workshop and the businesses that access it would be minor. The exception is during a 60-hour rail possession where all services are stopped; however, this stoppage occurs under the existing operational arrangement.

It is expected that access to the operating businesses during smaller possessions and track occupancy authorisations (nominally for 9 hours) would be able to be maintained with access negotiated between ARTC and the operating businesses. ARTC will work with operating businesses on the corridor to ensure access impacts to their operation are minimised during detailed construction planning and the construction period.

ARTC will continue to engage with Junee Railway Workshop, Qube and SSR throughout construction to manage potential access impacts to business.

4.2.2.3 Business access

Summary of issue

Qube Logistics owns and operates the intermodal terminal at Harefield. In this submission, Qube sought confirmation from ARTC that rail operations on the Harefield siding will not be disrupted outside the proposed weekend possessions and that any scheduled services will be unaffected. Qube Logistics also seeks further information on what level of access is required to land within the Harefield Intermodal Terminal during construction and what measures would be implemented to minimise impacts on intermodal operations.

Response

Access through the Harefield Intermodal Facility is not required. Access through the facility had been potentially required to enable access to a particular area of the rail corridor as shown in figure 8-11 of the EIS. This access is no longer required (refer to section 3.2.2 of the Preferred Infrastructure Report).

4.2.3 ErinEarth Ltd

4.2.3.1 Noise impact

Summary of issue

This submission stated that ErinEarth's operations and amenity will be heavily impacted by the proposed Inland Rail route passing adjacent to the community site. Concerns include both construction noise and vibration in addition to long-term noise once the project is operating.

The impact on ErinEarth's outdoor garden activities and educational programs has not been adequately accounted for in the EIS. Any proposed mitigation measures should be discussed directly with ErinEarth management.

Response

The ErinEarth Centre was assessed in the noise and vibration (non-rail) assessment (Technical Paper 6) and Technical Paper 7 as an educational receiver. Outdoor activities occur at this receiver. However, the assessment of

ErinEarth Centre, as an educational receiver, meant that a more conservative criteria was applied during both construction and in operation.

The assessment concluded that there would be low-level impact from construction mainly due to these works being over 150 m in distance from the ErinEarth centre.

The assessment of construction noise from the proposal has been conservatively assessed based on worst-case assumptions. Noise at the levels reported in the EIS would not be experienced at all sensitive receivers and would only occur for limited periods during construction. Much of the demolition and construction work on the Edmondson bridge located 150 m north, would be undertaken within the 60-hour track possessions over a weekend period. These works would occur twice across the year with the potential for a further two work periods to be added. Significant disturbance of activities within the centre are not anticipated. However, a range of measures will be used to reduce the impact of construction noise. Where appropriate, these measures would include using temporary noise barriers, using quieter equipment, staging work to avoid extended periods of disruption and providing respite periods. Engagement with the community and organisations will occur during construction, to assist in managing the impacts from construction noise.

Impacts from construction noise would be managed in accordance with the Inland Rail NSW Construction Noise and Vibration Framework. A construction noise and vibration management plan will be prepared and implemented as part of the CEMP in accordance with the Inland Rail NSW Construction Noise and Vibration Management Framework program. An outline of the construction noise and vibration management plan is provided in Appendix C: Outline Construction Environmental Management Plan of this Submissions Report.

Inland Rail has updated the operational noise and vibration assessment to assess the entire length of the rail alignment rather than only the sites where infrastructure changes are needed such that was assessed in the EIS. This new assessment is provided in Appendix D of the Preferred Infrastructure Report. The ErinEarth Centre (receiver ID 215345) is predicted to exceed the daytime criteria in 2025 (opening) by up to 3 decibels and by up to 4 decibels in 2040. These exceedances are driven by an increase in daytime L_{Aeq} rail noise levels due to increased rail traffic volumes. As a result, the ErinEarth Centre would be eligible for the consideration of noise mitigation during the detailed design and construction of the A2I project. ARTC would contact the ErinEarth Centre to discuss the matter further during next phase of the project in detail design.

4.2.3.2 Alternative route/bypass of Wagga Wagga

Summary of issue

The submission suggests it may be more beneficial from both financial and social viewpoints to develop and evaluate a bypass of Wagga Wagga option.

Response

Approximately 65 per cent of the Inland Rail alignment uses existing rail corridors to make the best possible use of earlier investments in national and state rail corridors and freight networks, and minimise the environmental and community impacts associated with creating new rail corridors.

Consideration of a greenfield alignment (either in part or in entirety) for A2I is not in accordance with the objectives and Business Case of Inland Rail (ARTC, 2015), which aims to maximise the use of existing infrastructure where possible, and having an overall Inland Rail alignment with a less than 24-hour transit time between Melbourne and Brisbane. Recommendation 7 of the Independent Review of Inland Rail Report (Schott, 2023) states ‘The service offering proposed by ARTC, and supported by business, that offers a reliable 24-hour transit service on double-stacked trains of 1,800 metres length should be accepted’. The review further concluded ‘In view of the extensive studies and consideration made to choose the initial route for Inland Rail there is no reason for route change in any major way’. ARTC notes the Australian Government’s Response to the Independent Review of Inland Rail (Australian Government, 2023) for Recommendation 7, ‘The Australian Government understands that the service offering is supported by industry and business. It notes, however, that the service offering should not be supported beyond Beveridge in Victoria and Ebenezer in Queensland’.

Initial assessments were carried out to determine which existing infrastructure did not provide the necessary clearances for the operation of double-stacked freight trains (referred to as enhancement sites). The options assessment for A2I involve the preferred design solution at each enhancement site (e.g. track lowering or bridge replacement), as described in section 6.3 of the EIS. Consideration and analysis of a bypass of town(s) was not contemplated, would not be proportional to the assessed effects of the proposal along the existing freight rail line, nor achieves the objective of maximising the use of existing infrastructure.

There are no plans to consider changes to the A2I alignment from that endorsed by the Australian Government. This commitment was reinforced within the recent Independent Review of Inland Rail, with the Australian Government prioritising construction south of Parkes, including A2I. Recommendation 12 of the Inland Rail Review recognises that if and when Inland Rail train traffic increases significantly, the possibility to bypass the town should be investigated and easements protected for a new bypass corridor. In current estimates, rail traffic is expected to increase by around eight additional services per day and not until 2040. Accordingly, consideration of a bypass of Wagga Wagga is not contemplated by government and is not a necessity for this planning approval or assessment of the proposal.

4.2.4 Committee 4 Wagga

4.2.4.1 Rail viaduct in Wagga Wagga

Summary of issue

This submission suggested that more information should be provided on the structural integrity of the rail viaduct crossing the Murrumbidgee floodplain in Wagga Wagga. It should be confirmed whether the structure has the capacity to handle future freight weight demands, particularly those created by the proposed double stacked trains. An engineering assessment is required.

Response

During the scoping of the project an assessment of the structure integrity was undertaken to determine what structures required modification. Inland Rail will not materially change the operating conditions from the current situation. The viaduct over the Murrumbidgee River has been found to meet the requirement for Inland Rail. This includes the load rating for the bridge, given the locomotives are no heavier in axle load than the existing rail traffic that uses this line.

The viaduct over the Murrumbidgee River has a temporary speed restriction that would be removed once rectification works (that do not relate to Inland Rail) to the viaduct have been completed, which is anticipated to occur by mid-2026.

4.2.4.2 Traffic impact in Wagga Wagga

Summary of issue

This submission requested further investigation into the level crossing alternatives at Bourke Street and Fernleigh Road is required. These are major thoroughfares in the city. Increased rail use will have a significant impact on these level crossings, which have high traffic flows.

Response

Additional assessment of the operation of Bourke Street and Fernleigh Road level crossings during operation of the proposal has been completed as part of the Preferred Infrastructure Report. The assessment included modelling of impacts related to additional level crossing closures resulting from increased rail services, including the health precinct. Refer to section 6.1.3 of the Preferred Infrastructure Report for this additional assessment.

Level crossings that require no work as a result of the project do not form part of the proposal scope. Only level crossings that are required to be modified to accommodate double-stacked freight trains are included in the proposal scope, e.g. changes to accommodate track realignment.

The Bourke Street/Docker Street level crossing and the Fernleigh Road level crossing in Wagga Wagga do not require modification and are out of scope of the proposal. These level crossings are located on local roads and any modification, which is considered appropriate would need to be carried out by the road authority, Wagga Wagga City Council.

4.2.4.3 Bomen to Kapooka upgrade

Summary of issue

This submission sought details of the approximate cost of the proposed upgrade from Bomen to Kapooka. This is the specific section of the track that traverses Wagga Wagga.

Response

The proposal requires enhancement works at discrete sites along the existing alignment between Albury and Illabo. For most of the track, no works are required to accommodate the Inland Rail double-stacked trains. Therefore, no cost estimation for an upgrade from Bomen to Kapooka is available as no works are proposed as part of Inland Rail.

4.2.4.4 Alternative route/bypass of Wagga Wagga

Summary of issue

This submission requested a cost comparison between a bypass of the city and the proposed upgrade. The bypass is widely regarded as a preferred option, should it prove feasible.

Response

Approximately 65 per cent of the Inland Rail alignment uses existing rail corridors to make the best possible use of earlier investments in national and state rail corridors and freight networks and minimise the environmental and community impacts associated with creating new rail corridors.

Consideration of a greenfield alignment (either in part or in entirety) for A2I is not in accordance with the objectives and Business Case of Inland Rail (ARTC, 2015), which aims to maximise the use of existing infrastructure where possible, and having an overall Inland Rail alignment with a less than 24-hour transit time between Melbourne and Brisbane. Recommendation 7 of the Independent Review of Inland Rail Report (Schott, 2023) states 'The service offering proposed by ARTC, and supported by business, that offers a reliable 24-hour transit service on double-stacked trains of 1,800 metres length should be accepted'. The review further concluded 'In view of the extensive studies and consideration made to choose the initial route for Inland Rail there is no reason for route change in any major way'. ARTC notes the Australian Government's Response to the Independent Review of Inland Rail (Australian Government, 2023) for Recommendation 7, 'The Australian Government understands that the service offering is supported by industry and business. It notes, however, that the service offering should not be supported beyond Beveridge in Victoria and Ebenezer in Queensland'.

Initial assessments were carried out to determine which existing infrastructure did not provide the necessary clearances for the operation of double-stacked freight trains (referred to as enhancement sites). The options assessment for A2I involves the preferred design solution at each enhancement site (e.g. track lowering or bridge replacement), as described in section 6.3 of the EIS. Consideration and analysis of a bypass of towns was not contemplated, would not be proportional to the assessed effects of the proposal along the existing freight rail line, nor does it achieve the objective of maximising the use of existing infrastructure.

There are no plans to consider changes to the A2I alignment from that endorsed by the Australian Government. This commitment was reinforced within the recent independent review of Inland Rail, with the Australian Government prioritising construction south of Parkes, including A2I. Recommendation 12 of the Inland Rail Review recognises that if, and when, Inland Rail train traffic increases significantly, the possibility to bypass the town should be investigated and easements protected for a new bypass corridor. In current estimates, rail traffic is expected to increase by around 2 additional services per day and not until 2040. Accordingly, consideration of a bypass of Wagga Wagga is not contemplated government and is not a necessity for this planning approval or assessment of the proposal.

4.2.5 The Scots School, Albury

4.2.5.1 Landscaping on the rail corridor boundary

Summary of issue

This submission noted that, previously, the boundary between the rail corridor and the school was planted out with shrubs. It was requested that these plantings be re-instated once construction works are complete to improve noise and visual outcomes for the school.

Response

Inland Rail has no proposal to landscape within the boundary of the rail corridor. Clearing and trimming is undertaken periodically as part of normal maintenance of the corridor. Landscape treatments within the rail corridor are not considered an effective method of noise attenuation. Further information regarding potential noise mitigation options and the criteria needing to be satisfied to be considered for noise mitigation, is outlined further in chapter 9 of the Revised operational noise and vibration (rail) (Appendix D of the Preferred Infrastructure Report).

4.2.5.2 Noise and vibration impact assessment approach

Summary of issue

This submission noted that the boarding school at The Scots School has over 100 staff and students and has a direct line of sight to the rail line. There is no mention of this in chapter 15 of the EIS. Due to the number of residents sleeping in these buildings, the submission believed they should be considered in the EIS.

Response

The assessment assumed usage of all school buildings to be for educational purpose with the relevant Rail Infrastructure Noise Guidelines criteria being 45dBA $L_{Aeq(1hour)}$ (internal). This compares to the most stringent night-time residential criteria of 60dBA $L_{Aeq(9hour)}$. Therefore, although some school buildings may be used for accommodation, this usage would result in higher residential night-time trigger levels. This is a conservative approach, since the trigger levels are lower for educational uses than residential uses. The assessment of The Scots School in Albury has, therefore, considered an appropriate and conservative trigger level for the boarding school.

Responses to submissions that raised issues regarding amenity, health and wellbeing are discussed further in section 4.1.10 of this Submissions Report.

4.2.5.3 Proximity of school buildings to the rail corridor

Summary of issue

This submission noted that in section 15.6.3, the EIS identifies that numerous school buildings are within 40 m of the proposed works. However, these buildings are much closer, as close as 23 m, to the centre of the rail line, and potentially 10–15 m from construction activity. This closeness to working buildings should require special consideration when assessing noise and vibration.

Response

Construction work at in this corridor section would occur close to the school buildings.

Mitigation measures would be implemented to manage noise exceedances, with the aim of achieving the applicable noise management level (mitigation measure NV5). Mitigation measures would be informed through location- and activity-specific construction noise and vibration reviews (mitigation measure NV1) and be guided by the noise and vibration management sub-plan of the construction environmental management plan (mitigation measure NV5).

Additionally, the Revised operational noise and vibration (rail) assessment undertaken as a part of the Preferred Infrastructure Report includes updated, conceptual mitigation measures based on the reference design, available in Appendix D of the Preferred Infrastructure Report.

4.2.5.4 Unique use of buildings adjacent to the rail corridor

Summary of issue

This submission outlined that the school does not believe the EIS has properly assessed the unique uses of the school buildings adjacent to the rail corridor and proposed construction works. For example, the School Chapel Hall is located within 23 m of the rail line and is used as a place of worship, among other uses.

Response

The Scots School in Albury was assessed in the EIS Technical Paper 6 and Technical Paper 7 as an educational receiver. This receiver also includes the School Chapel Hall, which may be defined as a place of worship. In accordance with the Rail Infrastructure Noise Guidelines, an internal noise criteria of 45dBA $L_{Aeq(1hour)}$ is applied for both educational institutions and places of worship. The assessment of The Scots School in Albury has therefore considered use of this receiver as a place of worship.

Additionally, the Revised operational noise and vibration (rail) assessment undertaken as a part of the Preferred Infrastructure Report reflects the type of uses within the school. The revised assessment is available in Appendix D of the Preferred Infrastructure Report.

4.2.5.5 Scheduling of rail possessions

Summary of issue

This submission noted that the EIS assessment does not suitably address the need for the Inland Rail project to consider the school calendar (e.g. examinations and theatre events), when scheduling rail possessions for the purposes of construction works.

Response

Track possessions provide a critical opportunity to undertake intensive work on the rail corridor without the risk of train movements. Under current arrangements, there are typically two possessions of 60-hours per year. This is the minimum number of major possessions that would occur each year during the construction of the proposal.

Due to the large extent of work required, consideration is being given to seeking additional possessions of up to 60 hours. Final staging of works and detailed possession planning would occur during detailed design planning. Detailed rail possession planning would be documented in the construction environmental management plan (CEMP), which would be prepared in consultation with stakeholders. Refer to section 8.3 and section 8.4.1 of the EIS for further detail.

All planned possessions and occupancies are scheduled ahead of time, although changes do occur due to other events and incidents, and to weather. Accordingly, it is critical to note that adequate advance notice is available to inform the community of planned possessions, and the associated durations of construction work. This would be addressed through the communication plan and the various sub-plans to the CEMP.

A construction noise and vibration management plan would be prepared for all construction work periods. Outside of possession periods, this plan could identify site-specific mitigation measures. such as using the school calendar to plan when to minimise noise and vibration impacts, where they may occur over sensitive periods and where it may be feasible within the work program. As noted, work undertaken during possession periods is time-critical with only these very narrow opportunities available to compete all necessary work. These periods are unlikely to have the same flexibility to modify the work schedule to fit around school calendar activities.

4.2.6 Henty Community Development Committee

4.2.6.1 Adequacy of consultation on the EIS

Summary of issue

This submission raised concerns about the adequacy of community and stakeholder consultation prior to the display of the EIS. It also raised concerns that no direct engagement had been undertaken with residents in Henty who had been identified as being potentially impacted in the operational noise assessment. The submission raised concerns about the adequacy of community consultation during display of the EIS. It noted the communication approaches used by Inland Rail were not accessible or suitable to the wider local community. Online public sessions and email updates were considered inaccessible to those without the ability to effectively use or access a computer, such as people who are older.

Response

The landowners of six residences that were identified to potentially experience operational noise exceedances in Henty were sent letters in January 2022 inviting them to meet with the ARTC team to learn more about the noise assessment process, the findings of the assessment, and how noise exceedances may be managed; however, no response was received from the landowners.

ARTC understands that some community members may not use or may not have access to computers and the internet; as such, ARTC used non-computer-based engagement methods, including an advertisement in the local newspaper of the upcoming community drop in-session, and a letter was sent by mail to residents predicted to be affected by property and noise impacts advising of the release of the EIS, ongoing consultation activities and the formal submission process, on 10 August 2022.

4.2.6.2 Operational rail noise and vibration

Summary of issue

This submission raised concerns related to the increased noise and vibration impacts to the surrounding community in Henty from more frequent trains with heavier loads.

Response

Additional assessment of operational noise has been completed as part of the Preferred Infrastructure Report (refer to section 6.2 of the Preferred Infrastructure Report). The assessment modelled operational noise impact at sensitive receivers along the full length of the Albury to Illabo section of Inland Rail.

As summarised in the Preferred Infrastructure Report, around 91 residential receivers and four non-residential receivers in Henty are identified as exceeding the noise trigger levels.

Where exceedances were predicted, the investigation of reasonable and feasible mitigation measures was triggered; however, options for mitigation were recommended as part of the overall strategy to minimise the potential noise and vibration impacts of the proposal, including areas where exceedances are not predicted to occur.

4.2.6.3 Road performance impacts—level crossings

Summary of issue

This submission requested information about the proposed level crossings closures under the project. It stated that they are important access points for Henty's residents who are older and those needing access to major agricultural sites.

Response

The primary change resulting from the proposal is the increased frequency of trains passing and the increased proportion of trains that are 1,800 m in length (resulting in more frequent longer level crossing closures). Due to the increase in freight trains, a level crossing closure is more likely to be encountered during a peak hour as a result of the proposal. In the EIS, this is assumed to be a maximum of two services in any one hour in 2040, noting that this is a conservative assumption given only three additional train services overall would occur over a 24-hour period within Henty (as outlined in section 1.2 of this Submissions Report).

4.2.6.4 Land use and property—property values

Summary of issue

This submission raised concerns that the proposal would negatively impact property values in the vicinity of the rail corridor due to noise and vibration impacts from more frequent and larger trains if a solution is not reached with the community.

Response

As discussed in section 4.2.6.2 of this Submissions Report, additional operational noise and vibration (rail) assessment was completed as part of the Preferred Infrastructure Report and around 91 residential receivers and four non-residential receivers in Henty are identified as exceeding the noise trigger levels. Where exceedances were predicted, the investigation of reasonable and feasible mitigation measures was triggered; however, options for mitigation were recommended as part of the overall strategy to minimise the potential noise and vibration impacts of the proposal, including areas where exceedances are not predicted to occur.

Property values are driven by a range of multiple factors and impacts to property values are not a relevant consideration under the EP&A Act. The EP&A Act requires the consideration of social and economic impacts, which has been considered in chapter 13 and chapter 14 of the EIS.

4.2.7 Riverina Sustainable Food Alliance

4.2.7.1 Alternative route/bypass of Wagga Wagga

Summary of issue

This submission stated there should be a bypass for all heavy freight rail around the city. Use of the existing track with its single line viaduct of 120 years old will only increase congestion.

Response

Approximately 65 per cent of the Inland Rail alignment uses existing rail corridors to make the best possible use of earlier investments in national and state rail corridors and freight networks and minimise the environmental and community impacts associated with creating new rail corridors.

Consideration of a greenfield alignment (either in part or in entirety) for A2I is not in accordance with the objectives and business case of Inland Rail, which aims to maximise the use of existing infrastructure where possible and having an overall Inland Rail alignment with a less than 24-hour transit time between Melbourne and Brisbane. ARTC notes the Australian Government's response to Recommendation 7 of the Schott Report (Schott, 2023) which states, 'The service offering proposed by ARTC, and supported by business, which offers a reliable 24-hour transit service on double-stacked trains of 1,800 metres length should be accepted'. The Australian Government's response to that recommendation is that, 'The Australian Government understands that the service offering is supported by industry and business. It notes, however, that the service offering should not be supported beyond Beveridge in Victoria and Ebenezer in Queensland' (Australian Government, 2023).

Initial assessments were carried out to determine which existing infrastructure did not provide the necessary clearances for the operation of double-stacked freight trains (referred to as enhancement sites). The options assessment for A2I involves the preferred design solution at each enhancement site (e.g. track lowering or bridge replacement), as described in section 6.3 of the EIS. Consideration and analysis of a bypass of towns was not contemplated, would not be proportional to the assessed effects of the proposal along the existing freight rail line, nor does it achieve the objective of maximising the use of existing infrastructure.

There are no plans to consider changes to the A2I alignment from that endorsed by the Australian Government. This commitment was reinforced within the recent independent review of Inland Rail, with the Australian Government prioritising construction south of Parkes, including A2I. Recommendation 12 of the Inland Rail review recognises that if and when Inland Rail train traffic increases significantly, the possibility to bypass the town should be investigated and easements protected for a new by-pass corridor. In current estimates, rail traffic is expected to increase by around two additional services per day and not until 2040. Accordingly, consideration of a bypass of Wagga Wagga is not contemplated government and is not a necessity for this planning approval or assessment of the proposal.

The posted speed limit for freight trains through Wagga Wagga is 40 km/h. The viaduct over the Murrumbidgee River has a temporary speed restriction which would be removed once rectification works (that do not relate to Inland Rail) to the viaduct have been completed, which is anticipated to occur by mid-2026.

During the scoping of the project an assessment of the structure integrity was undertaken to determine what structures required modification. Inland Rail will not materially change the operating conditions from the current situation. The viaduct over the Murrumbidgee River has been found to meet the requirement for Inland Rail. This includes the load rating for the bridge, given the locomotives are no heavier in axle load than the existing rail traffic that uses this line.

4.2.7.2 Level crossing delays

Summary of issue

This submission noted that both hospitals and specialist health services are within a very short distance of the existing line. The rail proposal will effectively cut the city in two with the larger and more frequent freight. The response times with the level crossings will cause congestion and delay for response time.

Response

Additional assessment of the operation of Bourke Street and Fernleigh Road level crossings during construction and operation of the proposal has been completed as part of the Preferred Infrastructure Report. The assessment included modelling of impacts related to additional level crossing closures resulting from increased rail services, including the health precinct. Refer to section 6.1 of the Preferred Infrastructure Report for further detail.

The social and economic assessments for the proposal (EIS Technical Paper 4 and Technical Paper 5, respectively) have considered impacts from the proposal, including potential impacts to businesses and tourism. A range of mitigation measures have been identified in Appendix B: Updated Mitigation Measures of this Submissions Report to manage impacts from the proposal and maximise social and economic benefits. Additional social impact assessment in the context of level crossing closures in Wagga Wagga is provided in section 6.1 of the Preferred Infrastructure Report.

4.2.8 NSW Farmers Association

4.2.8.1 Train numbers

Summary of issue

This submission requested clarification about why the proposal would only allow for two extra train movements per day when Inland Rail seeks to increase the use of freight train transport.

Response

The EIS has assessed the peak rail operations of Inland Rail, which is planned to occur in 2040 and be sustained thereafter. The EIS identified that the number of freight trains would be expected to increase up to a total of 18 freight trains per day in 2025 and a total of 20 freight trains per day in 2040. This is predicted to be a maximum of two trains per hour by 2040. In fact, the average number of freight trains movements between Albury and Illabo varies in different sections (see section 1.2.3 for further information). For example, north of Junee Yard, the freight train numbers are slightly higher, as freight trains can connect from the Junee to Griffith rail line onto the Main South Line (refer to Table 4-2).

TABLE 4-2: BREAKDOWN OF TRAIN NUMBERS BY SECTION OF THE PROPOSAL

Section of the proposal	Train service	Train numbers		
		Current	2025	2040
Albury Yard to Junee Yard	Freight	12	15	18
	Passenger	4[1]	4[1]	4[1]
Junee Yard to Illabo	Freight	**12**[2]	**18**[2]	**20**[2]
	Passenger	4	4	4

Note:

1. Melbourne to Albury V/Line services, which terminate at Albury Yard, have not been included. It is assumed there is no growth in passenger services.
2. Bold font represents highest freight train number in each year.

The proposal would enable the use of double-stacked trains to operate, and trains of 1,800 m in length would more frequently occur when Inland Rail is operational. As such, while the number of freight trains per day on this section of rail would not significantly increase, the number of containers transported per train movement would increase as the modal shift to rail away from road progresses and the overall freight task increases.

4.2.8.2 Level crossings

Summary of issue

This submission requested detail on the times that trains pass through the Junee level crossing on the Olympic Highway and how would the operation of Inland Rail would change how this level crossing operates.

Response

The primary change resulting from the proposal is the increased frequency of trains passing and the increased proportion of trains that are 1,800 m in length (resulting in more frequent longer level crossing closures). Due to the increase in freight trains, a level crossing closure is more likely to be encountered during a peak hour as a result of the proposal. In the EIS, this is assumed to be a maximum of two services in any one hour in 2040, noting that this is a conservative assumption given only two additional train services overall would occur over a 24-hour period through Junee.

The level of service (LoS) as a measure of average delay over an hour at level crossings is predicted to remain at the highest performing category (LoS A), as there would be a maximum of two level crossing closures in any one hour in 2040, and the level crossing would not impede traffic flow in between closures, skewing the predicted LoS.

ARTC is investigating the closure durations of the level crossing at the level crossing on the Olympic Highway, Junee. Mitigation measure SI9 includes that ARTC will investigate opportunities to reduce the duration of level crossing closures at this location.

4.2.8.3 Traffic growth/assessment

Summary of issue

This submission noted that Junee Shire Council's suggested traffic growth rates in the EIS are too low, because the other four local government areas are allowing a 3 per cent increase on highways, noting that Junee is serviced by the Olympic Highway.

Response

Traffic growth rates were developed based on review of historical traffic data and advice from Transport for NSW and relevant local councils. A growth rate of 1.5 per cent was applied for Junee LGA based on advice provided by Junee Shire Council. The growth rates applied were relevant to each LGA, as the factors that contribute to traffic growth vary between these areas. Variation in assumed traffic growth for arterial roads, where they pass between multiple LGAs, is considered to be appropriate as motorists use these roads within an LGA, as well as for travelling regionally. The lower growth rate assigned to the Olympic Highway within the Junee LGA is considered appropriate.

4.2.8.4 Fire risk

Summary of issue

This submission noted the proposed construction timeframes for Harefield Yard clearances and Junee to Illabo clearances enhancement sites would be during the bushfire season. It requested details on the measures proposed to minimise bushfire risk during construction.

Response

Hazards would be managed in accordance with the environmental management approach, as detailed in EIS chapter 27 and Appendix B: Updated Mitigation Measures of this Submissions Report. This management would include requirements for the development and implementation of emergency and incident response plans and procedures, including flood and bushfire risk.

Mitigation measure H2 also sets out specific mitigation measures that would be implemented to address potential bushfire risks, including:

- adequate access and egress for firefighting vehicles and staff at all enhancement sites during construction
- protocols for the management of bushfire risk during construction in accordance with Planning for Bushfire Protection (NSW Rural Fire Service, 2019), Hume Zone Bush Fire Risk Management Plan (Hume Zone Bush Fire Management Committee, 2016) and Riverina Bush Fire Risk Management Plan (Riverina Bush Fire Management Committee, 2015)
- provide first-response capabilities, including fire extinguishers, water carts and hoses at enhancement sites where required.

4.2.8.5 Parking

Summary of issue

This submission noted that the use of on-street parking by the construction workforce at Olympic Highway underbridge would increase risk to public users of this parking and the passing motorists. It queried what safety controls would be in place to manage this risk.

Response

The number of car parking spaces at the construction compounds would be determined during construction planning. Worker parking would generally be contained to the rail corridor. During rail possessions, when the number of workers would likely peak, there may be a need for temporary use of on-street and road-side parking. Adequate safety controls would be implemented where the proposal results in changes that may impact the parking of vehicles within and adjacent to the proposal site. Parking in high-speed environments, such as arterial roads, is generally not anticipated to be impacted by the proposal. Specifically, parking would not be permissible on the travel lanes of the Olympic Highway. Safe parking arrangements would be managed through implementation of the TMP.

4.2.8.6 Active transport during Kemp Street bridge closures

Summary of issue

The submission asked about the pedestrians that use the Kemp Street bridge for access and what alternatives do they have when it is closed. The submission asked if school children would have to be driven to school, thereby increasing traffic on local roads.

Response

As part of the Preferred Infrastructure Report, an updated design for a separate pedestrian bridge structure at Kemp Street has been completed. To eliminate impacts to active travel, the pedestrian bridge would be completed prior to closure of the Kemp Street bridge (refer to section 3.2.2.2 of the Preferred Infrastructure Report).

Consistent with mitigation measure TT17, the construction traffic transport and access management plan will include measures to advise pedestrians of changes to routes and alternative points of access. In association with the communication plan, early warning and general community awareness will be maintained.

4.2.8.7 Junee level crossing

Summary of issue

With respect to the Olympic Highway, Junee level crossing, this submission raised the following queries:

- what traffic counts were completed, why the ‘peak hour’ selected is in the middle of the afternoon and why the assessment does not consider a morning peak
- why this level crossing experiences more frequent closures and how the operation of Inland Rail would change how this level crossing operates
- what times would trains pass through the level crossing in the proposal.

Response

Traffic volumes for the Olympic Highway in Junee were informed from a traffic count completed for the proposal at the intersection of the Olympic Highway (Seignior Street) and Broadway Street. The daily traffic volume profile was assessed based on relative traffic counts for each precinct, to determine the peak morning and afternoon travel times.

The assessment of road network performance was completed based on a peak (worst-case) hour. As detailed in the methodology for the traffic and transport assessment (section 3.1 of the EIS Technical Paper 1). Where available, the highest peak-hour period background traffic volumes have been used; these volumes may occur during the morning or afternoon period. Where this information was not available, the assessment assumed an hourly traffic volume of 10 per cent of the daily two-way traffic volumes.

Operation of the proposal would result in additional trains. Conservatively, these additional trains have been assessed based on a maximum of two train movements in any hour at peak operation of the proposal.

The existing level crossing on the Olympic Highway in Junee is not included in the proposal, and no changes to its operation are proposed. Modifications to the current configuration of LX 607 Olympic Highway at Junee are not required to accommodate double-stacked freight trains and, as such, no works are proposed to this level crossing as a result of the proposal. This level crossing was not included in the proposal site nor scope of the proposal, and grade separation was not considered.

During consultation activities, the community in Junee and the Junee Shire Council expressed that LX 607 Olympic Highway can close for excessively long periods of time, or close with no train performing a through movement across the level crossing. This is generally attributed to the changeover of drivers of some trains on the Junee Station platform and shunting movements within the Junee yard.

ARTC has explored preliminary options and carried out consultation with rail operators regarding a potential relocation of the driver changeover area. At this stage, a solution could not be reached between all involved parties. A potential relocation solution would be contingent on being compatible with the network configuration and safety of train crews in the context of an operating rail corridor. In accordance with mitigation measure SI9, ARTC will continue to investigate opportunities to reduce the duration of level crossing closures at this level crossing. Should this prove feasible, ARTC would undertake any necessary works through separate approvals, as required.

4.2.8.8 Track infrastructure

Summary of issue

This submission requested information on how can signalling at level crossings can work for more than one type of train using the rail corridor.

Response

Level crossings are designed to function in response to all trains using the rail corridor.

4.2.8.9 Road performance impacts—construction

Summary of issue

This submission queried if traffic surveys had been completed to inform the impact assessment of the detoured traffic during the closure of the Kemp Street bridge. The submission stated that the EIS assumes all traffic that would have used Kemp Street would travel to Main Street and continue north; however, this assumption does not take into account:

- vehicles with destinations in areas south of Main Street (such as businesses along Humphrys Street)
- heavy vehicles that would need to connect to Byrnes Road.

The submission queried what mitigation measures would be implemented to address the damage to roads located along detour routes or construction routes, including roads to the west of the rail corridor in Junee to address impacts due to increased traffic (including heavy vehicles) (e.g. Lorne Street and Humphrys Street), noting that preventative road works are proposed at Pretoria Avenue and Joffre Street.

Response

As part of the Preferred Infrastructure Report, additional assessment was completed to assess the impacts of Kemp Street bridge. This assessment used additional surveys and a microsimulation model. Further detail is in section 6.1 of the Preferred Infrastructure Report.

The microsimulation model accounted for driver behaviour with traffic re-routing within the model based on the most efficient route. This distribution is factored into the results of the assessment provided in section 6.1 of the Preferred Infrastructure Report. Diverted traffic would use Humphrys Street.

Kemp Street bridge presently has load limits, which prevents certain types of heavy vehicles from using the bridge. Vehicles crossing the rail line at Kemp Street and travelling to, or from, Byrnes Road would be expected to use the proposed diversion route via Edgar Street and one of the cross-streets connecting to Lorne Street. The nearest level crossing south of Junee is located at Harefield Road, Harefield (about 10 km south of Kemp Street). Travel via this route to the Olympic Highway would take about 15 minutes (not taking into consideration delays from potential closures at the level crossings). This diversion is equivalent to the travel time to the same destination, without the diversion. For heavy vehicles that presently cannot use Kemp Street bridge or that would be diverted during construction and have an origin or destination south of Junee, access would be via Bomen as Harfield Road is not an approved heavy vehicle route.

As reported in the EIS Technical Paper 1, the traffic survey (based on 2014 data) for Byrnes Road recorded daily (two-way) traffic volumes of 2,299 with eight per cent heavy vehicles. Road network performance for Byrnes Road was included in the assessment for the Junee and surrounds and Harefield enhancement sites. The road, including the intersection of Byrnes Road and Harefield Road, was identified to operate with good levels of service (LoS A or B), including with construction of the proposal. While some motorists, including heavy vehicles, may use Byrnes Road and connecting roads during the closure of Kemp Street bridge, this is not anticipated to be a significant proportion and would not impact the level of performance of the road network.

As stated in mitigation measure TT15, a road dilapidation report will be prepared for all haul routes within each precinct. Should damage to the road occur as a result of construction, the damage will be rectified to restore the road to the pre-work condition as identified in the road dilapidation report or as otherwise agreed with the relevant

road authority. Joffre Street and Pretoria Avenue will also be monitored for damage during construction and any necessary repairs attended to as soon as possible.

Impacts to June Shire Council assets would also be managed through the interface agreements that Junee Shire Council has entered into with ARTC (refer to section 3.4 of this Submissions Report).

4.2.8.10 Level crossing treatments/ road infrastructure

Summary of issue

This submission noted that the storage lanes and a concrete island proposed to be established on the level crossing approach from the Olympic Highway is unsuitable and could create a traffic hazard. Consultation on the private level crossing changes has not been adequate.

Response

The level crossing on Shire and Carter Property access road (LX605) is a licensed, private level crossing, which provides primary access to a private property and to the Junee Shire Council's quarry. ARTC has engaged with the private property owner, Junee Shire Council and Transport for NSW, after the display of the EIS, on possible alternative designs.

In response to stakeholder feedback on this level crossing, the design solution to address the existing non-compliances has been revised. The track would be realigned to accommodate a level crossing at this location that does not impact on the Olympic Highway. The new track and level crossing would be realigned by up to 16 m south from the current level crossing location.

The design of the level crossing would be changed to accommodate the realigned track and upgraded from a passive to an active level crossing as previously proposed in the exhibited EIS. Further detail on the revised design is provided in section 3.2.1.4 of the Preferred Infrastructure Report. Engagement with stakeholders would continue during detailed design.

4.2.8.11 Bridges

Summary of issues

This submission noted that the Kemp Street bridge should be a Disability Discrimination Act (DDA)-compliant design.

Response

The design of the replacement bridges at Edmondson Street and Kemp Street are required to provide a vertical clearance of 7.1 m of the rail line to enable double-stacked container trains to safely operate. As a result, the design as presented in the EIS does not meet DDA requirements for pedestrian access. ARTC has included changes to the Edmondson Street and Kemp Street bridge designs as part of the Preferred Infrastructure Report to provide a separate pedestrian bridge immediately adjacent to the road bridges. This separate structure would provide DDA-compliant access. Refer to section 3.2.1.1 of the Preferred Infrastructure Report for further detail on this change.

4.2.8.12 Options and alternatives

Summary of issues

This submission queried why grade-separation not considered for the level crossing near Junee Station.

Response

No modifications are needed to the current configuration of LX 607 Olympic Highway at Junee to accommodate double-stacked freight trains and, as such, this level crossing is not included in the proposal site or scope of the proposal.

Summary of issues

This submission queried why an Australian Level Crossing Assessment Model (ALCAM) assessment was not carried out for the Olympic Highway underbridge at Junee.

Response

ALCAM assessments are undertaken for level crossings only and cannot be applied to other infrastructure. Minor modification to the track realignment over the Olympic Highway bridge would be required. Track reconfiguration was selected as the preferred option for work to the bridge based on the least distribution to the operating line and what structural work was necessary, as detailed in section 6.3.3 of the EIS. Structural engineering assessments are undertaken on existing infrastructure throughout the design process. These assessments concluded that the bridge has adequate design life and a suitable structural capacity for use by Inland Rail.

4.2.8.13 Water supply

Summary of issues

This submission queried where water for construction would be sourced from.

Response

Construction water sources would be finalised during the detailed design phase, considering:

- climatic conditions in the lead up to construction
- agreements with local governments for sourcing mains water
- agreements with water supply authorities (such as Riverina Water) for sourcing water or treated non-potable water.

Possible options for water supply have been identified in section 5.2.1.4 of the EIS Technical Paper 11.

The confirmation of where water would be sourced from would occur closer to the commencement of construction, and would reflect the availability at that time with consideration of climatic conditions, agreements with local government and other water supply authorities (e.g. Riverina Water). This is reflected in mitigation measure HFWQ1, which commits to the further investigation of water supply options, and ongoing consultation with water suppliers and alternative water supply options.

4.2.8.14 Construction laydown areas

Summary of issues

This submission queried where materials for construction would be stockpiled for enhancement works in the Junee precinct.

Response

Stockpiling would primarily occur within the construction compounds at Junee, as shown in Figure 8-12 of the EIS. Stockpiling may occur outside designated laydown areas within the proposal site for short durations.

Construction would require temporary use of land outside the rail corridor for the duration of the construction period. The proposed temporary occupation and use of these areas are subject to further engagement and agreement with landowners. The final land requirements for the proposal would be confirmed during detailed design. Fencing to secure the construction area would generally not encroach on private property or impact current private property fencing. In the event that property boundary fencing is impacted, it would be managed by the construction contractor in consultation with the impacted landowner.

4.3 Public authority submissions

4.3.1 Lockhart Shire Council

The submission from Lockhart Shire Council raised a number of items, addressed the following sections.

4.3.1.1 Operational rail noise

Summary of issues

Lockhart Shire Council stated that in the Lockhart Local Government Area, the Yerong Creek Public School is predicted to experience operational rail noise exceedances. It was also expressed that from attending meetings of the Inland Rail Community Consultative Committee, established as part of the proposal's community engagement initiatives, Lockhart Shire Council is aware that Inland Rail is consulting directly with the Yerong Creek Public School regarding noise mitigation measures.

Lockhart Shire Council wants to ensure that the Yerong Creek Public School continues to be consulted and that appropriate noise mitigation measures are incorporated into any approval issued for the proposal.

Response

The noise levels at Yerong Creek Public School are predicted to exceed the Rail Infrastructure Noise Guidelines airborne noise criteria in 2040 during operation of the proposal due to the increased rail volumes forecast for the day period (7 am to 10 pm). The 2040 internal noise levels at the school are predicted to reach 55dBA $L_{Aeq(1hr)}$.

The Revised operational noise and vibration (rail) assessment has been prepared as part of the Preferred Infrastructure Report, including assessment of the full length of the rail corridor between Albury and Illabo. The assessment has identified a number of reasonable and feasible mitigation measures where predicted noise levels were above the assessment criteria. A summary of the assessment is provided in section 6.2 of the Preferred Infrastructure Report.

An operational noise and vibration review would be undertaken to confirm noise and vibration predictions based on the final design and how predicted impacts would be mitigated, should they be required.

4.3.1.2 Support for the proposal

Summary of issues

Subject to Lockhart Shire Council's concerns regarding operational noise impacts at Yerong Creek Public School being addressed, Lockhart Shire Council expressed its general support of the proposal, noting that it is consistent with the *Lockhart Shire Community Strategic Plan 2022–2032* (Lockhart Shire Council, 2022a) and the *Lockhart Shire Council's Delivery Plan 2022–2025* (Lockhart Shire Council, 2022b) with respect to the following objectives:

- improve services and infrastructure that supports our rural businesses
- lobby to increase the use of rail for agricultural transportation.

Lockhart Shire Council's submission also advocated for the upgrade of The Rock to Boree Creek rail line to the same standard (axle loading) as the main Sydney to Melbourne rail line over a period of years, due to the potential benefits, including reduced freight costs for producers, improved safety for road users and reduced maintenance costs for Lockhart Shire Council in relation to its road network.

Response

Inland Rail would make it easier to connect farms, mines, cities and ports to domestic and international markets. Two million tonnes of agricultural freight would switch from road to rail, with a total of 8.9 million tonnes of agricultural freight more efficiently diverted to Inland Rail.

The proposal would create jobs during construction and have flow-on benefits to the local economies around the enhancement sites, such as the Lockhart LGA.

Lockhart Shire Council's comments regarding the upgrade of The Rock to Boree Creek rail line are noted; however, this rail line is part of the Country Regional Network and is not part of the ARTC network or the Inland Rail alignment.

4.3.2 Wagga Wagga City Council

The submission from Wagga Wagga City Council raised a number of items, addressed the following sections.

4.3.2.1 Issues with the approach of the EIS

Summary of issues

Wagga Wagga City Council queried the approach to consider only enhancement sites within the scope of the EIS and stated that this approach did not consider operation of the proposal for the full length of the alignment and may compromise the integrity and effectiveness of the EIS.

Wagga Wagga City Council stated that the full length of the corridor must be considered in the EIS.

Response

The rail line between Albury and Illabo already caters for freight trains up to 1,800 m. The enhancement works at discrete locations are required to provide for the increased vertical and horizontal clearances required for double-stacked container freight trains. No additional works would be required outside the enhancement sites identified in Figure 1-2 as they meet the clearance requirement for the Inland Rail program. This is also outlined in the declaration of the proposal as CSSI in the now repealed State Environmental Planning Policy (State and Regional Development) 2011 (as replaced by the State Environmental Planning Policy (Planning Systems) 2021), the Scoping Report and the EIS.

ARTC have been directed by DPE to complete further assessments of operational noise and vibration, traffic and air quality impacts as part of the Preferred Infrastructure Report. These are provided in sections 6.1 to 6.3 of the Preferred Infrastructure Report.

4.3.2.2 Engagement

Summary of issues

Wagga Wagga City Council expressed that ARTC, DPE, and Transport for NSW have conflicting positions and views about the alignment of the proposal scope.

Wagga Wagga City Council also stated there had been limited consultation on issues of concern, which has resulted in the use of inaccurate data, incorrect conclusions, an incomplete EIS, and a risk to the efficient functioning of the City of Wagga Wagga.

Response

ARTC commenced stakeholder meetings with DPE, Transport for NSW and relevant local councils in 2018. The A2I Community Consultative Committee was established in February 2021 to provide a forum between the proponent and representatives of the community, stakeholder groups and the local council to discuss issues directly relating to the proposal.

ARTC has been in continual communication with DPE and Transport for NSW during this time. Without details of the specific instances of the suggested conflicting positions, it is not possible to respond. The strategic need for Inland Rail and the benefits and opportunities the infrastructure will open for regional NSW in particular is outlined in the EIS.

The EIS has used a mix of publicly available data, inputs from government agencies, and onsite survey and recordings to undertake the assessment. The basis of each assessment has been determined based on the SEARs, relevant standards and guidelines, and specialist expertise. The EIS has been thoroughly prepared and peer reviewed.

Additional and ongoing consultation with local authorities, including Wagga Wagga City Council, has been outlined in section 3.4 of this Submissions Report, including consultation as part of the Preferred Infrastructure Report.

4.3.2.3 Issues specific to the EIS methodology—assessment years

Summary of issues

Wagga Wagga City Council's submission raised the issue that the EIS documentation considers operational impacts between the commencement of operation (2025) and the year 2040, which is the first 15 years of operation. Wagga Wagga City Council stated that this contrasts directly with the 2015 business case, which estimated that Inland Rail will not be fully developed until 2049–50 and which projects economic impacts up to 50 years into the future.

Response

As discussed in section 1.2.4, in response to the Independent Review of Inland Rail, the Australian Government has prioritised completing the sections of Inland Rail between Beveridge in Victoria and Narromine in New South Wales by 2027. In line with the government's response to the review, ARTC is now taking a staged approach to Inland Rail, with a focus south of Parkes on construction and delivery to progressively unlock the benefits of Inland Rail ahead of end-to-end completion. North of Parkes, attention is on obtaining approvals, securing the route and refining cost and delivery arrangements ahead of commitments for construction.

Subject to approval, detailed design and construction planning for A2I would commence shortly after, in mid-2024. Due to the nature of the works, construction of some elements would also commence shortly after approval. Construction is expected to take about 30 months for completion by the end of 2026, with enhancement sites progressively commissioned on completion of construction.

Anticipated train numbers remain as reported in the EIS and have not been revised, with 2040 retained as the design year for assessment purposes and represents the year of peak rail operation. It is estimated that the operation of Inland Rail would increase freight train movements to a total of 18 freight trains per day in the early phase of Inland Rail's operation when all projects are completed, and up to a total of 20 freight trains per day over the following years on further take up of the service.

The EIS considered proposed developments in the vicinity of the proposal. Regional and local strategic plans were considered in assessments, where relevant, such as in the landscape and visual, social and land use and property assessments.

The cumulative impacts also assessed the interactions between the proposal and other approved or yet-to-start projects, or with reasonably foreseeable future development in the area that is likely to be affected by the proposal.

The business case provides a representative conceptual project with which to assess the commercial and societal benefits at that time; it does not necessarily correlate directly with the project assessed in the EIS, given that there is continual ongoing development of the concept throughout the process.

4.3.2.4 Issues specific to the EIS methodology—operational rail noise and vibration

Summary of issues

Operational noise and vibration scope

Wagga Wagga City Council expressed that operational noise and vibration is only considered within a 2 km radius of the enhancement sites and should be considered for the full-length of the corridor.

Operational noise and vibration criteria

Wagga Wagga City Council stated that operational noise and vibration criteria are predicted for Kildare Catholic College and South Wagga Public School. Wagga Wagga City Council also stated that additional noise and vibration

monitoring will be completed at these locations following commencement of operation of the proposal, and mitigation measures will be implemented where necessary. Wagga Wagga City Council raised the issue of the significance of these sensitive receivers as places of education, and reinforced that adverse noise and vibration impacts above the thresholds are unacceptable and must be rectified prior to the commencement of operations.

Ground-borne noise receivers

Wagga Wagga City Council queried the assumption that ground-borne noise at residential receivers at a distance of 45 m or more from the track would be below the relevant assessment criteria, and raised that sensitive receivers within 45m of the rail corridor and affected by ground-borne noise and vibration must be fully assessed as part of the EIS. General assumptions regarding these receivers are not considered to be a sound evaluation.

Validation and calibration of modelling

Wagga Wagga City Council stated that Appendix C of the EIS Technical Paper 7 included an assessment of double-stacked trains compared to single-stacked trains. Wagga Wagga City Council stated their acceptance of the accuracy of the study; however, the submission noted the assessment had been completed in South Australia and queried its application to the A2I corridor without any empirical study of noise and vibration being undertaken.

Wagga Wagga City Council recommended that an empirical study on the A2I corridor be completed, using appropriate rollingstock, motive power, speeds, loadings and lengths, and stated this should be coupled with both noise- and vibration-sensing devices at appropriate intervals and sensitive receivers.

Vibration impacts

Wagga Wagga City Council stated that the EIS has identified several heritage and non-heritage sensitive receivers, which are predicted to experience vibration that exceeds the allowable thresholds, including South Wagga Public School and several private residences, and that additional studies will be required to determine the vibration sensitivity of the relevant structures.

Wagga Wagga City Council also stated the importance of these studies and requested to be consulted regarding these assessments and plans at early stages in the process.

Recommendations: The following clarifications will need to be sought:

- studies must be undertaken to determine the sensitivity to vibration of relevant structures along the full length of the line
- monitoring of these structures must take place through the construction period and beyond
- dilapidation surveys must be conducted on all structures within the zone of influence of the A2I enhancement sites.

Response

Operational noise and vibration scope

An updated operational rail noise and vibration (rail) assessment has been completed for the full length of the rail corridor between Albury and Illabo. This assessment was expanded from the EIS to include the areas potentially impacted by noise and vibration from operation of the proposal outside of enhancement sites. A summary of the noise and vibration assessment is provided in section 6.2 of the Preferred Infrastructure Report.

Operational noise and vibration criteria

Preliminary consultation has also been undertaken with schools where exceedances of noise and vibration criteria are predicted.

Identification of noise mitigation will continue to be investigated during detailed design, taking into consideration landowner preferences and, in the case of non-residential receivers, informed by further investigations of internal noise levels, building layout and building condition.

As provided in mitigation NV3, an operational noise and vibration review will be undertaken to review the potential for operational impacts prior to operational commencement. This will guide the approach to identifying feasible and reasonable mitigation measures to be incorporated in detailed design. All mitigation measures will be in place prior to the commencement of Inland Rail traffic.

Ground-borne noise receivers

Additional assessment undertaken as part of the Preferred Infrastructure Report indicates that, based on the proposal train speed types, ground-borne noise levels at distances greater than 50 m from the track are expected to comply with the assessment criteria (i.e. 40dBA L_{ASmax} daytime and 35dBA L_{ASmax} night-time). There are some residential receivers are located within the offset distance; however, airborne noise levels during train pass-bys are predicted to be the dominant noise contribution at sensitive receivers with 50 m of the alignment. As per the methodology listed in the Rail Infrastructure Noise Guidelines, the assessment of ground-borne noise is not required when the airborne noise contribution is dominant, which is the case in this instance. Therefore, further consideration of ground-borne noise for these receivers is not required.

Validation and calibration of modelling

The experimental study was conducted to investigate the noise and vibration emission levels of double-stacked trains in comparison to single-stacked trains. The study concluded that, while the loading of the freight consist can vary considerably depending on the mix of empty or fully loaded containers, the measurements found it to be insignificant in relation to rolling noise and vibration emissions when compared to other factors, such as individual wheel and track conditions. Based on this analysis, correction factors for noise and vibration emissions from double-stacked wagons have not been considered in the Inland Rail operational rail noise and vibration assessments at the EIS stage. While Inland Rail anticipate that the predicted impacts are conservative, based on the available information at the reference design, it is expected that the model assumptions will undergo further verification during the detailed design phase and the impacts of double-stacked trains will be studied in greater detail based on detailed design of the proposal. It is not in Inland Rail's interests to underpredict operational impacts as the proposal will be conditioned with ongoing compliance monitoring. Any residual impacts identified during compliance monitoring will be subject to feasible and reasonable mitigation.

Vibration impacts

Mitigations measures have been provided that address the Wagga Wagga City Council's recommendations (NV1, NV2, NV5 and NV6). The notification of impacts is currently proposed to be undertaken in accordance with the communication management plan for the proposal.

Location- and activity-specific construction noise and vibration reviews will be prepared based on a more detailed understanding of the construction methods, including structural reviews of potentially at-risk buildings, as required. The plan will confirm predicted impacts at relevant receivers to assist with the selection of feasible and reasonable management measures. The statements will also confirm noise and vibration auditing and monitoring requirements.

Condition surveys will be completed before and after construction works where buildings or structures, utilities or road infrastructure are within the minimum vibration working distances.

As construction work would not be undertaken outside enhancement sites, assessments for construction-related vibration are only required for activities occurring within the enhancement sites. Within the operational phase of the proposal, vibration levels from train pass-by events are primarily governed by rail and wheel roughness and the rolling speed of the train. The operation of Inland Rail would not change these factors.

The Preferred Infrastructure Report includes a revised operational noise and vibration (rail) assessment for the full length of the rail corridor between Albury and Illabo. This assessment was expanded from the EIS to include the areas potentially impacted by vibration from operation of the proposal outside of corridor enhancement sites. The results of this assessment are provided in section 6.2 of the Preferred Infrastructure Report.

During the detailed design phase, an operational noise and vibration review will be undertaken on the final design to review the potential for operational impacts and guide the approach to identifying feasible and reasonable mitigation measures to be incorporated in the detailed design (refer to mitigation measure NV3). This review will include a requirement for compliance monitoring of operational vibration once Inland Rail has commenced operation.

4.3.2.5 Level crossings—assessment

Summary of issues

Operational impacts

Wagga Wagga City Council stated there appears to be no consideration within the EIS of the impacts of freight trains that are known to stop or slow while passing through Wagga Wagga, and stated locomotive crew changes at Wagga Wagga platform have resulted in closure times greater than four minutes for the Bourke/Docker crossing for freight trains under 1,000 m.

Wagga Wagga City Council stated that it has collected train speeds and gate closure times at the Bourke Street and Docker Street level crossing to determine the validity of the predicted closure time of 121 seconds included in the EIS, and total closure times are expected to be greater than 121 seconds for a significant portion of rail traffic. Wagga Wagga City Council stated that the frequency and duration of gate closures at all on-grade crossings will increase during operation of the proposal.

Wagga City Council also raised that there has been limited empirical data gathered, and that data in the EIS related to train speeds and traffic counts is inaccurate, making the conclusions for wait times and queueing at level crossings false and misleading in terms of magnitude and effect.

Train movements

Wagga Wagga City Council noted there is a discrepancy between the noise and vibration assessment, and traffic and transport assessment, in the number of expected train movements through Wagga Wagga in the projected operations envelope. The numbers used for the level-crossing impact assessment are lower than the noise and vibration study. This brings into question the effectiveness of the EIS as a holistic document.

Wagga Wagga City Council noted the EIS must be consistent about the planned number of train movements through Wagga Wagga in 2025 and 2040. Wagga Wagga City Council also noted that upper limits must be set on train movements throughout planned operations as to limit impacts within those assessed in the EIS.

Traffic counts

Wagga Wagga City Council disputed the traffic counts used to determine operational impacts at the Bourke Street/ Docker Street intersection, and presented the following traffic counts it had collected, which are compared to counts provided in the EIS in Table 4-3.

TABLE 4-3: WAGGA WAGGA CITY COUNCIL BREAKDOWN OF TRAIN NUMBERS BY SECTION OF THE PROPOSAL

Survey	Count year	Average daily (two-way) volume)	Heavy vehicle proportion
EIS count	2021	8,957	8%
Council count	2022	12,718	10.73%

This data in turn highlights that queue lengths at the Bourke Street/Docker Street intersection will likely be much longer in 2025 than the modelled 238 m. Traffic counts included in the EIS appear to be only 70 per cent of the estimated traffic based on the traffic count collected by council.

Wagga Wagga City Council recommended consideration be given to the fact that freight trains have been shown to not pass through Wagga Wagga at the top speed of 80 km/h and are unlikely to do so in the future. Additional delays caused by trains stopping/slowing through Wagga Wagga have not been considered in the analysis of on-grade level crossing, which should be addressed.

Level of service analysis

Wagga Wagga City Council stated that the level of service of the roads associated with the level crossings has been determined solely through the average delay value. The EIS states. ‘An assessment of active (gate controlled) level crossing LOS (Level of Service) was undertaken and found that all level crossings on public roads would operate at a delay-based LOS of A [see Table 4]’; as such, no mitigation measures have been proposed for the on-grade level crossings in Wagga Wagga. Wagga Wagga City Council disputed that impacts from gate closures at crossings should be assessed solely through the average delay of all vehicles using the crossing, when a portion of vehicles will experience no delay and another portion will experience excessive and worsening delays.

Wagga Wagga City Council recommended that average delay to vehicles must not be used as a sole criterion for evaluation of operational impacts on on-grade crossings.

Response

Operational impacts

As part of the Preferred Infrastructure Report, additional modelling for traffic and transport assessment has been completed. This modelling included completion of a microsimulation model for the assessment of the Edmondson Street bridge closure and the potential impacts to the road network due to more frequent and longer level crossing closures in the operational phase. The model incorporated observed level crossing closure data to calculate average closure times. The impacts of increased level crossing closures in 2025 and 2040 were also assessed for Bourke Street and Docker Street. Further information on the operation impacts is discussed in section 6.1.3.2 of the Preferred Infrastructure Report.

Clarification about the traffic counts presented within the Wagga Wagga City Council response compared to the EIS is provided later under ‘Traffic counts’ below.

Train movements

Train numbers throughout the EIS are consistent, but are presented differently in each technical paper.

The operational rail noise assessment (EIS Technical Paper 7) presented a breakdown of the passenger and freight train movements in three sections (Albury Yard, Albury to Junee, and Junee to Illabo) to reflect additional movements associated with the Albury Yard and/or the Junee intermodal activities. Additional movements in Albury Yard relate to V/Line passenger services that terminate at Albury Station.

The remaining parts of the EIS, including the traffic and transport assessment (EIS Technical Paper 6) presents the change in freight movements, and has assigned the upper limit of the freight movements that would travel between Albury and Illabo across all enhancement sites (being up to a total of 18 movements per day in 2025 and up to a total of 20 movements per day in 2040) to present a worst-case assessment. Passenger and freight movements are identified separately.

Traffic counts

As noted in the EIS Technical Paper 1, the traffic count presented for the Bourke Street/Docker Street intersection was completed over a 10-hour period (5am to 10am and 2pm to 7pm), which may account for discrepancies with counts collected by Wagga Wagga City Council. The assessment was based on peak-hour data to determine the impact rather than daily average traffic volume.

The transport and traffic assessment addendum (Appendix C of the Preferred Infrastructure Report) includes assessment of level crossing closure times with trains travelling at slower speeds.

The additional traffic and transport assessment completed as part of the Preferred Infrastructure Report includes supplementary traffic and pedestrian surveys. Traffic and pedestrian count data was collected on Thursday 8 June 2023. The surveys completed include:

- vehicle counts using cameras at intersections in Albury, Wagga Wagga, Culcairn, Henty, Uranquinty, Yerong Creek and Junee
- automatic traffic count (tubes) in Wagga Wagga, Albury, The Rock, and Junee
- vehicle travel time surveys in Wagga Wagga
- pedestrian counts in Wagga Wagga (Cassidy parade pedestrian bridge, Wagga Wagga Station pedestrian bridge and Edmonson Street bridge) and Junee (Kemp Street bridge).

Level of service analysis

The LoS analysis was specified in the SEARs. The LoS predicted in the EIS Technical Paper 1 was based on average delay during peak traffic periods. As LoS is the only criteria available to use in the assessment, it was supported by further assessment.

The assessment of the road network performance between intersections (referred to as road links) has been carried out in the additional assessment of the road network, with which additional mitigation measures have been provided in section 6.1.4 of the Preferred Infrastructure Report.

4.3.2.6 Level crossings—impacts to emergency services

Summary of issues

Wagga Wagga City Council expressed concern that the EIS had not considered the potential adverse operational impacts on emergency services—specifically, response and travel times. Wagga Wagga City Council stated that there is evidence that emergency vehicles will be delayed for excessive periods of time, which is likely to worsen. Wagga Wagga City Council also stated that this issue had been overlooked considering the adjacent health precinct around Docker Street and the Wagga Wagga Base Hospital, and emergency care located north of the rail line, and emergency services located south of the rail line.

Wagga Wagga City Council noted operational impacts on emergency services and consequential impacts on the safety of the inhabitants of Wagga Wagga had not been considered.

Response

Emergency vehicles would be subject to the same increased frequency in level crossing closures as identified for other vehicles crossing the rail corridor at Docker Street and Fernleigh Street. Alternative routes through grade-separated crossings are available at Edmondson Street, Pearson Street and Albert Street.

As stated in the EIS Technical Paper 1, the duration of closures at level crossings would not worsen with operation of the proposal; however, operation of the proposal would increase the frequency of level crossings (a maximum of two per hour).

Mitigation measures TT1, TT4, and TT17 include the requirement for engagement with Transport for NSW and/or emergency services to manage potential disruption to level crossings or other public roads as a result of construction or required detours during construction.

Engagement with emergency services is documented in chapter 5 of the Preferred Infrastructure Report.

4.3.2.7 Level crossings—Fernleigh Road crossing

Summary of issues

Wagga Wagga City Council expressed that while attention has been given to the Bourke Street/Docker Street level crossing, as an arterial road, Wagga Wagga City Council acknowledged that forecast impacts of the proposal were just as severe, if not worse, at the Fernleigh Road crossing. This level crossing serves the suburb of Ashmont, an area of Wagga Wagga with noted lower household incomes and socio-economic status. Fernleigh Road serves as one of only four roads to and from the suburb. Wagga Wagga City Council raised that the forecast delays, as indicated in Table 2 of its submission, will have adverse impacts on the Ashmont community, including their access to emergency services. Wagga Wagga City Council stated the EIS is incomplete because the traffic and transport study does not adequately take into account the adverse effects of level-crossing closure times, both social and economic, on this community.

Wagga Wagga City Council stated that there is no threshold provided for vehicle delay or vehicle queuing, which would warrant consideration of grade-separation for Fernleigh Road and Bourke Street/Docker Street. The EIS must take into consideration social and economic impacts caused by on-grade crossing closure times, especially concerning the Fernleigh Road crossing.

Response

The EIS Technical Paper 4 assessed the impact of increased level crossing closures in Wagga Wagga (refer to sections 8.1.2, 8.2.2 and 8.5.2 of Technical Paper 4). Additional assessment of social impacts due to increased closures at the Fernleigh Road level crossing has been completed as part of the Preferred Infrastructure Report (refer to section 6.1.3 4 of the Preferred Infrastructure Report). Increased closures may result in longer journey times and increased stress for residents; however, as it is an existing operational level crossing, residents would likely have developed a level of resilience to potential delays. The area is also well connected to an alternative arterial road and highway connections for residents to use should potential level crossing delays be seen as a deterrent. The Ashmont community is within 5-km drive of the Wagga Wagga Base Hospital and Wagga Wagga city centre, which is located on the same side of the rail corridor.

Level crossings that are within the scope of the proposal only include those that are required to be modified to accommodate double-stacked freight trains, such as modification to accommodate track realignment. Consideration of the road–rail interface treatment at level crossings that are out of scope does not form part of the proposal.

The Bourke Street/Docker Street level crossing and the Fernleigh Road level crossing in Wagga Wagga do not require modification and are out of scope of the proposal. These level crossings are located on local roads and any modification considered appropriate would need to be carried out by the road manager, Wagga Wagga City Council.

4.3.2.8 Level crossings—assessment of cumulative costs

Summary of issues

Wagga Wagga City Council raised the issue that there is no assessment of the cumulative costs associated with the additional delays that will occur at the level crossings in Wagga Wagga.

Wagga Wagga City Council believes that the cumulative impacts of ongoing and proposed rail operations, combined with expected growth in traffic prompted by planned growth as outlined in the Wagga Wagga City Council Local Strategic Planning Statement, will become a significant traffic and transport issue for the community of Wagga Wagga. Wagga Wagga City Council also raised that there is currently no clear solution or criteria for action to resolve this issue from any proponent or party related to Inland Rail.

Wagga Wagga City Council stated that there appears to be little to no consideration toward mitigating future issues identified in the EIS (2025–2040), which are not directly within the scope of proposal. These ‘pain-points’, especially those related to level crossings, will certainly occur in the future and are not addressed at all.

Response

Level crossings that are within the scope of the proposal only include those that are required to be modified to accommodate double-stacked freight trains, such as modification to accommodate track realignment. Consideration of the road–rail interface treatment at level crossings that are out of scope does not form part of the proposal.

The Bourke Street/Docker Street level crossing and the Fernleigh Road level crossing in Wagga Wagga do not require modification and are out of scope of the proposal. These level crossings are located on local roads and any modification considered appropriate would need to be carried out by the road manager, Wagga Wagga City Council.

4.3.2.9 Level crossings—impacts of the Bomen viaducts

Summary of issues

Wagga Wagga City Council raised the issue that the 40 km/h speed restriction for trains at the Bomen viaducts has not been considered in the EIS and the council states that this restriction has a drastic effect on train speeds at the Bourke Street/Docker Street level crossing. Rectification works in the form of mid-span supports has not resolved this problem and there remains a speed restriction in place of 40 km/h for all trains, as stated above. There is no intention for the proposal to rectify or replace the viaduct and, as such, the assumption that trains will travel through the city at 80 km/h is not possible.

Wagga Wagga City Council also raised the issue that the 40 km/h speed restriction over the viaducts is located less than 3 km from the Bourke Street/Docker Street intersection. A 1,800 m train would, therefore, only begin accelerating beyond 40 km/h toward 80 km/h at 1.2 km before level crossing—a relatively short distance in railway terms.

Wagga Wagga City Council recommended these commitments are made to limit the impacts of operation on Wagga Wagga’s transport network:

- the Bomen Viaducts and their associated speed restriction must be included in the assessments of the EIS to fully account for the impacts at on-grade crossings
- rectification of the Bomen Viaducts to lift the 40 km/h speed restriction must be included in the scope of enhancement activities of the A2I project to realise the core objectives of the proposal—to move freight at maximum speed.

Response

The addendum to the transport and traffic assessment completed as part of the Preferred Infrastructure Report has included assessment of level crossing closures based on observed closure times. The results of this assessment are provided in section 6.1 of the Preferred Infrastructure Report.

The speed restriction on the Bomen viaducts (referred to as the Wagga Wagga viaduct elsewhere in this Submissions Report) is a temporary measure until a series of maintenance works can be completed. The maintenance work requires work to the viaduct structure that can only be carried out safely when trains are not running. To minimise impacts to train services, the maintenance work is being planned to occur in rail possessions. It is anticipated that this work would be completed prior to the commencement of the proposal and operation of Inland Rail trains.

The temporary speed restriction is not a typical reflection of the operation of the rail network in this location or potential impacts of the proposal on at-grade crossings. It relates to the maintenance work, which does not form part of the proposal.

4.3.2.10 Level crossings—resolution of on-grade crossings

Summary of issues

Grade separation

Wagga Wagga City Council expressed that there has been ongoing community and technical discussion around the delay and safety of level crossings, throughout the full alignment of the proposal. Two level crossings in Wagga Wagga, Bourke Street/Docker Street crossing and Fernleigh Road crossing, have been the focus of these discussions. Wagga Wagga City Council stated that enhancement at these sites has not been considered as they are outside of the scope of the proposal.

Wagga Wagga City Council stated that the Grade Separating Road Interfaces Program is a concurrent capital works program being delivered by Transport for NSW, which has identified 26 on-grade crossings of state and regional roads that are being investigated for grade separation; and the Bourke Street/Docker Street crossing has been considered as one of these 26 sites. Due to the constrained nature of the site, the Bourke Street/Docker Street crossing has not been prioritised for funding in the program, nor has it been ranked within the priority list.

Wagga Wagga City Council queried the validity and effectiveness of an EIS process that has no avenues available for the grade-separation of additional road–rail crossings should they be identified as suitably impacted.

Wagga Wagga City Council requested that thresholds for impact be set that would activate the process of grade separation of road–rail crossings, supported by appropriate funding and surveillance plans and methodology.

Future issues at level crossings

Wagga Wagga City Council stated that there appears to be no consideration toward mitigating future issues at level crossings identified in the EIS (2025–2040), which are not directly within the scope of the proposal.

Strategic planning

Wagga Wagga City Council expressed that, while there have been ongoing discussions with ARTC about the A2I enhancement sites, there has been limited engagement regarding the strategic direction of the city and planned population growth. Wagga Wagga City Council stated that it has invested heavily in rail transport and the Inland Rail project through the Riverina Intermodal Freight & Logistics Hub and the associated Special Activation Precinct. Wagga Wagga City Council expressed that the proposal failed to consider the wider strategic plan of the city, especially transport-related impacts regarding road–rail interfaces, resulting in community severance in Wagga Wagga.

Response

Grade separation

Level crossings that are within the scope of the proposal only includes those that are required to be modified to accommodate double-stacked freight trains, such as modification to accommodate track realignment. Consideration of the road–rail interface treatment at level crossings that are out of scope does not form part of the proposal.

Where track realignment occurs at level crossings within the proposal site, adjustment to the level crossing infrastructure is required to maintain compliance with Australian and ARTC level crossing standards.

The Bourke Street/Docker Street level crossing and the Fernleigh Road level crossing in Wagga Wagga do not require modification and are out of scope of the proposal. These level crossings are located on local roads and any modification that is considered appropriate would need to be carried out by the road manager, Wagga Wagga City Council.

Future issues at level crossings

The Bourke Street/Docker Street level crossing and the Fernleigh Road level crossing in Wagga Wagga do not require modification and are out of scope of the proposal. These level crossings are located on local roads and any modification considered appropriate would need to be carried out by the road manager, Wagga Wagga City Council.

Strategic planning

ARTC has consulted with Wagga Wagga City Council since 2018, with consultation planned to continue regarding the proposal during detailed design, construction and operation of the proposal.

The assessment has accounted for population growth/increase vehicle traffic in Wagga Wagga (following engagement with Transport for NSW).

4.3.2.11 Air quality

Summary of issues

Wagga Wagga City Council raised the issue that operational air pollution has only been considered at enhancement sites when operations will occur along the full length of the A2I corridor.

Wagga Wagga City Council queried a lack of consideration of air quality impacts for several sensitive receivers within a 50 m radius of the rail track, and that the EIS made a generalised assumption surrounding operational air pollution and that the EIS has not quantified expected pollutant dosage for these receivers. Wagga Wagga City Council queried the validity of the assumption that the operational air pollution impact will be negligible within 50 m of the rail track, when no qualitive or quantitative data was used to make this assumption.

Wagga Wagga City Council expressed concern that no quantitative assessment was undertaken regarding operational air pollution for the proposal when there are many specific and unique characteristics of rail operation for the proposal.

Wagga Wagga City Council recommended that empirical studies using relevant rollingstock and motive power be undertaken to validate impacts on sensitive receivers.

Wagga Wagga City Council also stated there is potential for increased train idling at Bomen, Uranquinty and Wagga Wagga yard enhancement sites due to the increased rail traffic using the single line, and that this has not been directly considered in the EIS.

Response

Additional air quality assessment of the proposal has been undertaken, with further details available in section 6.3 of the Preferred Infrastructure Report. The addendum assessment has considered the potential air quality impacts of the expected train operations (both passing and idling) through the completion of air quality modelling in rural and urban environments that are representatives of the towns along the track alignment. A full copy of the addendum assessment is provided in Appendix E of the Preferred Infrastructure Report.

Due to the spatial extent of the proposal, a case study approach has been undertaken and assesses expected train operations in an urban setting and a rural setting to represent the urban areas and rural areas along the Albury to Illabo alignment. For both the urban and rural case studies, the study area considers potential air quality impacts within 200 m of the rail corridor.

4.3.2.12 General operational concerns

Summary of issues—options and alternatives

Wagga Wagga City Council stated that no alternative routes for A2I have been evaluated.

Wagga Wagga City Council raised a concern that insufficient consideration of alternatives to the proposal has been provided and that the EIS, therefore, does not fully meet the requirements of the SEARs.

Wagga Wagga City Council recommended that:

- alternative alignments should be considered within the EIS to limit impacts within Wagga Wagga caused by the routing of trains through the centre of the city
- alignments that bypass the urbanised centre of Wagga Wagga should be considered and evaluated with appropriate criteria, and these assessments included in the EIS.

Response

Consideration of a greenfield alignment (either in part or in entirety) for A2I is not in accordance with the objectives and Business Case of Inland Rail (ARTC, 2015), which aims to maximise the use of existing infrastructure where possible, and having an overall Inland Rail alignment with a less than 24-hour transit time between Melbourne and Brisbane. Recommendation 7 of the Independent Review of Inland Rail Report (Schott, 2023) states 'The service offering proposed by ARTC, and supported by business, that offers a reliable 24-hour transit service on double-stacked trains of 1,800 metres length should be accepted'. The review further concluded 'In view of the extensive

studies and consideration made to choose the initial route for Inland Rail there is no reason for route change in any major way'. ARTC notes the Australian Government's Response to the Independent Review of Inland Rail (Australian Government, 2023) for Recommendation 7, 'The Australian Government understands that the service offering is supported by industry and business. It notes, however, that the service offering should not be supported beyond Beveridge in Victoria and Ebenezer in Queensland'.

Initial assessments were carried out to determine which existing infrastructure did not provide the necessary height or width clearances for the operation of double-stacked freight trains (referred to as enhancement sites). The options assessment for A2I involved the preferred design solution at each enhancement site (e.g. track lowering or bridge replacement), as described in section 6.3 of the EIS. Consideration and analysis of a bypass of towns was not contemplated as it would not be proportional to the assessed effects of the proposal along the existing freight rail line, nor does it achieve the objective of maximising the use of existing infrastructure.

There are no plans to consider changes to the A2I alignment from that endorsed by the Australian Government. This commitment was reinforced within the recent Independent Review of Inland Rail, with the Australian Government prioritising construction south of Parkes, including A2I. Recommendation 12 of the Inland Rail Review recognises that if, and when, Inland Rail train traffic increases significantly, the possibility to bypass the town should be investigated and easements protected for a new bypass corridor. In current estimates, rail traffic is expected to increase by around eight additional services per day and not until 2040. Accordingly, consideration of a bypass of Wagga Wagga is not contemplated by government and is not a necessity for this planning approval or assessment of the proposal.

A full response to matters related to alternatives and options of the Inland Rail program and the proposal is provided in section 4.1.2.

Summary of issues—scope of impact assessment

Wagga Wagga City Council expressed concern that the EIS states there are challenges in determining the accuracy of qualitative comparisons for the impact assessment. Despite this, no empirical studies were undertaken along the A2I corridor.

Response

The technical assessments undertaken to support the EIS used methodologies based on the potential impacts associated with the proposal, the SEARs, technical expertise and the relevant standards and guidelines.

Assessments used observed data where it was deemed necessary, such as such as traffic counts, noise monitoring heritage surveys and ecological surveys. Modelling methodologies were adopted to predict quantitative outcomes with respect to hydrology, noise and traffic. Qualitative assessments were used where environmental impacts were considered minor or standard in line with construction practices.

ARTC has completed additional quantitative assessments, including traffic modelling, operational rail noise modelling and operational air quality modelling, which is provided in the Preferred Infrastructure Report.

Summary of issues—adequacy of the EIS

Wagga Wagga City Council queried whether the completeness and accuracy of the EIS, combined with the large number of rail interfaces affected by the proposal, will result in community severance and that the proposal will leave Wagga Wagga with a legacy of adverse environmental impacts through the city.

Response

These matters have been responded to in earlier responses within this section as well as sections 4.3.2.1 to 4.3.2.8, section 4.3.2.10 and section 4.3.2.11.

ARTC lodged the SSI application and Scoping Report for the proposal with DPE in May 2020. The Scoping Report indicated that ARTC was seeking approval to upgrade sections where enhancements are required to operate the Albury to Illabo section of Inland Rail. The SEARs for the proposal were issued from DPE on this basis. The EIS addresses the guideline for EISs in NSW as it was prepared with regard to the *State significant infrastructure guidelines—preparing an environmental impact statement* (DPE, 2022c) as documented in the EIS Appendix H: RAF checklist.

The declaration of the proposal as CSSI in the now repealed State Environmental Planning Policy (State and Regional Development) 2011 (as replaced by the State Environmental Planning Policy (Planning Systems) 2021), the Scoping Report and EIS made clear that the proposal comprises of enhancement works and that works beyond the enhancement sites do not form part of the proposal given the rail corridor has the same operations as it would when Inland Rail commences.

The EIS assessed impacts within a particular area where enhancement sites are in proximity to one another, such as Wagga Wagga. In these instances, sites were assessed at a precinct level to consider broader impacts beyond enhancement sites. Assessment of social impacts were also considered at a local and regional scale.

Additional assessments have been completed as part of the Preferred Infrastructure Report. These assessments include additional assessment of operational noise and vibration for the full length of the Albury to Illabo corridor, operational air quality assessments (using a case study approach to represent the urban areas and rural areas along the Albury to Illabo alignment) and traffic impact assessments (including the microsimulation modelling of Wagga Wagga). Additional mitigation measures have been identified through these additional assessments. Refer to chapter 6 of the Preferred Infrastructure Report and its supporting appendices for further detail.

Increased closures may result in longer journey times and increased stress for residents; however, as it is an existing operational level crossing, residents would likely have developed a level of resilience to potential delays. The area is also well connected alternative arterial road and highway connections for residents to use should potential level crossing delays be seen as a deterrent.

Level crossings that are within the scope of the proposal only include those that are required to be modified to accommodate double-stacked freight trains, such as modification to accommodate track realignment. Consideration of the road–rail interface treatment at level crossings that are out of scope does not form part of the proposal.

The Bourke Street/Docker Street level crossing and the Fernleigh Road level crossing in Wagga Wagga do not require modification and are out of scope of the proposal. These level crossings are located on local roads and any modification, which is considered appropriate would need to be carried out by the road manager, Wagga Wagga City Council.

Summary of issues—future operations

Wagga Wagga City Council stated that that the proposal includes provision for trains up to 3,600 m in length, and that extension of crossing loops would be required prior to these operations commencing; however, there have been no guarantees given that if/when these extensions are undertaken and operations begin, that a sound EIS will be undertaken for the full length of the corridor, considering operational impact.

Wagga Wagga City Council expressed concern that these extension works will be treated as discrete enhancement works and that running 3,600 m trains will be treated as an operational decision by ARTC. Wagga Wagga City Council requested assurances and evidence that an approval process will be undertaken for the commencement of 3,600 m trains on Inland Rail, and requests information on the operational restrictions of ARTC to run trains at lengths greater than 1,800m prior to such an approval process.

Wagga Wagga City Council requested guarantees that the assessment to run trains of lengths greater than 1,800 m will have scope to assess traffic and transport impacts on all intersecting roads and will have scope to grade-separate road crossings, if required.

Response

Inland Rail would operate 24-hours per day and would accommodate double-stacked freight trains up to 6.5 m high and up to 1,800 m in length. The operation of 3,600 m long trains would be subject to a separate assessment and approval process under the EP&A Act. The approval sought for the proposal would limit train operations to 1,800 m, with rail infrastructure built having regard to that limitation—longer trains cannot be accommodated within the proposal design. A further planning assessment process would be required for longer train operations in the future.

Summary of issues—future assessment

Wagga Wagga City Council requested additional information on whether small incremental increases in train lengths would occur beyond 1,800 m. Wagga Wagga City Council stated that it would be opposed to this action without appropriate impact assessments being undertaken.

Response

ARTC are not proposing incremental increases in train length greater than 1,800 m as part of this proposal.

Summary of issues—impacts to passenger services

Wagga Wagga City Council stated that it did not agree with the position that the proposal would not result in any change in operation of the existing rail network and believes that the priority allocated to Inland Rail trains would result in detrimental impacts on regional passenger train scheduling and operations.

Response

Passenger rail services would continue, with no planned modifications to the existing passenger stop locations, service frequency or schedule required as part of the proposal's operation; however, ARTC has an ongoing task to review all service schedules when new services are added and small modifications to how the rail line operates can be expected as part of normal operational procedures.

Summary of issues—maximum daily train movements

Wagga Wagga City Council raised the issue that the EIS assessments are based on a predicted 22 total train movements every 24 hours, compared to 16 currently; however, daily train movements could potentially increase to greater than 22. Wagga Wagga City Council requested that a maximum number of daily train movements be defined through Wagga Wagga.

Response

A detailed breakdown of the freight and passenger services is provided in section 1.2.3.2 of this Submissions Report. By 2040, the number of train movements within Wagga Wagga itself is projected to be up to a total of 18 freight train movements per day and 4 passenger train movements per day (totalling 22 train movements). The EIS has assessed 20 freight train movements with no change to passenger train movements (4) as a worst-case assessment to account for minor differences between sections of track between Albury and Junee.

4.3.2.13 Flooding impacts (construction)

Summary of issues—disparities in EIS Technical Paper 11

Wagga Wagga City Council noted disparities identified in the EIS Technical Paper 11: Hydrology, flooding and water quality (Technical Paper 11) as follows:

- The basin to the south-east is described as a council-owned stormwater detention basin. The actual role of the basin is to reduce the level of the water table related to the reduction of salinity. The basin does not serve a stormwater detention function as there are no stormwater inlet or outlet structures. This has been previously explained to ARTC.
- Peak flow in the Glenfield drain is claimed to be 62 m^3/s for a 1% AEP event. The culvert under the rail line adjacent to the bridge fundamentally does not have capacity in this magnitude, although ARTC claim that no overtopping of the rail line will occur.
- The EIS states the Glenfield Drain catchment is 600 hectares (ha); however, Wagga Wagga City Council data shows the total catchment is 1,600 ha and 1,350 ha to the culvert at the rail line.
- The report shows combined probability scenarios for rainfall events in the local (Pearson Street bridge) and Glenfield drain catchments to be ‘unlikely’ (1:10,000 for a 1% AEP). This is likely erroneous, noting the proximity of the catchments (4 km).

The following issues have been raised regarding flooding:

- The validity of the flood impact assessment cannot be accurate when there is a contradiction between the Wagga Wagga City Council-provided *Wagga Wagga Major Overland Flow Floodplain Risk Management Study and Plan* (MOFFS) (2021) (Wagga Wagga City Council and WMAWater, 2021) and the prepared flood study.
- The peak flow in Glenfield drain of 62 m^3/s and the existing culvert size (capacity of ~ 20 62 m^3/s [sic]) contradict the claim that there will be no overtopping of the rail line. Both these claims cannot be true, which brings into question the validity and accuracy of the flood modelling undertaken as part of the EIS.
- The combined probability of rainfall events in the discussed catchments cannot be considered ‘unlikely’ considering the proximity of the catchments (4 km).

Response

To inform an understanding of the existing flood behaviour at the proposal site and impacts from the proposal, information gathered from a desktop review was used to determine the existing flooding conditions at the study area and risk to the enhancement sites. Primarily, available flood studies sourced from local councils and flood modelling completed for the proposal have provided an understanding of historic events and how flood risk is managed across the study area.

The studies used to inform the assessment at Wagga Wagga included *Wagga Wagga Revised Murrumbidgee River Floodplain Risk Management Study and Plan* (2018) (Wagga Wagga City Council and WMAWater, 2018) and the *Wagga Wagga Major Overland Flow Floodplain Risk Management Study and Plan* , (2021) (Wagga Wagga City Council and WMAWater, 2021).

As identified by Wagga Wagga City Council, the peak flow identified in the EIS Technical Paper 11 for the Glenfield drain should have been 21 m^3/s. This has been confirmed through a review of the Wagga Wagga City Council’s flood model that has been used for the assessment. The review of the flood model also confirmed that no overtopping of the rail occurs up to the 1% AEP. Despite these discrepancies in the EIS Technical Paper 11, the outcomes of the flood assessment have been reviewed and confirms that the outcomes of the predicted impacts remain the same. The key finding of the assessment is that the change in the rail corridor drainage outflows to the external catchment is not significant enough to affect the flood behaviour of the Glenfield drain catchment.

As noted in the submission, a catchment of 1,350 ha drains to the culvert (instead of 600 ha as indicated in the EIS Technical Paper 11). The 1 ha rail catchment is less than 0.1 per cent of the total catchment contributing into the

Glenfield drain. As demonstrated in the EIS Technical Paper 11, the discharge from the rail is negligible compared to the Glenfield drain flow. The statement of the combined probability of concurrent peak flows in the two subject catchments is a simplification and the combined probability could be less than the value quoted in the EIS Technical Paper 11 (1 in 10,000). However, this does not change the outcomes of the assessment noting that the rail catchment is a very small portion of total catchment (0.1 per cent) at the point of discharge from the rail corridor.

Further, the flood modelling assessment demonstrated that the proposed enhancement work does not cause adverse flood impacts and is compliant with the quantitative design limits. Further, the flood model schematisation for Pearson Street bridge enhancement site has been subject to peer review by BMT to verify the suitability and reliability of the models. No issues were identified through this review.

Summary of issues—construction impacts at Pearson Street bridge

Wagga Wagga City Council stated that the EIS did not address its fundamental concern regarding flooding at Pearson Street bridge induced by the construction works. Specifically, it stated that the sagging of the rail line to the east of the bridge, combined with the associated heights of the rail cess drain and flood flows at the culvert drain, would result in water flowing from Glenfield drain culvert into the sag of the rail line. This would, in turn, result in flows moving from the sag into adjacent industrial lots to the north of the corridor, as indicated by Wagga Wagga City Council's modelling of the proposal (Attachments D and E of Wagga Wagga City Council's submission). Wagga Wagga City Council noted that an in-principle resolution to this matter has been reached with ARTC—the inclusion of a second bund (embankment) on the northern side of the rail line to protect the industrial lots; however, Wagga Wagga City Council's perspective remains that stormwater flows would enter the rail sag form the culvert.

Response

There is a risk of localised flooding upstream of the railway corridor affecting the railway at the Pearson Street bridge enhancement site. To mitigate this risk, the EIS proposed a 0.5 m-high bund on the south-eastern cutting of the rail corridor. The EIS Technical Paper 11 noted the purpose of the bund was to prevent overtopping of the rail alignment and that it would provide a 1% AEP flood immunity to the proposed lowered track. At the request of Wagga Wagga City Council, a second bund is now proposed on the north-eastern cutting of the rail corridor and would generally have consistent dimensions with, and be parallel to, the southern bund as described in section 3.2.1.3 of the Preferred Infrastructure Report.

As provided in mitigation measure HFWQ3, further consultation would be undertaken with Wagga Wagga City Council and other relevant authorities to identify opportunities to coordinate the proposal with proposed flood mitigation works (see mitigation measure HFWQ3). This includes matters relating to the Glenfield drain project.

The detailed response to hydrology and flooding matters is included in Appendix D: Detailed Response to Hydrology and Flooding Matters of this Submissions Report.

4.3.2.14 Transport impacts (construction)

Summary of issues

Wagga Wagga City Council expressed concern that any detrimental effects on local road pavement conditions must be considered and compensated for. Wagga Wagga City Council requested that road condition assessment and reports be prepared by a mutually approved independent party and to a mutually approved scope of works prior to construction. Any significant dilapidation of road pavements or road use resulting from the proposal and its construction activities are to be rectified by ARTC for an ongoing period of up to 10 years post construction.

Response

As provided in mitigation measure TT15, a road dilapidation report will be prepared for all haul routes within each precinct. Should damage to the road occur as a result of construction, the damage will be rectified to restore the road to the pre-work condition as identified in the road dilapidation report or as otherwise agreed with the relevant road authority.

Impacts to Wagga Wagga City Council assets would also be managed through the interface agreements that Wagga Wagga City Council has entered into with ARTC (refer to section 3.4 of this Submissions Report).

4.3.2.15 Impacts on Wagga Wagga City Council infrastructure

Summary of issues

Wagga Wagga City Council require that all assets transferred to it have an appropriate defect inspection undertaken in the presence of a Wagga Wagga City Council representative. All defects identified are to be recorded and rectified in accordance with an agreed method. All culvert assets are to have a CCTV inspection undertaken in accordance with WSA 05-2020 Conduit Inspection Reporting Code of Australia and the associated records provided to Wagga Wagga City Council.

Wagga Wagga City Council require ARTC to retain the obligation and responsibility to rectify any assets transferred to Wagga Wagga City Council where the integrity or function of assets is compromised during a period of up to 10 years post construction. This expectation includes the downstream extent of erosion protection treatments for all new culverts and all existing culverts subject to inundation.

Response

Commercial agreements regarding Wagga Wagga City Council assets or assets that are to be transferred to Wagga Wagga City Council have been negotiated separately between ARTC and Wagga Wagga City Council through an interface agreement. Handover of assets would be undertaken in consultation with Wagga Wagga City Council and in accordance with the signed interface agreement.

4.3.3 Junee Shire Council

The submission from Junee Shire Council raised a raised a number of items, addressed the following sections.

4.3.3.1 Train movements

Summary of issues

Total daily number of train movements

Junee Shire Council queried the difference in the total daily number of train movements in 2025 and 2040 between the Scoping Report and the EIS.

Impact at level crossings

Junee Shire Council raised concerns about impacts to the road and pedestrian interface at level crossings, particularly at the Junee Station level crossing. Junee Shire Council requested that ARTC undertake and provide a detailed analysis assessing the impact of the level crossing activation at Junee Station, including all current railway movements impacting the level crossing (freight and passenger train movements, shunting movements, and train driver changeovers).

Impacts of train driver changes

Junee Shire Council also requested alternate arrangements be made to minimise the impacts of train driver changes on the level crossing while the Kemp Street bridge is closed, to minimise time delays.

Response

Total daily number of train movements

The difference in the total daily number of train movements between the Scoping Report and the EIS is a result of the inclusion of passenger train movements in the Scoping Report in the total daily number. The EIS distinguished between freight movements and passenger movements in the total daily number of train movements to ensure clarity on the number of freight train movements impacted by the proposal.

Impact at level crossings

No modifications are needed to the current configuration of LX607 Olympic Highway at Junee to accommodate double-stacked freight trains and, as such, this level crossing is not included in the proposal site or scope of the proposal.

Assessment of vehicle queue lengths for peak-hour closures based on predicted traffic and train volumes in 2025 and 2040 are provided for all level crossings in section 6.3.8.2 of the EIS.

Impacts of train driver changes

ARTC notes that train timetabling and driver changes would be the responsibility of operators and is not within the jurisdiction of ARTC.

ARTC has explored preliminary options and carried out consultation with rail operators regarding a potential relocation of the driver changeover area. At this stage, a solution could not be reached between all involved parties. A potential relocation solution would be contingent on being compatible with the network configuration and safety of train crews in the context of an operating rail corridor. In accordance with mitigation measure SI9, ARTC will continue to investigate opportunities to reduce the duration of level crossing closures at this level crossing. Should this prove feasible, ARTC would undertake any necessary works through separate approvals, as required.

4.3.3.2 Kemp Street bridge

Summary of issues

Disability Discrimination Act and accessibility standards

Junee Shire Council expressed its appreciation regarding recent discussions with ARTC about pedestrian access at the Kemp Street bridge. Junee Shire Council recommended that a separated foot and cycle footbridge, fully compliant with DDA and accessibility standards, be included in the EIS and in any approval issued for the proposal.

Adaptive reuse

Junee Shire Council recommended that elements of the existing Kemp Street bridge, such as the locally manufactured red brick and streetlighting, should be retained where possible for adaptive reuse, in consultation with Junee Shire Council.

Regarding the commitment in the EIS to gift the Junee pedestrian bridge to Junee Shire Council, council requested that the demolition and transportation of the bridge be sympathetic to it being able to be reused.

Response

Disability Discrimination Act and accessibility standards

ARTC has included a change to the Kemp Street bridge design to provide a separate pedestrian bridge that would achieve DDA compliance. Further detail on the design of the proposed pedestrian bridge is provided in section 3.2.1.1 of the Preferred Infrastructure Report.

Adaptive reuse

Investigations to be completed during detailed design would include consideration of the process of demolition and transportation of the Junee pedestrian bridge to allow material to be reused (NAH3), and for adaptive reuse of elements of the existing Kemp Street bridge (NAH4).

4.3.3.3 Social

Summary of issues

Construction impacts to Junee Correctional Centre

Junee Shire Council raised concerns that the socio-economic assessment in the EIS does not specifically address matters related to the Junee Correctional Centre other than comments on workforce statistics. Junee Shire Council requested that socio-economic assessments be updated to include further detail about the Junee Correctional Centre, such as pressure on local travel and the availability of affordable accommodation for visitors to the facility.

Operational impacts to users of the Olympic Highway

Junee Shire Council expressed concern that the socio-economic impacts of road and rail traffic through Junee on residents and users of the Olympic Highway in Junee during operation of the proposal were not adequately considered in the EIS.

Junee Shire Council recommended further analysis be undertaken and detailed analysis provided assessing the specific impact of the level crossing activation at the Junee Railway Station during the removal and construction of the Kemp Street bridge, as well as during the operation of the Inland Rail. This analysis should be inclusive of all current railway movements impacting the level crossing by freight and passenger train movements, shunting movements within rail precinct and train driver changeover in 2022, with projections out to 2040, noting the increased frequency of those train movements to establish the road and pedestrian cumulative impacts at that location.

Response

Construction impacts to Junee Correctional Centre

Impacts to mobility and accommodation due to workforce demands have been assessed in the EIS and the EIS Technical Paper 4, which included consideration of Junee Correctional Centre as a key source of regional employment. This assessment found that the proposal would have very high to high impacts without mitigation. This is an acknowledgment of the constrained rental market and limited availability of temporary accommodation, and the impacts to the availability of short-term accommodation for other users during construction. For Junee, the assessment identified that there would be insufficient supply to satisfy the demand during the construction peak (March 2024).

Mitigation measure SI6 requires the preparation of a workforce accommodation plan to address the potential shortfalls of accommodation during construction. This plan would include a monitoring and management mechanism to identify the capacity of local short-term accommodation and rental housing, and to adapt as required if accommodation supply constraints become apparent.

Operational impacts to users of the Olympic Highway

Socio-economic impacts and benefits have been assessed in the EIS. Predominantly, impacts from operation of the proposal would be associated with an increased frequency of train movements. These impacts were rated as low to medium prior to mitigation based on relevant changes from the existing operation of the rail line.

The social impact assessment acknowledged the continual use of Junee Station for crew changes and the increase in waiting time due to train movement, would possibly result in social severance being experienced as a noticeable change for local residents.

ARTC has explored preliminary options and carried out consultation with rail operators regarding a potential relocation of the driver changeover area. At this stage, a solution could not be reached between all involved parties. A potential relocation solution would be contingent on being compatible with the network configuration and safety of train crews in the context of an operating rail corridor. In accordance with mitigation measure SI9, ARTC will continue to investigate opportunities to reduce the duration of level crossing closures at this level crossing. Should this prove feasible, ARTC would undertake any necessary works through separate approvals, as required.

4.3.3.4 Fencing

Summary of issues

Junee Shire Council requested that ARTC provide fencing to the rail corridor through the township of Junee at the detailed design stage to address community safety concerns related to increased rail traffic movement, noting that much of the existing rail corridor in Junee township is not fenced.

Response

Minor adjustments to existing fencing would be required where an area is directly impacted by the proposal, including shifting small sections of existing fencing. New fencing along the alignment is outside of the scope of the EIS.

4.3.3.5 Construction traffic and transport

Summary of issues

Junee Shire Council stated that a construction traffic transport and access management plan should be developed in consultation with local councils.

Response

Section 9.6.1 of the EIS defines the proposed approach to the traffic and transport management sub-plan, which would form part of the CEMP. This sub-plan requires construction traffic transport and access management plans to be prepared for each enhancement site. Mitigation measures for the proposal includes consultation with councils regarding multiple issues. The draft CEMP outline in Appendix C: Outline Construction Environmental Management Plan of this Submissions Report has been updated to include that the construction traffic transport and access management plans for each enhancement site would be prepared in consultation with Transport for NSW and local councils.

4.3.3.6 Waste and resource management

Summary of issues

Junee Shire Council requested that ARTC undertake waste disposal activities at Junee Landfill in consultation with Junee Shire Council, noting that Junee Shire Council will preference preserving landfill for the local community.

Further analysis was also requested to identify the suitability of construction compounds within the Junee LGA for the proposed quantities of stockpiled material.

Response

As outlined in section 23.3.5 of the EIS, arrangements would be made with suitable waste management facilities to ensure that the waste types and quantities from the proposal can be accepted prior to removal from the proposal site, including the Junee Landfill Facility. Approaches to avoid, reduce, reuse and recycle and recover waste through the design and construction phase of the proposal would continue to be investigated by ARTC and the construction contractor.

Waste would be stored temporarily within the proposal site, including at construction compounds, before being transferred offsite for recycling and disposal. Where temporary stockpiles are required outside of construction compounds, stockpiles would be fully contained within the proposal site. The volume of each stockpile would vary during the construction period according to the construction worked being carried out.

The storage of stockpiled material would be further investigated by the construction contractor as part of the CEMP. As stated in mitigation measure WM2, measures would include development of a spoil management strategy to define the preferred approach for the management of spoil during construction.

4.3.3.7 Groundwater

Summary of issues

Junee Shire Council stated that significant dewatering of the groundwater at the Kemp Street bridge location is anticipated to be required but expressed concern that storage solutions are not proposed as part of the EIS (with further detail to be provided prior to construction).

Junee Shire Council recommended that the EIS be amended to include options for storage of groundwater in consultation with Council, including assessment of potential impacts of dewatering, existing stormwater infrastructure and any other relevant issues.

Response

The total dewatering volume calculated for construction at Kemp Street bridge is 11.4 megalitres (ML). This calculation was based on conservative assumptions and is a worst-case estimate. Dewatering was assumed to occur over a period of 25 days.

A groundwater management sub-plan would be developed for the proposal. The groundwater management sub-plan would include a dewatering protocol, including details for the disposal, treatment or reuse of extracted groundwater. This plan would include details on the temporary storage and transfer of groundwater.

Plant and equipment to be used during construction of the proposal includes water carts, which would be used for the transfer of groundwater. The traffic and transport assessment (EIS Technical Paper 1) assumed up to 8 heavy vehicles would arrive/depart the Kemp Street bridge enhancement site in an hour, which is sufficient to allow the use of water carts to transfer extracted groundwater at the estimated rates.

4.3.3.8 Minor error in the EIS

Summary of issues

Junee Shire Council stated that section 3-12 of the EIS states the proposal site crosses the Riverina Highway (Albury), and the Olympic Highway (Culcairn, Junee and approximately 2 km north-east of Illabo). Junee Shire Council noted these roads cross the rail corridor via grade separations, and the level crossing is located 2 km northeast of Illabo.

Response

This error in this paragraph is noted. The preceding description in the EIS identifies this area as a level crossing.

4.3.3.9 Options assessment—Kemp Street bridge

Summary of issues

Impacts to residential receivers near Kemp Street bridge

Junee Shire Council expressed concern that the reconstruction of the approach roads on both sides of the Kemp Street bridge would not be constructed to a compliant standard and requested that this concern be reflected in the EIS.

Junee Shire Council also expressed its position that significant negative impacts would occur for residential properties located directly adjacent to the Kemp Street bridge approaches, which have not been adequately assessed in the EIS. The increase in the overall height of the bridge and approaches are considered to directly impact these residences.

Junee Shire Council requested that consideration be given to purchase of affected properties located directly adjacent to the Kemp Street bridge due to impacts to these receivers and that the properties are returned as open space.

Landscaping at Endeavour Park

Junee Shire Council stated that open space near the Kemp Street bridge at Endeavour Park would be required to be reconfigured to accommodate the associated intersection. Junee Shire Council requested the landscaping of this space be completed to a high standard, recognising the prominence of this location as an entrance point to the Junee CBD. Junee Shire Council also expressed that there was an opportunity for the adaptive reuse of certain heritage elements to preserve the heritage fabric of this location as part of these landscaping works.

Response

Impacts to residential receivers near Kemp Street bridge

Kemp Street bridge would be replaced with a new bridge about 2.6m taller than the existing structure. Since exhibition of the EIS, the Kemp Street bridge design has changed to include a separate pedestrian and cyclist bridge to the north of the road bridge. This separate structure would achieve DDA compliance. Further detail on the design of the proposed pedestrian bridge is provided in section 3.2.1.1 of the Preferred Infrastructure Report and an

landscape and visual assessment of the proposed change is provided in section 7.2 of the Preferred Infrastructure Report.

Construction of the replacement bridges would have temporary amenity and traffic impacts on nearby residences. Once operational, the main impact to residents nearby the replacement bridges is minor to moderate adverse visual impacts. Based on the identified impacts of the proposal, purchase of nearby properties has not been identified as warranted.

Landscaping at Endeavour Park

A concept landscape masterplan for this area is provided in Appendix C of the EIS Technical Paper 10: Landscape and visual impact assessment, which will be further developed in detailed design.

As provided in mitigation measure LV3, the final urban design treatments and landscaping at Endeavour Park will be identified in consultation with Junee Shire Council and informed by community consultation. These measures includes park embellishments where possible—improvements will provide screening of rail corridor and enhance the local landscape character.

4.3.3.10 Options assessment—Olympic Highway underbridge

Summary of issues

Junee Shire Council objected to the preferred outcome outlined in the EIS for the Olympic Highway underbridge. Junee Shire Council recommended that ARTC reconsider the preferred outcome to include road lowering in this location to increase clearance height under the bridge and reduce the risk of road traffic collision due to a low clearance.

Response

ARTC is seeking approval to carry out enhancement works to structures and sections of track along 185 km of the existing operational standard-gauge railway between Albury and Illabo, to accommodate double-stacked freight trains up to 6.5m high. Lowering the Olympic Highway was not considered a part of the proposal as its purpose would not be to facilitate the running of double-stacked trains along the rail corridor as part of Inland Rail.

4.3.3.11 Options assessment—grade separation at the level crossing at the Junee Railway Station (LX 607)

Summary of issues

Junee Shire Council stated that the level crossing at the Junee Railway Station (LX 607) currently has four rail tracks at this crossing, which may trigger the requirement for grade separation in accordance with ARTC policy.

Junee Shire Council requested further investigation and analysis into the operation of the Olympic Highway level crossing adjacent to the Junee Station, including anticipated waiting periods due to driver changeover. Installation of appropriate driver change infrastructure was requested for consideration as a mitigation measure to reduce wait times at this location, where grade separation cannot be achieved.

Response

No modifications are needed for the current configuration of LX 607 Olympic Highway at Junee to accommodate double-stacked freight trains and, as such, this level crossing is not included in the proposal site or scope of the proposal.

ARTC has explored preliminary options and carried out consultation with rail operators regarding a potential relocation of the driver changeover area. At this stage, a solution could not be reached between all involved parties. A potential relocation solution would be contingent on being compatible with the network configuration and safety of train crews in the context of an operating rail corridor. In accordance with mitigation measure SI9, ARTC will continue to investigate opportunities to reduce the duration of level crossing closures at this level crossing. Should this prove feasible, ARTC would undertake any necessary works through separate approvals, as required.

4.3.3.12 Options assessment—level crossing at Wornes Gate Lane (LX1472) and at the Carter Property access road (LX605)

Summary of issues

LX 1472 (Wornes Gate Lane)

Junee Shire Council requested a review of the preferred option to upgrade the level crossing at Wornes Gate Lane (LX1472) from passive to active because Wornes Gate Lane on the southern side of the rail corridor is an unformed public road.

Carter Property access road (LX605)

Junee Shire Council also requested a review of the preferred option for the level crossing at the Carter Property access road (LX605) from passive to active. Junee Shire Council considered that limiting traffic movements to left in and left out at this level crossing would create traffic hazards. Junee Shire Council also recommended upgrades to Brabins Road to facilitate suitable site access.

Response

LX 1472 (Wornes Gate Lane)

This level crossing would be modified to accommodate the realigned track and upgraded from a passive to an active level crossing.

This level crossing is minimally used and is not the primary access point for any private property. ARTC's preferred design solution would be permanent closure of this level crossing, subject to stakeholder agreement. Consultation would continue separately with relevant stakeholders on the potential permanent closure of this level crossing, but this option has not been included in the scope of the proposal.

Carter Property access road (LX605)

In response to stakeholder feedback on this level crossing, and as discussed with Junee Shire Council, the design solution to address the existing non-compliances has been revised. The track would be realigned to accommodate a level crossing at this location that does not impact on the Olympic Highway. The new track would be realigned by up to 16 m south of the current level crossing location. This design solution maintains the ability for vehicles to perform both left- and right-hand turns into and out of the level crossing and does not decrease the safety and functionality of the road network.

The design of the level crossing would be still be upgraded from a passive to an active level crossing as previously proposed in the exhibited EIS. Further detail on the revised design is provided in section 3.2.1.4 of the Preferred Infrastructure Report.

4.3.3.13 Proposed features and operation

Summary of issues

Junee Shire Council stated that any design modifications that occur as a result of matters arising during the exhibition of this EIS would be identified in a Preferred Infrastructure Report or Amendment Report.

Response

A Preferred Infrastructure Report has been issued alongside this Submissions Report. The changes made to the proposal are detailed in chapter 3 of the Preferred Infrastructure Report.

4.3.3.14 Traffic and transport—Traffic data

Summary of issues—traffic data

Junee Shire Council stated that the traffic data included in the EIS differs to the data collected on behalf of Junee Shire Council in 2021. The traffic data in the EIS refers to a maximum traffic volume of 2,590 per day with 33 per cent heavy vehicles for Byrnes Road compared to Junee Shire Council's data, which shows average daily traffic volume of 2,840 per day with 17 per cent heavy vehicles.

Response

A volume of 2,590 vehicles per day (vpd) noted in the EIS is based on the 2018 count. A growth rate was applied to 2018 volumes to estimate those for 2024 (calculated as 2,920 vpd). The rate of increase applied is generally consistent with counts obtained by Council in 2021 of 2,840 vpd. Assessment of a higher heavy vehicle percentage was adopted as it is considered to be a more conservative assumption for the assessment. Additional traffic counts have been completed in Junee on 8 June 2023 to supplement the traffic data noted in the EIS. Further detail on the traffic counts and outcomes is detailed in Appendix C of Preferred Infrastructure Report.

4.3.3.15 Traffic and transport—road network dilapidation reports

Summary of issues

Junee Shire Council stated that the road network in Junee is highly vulnerable to damage caused by changes to the flow of traffic and increases in traffic and heavy vehicular movements both during the construction phase and ongoing operation of the proposal.

Junee Shire Council requested dilapidation reports be prepared for the road network include roads used for diversions and detours along with haul roads, incorporating assessments of the structural integrity and load capacity of the subject roads. Junee Shire Council also requested the identification of roads requiring preventative upgrades prior to the commencement of construction of the proposal to ensure the subject roads will withstand the changes in

traffic movements and minimise risk of road failures and defects that require reactive repairs. Junee Shire Council expressed the opinion that ARTC should identify the need to undertake proactive road upgrades, where applicable, instead of making reactive repairs during construction.

Response

The EIS has considered roads impacted by the proposal, including diversions and haul roads. Construction routes were selected to minimise the use of local roads where possible; however, as detailed below, the number of heavy vehicles required for construction is generally low.

Where required, planning for diversion routes has selected roads of the same order as far as possible. In the instances where diversion routes have been required on roads of a lower order, the requirement for proactive mitigation has been considered.

Within Junee, the proposal includes diversion of the Olympic Highway onto roads of a lower order (Joffre Street and Pretoria Avenue) for about two months. This would require temporary widening of these roads and adjustments to road drainage. Specific mitigation measures were included in the EIS to address the potential impacts from this diversion:

- TT9—consultation with Junee Shire Council will be undertaken regarding the potential for 'preventative' road works, prior to road diversions in Junee on Joffre Street and Pretoria Avenue, to counter the higher than typical traffic and heavy vehicle movements on some local roads expected due to diverted traffic
- TT15—Joffre Street and Pretoria Avenue will be monitored for damage during construction and any necessary repairs attended to as soon as possible.

Impacts to Junee Shire Council assets would also be managed through the interface agreements that Junee Shire Council has entered into with ARTC (refer to section 3.4 of this Submissions Report).

The proposal does not result in any significant modification to the existing road network, which would impact the function or performance of the broader road network, beyond current or future issues, which would occur under existing conditions. Upgrade of the broader road network is outside the scope of the proposal.

4.3.3.16 Traffic and transport—improvements to the broader local road network

Summary of issues

Junee Shire Council raised the issue that the proposal provides an opportunity to improve the broader local road network and the movement of freight in and around Junee, which has not been considered.

Junee Shire Council raised the issue that Kemp Street bridge will be upgraded to be able to accommodate heavy vehicle traffic; however, this upgrade should also include capacity for future use by A-Doubles and road trains and upgrades to the adjoining intersections.

Junee Shire Council noted the Junee Freight and Transport Plan—Draft Traffic Study Report to assess key network constraints, including the identified constraints posed by the rail network. The assessment identified 14 locations where there are existing safety and/or operational concerns related to movement of freight and the operation of the rail network through the township of Junee.

Junee Shire Council suggested that the refinement of traffic detours for Junee and the development of traffic control plans for the detours be developed in consultation with Junee Shire Council and that any diversions/detours associated with the local road network be agreed with Junee Shire Council before implementation. Junee Shire Council requested that the Kemp Street bridge and associated intersections be designed to accommodate A-Doubles and road trains.

Response

The proposal does not result in any significant modification to the existing road network that would impact the function or performance of the broader road network, beyond current or future issues that would occur under existing conditions. Upgrade of the broader road network is therefore outside the scope of the proposal.

Kemp Street bridge is not a designated B-Double route; however, consideration of turning radius for heavy vehicles has been included in the proposed design. The classification of Kemp Street bridge is not proposed to be changed as part of the proposal.

To minimise impacts from an increase in train numbers during the operation of Inland Rail, ARTC will continue to monitor and manage the growth of train movements into the future, with a focus on the safe operation of the level crossing, and will maintain engagement with Junee Shire Council in this regard.

With regard to the Kemp Street bridge replacement, ARTC will further engage with Junee Shire Council on the design outcomes and design vehicle requirements throughout the detailed design phase of the proposal, consistent with mitigation measures TT1 and TT9 and the arrangements within the signed interface agreement.

4.3.3.17 Traffic and transport—clearing/trimming of vegetation within road corridors and public spaces

Summary of issues

Junee Shire Council requested that any clearing/trimming of vegetation within road corridors and public spaces outside of the rail corridor be undertaken following consultation with Junee Shire Council.

Response

Junee Shire Council would be consulted prior to any works being carried out within road reserves or other public spaces.

4.3.3.18 Traffic and transport—construction vehicle parking

Summary of issues

Junee Shire Council requested that parking for construction vehicles be located off-street and not impact on the availability of on-street parking for residents and business parking.

Junee Shire Council requested that any approval for the proposal provide certainty for Junee Shire Council to be consulted during the preparation of construction traffic transport and access management plans.

Response

The number of car parking spaces at the construction compounds would be determined during construction planning. Worker parking would generally be contained to the rail corridor. During rail possessions, when the number of workers would likely peak, there may be a need for temporary use of on-street and roadside parking.

Section 9.6.1 of the EIS defines the proposed approach to the traffic and transport management sub-plan, which would form part of the construction environmental management plan. This sub-plan requires construction traffic transport and access management plans to be prepared for each enhancement site. Mitigation measures for the proposal includes consultation with councils regarding multiple issues. Appendix C: Outline Construction Environmental Management Plan of this Submissions Report has been updated to include that the construction traffic transport and access management plans for each enhancement site would be prepared in consultation with Transport for NSW and local councils.

4.3.3.19 Air quality

Summary of issues

With regard to air quality impacts, Junee Shire Council proposed that dust suppression seals at rail level crossings on gravel roads be extended to 150 m either side of the crossing, as a minimum, to be effective.

Response

The extent of sealed roads at modified level crossings would be considered during detailed design.

4.3.3.20 Economics

Summary of issues

Junee Shire Council raised the concern that the workforce demands of the proposal will cause negative impacts to the local workforce, which is already experiencing the impacts of staff shortages. Junee Shire Council stated that it generally supports the use of local workers where appropriate; however, it expressed concern that the EIS has not adequately considered an employment scenario where there are no local workers available to furnish the required workforce. Junee Shire Council recommended that materials/consumables be sourced from local businesses, where possible, to benefit local economies across the length of the proposal. Council also recommended that additional analysis of the workforce be included where there are no local workers to furnish workforce requirements.

Response

The social impact assessment considered the potential availability of the local workforce for the proposal, and concluded that a low proportion (10 per cent) of the total workforce required to construct the proposal would likely be able to be sourced locally, with the remainder to be sourced from a non-resident workforce. Mitigation for the proposal includes a workforce management plan to manage potential impacts of the construction workforce on local and regional communities.

A local and Indigenous industry participation plan will be developed as part of the proposal, which will identify the capacity of local and Indigenous businesses suitable to supply the proposal, and set procurement targets and identify methods for preparing suppliers to be ready for potential demand.

4.3.3.21 Noise and vibration

Summary of issues

Junee Shire Council raised concerns that the approach taken in assessing potential noise impacts in the EIS is not adequately able to draw conclusions regarding potential mitigation measures, particularly to sensitive receivers such as educational facilities. Junee Shire Council recommended that a more thorough assessment be conducted that includes 'ground truthing' exercises and measurements at sensitive receiver sites to identify and propose mitigation measures at these locations. Junee Shire Council also requested a commitment be made by ARTC to ongoing monitoring in these locations to ensure the mitigation measures proposed are effective over the life of the proposal.

Response

The construction noise and vibration assessment included in the EIS has been completed in accordance with relevant legislation and guidelines and is considered adequate. Further discussion of feasible and reasonable mitigation measures has been included in the construction airborne noise assessment addendum (refer to section 5.8.1 and Appendix G: Detailed Response to Non-Rail Noise Matters of this Submissions Report).

The revised operational noise and vibration (rail) assessment has been updated using additional noise monitoring undertaken in 2023. The study area has been increased from focusing on enhancement sites to cover the full length of the rail corridor between Albury and Illabo. The approach and outcomes of the revised assessment is detailed in section 6.2 and Appendix D of the Preferred Infrastructure Report.

As established in mitigation measure NV13, operational noise and vibration compliance monitoring will be undertaken, once Inland Rail has commenced operation, at representative locations to compare actual noise performance against that predicted by the operational noise and vibration review. Compliance monitoring requirements will be defined by the operational noise and vibration review (mitigation measure NV3).

The results of monitoring will be included in an operational noise and vibration compliance report, prepared in accordance with the conditions of approval (if approved). The need for any additional feasible and reasonable mitigation measures will be identified as an outcome of the monitoring.

4.3.3.22 Hazards

Summary of issues

Junee Shire Council stated that construction works within the LGA are proposed to be carried out within peak bushfire season. Junee Shire Council raised concerns that no mitigation measures have been proposed to reduce the risk of bushfire or grassfire in these locations at these times. Junee Shire Council recommended that the EIS be amended to include appropriate mitigation measures for bushfire prevention, including rescheduling of hot works on days where 'stop harvest' or similar notices are issued by the Rural Fire Service. Where works cannot be rescheduled, alternative fire protection measures should be proposed.

Response

As provided in mitigation measure H2, the protocols for the management of bushfire risk will be implemented during construction in accordance with Planning for Bushfire Protection (RFS, 2019), Hume Zone Bush Fire Risk Management Plan (Hume Zone Bush Fire Management Committee, 2016) and Riverina Bush Fire Risk Management Plan (Riverina Bush Fire Management Committee, 2015).

4.3.3.23 Hydrology and flooding

Summary of issues

Junee Shire Council recommended completion of a drainage/flood assessment of the entire length of the rail corridor to identify and resolve existing drainage/flooding issues. Junee Shire Council suggested this assessment should not be limited to the proposed work locations given the impacts of the proposal on future rail operations.

Response

The proposal includes construction at enhancement sites, where modification of the existing rail line is required to facilitate operation of double-stacked freight trains.

At locations outside the enhancement sites, no modification to the existing rail line is required for the proposal. The operation of Inland Rail trains will not impact drainage and flooding. As such, this is not considered relevant to the proposal and ARTC will continue to manage drainage and flooding as part of their ongoing operations.

4.3.3.24 Strategic planning

Summary of issues

Junee Shire Council stated that the EIS refers to the *Future Transport Strategy 2056* (Transport for NSW, 2018a) but expressed concern that ARTC has not considered the broader aspects of this strategy, with consideration limited to rail and direct impacts on the rail corridor only. Junee Shire Council requested that ARTC address the *Future Transport Strategy 2056* with a more integrated approach, considering the broader aspects of this strategy.

Response

The level of detail provided in the EIS regarding the *Future Transport Strategy 2056* is limited to details directly relevant to the proposal. The *Future Transport Strategy 2056* was replaced by the *Future Transport Strategy: Our vision for transport in NSW in 2022* (Transport for NSW, 2022). Consideration of the proposal's consistency with this strategy has been provided in section 5.9.27.

4.3.3.25 Utilities

Summary of issues

Junee Shire Council requested that clarification be provided regarding the relocation of the sewer as part of the Kemp Street bridge replacement works.

Response

Consultation with public utility authorities is being undertaken as part of the design process to identify and locate existing utilities and incorporate utility authority requirements for relocations and/or adjustments. Preliminary investigations have indicated that a number of utilities would need to be relocated or adjusted as part of the proposal at Kemp Street bridge, including Junee Shire Council owned sewer mains.

Commercial agreements regarding Junee Shire Council assets or assets that are to be transferred to Junee Shire Council have been negotiated separately between ARTC and Junee Shire Council through an interface agreement.

4.3.3.26 Technical Paper 1: Transport and Traffic

Summary of issues

Closure times at level crossings

Junee Shire Council stated that the EIS Technical Paper 1 referenced that closure times at the level crossings would be 121 seconds with or without the proposal. This closure time does not appear to consider train driver changeovers occurring at Junee, resulting in the level crossing being closed for extended periods and queuing at the crossing. This extended closure period would be exacerbated during construction when the Kemp Street bridge is closed, and additional traffic is diverted through the level crossing.

In addition these comments, the scope of works for the A2I should be expanded to include the relocation of the rail infrastructure for the train driver changeovers to avoid impacts on the level crossing both during construction and the ongoing operation of the upgraded rail network.

Classifications

Junee Shire Council queried if reference to John Potts Drive (table 5.50 in the EIS Technical Paper 1) is an error, as it appeared to have no relationship to the Olympic Highway underbridge enhancement site. Council noted the table also references passenger car units and Illabo Road as an urban road. Illabo Road also forms part of the Olympic Highway—these references are confusing and need to be reviewed.

Junee Shire Council also raised the issue that the EIS Technical Paper 1 refers to Wornes Gates Road in Illabo as a public level crossing; however, this road is not a public road on the southern side of the Olympic Highway.

Response

Closure times at level crossings

ARTC has explored preliminary options and carried out consultation with rail operators regarding a potential relocation of the driver changeover area. At this stage, a solution could not be reached between all involved parties. A potential relocation solution would be contingent on being compatible with the network configuration and safety of train crews in the context of an operating rail corridor. In accordance with mitigation measure SI9, ARTC will continue to investigate opportunities to reduce the duration of level crossing closures at this level crossing. Should this prove feasible, ARTC would undertake any necessary works through separate approvals, as required. Classifications traffic data supplied by Junee Council did not include data for Illabo Road. Of the data that was supplied, John Potts Drive was considered the most representative of Illabo Road as it is also a residential road in the north of Junee.

Illabo Road does form part of the Olympic Highway; however, it also connects to Regent Street south of the Olympic Highway as a local road. Illabo Road is therefore categorised as an urban road and highway.

Reference to passenger car units is required because it explains the reason for the difference between construction peak hour volumes on Main Street (Olympic Highway) and Illabo Road. Road performance assessment for highways requires use of passenger car units and is used throughout the report in all relevant locations, not just for Junee.

According to ARTC's records, Wornes Gate Lane on the southern side of the Olympic Highway is an unformed public road.

4.3.3.27 Appendix H: Construction Environmental Management Plan

Summary of issues

Junee Shire Council requested that the proposed road link to the Harefield Yard site shown in Appendix H of the EIS be reconsidered, as it is currently shown as an adverse angle access (Appendix H, Figure 4.5.1). Junee Shire Council recommended that access to this site be provided via the disused Byrnes Road, immediately east of the level crossing in this location.

Response

The use of the disused Byrnes Road to access the Harefield Yard Clearances enhancement site will be investigated, subject to connectivity to the road networks and condition.

4.3.3.28 General comments

Summary of issues

Infrastructure Interface Agreements

Junee Shire Council recommended separate Infrastructure Interface Agreements be prepared and agreed for all road crossings and interfaces with Junee Shire Council infrastructure prior to the finalisation of designs.

General clean-up of the rail corridor

Junee Shire Council also requested that a general clean-up of the rail corridor be provided as part of the proposal, including removal of disused or redundant rail infrastructure such as overhead wires and poles.

Ongoing maintenance

Junee Shire Council requested the commitment of ARTC to the ongoing maintenance of Inland Rail/ARTC assets over the life of the proposal, including mowing/slashing, weed control and fencing.

Response

Infrastructure Interface Agreements

Commercial agreements regarding Junee Shire Council assets or assets that are to be transferred to Junee Shire Council have been negotiated separately between ARTC and Junee Shire Council through an interface agreement.

General clean-up of the rail corridor

Disused or redundant infrastructure directly impacted by the proposal would be removed, if required. Business-as-usual rail maintenance activities by ARTC, such as raising and/or replacement of existing signal gantries, are excluded from this proposal.

Ongoing maintenance

Standard ARTC maintenance activities would be undertaken during operations and there would be no change to the maintenance schedule. Typically, these activities would involve minor maintenance works, such as bridge and culvert inspections, through to major maintenance, such as reconditioning of track and topping up of ballast, as required. Maintenance activities do not form part of the state significant infrastructure application for the proposal.

Works within the rail corridor would be undertaken in accordance with ARTC's standard operating procedures and the ARTC's Environment Protection Licence (EPL 3142).

5. NSW Government department or agency advice

5.1 NSW Department of Planning and Environment—Biodiversity Conservation and Science Directorate

The NSW Department of Planning and Environment—Biodiversity Conservation and Science Directorate (DPE—BCS) provided advice on flooding and biodiversity matters, dated 13 September 2022 and 14 September 2022, respectively. Consideration of the items raised in their advice is provided in the sections following.

5.1.1 Flooding

Summary of issues—Riverina Highway bridge

DPE—BCS requested the detailed design of the Riverina Highway bridge enhancement site include a detailed flood assessment of the operation of the stormwater storage and pump system to ensure the minimisation of downstream flood impacts to the satisfaction of Albury City Council.

DPE—BCS also recommended a thorough assessment of the flood impacts during operation of the Riverina Highway enhancement site be completed in the detailed design stage to ensure the downstream impacts do not exacerbate the existing flood risks through the Albury CBD. Albury City Council must also be extensively consulted throughout this process.

Response

Flood modelling at Riverina Highway bridge would be carried out during detailed design, based on the proposed operation of the storage and pump system, to confirm predicted compliance with the quantitative design limits for Inland Rail. The modelling would be undertaken in consultation with Albury City Council. This is reflected in the new mitigation measure HFWQ5 (refer to Appendix B: Updated Mitigation Measures of this Submissions Report).

An update was provided via letter to Albury City Council on 4 November 2022 confirming the anticipated timing of detailed design development and ARTC's commitment to consult with Albury City Council throughout the detailed design and flood assessment process.

Summary of issues—Uranquinty Yard clearances

DPE—BCS requested additional information on the proposed works and flood impacts at the Uranquinty Yard clearances enhancement site. Close liaison with Wagga Wagga City Council is requested to ensure complementary flooding outcomes are achieved.

DPE—BCS recommended the following:

- that the Response to Submissions Report clarifies the proposed modifications to the Sandy Creek rail bridge and embankment, including confirmation of flood impacts resulting from any changes to the existing structures. This must include details on the hydraulic modelling methodology used to ensure that a consistent approach has been used when assessing the impact of any changes to the rail line
- a cumulative impact scenario for the 1% Annual Exceedance Probability (AEP) be undertaken with the proposed levee in place
- ARTC works closely with Wagga Wagga City Council in the detailed design stage to ensure consistency with the Uranquinty levee upgrade project.

Response

Sandy Creek

Sandy Creek bridge is a two-span bridge that carries two tracks (the main line and the loop line) over Sandy Creek. A track realignment is proposed through the Uranquinty Yard area, including at the Sandy Creek bridge, to provide the required clearances between double-stacked trains. New precast bearing blocks on the bridge piers would be installed to support the altered track locations. Vertical alignment lifts of up to 50 mm are proposed is association with the slews, although no changes would occur at the bridge or the level crossing. There are no changes proposed to Sandy Creek bridge at the Uranquinty Yard enhancement site that can affect the flow conveyance and impact the waterway.

Minor alterations are proposed to the bridge superstructure to accommodate the realigned track, including changes to the bearing blocks (without altering height); however, no change is proposed to the substructure. There is minor embankment widening on the main line approach to the bridge to ensure safe and stable embankments. The widening is limited to being behind the existing abutment wall and does not impact the existing waterway. Subject to detailed design review, rock protection may be added to the loop line approach to the bridge. As such, there are no changes proposed to Sandy Creek bridge at the Uranquinty Yard enhancement site that can affect the flow conveyance and impact the waterway.

As anticipated in the EIS Technical Paper 11, the proposed works at Uranquinty Yard clearances enhancement site cause negligible changes (i.e. less than 10 mm) in flood levels for the 2%, 1% AEP and probable maximum flood (PMF) events.

Should the detailed design of the bridge structure or embankment require changes that could affect flood conveyance, the flood model would be updated to reflect these changes and design alterations or mitigation measures applied as required to ensure changes in flood behaviour outside of the rail corridor are consistent with the adopted quantitative design limits (QDLs) to mitigate any adverse flood impacts.

The detailed response to hydrology and flooding matters (refer to Appendix D) includes additional assessment at the Uranquinty Yard clearances enhancement site. The proposed works at Uranquinty Yard clearances enhancement site (without the proposed levee) cause negligible changes (i.e. less than 10 mm change) in flood levels for the PMF and the 1% and 2% AEP flood events. The proposal would therefore be consistent with the quantitative design limits.

The proposed levee mitigates the flooding at the Uranquinty Yard clearances enhancement site and prevents floodwater overtopping the rail alignment (up to and including the one per cent AEP flood event). The flood impact assessment shows that the proposed works at the Uranquinty Yard clearances enhancement site would not generate adverse flood impact with the proposed levee in place. Accordingly, the proposal is consistent with the quantitative design limits.

Hydraulic modelling

The following methodology was used to assess the existing and proposed conditions at the Uranquinty Yard clearances enhancement site:

- The flood model for Sandy Creek was obtained from Wagga Wagga City Council.
- No changes to the existing model structure were undertaken to create the existing conditions. The flood model was re-run for relevant flood events (i.e. PMF, 1% AEP and 2% AEP) to assess and describe the existing flood conditions and mechanisms. The model results were compared with the results published by Wagga Wagga City Council to confirm consistency in the model outputs and mapped results.
- The proposed changes in the rail vertical alignment were included in the model to assess possible impacts.
- Process the flood model results to generate peak flood levels, flow velocities and flood hazard for different flood events for the existing and proposed conditions.
- The model results for the existing and proposed conditions were compared to assess possible flood impacts.

Further detail on the modelling methodology is provided in Appendix D: Detailed Response to Hydrology and Flooding Matters of this Submission Report.

As anticipated in the EIS Technical Paper 11, the proposed works at Uranquinty Yard clearances enhancement site cause negligible changes (i.e. less than 10 mm) in flood levels for the PMF and the 1% and 2% AEP flood events. Consequently, the afflux mapping has not been updated for the revised model outputs, and the proposal is consistent with the quantitative design limits.

Cumulative assessment

A cumulative impact scenario for the 1% AEP event has been completed at the Uranquinty Yard clearances enhancement site. The proposed levee mitigates the flooding at the Uranquinty Yard clearances enhancement site and prevents floodwater overtopping the rail alignment (up to and including the one per cent AEP flood event). The flood impact assessment shows that the proposed works at the Uranquinty Yard clearances enhancement site would not generate adverse flood impact with the proposed levee in place. Accordingly, the proposal is consistent with the quantitative design limits. Further information about the impacts of the proposal is provided in Appendix D. The assumptions for the Uranquinty levee upgrade project were determined following consultation with Wagga Wagga City Council.

This assessment found that the proposed levee mitigates the flooding at the Uranquinty Yard clearances enhancement site and prevents floodwater overtopping the rail alignment (up to and including the 1% AEP flood event). Thus, changes to the rail vertical alignment do not affect the flood mechanisms.

The flood impact assessment shows that the proposed work at the Uranquinty Yard clearances enhancement site does not generate adverse flood impact with the proposed levee in place.

Engagement with Wagga Wagga City Council

Across November 2022, ARTC and Wagga Wagga City Council have engaged in correspondence concerning the proposal and impacts to flooding and drainage, including Uranquinty (refer to section 3.4 of this Submissions Report).

ARTC remains committed to further consultation with Wagga Wagga City Council during detailed design to identify opportunities to coordinate flood mitigation works at Uranquinty (mitigation measure HFWQ3).

Summary of issues—Pearson Street bridge

DPE—BCS noted that close liaison is required with Wagga Wagga City Council during the detailed design of the Pearson Street bridge enhancement site to ensure complementary flooding outcomes are achieved.

DPE—BCS recommended that ARTC work closely with Wagga Wagga City Council in the detailed design stage to ensure the proposal complements the Glenfield Drain Flood Mitigation project.

Response

Glenfield drain

Glenfield drain passes under the rail corridor within the Pearson Street bridge enhancement site via a concrete box culvert. The proposal does not include works to the culvert as the proposal does not necessitate a change to the structure. During reference design development, ARTC offered Wagga Wagga City Council the opportunity to undertake work to the existing culvert as part of, or during, the construction activities of the proposal. It is understood that planning for this work by Wagga Wagga City Council at that point in time had not advanced sufficiently for the council to confirm any intention to undertake work to the existing culvert and, consequently, such work was not able to be included in the EIS as a part of the proposal and/or the cumulative impact assessment.

The EIS did consider the relevant floodplain risk management plans prepared by local councils (refer to section 5.1.2.6 of the EIS Technical Paper 11). Flood mitigation measures were reviewed to assess possible interaction with the proposed enhancement works. This assessment concluded that the flood mitigation measures proposed in the floodplain risk management plans would not be affected by the proposal.

Engagement with Wagga Wagga City Council

In November 2022, ARTC and Wagga Wagga City Council engaged in correspondence about the proposal and impacts to flooding and drainage, including Glenfield drain and the Pearson Street bridge enhancement site (refer to section 3.4 of this Submissions Report).

Since the exhibition of the EIS, further engagement has been carried out with Wagga Wagga City Council regarding their intent to carry out works at the Glenfield drain. ARTC will continue to work collaboratively with Wagga Wagga City Council to ensure complementary flooding outcomes are achieved between the proposal and any planned work of Wagga Wagga City Council. These actions will progress in line with the interface agreement between ARTC and Wagga Wagga City Council (refer to section 3.4). Additional mitigation measures from the updated flooding and hydrology report are available in Appendix B.

Summary of issues—Wagga Wagga Yard clearances

DPE—BCS requested that the flood impact assessment at the Wagga Wagga Yard clearances enhancement site be updated to ensure all missing drainage elements are included in the hydraulic model prior to approval.

DPE—BCS recommended the existing culvert at the Wagga Wagga Yard clearances be captured in the hydraulic model, and the updated flood impact assessment include confirmation that the quantitative design limits are not exceeded. This updated assessment is recommended to be included in the Response to Submission report.

Response

Following discussion with DPE—BCS, it was agreed that sensitivity tests would be completed concerning the position and capacity of the culvert at this location to test the influence/resolution of the identified impact. These tests would be completed using assumptions due to the lack of detailed survey at this location. If required, it was agreed that further investigation would be completed during detailed design supported by detailed survey. Refer to Appendix D: Detailed Response to Hydrology and Flooding Matters of this Submission Report.

ARTC undertook sensitivity tests on the position and capacity of the culvert at Wagga Wagga Yard. The sensitivity test results showed that the industrial area at the east of the enhancement site is still affected by afflux. Within these scenarios, afflux exceed the quantitative design limits in a similar manner to that described in the EIS.

The afflux in this industrial area is caused by more water diverted from the enhancement site in an easterly direction. This is caused by the increase in the crest of the rail that acts as a barrier deflecting water toward the lower topography. The increase in the crest of the rail is minor (i.e. around 50 mm) and the afflux in the industrial area is on average 14 mm.

Due to the minor nature of the impact, flood mitigation options would be investigated at the detailed design stage to reduce the afflux to be within the quantitative design limits. Flood mitigation options might include an upgrade to the capacity of the drainage network, the inclusion of storage basins to reduce the amount of water diverted to the industrial area, and/or the inclusion of balancing culverts across the rail to mimic the existing flood conditions.

ARTC would evaluate the opportunity to update the flood model with the inclusion of additional survey information of the drainage network (or/and more accurate LiDAR data) at the detailed design stage. This is reflected in the existing mitigation measure HFWQ4, which states, ‘At Wagga Wagga Yard enhancement site, flood modelling would be carried out during detailed design to confirm predicted afflux at industrial properties located at Railway

Street and compliance with the Quantitative Design Limits for Inland Rail. This would be informed by topographic and building floor surveys and a review of localised drainage structures (as required)'.

Summary of issues—additional information or assessment

DPE—BCS noted that additional information or assessment is required at enhancement sites that impact drainage lines or streams.

DPE—BCS recommended evidence be provided to confirm that the qualitative assessment of the proposal's impact on drainage lines and streams is sufficient. Where sufficient evidence cannot be provided, a quantitative assessment must be presented in the Response to Submissions report.

Response

As described in section 3 of the EIS Technical Paper 11, the enhancement sites were classified on hydraulic complexity, based on the potential to generate flood impacts to watercourses, floodplain, drainage channels or overland flow. Table 3.6 of the technical paper summarises the type of assessment undertaken for each site based on the hydraulic complexity. For the sites where any change in the drainage infrastructure was proposed, drainage models were developed to ensure no impacts.

In subsequent correspondence with DPE—BCS on this matter, ARTC noted that the information sought by DPE — BCS on the drainage design at the sites of low and moderate hydraulic complexity would occur during the detailed design stage and it would provide further information to DPE—BCS at that point in time. This should consider the impact of the PMF event at built-up areas (where information is available) and the tenure of the upstream areas that are impacted by drainage and/or flooding. Mitigation measure HFWQ4 has been updated to reflect this.

5.1.2 Biodiversity—native vegetation

Summary of issues

Excluded land

DPE—BCS noted that treatment of 'excluded land' in the land categorisation process is unclear. DPE—BCS recommended that the Biodiversity Development Assessment Report (BDAR) clearly state that excluded land is subject to the Biodiversity Assessment Method (BAM).

Streamlined assessment module

DPE—BCS noted that application of streamlined assessment module—planted native vegetation to planted native vegetation and scattered trees mapped in vegetation zones requires review.

DPE—BCS recommended:

- section 4.4 of the BDAR be updated to include application of the streamlined assessment module—planted native vegetation
- for each enhancement site where 'Miscellaneous ecosystem—ornamental plantings' is mapped, the streamlined assessment module—planted native vegetation is applied and the outcomes documented in accordance with the decision-making key in section 4.4 of the BDAR
- a review of the vegetation zones to determine the validity of applying the scattered tree streamlined assessment module or alternatively, provide further information to justify why allocation of scattered trees to PCT 277 (poor condition) is appropriate.

Non-native vegetation

DPE—BCS noted that justification for non-native vegetation within the subject land is not provided. DPE—BCS recommended that the BDAR is updated to include survey methods and outcomes used to identify non-native vegetation in the subject land, including where derived native grasslands of a Critically Endangered Ecological Community (CEEC) occur adjacent to non-native vegetation.

Patch size

DPE—BCS noted that patch size has not been addressed appropriately in the BDAR. DPE—BCS recommended that spatial data and maps of patch size is included in the BDAR in accordance with section 4.3.2 of the BAM and section 3.3.3 of the Operational Manual—Stage 1.

Plant Community Type selection

DPE—BCS noted that Plant Community Type (PCT) selection requires further justification. DPE—BCS recommended that additional information is included in Tables 4.7 and 4.9 of the BDAR to justify the allocation of each PCT.

Condition assessment for PCT 277

DPE—BCS noted that poor condition PCT 277 not classified as Box-Gum Woodland critically endangered ecological community (CEEC) is not supported. DPE—BCS recommended that the BDAR and BAM-C cases be updated to include PCT 277 (poor condition) as part of the BC Act-listing of the Box-Gum Woodland CEEC.

Predicted and candidate credit species assessments

DPE—BCS noted that predicted and candidate credit species assessments require review. DPE—BCS recommended that the exclusion of any ecosystem species must be consistent with Steps 1 and 2, and exclusion of species credit species must be consistent with steps 1–6 in section 5.2 of the BAM.

Response

Excluded land

Additional text has been added to section 4.2 of the revised BDAR that states, 'All lands identified as category 2 and excluded land are subject to BAM assessment under this report.'. The revised BDAR is provided in Appendix F of the Preferred Infrastructure Report.

Streamlined assessment module

Planted vegetation within the study area was assigned to two separate types being:

- PCT 277—native plantings
- Miscellaneous ecosystem—ornamental plantings.

When applying these planted vegetation types, the decision-making key under Appendix D.1 of the BAM streamlined assessment module—planted native vegetation was applied.

For patches of planted vegetation that occurred containing a mosaic of planted and remnant native vegetation, these patches were assigned to most reasonably associated PCT being PCT 277—Blakely's Red Gum—Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion. This approach is consistent with the treatment of such planted vegetation in accordance with Appendix D.1 (1) of the BAM streamlined assessment module—planted native vegetation.

For clarification purposes, the following text has been added to Table 4.9 in section 4.5.2 of the BDAR, 'These patches of planted native vegetation have been assigned to PCT 277 in accordance with Appendix D.1 (1) of the BAM streamlined assessment module—planted native vegetation.'

Miscellaneous ecosystem—ornamental plantings have been addressed in section 6.1 of the BDAR. In regard to the application of Appendix D of BAM 2022, the BDAR provides the following:

> 'Appendix D of the BAM (2020) was reviewed to determine if these ornamental plantings were suitable for assessment under this native vegetation streamlined assessment module. The decision-making key (D.1) in Appendix D of BAM 2020 was followed to point 5 ('Is the native vegetation…planted for functional, aesthetic, horticultural or plantation forestry purposes?') where the appropriate answer was 'yes'. This indicated that the D.2 assessment should be carried out.
>
> 'Assessment D.2 requires the assessor to assess the suitability of the planted native vegetation for use by threatened species and record any incidental sightings or evidence of threatened species credit species using, inhabiting or being part of the planted vegetation. Results of this assessment found that the ornamental plantings had very limited ecological value and are not being utilised by threatened species and are not threatened species. Therefore, these ornamental plantings were not considered further in the BDAR.
>
> The scattered tree module has not been applied to the BDAR. All native vegetation has been assigned to PCT level association and applied to a broad condition state vegetation zone. It is acknowledged under section 4.3.1(2) of the BAM that 'A vegetation zone may have discontinuous (fragmented) patches of vegetation (Subsection 4.3.2(1.)), provided the vegetation within the discontinuous areas are the same PCT and in a similar condition state.'

In respect to PCT 277—poor, small discontinuous (fragmented) patches of vegetation have been applied to poor condition vegetation zone that was representatively sampled from larger patches of similar condition state vegetation that was sampled using BAM vegetation integrity survey plots.

The revised BDAR is provided in Appendix F of the Preferred Infrastructure Report.

Non-native vegetation

The native vegetation methods section has been updated to make reference to the 173 rapid data points that were conducted throughout the BDAR study area.

In respect to providing additional information on areas where derived native grasslands of a CEEC occur adjacent to non-native vegetation, an additional three BAM vegetation integrity plots were sampled in December 2022. These plots have been assigned as Q16, Q17 and Q18 and were all sampled from Junee to Illabo clearances in areas adjacent to PCT 277—derived.

Where non-native vegetation occurred adjacent to areas of PCT 277 moderate, good and derived broad condition states, along the Junee to Illabo clearances, BAM plots were sampled to determine if vegetation integrity in these areas meet the definition of native vegetation. A total of three additional BAM vegetation integrity plots were sampled during December 2022, being Q16, Q17 and Q18 (see Appendix B-4, Photo 6.3, Photo 6.4 and Photo 6.5). These plots were entered into the BAM-C calculator for the Inland Slopes Interim Biogeographic Regionalisation for Australia (IBRA) subregion and assigned to vegetation zone #6_277_non-native and registered a current vegetation integrity score of 0.2. Given this, patches of Miscellaneous ecosystem—Highly disturbed areas with no or limited native vegetation have been appropriately assigned and reflect the long history of disturbance resulting from multiple overlapping construction zones relating to the Olympic Highway, existing rail line and adjoining agricultural activities.

The revised BDAR is provided in Appendix F of the Preferred Infrastructure Report.

Patch size

Patch size has been reviewed and the following adjustments have been made:

- inland slopes—PCT 5 patch size has been increased from 5–<25 ha class to >100 ha class assuming riparian connectivity along the Murray River. All other patch sizes for PCT 277 remain in the 5–<25 ha class
- lower slopes—a conservative approach has been adopted and all vegetation zones have been adjusted from <5 ha class to 5–<25 ha class.

Patch size changes have been made in both the BDAR and BAM-C cases.

The revised BDAR is provided in Appendix F of the Preferred Infrastructure Report.

PCT selection

Additional justification provided in respective tables as follows:

- PCT 5
  - PCTs that were considered included PCT 2, 7, 9, 10 and 11. PCT 2 was dismissed due to lack of sedges, PCT 7 was dismissed due to the absence of Warrego Grass and herbs, PCT 9 was dismissed due to the lack of Wallaby Grass, PCT 10 was dismissed as the tree canopy was not co-dominant with Black Box and PCT 11 was dismissed due to the absence of Lignum.
  - PCT 5 was considered the best fit and is consistent with the State Vegetation Type Map.
- PCT 277
  - Other PCTs that were considered based on nearby State Vegetation Type Map units included PCT 76, 266 and 276. PCT 76 was dismissed due to lack of Western Grey Box, PCT 266 was dismissed due to the absence of White Box and PCT 276 was dismissed due to the co-dominance of Blakely's Red Gum and Yellow Box.
  - PCT 277 was considered the best fit and is consistent with the State Vegetation Type Map.

The revised BDAR is provided in Appendix F of the Preferred Infrastructure Report.

Condition assessment for PCT 277

PCT 277-poor have been updated in BDAR and BAM-C to now meet BC Act Box-Gum Woodland CEEC (see Table 4.12 of the BDAR). The revised BDAR is provided in Appendix F of the Preferred Infrastructure Report.

Predicted and candidate credit species assessments

A review has been undertaken and the BDAR and BAM-C updated accordingly. Exclusions were limited to those where only habitat constraints or geographic limitations were listed as not realistically being present. This was a conservative approach compared to the previous version of the BDAR. The revised BDAR is provided in Appendix F of the Preferred Infrastructure Report.

5.1.3 Biodiversity—Threatened species

Summary of issues

DPE—BCS noted that targeted survey methods and locations of survey effort require clarification and review. DPE—BCS recommended:

- an update to Appendix C-3 and Tables 5.12 and 5.13 of the BDAR to reflect actual survey effort for candidate species credit species
- a detailed justification where the minimum survey requirements, recommended survey effort or survey months have not been met and to confirm whether affected species should be assumed to be present.

Response

The following updates have been made to the BDAR:

- survey dates provided in Table 5.12 and 5.13
- figures in Appendix C-3 have been updated and tracks associated with roads removed.
- the survey methodology for Key's Matchstick Grasshopper has been included in section 5.5.3.3.

Detailed justification where minimum survey requirements, recommended survey effort or survey months have not been met are provided in the following sections and in the revised BDAR. The revised BDAR is provided in Appendix F of the Preferred Infrastructure Report.

Brush-tailed Phascogale

It is reiterated in the revised BDAR that *'Habitat assessments determined that suitable habitat was not associated with the study area. Also, although targeted survey was not carried out in recommended survey months (December to June), appropriate survey methods (spotlighting, remote camera traps, stag watching) were carried out close to this period in mid-November and the species was not recorded. Opportunistic survey carried out within the recommended survey months also did not record the species.*

In NSW, the Brush-tailed Phascogale is mainly found east of the Great Dividing Range, with sparse records occurring to the west of the Great Dividing Range. The Brush-tailed Phascogale requires large tracts of habitat (females occupying 20–40 hectares and males up to 100 hectares) and is unlikely to persist in the small isolated fragments associated with the study area within a highly fragmented landscape.

The combination of negative targeted survey and opportunistic survey results, with the lack of suitable habitat, indicates that the species is unlikely to occur in the study area. Furthermore, there are no records for Brush-tailed Phascogale in the regions through which the study traverses. These facts indicate that the species is not likely to be affected by the proposal. As such, this species is not considered further.'

Powerful Owl

It is reiterated that in the revised BDAR: *'Species Presence: No (surveyed). Habitat assessments determined that suitable habitat was not associated with the study area and targeted survey methods (call playback, spotlighting, stag watching) during the November survey period did not record the species. Although surveys were carried out in November, outside of the recommended seasonal requirements, the Powerful Owl is essentially a forest and woodland species that requires large tracts of habitat and is unlikely to persist in the small isolated fragments associated with the study area. As preferred habitat did not occur in the study area and there are no records for Powerful Owl in the regions through which the study traverses indicate that the species is not likely to persist in the study area.'*

Masked Owl

It is reiterated that in the revised BDAR that *'Habitat assessments determined that suitable habitat was not associated with the study area and targeted survey methods (call playback, spotlighting, stag watching) during the November survey period did not record the species. Although Masked Owls almost exclusively feed on terrestrial mammals, including rodents, which can be seasonally abundant in pastoral lands, it is essentially a woodland and forest species and is unlikely to persist in areas where patches of forest are reduced to small, isolated fragments as are such habitats associated with the study area. Although surveys were carried out in November, outside of the recommended seasonal requirements, since preferred habitat did not occur in the study area and the records for Masked Owl in the regions through which the study area traverses are very scant, the species is not likely to persist in the study area.'*

Cullen parvum (Small Scurf-pea)

Text has been added to Table 5.16 of the revised BDAR: *'In terms of the suitability of survey timing, BioNet and subsequently BAM-C identifies the seasonal survey period for Cullen parvum as December to January, however the broader published literature on this species identify flowering and fruiting to occur from October to April (Davies 1986 (October to February), Jessop and Toelken 1986 (October to December) Grimes 1997 (Oct-Apr), Moxham and Dorrough 1995 (October to March), Walsh and Entwisle 1996 (Oct-Jan) and Harden 2002 (October to April)). A review of online resources have PlantNET identifying flowers and fruits between October to April, VicFlora being October to January and eFlora SA October to December. All accessed published literature and online floras indicate that surveys conducted during November would be suitable in terms of seasonality for detecting Cullen parvum.*

Interestingly, whilst BioNet recommends the survey period for Cullen parvum as Dec-Jan, the general notes provided for the species reference the Victorian and South Australian Action Statements which state flowering occurs between Oct-Feb. Further, under the Victorian Action Statement the intended management action for the species is that all known sites should be surveyed in Oct-Nov.

In addition to published and online flora information on the flowering and fruiting times for Cullen parvum, a review of recorded catalogued specimens indicate that numerous recordings of the species occur from the November period. A small subset of catalogue specimens examples include:

- *BioNet Atlas of NSW Wildlife:SPJGI4984767 dated 11/04/2011*
- *BioNet Atlas of NSW Wildlife:SPJGI4931871 dated 11/04/2011*
- *CANB691507-1 dated Nov 2005*
- *MEL0694262A dated 11/18/1985*
- *Victorian Biodiversity Atlas – 5739372 dated 11/08/1991.*

The targeted surveys conducted for Cullen parvum during 11–18 November 2020, whilst technically undertaken two week prior to the BAM-C recommended survey period, meet the seasonality requirements of published literature and timing of previously recorded catalogued specimens of this species.'

5.1.4 Biodiversity—impact assessment

Summary of issues

Indirect impacts to Sloane's Froglet

DPE—BCS noted indirect impacts to Sloane's Froglet in the subject land are not considered. DPE—BCS recommended the review of the indirect impacts to Sloane's Froglet in the subject land to include an assessment in accordance with section 8.6 (4) of the BAM.

Prescribed impacts

DPE—BCS noted prescribed impacts require additional assessment. DPE—BCS recommended:

- an update to the prescribed impacts to identify the affected entities and an assessment against the prescribed impact criteria as per Stage 1 and section 6 of the BAM including mapping of high-risk locations
- completion of a prescribed impacts assessment as per the Stage 2 impact assessment criteria under section 8.3 of the BAM for each relevant prescribed impact and species
- a full assessment of the extent of prescribed impacts on threatened entities must be conducted in accordance with Section 9.2 of the BAM. The assessment must define if a residual prescribed impact for any threatened entity is expected to occur.

Mitigation measures

DPE—BCS noted mitigation measures require additional detail. DPE—BCS recommended that specific mitigation measures and detail according to section 8.4 of the BAM and the BAM Operational Manual—Stage 2 is provided in the BDAR.

Response

Indirect impacts to Sloane's Froglet

Additional comments regarding indirect impacts have been added to the revised BDAR. No additional offsets or mitigation measures are required as indirect impacts to the (not recorded) Sloane's Froglet will be negligible.

The revised BDAR is provided in Appendix F of the Preferred Infrastructure Report.

Prescribed impacts

In response to the matters raised by DPE—BCS:

- identification of affected entities: affected entities are identified in Table 6.1 of the revised BDAR. Locations are mapped in appendix figures that are now referred to in Table 6.1
- completion of a prescribed impacts assessment: this has been undertaken and documented in Table 8.1 and 8.2 of the revised BDAR
- a full assessment of the extent of prescribed impacts on threatened entities: this has been undertaken and documented in Table 9.10 of the revised BDAR. Due to the minimal impact predicted, no additional credit requirements for prescribed impacts are considered necessary.

The revised BDAR is provided in Appendix F of the Preferred Infrastructure Report.

Mitigation measures

There will be further investigation of mitigative measures, such as glider poles, once the detailed design is completed and this is included in the BDAR. Due to the level and nature of the project (works within and adjoining an existing disturbed rail corridor), the mitigation measures proposed are considered to be adequate and appropriate.

5.1.5 Biodiversity—landscape context

Summary of issues

Landscape connectivity features

DPE—BCS noted landscape connectivity features are not mapped to inform further assessment in the BDAR. DPE—BCS recommended that landscape features mapping and the assessment is updated to identify landscape features, including Important Habitat Areas for the Regent Honeyeater.

Native vegetation cover

DPE—BCS noted native vegetation cover in landscape assessment requires review to include all native vegetation. DPE—BCS recommended a review of native vegetation cover in the assessment area of each enhancement site for it to include all woody and non-woody native vegetation (including planted native vegetation). Once complete, DPE—BCS recommended a review of the native vegetation per cent cover for each subregion and, where required, an update to the BAM-C and the BDAR.

Response

Landscape connectivity features

Existing landscape connectivity is poor. The most likely area where there any a chance of habitat connectivity being disrupted is in the north of Albury (north of Thurgoona Drive). There was a cluster of Regent Honeyeater sightings in Thurgoona in 1999, 2000, 2001 and 2003 but none since. While no habitat critical to breeding is associated with the study area, mapped important habitat (foraging) for the Regent Honeyeater has been identified in the Thurgoona area at the Billy Hughes bridge enhancement site. The total impact to native vegetation at the Billy Hughes bridge enhancement site is 0.15 hectares, comprising 0.1 hectares of PCT 277_poor in the Lower Slopes Interim Biogeographic Regionalisation for Australia subregion and 0.14 hectares of PCT 277_poor in the Inland Slopes Interim Biogeographic Regionalisation for Australia subregion. In the area mapped as containing important habitat for the Regent Honeyeater, all impacts to native vegetation have been avoided with impacts restricted to non-native/exotic grassland. Accordingly, it is unlikely that this proposal will adversely affect habitat critical to the survival of this species. This information has been included in Appendix D-2 of the revised BDAR.

The revised BDAR is provided in Appendix F of the Preferred Infrastructure Report.

Native vegetation cover

Due to not being able to ground-truth all patches of potential native vegetation cover, a precautionary approach has been adopted to predict native vegetation cover. Accordingly, native vegetation cover for both Interim Biogeographic Regionalisation for Australia subregions has been assigned to 11 per cent or the greater than 10–30 per cent BAM class. The BAM-C and BDAR have been updated to reflect this change.

The revised BDAR is provided in Appendix F of the Preferred Infrastructure Report.

5.1.6 Biodiversity—matters of national environmental significance

Summary of issues

DPE—BCS noted Matters of National Environmental Significance (MNES) assessments require review and assessment against the approval decision.

DPE—BCS recommended:

- a review the Matters of National Environmental Significance assessment of significance with reference to known local populations of species and their habitats
- identification of where impacts to MNES vary from those identified in the non-controlled action approval in the BDAR.

Response

The BDAR has assessed the full impact of the proposed action and the findings of the assessments of significance are considered consistent with those assessed as part of the non-controlled action approval.

In short, the proposed action is considered unlikely to lead to a significant impact on any MNES matters.

5.1.7 Biodiversity—administration

Summary of issues

The BDAR does not meet certification requirements of the BAM.

DPE—BCS recommended that the BDAR is certified by a current accredited assessor within 14 days of the two cases being finalised and credit reports provided from Biodiversity Offsets and Agreement Management System (BOAMS).

Response

The EIS Technical Paper 8 was certified by an assessor who is currently accredited and was at the time of authoring within 14 days of the two cases being finalised and credit reports provided from BOAMS. The revised BDAR is provided in Appendix F of the Preferred Infrastructure Report and meets the certification requirements of the BAM.

5.1.8 Biodiversity—introduction

Summary of issues

Report terminology is not consistent with the BAM.

DPE—BCS recommended that the terms used for the assessment in the glossary are clarified and applied consistently throughout the BDAR.

Response

The revised BDAR has been updated to clarify the terms used and have been applied consistently. The revised BDAR is provided in Appendix F of the Preferred Infrastructure Report.

5.2 NSW Department of Planning and Environment—Crown Lands

The NSW Department of Planning and Environment—Crown Lands (DPE—Crown Lands) provided advice in response to the public exhibition of the EIS dated 5 September 2022. Consideration of the items raised in their advice is provided in the sections following.

5.2.1 Use and access of Crown land, roads and waterways

Summary of issues

Land acquisition

DPE—Crown Lands noted that Crown land and roads adjoin the proposal footprint at Uranquinty and Junee. Lot 1 DP 622732 is Crown land (Travelling Stock Reserve 96932) and there are Crown roads located to the west of the Junee Olympic Highway Underbridge footprint.

If the proposal requires the use of the Crown land to implement the proposal, the land will need to be acquired under the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW) (LAJTC Act).

Authority

DPE—Crown Lands noted there are a number of Crown waterways and roads within the proposal area.

DPE—Crown Lands will need to be referenced, prior to any use or occupation of any Crown roads or land, during the assessment phase.

Authority to use, traverse, access or build infrastructure on Crown land, roads and waterways is required under the *Crown Land Management Act 2016* (NSW) and the *Roads Act 1993* (NSW). DPE—Crown Lands recommended that ARTC contact DPE—Crown Lands as early as possible to discuss and initiate the processes required to authorise the use of and/or access to Crown land and roads.

DPE—Crown Lands provided maps in their advice on the EIS, which show Crown land in and near the Yerong Creek yard clearances and Murray River bridge enhancement sites.

Response

Land acquisition

The proposal would involve the temporary occupation of Crown land, including roads and waterways, to enable construction. Permanent acquisition of Crown land (around 0.5 ha) for the purpose of operation of the proposal would be required to accommodate the changes to the design of the LX605 and the realignment of track at this location (refer to section 3.2.1.4 of the Preferred Infrastructure Report). No other acquisition of Crown land is proposed.

The Travelling Stock Reserve 96932 on Lot 1 DP 622732 in Uranquinty is not proposed to be occupied during construction or operation of the proposal. The Uranquinty Yard clearances would involve work within Sandy Creek, which is a Crown waterway, to establish a temporary creek crossing during construction. Through mitigation measure TT5, ARTC would consult with the Riverina branch of Local Land Services (LLS) regarding potential impacts to the Travelling Stock Reserve during construction.

The Crown road to the west of the Olympic Highway underbridge enhancement site would be temporarily occupied at the southern end of Regent Street in Junee. This road would be partially occupied during construction to provide access to a temporary construction compound; however, it would remain accessible to the public.

ARTC will seek authorisation for the temporary occupation of Crown land that is located outside the ARTC lease area prior to the commencement of construction.

Authority

ARTC will seek authorisation under the *Crown Land Management Act 2016* (NSW) for the temporary occupation of Crown land that is located outside the ARTC lease area prior to the commencement of construction.

Consents would be sought under section 138 of the *Roads Act 1993* (NSW) from the relevant road authority for works that would disturb, erect a structure, or carry out a work in, on or over a public road.

At the Murray River bridge enhancement site, no work is proposed in the Crown waterway. All construction work is limited to the bridge itself and will be facilitated using scaffolding attached to the bridge.

At the Yerong Creek yard clearances enhancement site, the Crown road as highlighted yellow in the DPE—Crown Lands agency advice is not proposed to be used as part of the proposal and does not form part of the proposal site.

5.2.2 Lineal infrastructure traversing Crown land, roads or waterways

Summary of issues

DPE—Crown Lands noted that if lineal infrastructure is expected to traverse Crown land, roads and/or waterways, an easement over said Crown land, roads and/or waterways will be required for protection of the infrastructure.

As the easement process may be lengthy, DPE—Crown Lands recommended that ARTC apply for a licence for each Crown road, waterway and Crown land lot as soon as possible. A licence will temporarily authorise use and access for the infrastructure to traverse Crown roads, Crown waterways and Crown land while the easement applications are being processed.

DPE – Crown Lands highlighted that licences or easements must be in place before infrastructure can traverse Crown land or roads. It is important to note that authority must be in place before Crown land or roads can be used, traversed, accessed or infrastructure can be built.

Response

As the proposal involves enhancement works to an existing rail corridor, no new linear infrastructure would traverse Crown land. ARTC is not proposing to establish any new easements that traverse Crown land.

ARTC will seek authorisation under the *Crown Land Management Act 2016* (NSW) to allow the occupation of Crown land that is located outside the ARTC lease area.

5.3 NSW Department of Planning and Environment—Heritage NSW—Aboriginal Cultural Heritage

The NSW Department of Planning and Environment—Heritage NSW (Heritage NSW) provided advice (undated) in response to the public exhibition of the EIS on Aboriginal cultural heritage matters. Consideration of the items raised in their advice is provided in the sections following.

5.3.1 Mapping

Summary of issues

Clarifications

Heritage NSW requested clarification of changes that occurred to the proposal area post-survey, the areas not subject to survey, and whether the Registered Aboriginal Parties (RAPs) were made aware of the changes to the proposal boundary.

Mapping for site A21-2

Heritage NSW requested updated mapping that includes the location of site A2I-2 and the proposed location of the construction compound that will be placed adjacent to the site as well as the locations of construction compounds throughout the proposal area.

Protection of site A21-2

Heritage NSW requested additional information on how site A2I-2 will be protected during the construction and use of the compound.

Response

Clarifications

The Draft Aboriginal Cultural Heritage Report (ACHAR) circulated to RAPs identified where changes occurred to the footprint following completion of the field survey. The changes were accompanied by a consideration of the potential heritage significance for each site, which concluded that:

- the additional area that was incorporated into the Murray River bridge enhancement site (being the full extent of Townsend Street) would have the same level of archaeological potential as the southern section of the unformed road that had been subject to site survey
- all other changes are contained within disturbed areas that do not have archaeological potential.

On this basis, these changes did not require the completion of an additional site walkover. Further, no comments were made from the RAPs on these changes.

One minor additional change did occur at Illabo, following completion of the RAP engagement, to reflect the removal of roadside vegetation to provide compliant sightlines for vehicles at the Brabins Road level crossing (LX 604) within the Junee to Illabo clearances enhancement site. This area covered around 300 m^2. This area is within the road reserve and was not identified as having potential for heritage due to its level of disturbance. This was informed by the desktop assessment (provided at the start of the cultural heritage assessment (as detailed in section 3.3 of the EIS Technical Paper 2). As such, it was concluded that engagement with RAPs on this change was not required.

A map series comparing the site investigation area at the time of the field survey with RAPs to the proposal site presented in the EIS has been provided in section 3.1.2 and Appendix E: Detailed Response to Aboriginal Cultural Heritage Matters of this Submissions Report. Further changes have been made to the proposal site and consideration of Aboriginal heritage within these revised areas is provided in section 3.2.2.1 of the Preferred Infrastructure Report.

During detailed design, the construction contractor may identify additional or new locations for compounds within the proposal site or in adjoining disturbed areas. If these extend outside the areas subject to assessment, due diligence would occur to ensure that only previously disturbed areas are used and do not impact areas of Aboriginal cultural heritage.

Mapping for site A21-2

A map series that identifies the construction compounds for the proposal is provided in Appendix A of the Preferred Infrastructure Report. A separate map has been provided to Heritage NSW that identifies proposal features at the Olympic Highway underbridge enhancement site and site A21-2.

Protection of site A21-2

Mitigation measure AH1 has been amended to provide a more explicit requirement to fence the A2I-2 site (refer to Appendix B).

Additionally, mitigation measure AH3 has been amended to specifically note the protection requirements of the A2I-2 site in the cultural awareness training.

5.3.2 Areas of Potential Archaeological Deposit—Zone 3

Summary of issues

Heritage NSW noted that the EIS Technical Paper 2 identifies that a large paddock in the north-west of Zone 3 has been subject to previous disturbance and is unlikely to contain Aboriginal cultural heritage; however, review of historical imagery indicates that beyond initial clearing there have been limited impacts to the area. Heritage NSW requested further explanation on the past impacts to this area and the proposed impacts by the proposal. Where adequate justification is not provided, Heritage NSW noted that additional investigation in the form of test excavations may be required.

Response

Zone 3 in the ACHAR refers to the proposal site at the Billy Hughes bridge enhancement site. A review of aerial imagery from 2011 identified that almost the entire surface of this paddock has been subject to surface disturbance from vehicle movements and possibly ploughing. While this process would not have removed any Aboriginal cultural heritage present it would have notably disturbed any expressions Aboriginal cultural heritage on the surface.

This area was subject to a targeted field survey with Registered Aboriginal Parties (RAPs) during the preparation of the EIS Technical Paper 2 (refer to section 4.2 of Technical Paper 2 for further detail). Observations and feedback

from the RAPs did not identify that this area would be a potential archaeological deposit (PAD), or that it had any cultural interest.

The area is proposed to be used temporarily for construction laydown and storage, which would have only minimal intervention and would not impact the ground surface to any depth more than the current level of disturbance. Test excavation would impact the ground to a greater degree than the proposed construction compound use.

Further discussion on this area has been provided in the section 3.1.2 and Appendix E: Detailed response to Aboriginal cultural heritage matters of this Submissions Report.

5.3.3 Areas of Potential Archaeological Deposit—Zone 1

Summary of issues

Clarification of proposed impacts to Zone 1

Heritage NSW requested clarification of the proposed impacts to the PAD identified in Zone 1. It is unclear from the mapping whether the PAD was subject to survey and whether the PAD is within or adjacent to the works boundary.

Monitoring and community collection methodology for Zone 1

Heritage NSW noted that if sections of the PAD in Zone 1 in a disturbed context are likely to be impacted, then Heritage NSW recommends that a monitoring and community collection methodology be created for the upgrade and grading of the existing roads and tracks within Zone 1.

Test excavations for Zone 1

Heritage NSW noted that if works are proposed outside of existing disturbance, then it is recommended that test excavations be implemented prior to proposal approval as test excavation upfront informs the potential of the proposal area to contain Aboriginal objects, whether future salvage excavation is required, and would allow ARTC to redesign the proposal to avoid any significant objects or sites if necessary.

Direct impacts to Zone 1

Heritage NSW noted that while the ACHAR concludes that direct impacts to identified PADs will be avoided, PADs are within or directly adjoining the construction impact area. Heritage NSW noted that if there is potential for the PADs to be impacted and/or extend further into the construction impact area, then test excavations to identify the nature, extent, and significance of any subsurface deposit are recommended to ensure that further impacts can be avoided, and the site adequately conserved.

Response

Clarification of proposed impacts to Zone 1

The PAD identified in Zone 1 extends along the unformed section of Townsend Street as well as to the east of the rail line. The portion of the PAD along Townsend Street that was subject to targeted survey is depicted in Figure 4.11 of the EIS Technical Paper 2. The proposal site does not extend into the PAD located between the rail line and the Hume Highway.

The unformed section of Townsend Street would be re-graded and then covered with geotextile fabric and gravel. The grading process (around 50 millimetre (mm) in depth) would impact a zone of existing surface disturbance and is therefore unlikely to impact any intact archaeological deposits. The gravel cover would provide protection from additional impacts from vehicle movements during construction, which are limited to light vehicles only. Grading of the street will be limited to the existing disturbed area of Townsend Street and controls will be implemented to exclude the use of areas adjacent to the unformed road (mitigation measure AH2).

Monitoring and community collection methodology for Zone 1

Noted, mitigation measure AH2 has been amended to include monitoring and implementation of a community collection methodology during the re-grading of the road (refer to Appendix B). This would occur following the inspection of the proposal site by a suitably qualified person with the proposal RAPs, to confirm the absence of objects before the re-grading commences.

Test excavations for Zone 1

Disturbance associated with the proposal would be confined to the previously disturbed areas of the unformed road (refer to mitigation measure AH2). The assessment concluded that, with the implementation of mitigation measures, further investigation in the form of test excavations is not required. As outlined above, additional controls, as recommended by Heritage NSW, have also been adopted.

Direct impacts to Zone 1

As stated above, disturbance associated with the proposal would be confined to the previously disturbed areas of the unformed road (refer to mitigation measure AH2). The assessment concluded that, with the implementation of mitigation measures, further investigation in the form of test excavations is not required.

5.3.4 Archaeological survey

Summary of issues

Heritage NSW noted the ACHAR has not presented the results of the survey as required by Requirements 5, 9–10, and 11 of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010). Please provide these details to allow for Heritage NSW to make as assessment of the adequacy of the survey coverage.

Response

The assessment was completed in accordance with the code and the required information is contained within Technical paper 2. The detailed response to Aboriginal cultural heritage matters (refer to section 3.1.2 and Appendix E) provides a consolidated response to the Requirements 5, 9, 10 and 11 of the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (Code of Practice).

5.4 NSW Department of Planning and Environment—Heritage NSW—Non-Aboriginal Heritage

The NSW Department of Planning and Environment—Heritage NSW provided advice in response to the public exhibition of the EIS dated 8 September 2022 on non-Aboriginal heritage matters. Consideration of the items raised in their advice is provided in the sections below.

5.4.1 Albury rail bridge over Murray River (SHR no. 01020)

Summary of issues

Reuse of materials

For the Murray River bridge, Heritage NSW recommended that, as much as possible, elements of the overhead bracing structure are reused in the replacement structure. Should reuse not be viable, documentation should indicate the reasons why reuse was not possible and provide probable relocation or alternate reuse spots. Alternatively, the bracing elements should form part of an interpretation strategy for the proposal. Any new materials proposed to be introduced to the historic structure shall be compatible with the historic fabric. Intrusions and intervention into the bridge must be minimised as much as possible.

Removal of graffiti and repainting

For the Murray River bridge, Heritage NSW also recommended that the proposed removal of graffiti and repainting be undertaken with consultation with the proposal's nominated heritage consultant. A site protection plan should also be in place to ensure that impacts resulting from the demolition are mitigated and the remaining historic structure is not damaged during construction works.

Response

Reuse of materials

The proposal seeks to reuse the existing framework, to the greatest extent feasible. This is reflected in mitigation measure NAH1, which commits ARTC to investigate the condition of the top bracing framework for the Murray River bridge during detailed design to determine if this material can be re-purposed in the modified bridge structure (refer to section 11.5.2 of the EIS). This is also reflected in the proposal description (refer to Table 7-4 of the EIS).

If the framework cannot be re-purposed, a suitably qualified heritage professional would be consulted on the design and installation of the new bracing to ensure it is appropriate to the existing fabric and style of the bridge (mitigation measure NAH1). This would reflect the minimisation of intrusions and interventions in the heritage item.

Mitigation measure NAH6 requires the implementation of a heritage interpretation strategy, and specifically identifies the heritage item.

Mitigation measure NAH6 has been amended to include new and removed structural components at the heritage item. This measure has also been amended to include an interpretation response for items/components of heritage items that would be removed or relocated as a result of the proposal.

Removal of graffiti and repainting

As described in chapter 8 of the EIS, the proposal would only repaint small sections of the bridge where work would disturb lead-based paint work. The proposal does not include the removal of lead-based paint or repainting of the full structure, as described in Table 5.2 of the EIS Technical Paper 3.

The heritage management sub-plan requirements in the construction environmental management plan outline has been amended to include site-specific protection plans (refer to Appendix C).

5.4.2 Albury Railway Station and yard group (SHR no. 01073)

Summary of issues

New pedestrian bridge

For the Albury Railway Station, Heritage NSW recommended that the proposed new pedestrian bridge be designed in consultation with the proposal's nominated heritage consultant to ensure that it is aesthetically balanced with its surroundings and the historic character of the yard and landscape.

Salvage and reuse of material

For the Albury Railway Station, Heritage NSW noted the proposed elements for demolition should be salvaged and reused as much as possible onsite and/or form part of the interpretation strategy. Heritage NSW also noted that a site protection plan should be in place to ensure that any impacts arising from demolition are managed appropriately.

Test excavations

For the Albury Railway Station, Heritage NSW also noted that the documentation includes a program of test excavation to manage impacts to the archaeological resource—the broad-gauge railway tracks. Heritage NSW recommended that the test excavations be undertaken prior to any approval granted for this application. Further, the test excavation report should be submitted for review by Heritage NSW—Non-Aboriginal Heritage and its findings should inform the proposal, the archaeological research design and any further detailed design.

Response

New pedestrian bridge

The existing bridge has insufficient clearance for the passing of double-stacked container freight trains and must be replaced.

Any new pedestrian bridge is required to meet relevant design and safety standards, including rail collision protection and anti-throw screens. During stakeholder engagement, ARTC has also been requested to provide a DDA-compliant bridge. This would result in a more visually prominent structure and minimises the opportunity to balance the bridge in the surrounding heritage landscape.

Further change to the design would occur during detailed design in line with the following mitigation measures:

- mitigation measure NAH6, which requires incorporation of heritage interpretation into the urban design of the bridges
- mitigation measure LV2, which requires the preparation of an urban design and landscape plan to guide detailed design. The plan will include design guidelines to minimise the visual impacts of infrastructure, with consideration of the existing landscape and visual context.

To provide a clearer connection of the heritage requirements within the landscape and urban design outcomes for the proposal, mitigation measure LV4 has been changed to include consideration of relevant heritage interpretation recommendations and the involvement of a suitably qualified heritage specialist.

Salvage and reuse of material

Mitigation measure NAH4 has been amended to include this item, which requires the need to investigate the salvage and reuse of items (refer to Appendix B).

The heritage management sub-plan requirements in the construction environmental management plan outline has been amended to include site-specific protection plans (refer to Appendix C).

Test excavations

Additional research has been conducted into the location and likely survival of the broad gauge rail lines within the Albury Railway Yard with a view to understanding this issue in greater detail. This is provided in section 3.1.3 and Appendix F: Detailed Response to Non-Aboriginal Cultural Heritage Matters), and included a review of historical plans, aerials and photographs.

Plans from 1949 and 1962 indicate the alignment of two areas of broad-gauge rail lines that coincide with the Inland Rail Albury to Illabo proposal site. These lines were located at the same ground surface level as the main lines. More recent photographs show partial removal of broad-gauge rail lines.

A site inspection in July 2023 by ARTC Inland Rail staff of the entire track lines in the vicinity of the works, confirmed the presence of two remnant sections of broad-gauge rail lines within the yard—one matching the location of the No. 3 broad-gauge shunting line.

This evidence shows that there is unlikely to be any buried evidence of these broad-gauge rail lines, as they existed at the same level as the current lines and have been removed in their entirety. However, a section of broad-gauge correlating to a line identified as shunting line No. 3 still exists, along with another broad-gauge rail line between gantry roads 8 and 9.

The No. 3 shunting line terminates just inside the enhancement site. The design of the proposal indicates there is no direct impact to this line. Similarly, the remnant broad-gauge rail line between gantry roads 8 and 9 is within the proposal site and is currently located within 2 m of the proposed new track formation.

The proximity of these lines to the proposed works areas suggest that they are at some potential risk of inadvertent impacts during works in adjacent areas. The proposed new track formation has been designed to tie in with the existing tracks and therefore cannot be moved further away from the broad-gauge line.

Should impact to the broad-gauge rail line between gantry roads 8 and 9 be unavoidable, mitigation measures NAH6 remains appropriate. Additionally, mitigation measure NAH8 has been updated to, 'Where impacts cannot be avoided on remnant broad-gauge railway track in the Albury Railway Station and Yard Group (SHR 01073) then these tracks would be archivally recorded prior to works commencement and a contextual study undertaken on broad-gauge tracks within the Albury Yard'.

The additional evidence reviewed confirmed the existence and location of these lines and therefore test excavation will provide no further information to confirm their basic nature and extent.

The heritage management sub-plan requirements in the construction environmental management plan outline have been amended to include site-specific protection plans (refer to Appendix C).

5.4.3 Culcairn Railway Station and yard group (SHR no. 01126)

Summary of issues

For the Culcairn Railway Station, Heritage NSW recommended that the significant fabric from the pedestrian bridge is salvaged and forms part of an interpretation strategy for the proposal.

For the Culcairn Railway Station, Heritage NSW also noted a site protection plan should be in place to ensure that any impacts arising from demolition are managed appropriately.

Response

Noted. ARTC is continuing its discussions with Greater Hume Council concerning the gifting of this bridge (mitigation measure NAH3) and this forms part of the heritage interpretation strategy (mitigation measure NAH6).

The heritage management sub-plan requirements in the construction environmental management plan outline have been amended to include site-specific protection plans (refer to Appendix C). Wagga Wagga Railway Station and yard group (SHR no. 01279)

Summary of issues

Design and detail of proposed replacement bridges

For Wagga Wagga Railway Station, Heritage NSW noted that the replacement structures are included in the documentation as being larger than the existing bridges (Edmondson Street bridge and Wagga Wagga Station pedestrian bridge). Heritage NSW recommended that the design and details of the proposed replacement bridges be undertaken with consultation with the proposal's nominated heritage consultant to ensure that visual impacts are minimised and that they sit within the aesthetic character of the historic yard group.

Site protection plan

For Wagga Wagga Railway Station, Heritage NSW also noted a site protection plan should be in place to ensure that any impacts arising from demolition are managed appropriately.

Response

Design and detail of proposed replacement bridges

The existing bridge has insufficient clearance for the passing of double-stacked container freight trains and must be replaced.

Any new pedestrian bridge is required to meet relevant design and safety standards, including rail collision protection and anti-throw screens. During stakeholder engagement, ARTC has also completed a revised design provide a DDA-compliant bridge. This would result in a more visually prominent structure and minimises the opportunity to balance the bridge in the surrounding heritage landscape.

Further change to the design would occur during detailed design in line with the following mitigation measures:

- mitigation measure NAH6, which requires incorporation of heritage interpretation into the urban design of the bridges
- mitigation measure LV2, which requires the preparation of an urban design and landscape plan to guide detailed design. The plan will include design guidelines to minimise the visual impacts of infrastructure, with consideration of the existing landscape and visual context.

To provide a clearer connection of the heritage requirements within the landscape and urban design outcomes for the proposal, mitigation measure LV4 has been amended to include consideration of relevant heritage interpretation recommendations and the involvement of a suitably qualified heritage specialist.

Site protection plan

The heritage management sub-plan requirements in the construction environmental management plan outline have been amended to include site-specific protection plans (refer to Appendix C).

5.4.4 Junee Railway Station, yard, locomotive depot (SHR no. 01173)

Summary of issues

For Junee Railway Station, Heritage NSW recommended that the fabric of the bridge structure be salvaged and reused within the proposed development and form part of the interpretation strategy for the proposal.

For Junee Railway Station, Heritage NSW also noted that a site protection plan should be in place to ensure that any impacts arising from demolition are managed appropriately.

Response

Noted. ARTC is continuing its discussions with Junee Shire Council concerning the gifting of this bridge (mitigation measure NAH3) and it forms part of the heritage interpretation strategy (mitigation measure NAH6).

The heritage management sub-plan requirements in the construction environmental management plan outline have been amended to include site-specific protection plans (refer to Appendix C).

5.4.5 Yerong Creek Urban Conservation Area

Summary of issues

For Yerong Creek Urban Conservation Area, Heritage NSW noted the assessment describes that the potential archaeological remains of the Yerong Railway Station Building (demolished in the 1980s) would be impacted by the proposal. The recommendations in the assessment include the implementation of a test excavation. Heritage NSW recommended that the test excavation program be completed prior to any approval granted for the proposal. The final test excavation report should be submitted for review by Heritage NSW, and any findings inform the Archaeological Research Design and any future detailed design of the proposal.

Response

Additional research has been conducted into the location and likely survival of potential archaeological remains of the Yerong Railway Station Building. This is provided in section 3.1.3 and Appendix F: Detailed Response to Non-Aboriginal Cultural Heritage Matters of this Submission Report, and included a review of historical plans, aerials and photographs.

Based on the marked location of the former station, the proposal would overlap with the edge of the platform area to provide clearance for the passage of the trains, however, the extent of that impact is unknown at this stage. Due to the fixed location of the rail lines, alternative design options to avoid impacts to the edge of the platform area are not possible.

The active rail corridor is highly constrained, and the feasibility for completion of a test excavation program at Yerong Creek Station, including its timing, would be highly constrained and require further investigation. Given the constraints on test excavation, alternative investigative options have been explored, and location data was established from georeferencing the historic plans and a ground penetrating radar survey was undertaken to investigate the potential for structural remains to exist.

The ground penetrating radar survey found no evidence of structural remains from the building and identified three ‘areas of interest’ (AOI) comprising clusters of random data anomalies. One of the anomalies (AOI1) was a linear feature at northern end of the platform and may represent a buried pipe, while AOI2 and AOI3 are non-patterned anomalies and were interpreted as possible deposits of construction rubble or demolition rubble. These results suggest that any archaeological deposits associated with the configuration and use of the Yerong Creek railway station would be highly disturbed.

Based on the results provided in section 3.1.3 and Appendix F: Detailed Response to Non-Aboriginal Cultural Heritage Matters in this Submission Report, the subsurface remains at the site will not provide any further understanding of the layout of the station building and its construction method. The amorphous nature of the ground penetrating radar anomalies also suggest that any other artefacts and deposits that may exist would be disturbed and/or decontextualised—their value is likely to be limited.

The former site of Yerong Creek station would be largely left in-tact with minimal groundwork anticipated to be required for the proposal. Where possible design should aim to reduce impacts to the platform and avoid excavations of the adjacent embankment area. In light of these findings, the Yerong Creek Railway Station archaeological site has been removed from mitigation measure NAH8. The site will be managed in accordance with the heritage unexpected finds protocol as outlined in mitigation measure NAH11.

5.4.6 Other heritage items

Summary of issues

For the following heritage items, Heritage NSW noted that no works are proposed to structures or moveable relics and therefore no impacts to heritage values or fabric are foreseen:

- Henty Railway Station and yard group (SHR no. 01169)
- The Rock Station and yard group (SHR no. 01268)
- Bomen Railway Station (SHR 01093, I8, 4280278)
- Junee Railway Station—moveable relics (SHR no. 01172).

Response

Noted.

5.4.7 Mitigation measures

Summary of issues

Heritage NSW noted mitigation measures are considered acceptable; however, the comments provided above should be incorporated into the documentation and the proposed strategy for archaeological disturbance, salvage, reuse of fabric and interpretation should be updated accordingly.

Response

Noted. Revisions to mitigation measures to address the issues raised are outlined in the above responses. The revised mitigation measures are presented in Appendix B: Updated Mitigation Measure to this Submission Report.

5.4.8 Impacts to additional heritage items

Summary of issues

Heritage NSW noted the three State Heritage Register listed items are noted in proximity to the proposed works area. It is recommended that any impacts arising from vibrations or changes to visual settings should be mitigated appropriately and as recommended in the assessment.

Response

Mitigation measures NV1, NV2, NV5, NV6 and NV10 contain controls to manage the risk of vibration-intensive activities in proximity to structures. This will include completion of condition surveys, selection of appropriate construction methods where risk of damage due to vibration could occur, and monitoring if residual risk of damage remains.

Revisions to mitigation measures to address visual impacts are outlined in the above responses.

5.4.9 Section 170 register items and local heritage items

Summary of issues

Heritage NSW noted that the proposed study area includes several section 170 register items as well as many local heritage items, and other local items are in the vicinity. Advice should be sought from the relevant state agencies and local councils, as a result.

Response

Numerous local and section 170 heritage items were identified in the heritage register searches completed for the EIS.

Transport for NSW and local councils were consulted during the development of the reference design and were invited to comment on the EIS during the exhibition period. Section 3.5 of Technical Paper 3 summarises the non-Aboriginal heritage related matters raised by local councils during consultation on the reference design, and how ARTC responded to them.

With the exception of Junee Shire Council, the submissions received during the EIS exhibition period from Transport for NSW and local councils did not include issues relevant to the heritage items within the proposal site or within 200m of the proposal. Junee Shire Council noted the commitment to gift the removed Junee Station pedestrian bridge to it and recommended additional controls to enable the sympathetic re-use of the structure (refer to section 4.3.3.2 for the response to this issue).

No additional engagement with relevant state agencies and local councils is proposed at this point, as they will continue to be involved in the design development once the detailed design of the proposal commences.

5.5 NSW Department of Planning and Environment—Water

The NSW Department of Planning and Environment—Water (DPE—Water) provided advice in response to the public exhibition of the EIS dated 8 September 2022. Consideration of the items raised in their advice is provided in the sections following.

5.5.1 Water supply and licensing

Summary of issues

Construction water supply security

DPE—Water requested clarification of the ability to obtain a secure water supply for the proposal. This is to include relevant agreements where required and to demonstrate that sufficient water entitlements can be acquired where necessary.

Post-approval requirements

DPE—Water noted the requirement for relevant approvals for water supply works (not considered in this proposal), and water access licences under the *Water Management Act 2000* (NSW) (WMA) before commencing any works that intercept or extract groundwater or surface water.

Response

Construction water supply security

Subject to approval, detailed design and construction planning for A2I would commence shortly after, in mid-2024. Due to the nature of the works, construction of some elements would also commence shortly after approval and would vary across enhancement sites. The demand for water over the construction period would also vary according to the construction activity. In total, the proposal would require 56.9 megalitres (ML) over two years of construction (ranging from 9.7 ML for the Albury precinct to 30.3 ML for the Junee precinct). Given the geographical distribution of the enhancement sites, water is likely to be sourced from multiple providers, over a single source.

Possible options for water supply have been identified in section 5.2.1.4 of Technical Paper 11. The confirmation of where water would be sourced from is associated with the design and construct contract for the proposal and would occur as detailed design and construction planning progresses. As such, agreements regarding construction water sources cannot be provided at this time. However, selected water sources would reflect the availability at that time and with consideration to climatic conditions, agreements with local government and other water supply authorities (e.g. Riverina Water). This is reflected in mitigation measure HFWQ1, which commits to the further investigation of water supply options, and ongoing consultation with water suppliers and alternative water supply options.

Post-approval requirements

The proposal does not include any water supply works and does not propose to extract surface water. In the unlikely event that such works and extraction is required, the necessary approvals would be obtained.

Water access licences under the Act and the associated regulations are required for dewatering and any other taking of water from a water source exceeding 3 ML per year.

As identified in section 19.4.2 of the EIS, dewatering is estimated to exceed 3 ML at one location (Kemp Street bridge enhancement site); therefore, a water access licence may be required, noting a conservative estimate was provided. Dewatering estimates, and therefore the need for a water access licence, would be confirmed during detailed design (refer to mitigation measure GW1).

5.5.2 Surface water

Summary of issues

Scour protection

DPE—Water noted that detailed design of the proposal should ensure that scour protection is consistent with existing structures prior to construction.

Unexpected impacts

DPE—Water noted that watercourses should be monitored for unexpected impacts and, if required, rehabilitated with reference to *A Rehabilitation Manual for Australian Streams* (LWRRDC, 2000).

Works within waterfront land

DPE—Water noted works within waterfront land need to be consistent with DPE Water's *Guidelines for Controlled Activities on Waterfront Land* (NSW DPI, 2018).

Consultation on the construction environmental management plan

DPE Water noted a CEMP must be prepared in consultation with DPE Water prior to commencing works.

Response

Scour protection

Where modified bridge structures that cross watercourses are proposed, no adjustments or replacements to instream piers or footings would be required. As such, changes in erosion and scour are not anticipated and additional scour protection is not required.

Where new or modified drainage infrastructure is proposed, scour protection is provided where required to ensure existing outcomes are maintained, or improved, as far as practicable.

As identified in Table 5.19 of Technical Paper 11: Hydrology, flooding and water quality, scour protection has been provided at four enhancement sites, including, Riverina Highway bridge, Billy Hughes bridge, Pearson Street bridge and Junee to Illabo clearances.

Unexpected impacts

Instream works would be required for new and modified drainage infrastructure; however, this would be minor and existing drainage lines would be maintained. These works would also occur in ephemeral watercourses, which only flow following rainfall events and recede rapidly.

Where temporary instream works would occur at Sandy Creek (located in the Uranquinty Yard clearances enhancement site) and at Jeralgambeth Creek (located in the Junee to Illabo clearances enhancement site), the works would be undertaken in dry conditions as far as practicable. Where work cannot be conducted in dry conditions, appropriate erosion and sediment controls would be installed and maintained. Disturbed areas would also be rehabilitated to pre-works condition (or better) and monitored. This is detailed in mitigation measure BD10 and Appendix C: Outline Construction Environmental Management Plan to this Submission Report.

Appendix C: Outline Construction Environmental Management Plan to this Submission Report for the soil and water management sub-plan has been amended to include reference to *A Rehabilitation Manual for Australian Streams* (LWRRDC, 2000) (refer to Table C-7 of Appendix C).

Section C1.1 to C1.3 of Appendix C: Outline Construction Environmental Management Plan to this Submission Report outlines ARTC's commitment for monitoring compliance, implementation of corrective action and continued improvement in environmental management during construction. Monitoring of watercourses would include assessment of watercourse stability and rehabilitation of watercourses that have been disturbed by construction.

Works within waterfront land

Table C-7 of Appendix C: Outline Construction Environmental Management Plan to this Submission Report outlines the requirements for the soil and water sub-management plan.

The soil and water sub-management plan would be prepared in accordance with the *Guidelines for Controlled Activities on Waterfront Land* (NSW DPI, 2018).

Consistent with these guidelines:

- the detailed design and construction planning will seek to minimise further impact or disturbance to riparian habitat (mitigation measure BD1)
- exclusion areas will be established and maintained around riparian habitats (mitigation measure BD6)
- activities within vegetated riparian zones will be managed to minimise impacts to aquatic environments as far as practicable. Riparian areas subject to disturbance will be progressively stabilised and rehabilitated (BD8).

Where new or modified drainage infrastructure is proposed, scour protection is provided where required to ensure existing outcomes are maintained, or improved, as far as practicable.

Consultation on the construction environmental management plan

As noted in section 27.1 of the EIS, the CEMP will contain a number of subject sub-plans, with each being prepared in consultation with relevant agencies, as relevant. Table H-7 in the revised Outline Construction Environmental Management Plan (in Appendix C to this Submission Report) was updated to specifically reference that the soil and water management sub-plan would be prepared in consultation with DPE—Water.

5.6 NSW Department of Primary Industries—Agriculture

The NSW Department of Primary Industries—Agriculture (DPI—Agriculture) provided advice in response to the public exhibition of the EIS dated 7 September 2022. Consideration of the items raised in their advice is provided in the sections below.

5.6.1 Level crossings

Summary of issues

DPI—Agriculture requested information on what assessment has been undertaken of level crossings associated with the numerous farm tracks and private access roads in rural areas, what consultation has been conducted with affected landowners, and what decisions have been made about these level crossings.

Response

ARTC note that there is only one private level crossing within the scope of the proposal. All other property accesses are from public roads.

The private level crossing is on the Shire and Carter Property access road (LX605) and is currently a passive level crossing. It provides primary access to a Junee Shire Council owned quarry and is one of the access points to a private property with a residence and agricultural operations. The property has other lawful access onto public roads. Legally, this is a private crossing, which is licensed between the Railway Commissioner, Junee Shire Council and the landowner of the private property (the landowner).

This level crossing is proposed to be upgraded from stop signs to active controls (flashing lights and boom barriers) as part of the proposal. This is the highest form of level crossing control.

ARTC consulted with the landowner, Junee Shire Council and Transport for NSW during the development of the reference design and EIS preparation to discuss these stakeholders use of the level crossing and possible design solutions to the existing short-stacking issue. Agency advice received from Transport for NSW and submissions received from Junee Shire Council and the landowner during the public exhibition of the EIS raised objection to the changes proposed at LX605. All parties supported the activation, but objected to the concrete island proposed as a short-stacking mitigation on the basis of traffic and access impacts.

In response to stakeholder feedback, the design solution at LX605 has been amended to address existing non-compliances by realigning the track and level crossing by up to 16 m south from the current level crossing location. This design solution maintains the ability for vehicles to perform both left- and right-hand turns into and out of the level crossing and does not decrease the safety and functionality of the road network. Refer to section 3.2.1.4 of the Preferred Infrastructure Report for further information on the amended design at LX605 and section 5.1 on the further engagement carried out regarding this level crossing in the Preferred Infrastructure Report.

As outlined in the updated proposal description in Appendix A of the Preferred Infrastructure Report, the public level crossing on Wornes Gate Lane (LX1472) is minimally used and is not the primary access point for any private property. ARTC's preferred design solution would be permanent closure of this level crossing, subject to stakeholder agreement. Consultation would continue separately with relevant stakeholders on the potential permanent closure of this level crossing but this has not been included in the scope of the proposal. The level crossing would be modified to accommodate the realigned track and upgraded from a passive to an active level crossing.

5.6.2 Biosecurity management

Summary of issues

DPI Agriculture requested that emergency animal disease protocols be included in site inductions and ongoing site biosecurity management, for example:

- keeping accurate records of all movements onto Inland Rail worksites adjacent to farmland
- preventing people who have visited foot-and-mouth disease infected areas within the last 7 days from working on sites adjacent to farms, or handling or feeding livestock
- limiting entry points and using clear signage to direct people away from farmland and livestock adjacent to the work sites
- ensuring all footwear, clothing and equipment of anyone visiting or working on sites adjacent to farmland is free of mud, animal manure and mucus
- ensuring there are facilities for disinfection of hands, shoes and equipment before and after movements onto worksites adjacent to farmland and or animal-handling facilities.

Response

ARTC would ensure measures to manage biosecurity risks (weeds and pathogens) are implemented in accordance with the *Biosecurity Act 2015* (NSW).

The recommended emergency animal disease protocols have been added to the amended construction environmental management plan outline under the biodiversity management sub-plan (see Appendix C of this Submissions Report).

5.7 NSW Department of Primary Industries—Fisheries

The NSW Department of Primary Industries (Fisheries) (DPI Fisheries) provided advice in response to the public exhibition of the EIS dated 17 August 2022. Consideration of the items raised in their advice is provided in the sections below.

5.7.1 Sandy Creek

Summary of issues

DPI Fisheries noted their previous advice that fish passage provision for the temporary crossing of Sandy Creek is not required. DPI Fisheries also noted the commitment to complete the works during periods of dry weather.

Response

Noted. As acknowledged by DPI Fisheries, the temporary creek crossing at Sandy Creek would not require temporary fish passage in accordance with *Why do fish need to cross the road? Fish passage requirements for waterway crossings* (Fairfull and Witheridge, 2003). This is due to the degraded condition of Sandy Creek and its highly ephemeral nature.

Instream works at Sandy Creek will be undertaken in dry conditions, as far as practicable, as constraints in construction planning may make it unfeasible to only conduct the works during dry weather.

Where works cannot be conducted in the dry, additional measures, including appropriate erosion and sediment control would be installed. This is reflected in mitigation measure BD10.

5.7.2 Jeralgambeth Creek culvert

Summary of issues

DPI Fisheries noted that modification of the Jeralgambeth Creek culvert will be completed in accordance with water crossing requirements outlined in Fisheries *Policy and Guidelines for Fish Habitat Conservation and Management (Update 2013)*(DPI, 2013) and *Why do fish need to cross the road? Fish passage requirements for water crossings* (Fairfull & Witheridge 2003).

Response

Noted. This is reflected in mitigation measure BD4.

5.7.3 Removal of large woody debris

Summary of issues

DPI Fisheries noted that removal of large woody debris from NSW rivers and streams is listed as a key threatening process under the *Fisheries Management Act 1994* (NSW). DPI Fisheries noted that under the proposed works there will be no removal of large woody debris from waterways.

Response

The proposal does not involve the removal of large woody debris or snags. These features were only identified at Murray River, Oddies Creek and Buckaringah Creek, and would not be impacted by the proposal.

Removal and displacement of habitat features would be avoided as far as practicable.

Any instream habitat features (woody debris, large rocks and boulders) at the temporary creek crossing location at Sandy Creek (Uranquinty Yard clearances) is to be removed and placed up or downstream of the construction area in consultation with a suitably qualified aquatic ecologist. Any such aquatic features will be reinstated within the watercourse at the completion of construction. This requirement is reflected in mitigation measure BD11.

5.7.4 Instream works in the Murray River and Oddies Creek

Summary of issues

DPI Fisheries noted that the proposal does not include works to the substructure of the Murray River bridge or instream works in the Murray River or Oddies Creek.

Response

The proposal does not include works to the substructure of the Murray River bridge or instream works in the Murray River or Oddies Creek degradation of native riparian vegetation.

Summary of issues

DPI Fisheries noted that degradation of native riparian vegetation along NSW watercourse is listed as a key threatening process under the *Fisheries Management Act 1994* (NSW). Under the proposal, 0.03 ha of riparian vegetation is to be removed. DPI Fisheries noted the use of terrestrial buffer zones as per the *Policy and Guidelines for Fish Habitat Conservation and Management (Update 2013*) (DPI, 2013) in order to maintain the riparian buffer zone and limit disturbance and susceptibility to bed or bank erosion.

Response

The biodiversity sub-plan of the CEMP will be prepared in accordance with the *Policy and Guidelines for Fish Habitat Conservation and Management (Update 2013)* (DPI, 2013) (refer to Appendix C: Outline Construction Environmental Management Plan to this Submission Report).

Impact to riparian areas would occur where disturbance is required within or adjacent to watercourses, such as the temporary crossing of Sandy Creek at Uranquinty.

Detailed design and construction planning will seek to identify changes that further avoid or minimise impact to riparian habitat (reflected in mitigation measure BD1).

Other mitigation measures relevant to minimising impact to riparian areas include:

- detailed design and construction planning will seek to minimise further impact or disturbance to riparian habitat (mitigation measure BD1)
- exclusion areas would be established around riparian areas that do not need to be disturbed and maintained during construction (mitigation measure BD6)
- activities within riparian zones would be managed to minimise impacts to aquatic environments and riparian areas subject to disturbance will be progressively stabilised and rehabilitated (mitigation measure BD8)
- where instream works occur in watercourses containing key fish habitat, the aquatic habitat would be returned to pre-works condition (or better) in accordance with the rehabilitation strategy (mitigation measure BD10).

Mitigation measure BD14 requires instream structures to be inspected and maintained to ensure issue that may block fish passage are resolved. The mitigation measure has been revised to decouple such inspections from routine track inspection to ensure appropriate staff undertake the inspections.

5.7.5 Rehabilitation strategy

Summary of issues

DPI Fisheries noted its support for the inclusion of improvement to aquatic habitat such as reinstatement of removed riparian vegetation within the watercourse, i.e. ‘re-snagging’, and reinstatement of native riparian vegetation to be incorporated into the rehabilitation strategy.

Response

Noted. This commitment is reflected in mitigation measure BD11, which requires that any instream habitat features (woody debris, large rocks and boulders) at the temporary creek crossing location at Sandy Creek (Uranquinty Yard clearances) is to be removed and placed up or downstream of the construction area in consultation with a suitably qualified aquatic ecologist.

Any such aquatic features will be reinstated within the watercourse at the completion of construction.

5.8 NSW Environmental Protection Authority

The NSW Environment Protection Authority (EPA) provided advice in response to the public exhibition of the EIS dated 8 September 2022. Consideration of the items raised in their advice is provided in the sections below.

5.8.1 Construction noise

Summary of issues

Noise monitoring graphs

The EPA noted that noise monitoring graphs in Appendix A in the EIS Technical Paper 6 indicate that a significant amount of data is weather affected. The EPA also noted that a conservative approach should be used when using the rating background levels (RBLs) calculated from this data to determine the noise management levels (NMLs), and subsequently the mitigation measures where predicted levels exceed the NMLs.

Calculation of noise management levels

The EPA queried the calculation of NML in Table 4.5 of Technical Paper 6. The EPA noted the following discrepancies:

- For Noise Catchment Area (NCA) 1, the RBL at night is 41 dBA and the NML is stated to be 50 dBA. The Interim Construction Noise Guideline (DECC, 2009) sets NMLs of background + 5dBA during outside standard hours, and the EPA noted the NML should be 46dBA.
- For NCA 14, the day out-of-hours RBL is reported as 42dBA and the NML is reported to be 57dBA. The EPA noted this NML should be 47dBA. The evening NML should also be 47dBA so that the evening NML.

Consideration of certain components

The EPA noted that noise from any construction camps and borrow pits required for the proposal should be assessed.

Feasible and reasonable mitigation measures

The EPA noted that the implementation of the Interim Construction Noise Guideline requires proponents to minimise noise using all feasible and reasonable mitigation measures. The EPA expressed its opinion that applying 'standard' and 'additional' mitigation as noted in the EIS Technical Paper 6 would, therefore, not automatically lead to feasible and reasonable outcomes (i.e. there is insufficient information on the outcomes of applying these measures).

The EPA noted that the aim of construction noise management is to apply all reasonable and feasible mitigation to minimise noise, regardless of whether measures are included in the 'standard' or 'additional' measures. During detailed design, ARTC will need to fully consider all feasible and reasonable mitigation measures, including respite periods, especially considering the scale of potential impact.

For the Edmondson Street bridge, in Table 8.23 of EIS Technical Paper 6, the predicted construction noise levels with 'standard' mitigation are up to 109 dBA $L_{Aeq,15min}$ and 110 dBA $L_{A1,1min}$. This is significantly higher than the Highly Noise Affected level of 75 dBA from the Interim Construction Noise Guideline. The EIS Technical Paper 6 also identified that vibration impacts are predicted above the human comfort criteria in the *Assessing Vibration—a technical guideline* (DEC, 2006).

The EPA recommended that the approach to noise management and mitigation should be amended to be consistent with the Interim Construction Noise Guideline. The EPA requested that further information and clarification should be provided for the potential noise mitigation measures available to reduce impacts at receivers including administrative measures such as respite, engineering controls and community engagement.

Response

Noise-monitoring graphs

EPA's comment is noted. Adverse meteorological periods were removed prior to the calculation RBLs and, as such, the monitoring data used was unaffected by weather and is representative of the locations.

The *Noise Policy for Industry* (NPfI) (EPA, 2017) guidelines requires that monitoring includes a minimum of 7 days (168 hours) of good data, where there is a high risk of noise nuisance. However, these guidelines were developed for permanent, industrial noise sources. Of the 15 noise monitoring locations, location 11 (Peacock Drive, Wagga Wagga), did not achieve the minimum duration of monitoring outlined in the NPfI, (a total of 113 hours of suitable data was recorded). In addition, the duration of suitable monitoring data at locations 1 and 3 (Townsend/Abercorn St Albury and Sanctuary Lane Ettamogah were both slightly below the minimum (167 and 161 hours respectively).

As these noise monitoring locations are used solely for the calculation of construction criteria, a reduced amount of monitoring data is considered suitable. Location 11 is situated within a residential context and it is not expected that noise levels would vary considerably between weekday and weekend periods and consequently the data captured is an adequate representation of a typical residential noise environment. Similarly, locations 1 and 3 are in predominantly rural areas with a single surrounding land use, and the presence of nearby highway infrastructure.

The quantum of data in this situation provides a sufficiently robust basis to determine the background noise environment at these locations. All other locations recorded more than 7 days of unaffected data and the RBLs derived from this data requires no further qualification.

Calculation of noise management levels

An error in the calculation of the RBL for NCA 1 and NCA 14 was included in the EIS Technical Paper 6. The RBLs stated in the EPA advice are correct. Consequently, the modelled results for NCA 1 and NCA 14 have been recalculated, and results presented in the detailed response to non-rail noise matters (Appendix G).

As the corrected NMLs were lower than those previously stated in the EIS Technical Paper 6, the corrections included the following NMLs:

- NCA 1 (Murray River bridge, Albury Station pedestrian bridge, Albury Yard clearances):
  - Out of hours—evening period (all days 6.00 pm to 10.00 pm): - 46dBA $L_{eq(15\ min)}$ (previously reported as 50dBA $L_{eq(15\ min)}$).
- NCA 14 (Kemp Street bridge, Junee Yard clearances and pedestrian bridge, Olympic Highway underbridge):
  - Out of hours—day period (Saturday 7.00 am to 8.00 am and 1.00 pm to 6.00 pm, Sunday 8.00 am to 6.00 pm): – 47dBA $L_{eq(15\ min)}$ (previously reported as 57dBA $L_{eq(15\ min)}$)
  - Out of hours—evening period (all days 6.00 pm to 10.00 pm): - 47dBA $L_{eq(15\ min)}$ (previously reported as 50dBA $L_{eq(15\ min)}$).

The correction of the NML identified additional receivers where exceedance of the NMLs is predicted. Full details of the results is presented in Appendix G of this Submissions Report.

Where exceedance of the NMLs is predicted at additional receivers, these receivers are subject to investigation of feasible and reasonable management and mitigation measures.

Consideration of certain components

The proposal does not include workforce accommodation camps or borrow pits.

Feasible and reasonable mitigation measures

The approach to mitigation to address construction noise and vibration impacts has been developed in accordance with ARTC Inland Rail Construction Noise and Vibration Management Framework and the requirements of the Interim Construction Noise Guideline. The Construction Noise and Vibration Management Framework was included as Appendix F in the EIS Technical Paper 6 of the EIS.

The proposal is located within a highly constrained setting, within an operational rail line, and in some locations a high number of receivers are in close proximity to the proposal site. As noted in the EIS, the construction of the proposal seeks to minimise work outside standard hours (out-of-hours work). However, the use of scheduled track possessions, means that working outside standard hours may be required at times. Reasons include the need to avoid impacts to operation of freight and passenger trains or road traffic on haulage roads, to ensure construction worker safety or to undertake emergency work. These constraints to construction of the proposal result in a high level of impact, particularly when noisy activities take place. The approach to managing construction hours (detailed in full within section 8.4 of the EIS) included the consideration of scheduling for highly noise intensive work. This would generally be limited to standard hours, or in continuous blocks not exceeding three hours each with a minimum respite from those activities and work of not less than one hour between each block.

Primary construction hours (being 6 am to 6 pm, seven days a week) are proposed for work that is not subject to rail possessions or track occupancy authorisations. These are now referred to as the Inland Rail Standard Program Construction Hours, see the updated proposal description in Appendix A of the Preferred Infrastructure Report for further information. Under the Inland Rail Standard Program Construction Hours, only low impact noise activities are permitted between 6.00 am and 7.00 am. For the purpose of the Inland Rail Standard Program Construction Hours, low impact noise activities at any time where:

- construction causes $L_{Aeq(15\ minute)}$ noise levels no more than 5 dB(A) above the rating background level at any residence in accordance with the Interim Construction Noise Guideline (DECC, 2009), and no more than the 'noise affected' NMLs specified in Table 3 of the Interim Construction Noise Guideline at other sensitive land uses
- vibration is no more than the preferred values for human exposure to vibration specified in Table 2.2 or Table 2.4 (as applicable) of *Assessing Vibration: a technical guideline* (DEC, 2006.

As part of the Construction Noise and Vibration Management Framework, a suite of standard mitigation measures are identified, which are considered to be feasible and reasonable for all Inland Rail projects to implement in most circumstances. These standard mitigation measures were identified in the EIS Technical Paper 6 and would be applied for the proposal. Standard mitigation measures for the proposals were outlined in the Construction Noise and Vibration Management Framework and section 8.3.1 of the EIS Technical Paper 1. Additional feasible and reasonable mitigation will be implemented for the proposal based on the construction methodology, operational constraints and site-specific requirements. All Inland Rail projects are not similar in environment, scope or constraints so mitigation measures cannot be generically applied between projects. Further, each Inland Rail project has different construction contractors, and the construction methodology cannot be finalised until they are engaged.

Section 3.2 of the Construction Noise and Vibration Management Framework details how additional mitigation measures will be applied for out-of-hours work where noise and vibration results in exceedances of the NMLs. This includes community engagement, respite offers and alternate accommodation, as well as physical mitigation, such as the use of temporary noise barriers and shielding of plant and equipment. Mitigation and management responses will be based on the predicted level of exceedance, community feedback and the consideration of what is feasible and what is reasonable.

Not until a construction contractor is engaged and the construction methodology finalised, can the specific noise and vibration mitigation be confirmed. Development of the construction methodology would seek to further reduce noise and vibration impacts from the proposal. All feasible and reasonable mitigation from the additional management measures identified will be implemented through the construction noise and vibration management plan.

A change to mitigation measure NV1 has been made to require construction noise and vibration statements to confirm predicted impacts at relevant receivers to assist with the selection of feasible and reasonable management measures and the requirements for respite.

5.8.2 Operational noise

Summary of issues

The EPA noted that assessment of operational noise was limited to the enhancement sites only. The EPA noted this approach will result in unfair and inequitable assessment of feasible and reasonable mitigation for sensitive receivers. The EPA requested that operational noise impact at sensitive receivers be assessed along the full length of the Albury to Illabo section of Inland Rail, not just at the enhancement sites.

Response

Additional assessment of operational noise has been completed as part of the Preferred Infrastructure Report (refer to section 6.2 of the Preferred Infrastructure Report). The assessment modelled operational noise impact at sensitive receivers along the full length of the Albury to Illabo section of Inland Rail.

Summary of issues

Wastewater discharges

The EPA noted that no accommodation camps or additional wastewater discharge points are proposed, so assessment of wastewater discharges was deemed not applicable. The EPA assume wastewater for site amenities would be removed via vacuum trucks.

Mitigation measures

The EPA noted proposed water quality mitigation measures include erosion and sediment control measures at each construction site, implemented in accordance with *Managing Urban Stormwater: Soils and Construction, Volume 1* (Landcom, 2004). Further it was noted that mitigation measures would be documented in a Construction Soil and Water Management Sub-plan.

Response

Wastewater discharges

Noted.

Mitigation measures

Noted. This is reflected in:

- mitigation measure HFWQ7, which requires sediment and erosion control devices to be installed in accordance with *Managing Urban Stormwater: Soils and Construction, Volume 1* (Landcom, 2004)
- the construction environmental management plan outline, which includes the preparation and implementation of a soil and water management sub-plan (refer to section 18.6.1 of the EIS and Appendix C: Outline Construction Environmental Management Plan of this Submissions Report).

5.8.3 Contamination

Summary of issues

Trigger for further site investigation

The EPA noted that section 20.4.2 of the EIS identified that sites within Albury Station (and surrounds) and Wagga Wagga Station (and surrounds) are considered to have a higher likelihood of contamination being present but the EIS assessed the AECs as either 'low' or 'medium' risk sites only. Also, enhancement sites with more extensive proposed excavation (including Riverina Highway bridge, Billy Hughes bridge, Pearson Street bridge and Kemp Street bridge), may have a higher likelihood to encounter contamination. The mitigation measures outlined in section 20.6.2 of the EIS include further investigation of these enhancement sites.

The EPA agreed that those areas have higher likelihood of encountering contamination; however, the EPA requested clarity on the specific triggers for when further investigations will be undertaken.

Construction Environmental Management Plan sub-plan for contamination

The EPA noted that the EIS Technical Paper 13 stated that 'the CEMP [Construction Environmental Management Plan) will include triggers for the completion of additional investigation'. The EPA noted that these triggers should be provided as early as possible and not be deferred post-approval during the preparation of the CEMP. The EPA requested clarification on the specific triggers for when further investigations will be undertaken.

The EPA noted agreement with the approach of preparing a CEMP subplan for contamination and hazardous materials.

Management measures for contamination

The EPA requested further details on how the proposal will prevent migration of contaminants from overland flow into surface water bodies.

Use of Certified Contaminated Land Consultants

The EPA advised that reports on contamination should be prepared, or reviewed and approved, by consultants certified under either the Environment Institute of Australia and New Zealand's Certified Environmental Practitioner (Site Contamination) scheme (CEnvP(SC)) or the Soil Science Australia Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM) scheme (certified consultants).

Sampling, Analysis, and Quality Plan

The EPA recommended that the sampling, analysis, and quality plan and subsequent contaminated land reports are also prepared, or reviewed and approved, by certified consultants.

Contaminated land matters included in the Construction Environmental Management Plan

The EPA recommended that the contaminated land matters included in the Construction Environmental Management Plan are prepared, or reviewed and approved, by certified consultants.

Response

Trigger for further site investigation

Based on the desktop assessment and site inspection, the risk of contamination across the proposal site is considered to be low within the context of the continuing railway land use; however, some discrete areas of medium risk have been identified, such as areas of waste within the rail corridor, fill used in the construction of the existing rail line and structures containing hazardous materials (such as lead paint and asbestos).

Based on the intensity of historical activities observed within the rail corridor, including the presence of operational facilities, and development in the surrounding area, enhancement sites within Albury Station and surrounds, and Wagga Wagga Station and surrounds are considered to have a higher likelihood of contamination being present. Equally, enhancement sites with more extensive (including area and depth) excavation proposed, including Riverina Highway bridge, Billy Hughes bridge, Pearson Street bridge and Kemp Street bridge, may also be considered to have a higher likelihood for the proposal to encounter contamination.

Site investigations at more developed railway precincts and those with more significant excavation (such as noted within the advice) were identified as being necessary in response to this higher likelihood. ARTC has committed to complete the site investigations during detailed design and prior to construction. These investigations would assist ARTC by further informing the likely waste classification of excavated material and the identification of which excavated material could be suitable for beneficial reuse onsite compared to the material which must be disposed of to a suitable waste treatment facility. Qualitative triggers were adopted to inform the selection of these sites, based on details of the proposal and site context, as outlined in the EIS. Triggers based on quantitative considerations were not considered appropriate in this instance.

The requirement for site investigations (including what enhancement sites and its required timing) is reflected in mitigation measure SC5. The results of site investigations would be reviewed against the criteria within the National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended) (the NEPM) (National Environment Protection Council (NEPC, 2013), to identify where additional actions are required.

Mitigation measure SC5 also has been amended to include a more explicit reference to the NEPM as the relevant assessment criteria (refer to Appendix B).

Construction Environmental Management Plan Sub-plan for contamination

As outlined, site investigations at more developed railway precincts and enhancement sites with more significant excavation would be completed during detailed design and prior to construction to inform the design and management and classification of waste soil. This requirement (and its required timing) is reflected in mitigation measure SC5.

The Construction Environmental Management Plan would include an unexpected finds procedure. It is common practice for this procedure to be prepared alongside the Construction Environmental Management Plan. This procedure would set out typical indicators of contamination (e.g. odour, visual staining of soils, potential asbestos containing materials) that would trigger the need for further investigation and/or site investigations. As outlined in mitigation measure SC6, the results of the site investigations will be assessed against the criteria contained within the National Environment Protection (Assessment of Site Contamination) Measure 1999 to identify where additional actions are required. The CEMP would be prepared in consultation with relevant agencies, including the EPA.

Management measures for contamination

Risks from off-site migration of contaminants from overland flow may occur where contaminants are present during construction, and not managed appropriately, such as where excavated soils are exposed to rainfall or surface water flows, and contamination is mobilised through erosion.

Contamination risk, and potential receptors including surface water bodies, are discussed in section 6.5 of the EIS Technical Paper 13. Site-specific impacts from areas of environmental concern during construction activities with the potential pathway of contaminant migration from overland flow into surface water bodies were assessed as being of low risk. This was generally due to the distance between the enhancement site and the surface water body, and the potential for occurrence of overland flows. Recommended actions to further manage the low risk was the implementation of standard environmental controls for the management of soils and waste.

These controls would be outlined in the contamination and hazardous materials sub-plan and the soil and water management sub-plan. As provided in the Appendix C: Outline Construction Environmental Management Plan of this Submissions Report, this sub-plan will include sediment and erosion control devices that would be installed to minimise mobilisation and transport of sediment in accordance with *Managing Urban Stormwater—Soils and Construction, Volume 1* (Landcom, 2004).

The soil and water management sub-plan will be coordinated with the contamination and hazardous materials sub-plan, which would include other measures to minimise potential impacts associated with encountering previously unidentified contamination, including an unexpected finds procedure and training for construction staff.

The Construction Environmental Management Plan would be prepared in consultation with relevant agencies, including the EPA.

Use of Certified Contaminated Land Consultants

Noted. The requirement for contamination reports to be prepared, or reviewed and approved, by certified consultants has been updated in the Construction Environmental Management Plan outline in Appendix C of this Submissions Report.

Sampling, Analysis, and Quality Plan

Noted. The requirement for the sampling, analysis, and quality plan and subsequent contaminated land reports to be prepared, or reviewed and approved, by certified consultants has been updated in mitigation measure SC5.

Contaminated land matters included in the Construction Environmental Management Plan

The requirement for the contamination and hazardous materials sub-plan to be prepared, or reviewed and approved, by certified consultants has been updated in the Construction Environmental Management Plan outline in Appendix C.

5.9 Transport for NSW

Transport for NSW provided advice in response to the public exhibition of the EIS, dated 28 September 2022. Consideration of the items raised in their advice is provided in the sections below.

5.9.1 Maritime requirements

Maritime requirements were raised in Appendix A of the Transport for NSW advice, and referred to chapter 4, chapter 9, and Appendix C of the EIS, as well as the EIS Technical Paper 1.

Issue

Transport for NSW noted it 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* (NSW) (Marine Safety Act). Transport for NSW noted the Marine Safety Act must be mentioned in the legislative requirements.

Transport for NSW also noted it is the relevant authority for approval of works on structures in, on, or over the bed of any waters under the *Ports and Maritime Administration Act 1995* (NSW) (Ports and Maritime Administration Act). Transport for NSW also noted the Ports and Maritime Administration Act must be mentioned in the legislative requirements.

Transport for NSW requested the Maritime Traffic Management Plan be submitted and approved a minimum of six weeks prior to commencing works in, on, or over navigable waters.

Transport for NSW clarified that the Murray River bridge in Albury is located in an existing 4-knot speed restriction zone and a 'Towing of Persons Prohibited' zone; therefore, no towing activities such as water skiing/tubing/wake boarding, etc. are permitted. Transport for NSW noted references to 'water ski school and users' may be removed.

Response

Transport for NSW's responsibility under the Marine Safety Act is noted.

Mitigation measure TT6 has been updated to specifically reference the Marine Safety Act and Transport for NSW and includes the preparation and implementation of a maritime traffic management plan (see Appendix B). New mitigation measure TT8 outlines the requirements for the preparation of the marine traffic management plan and specifically notes that it is to be prepared in accordance with the Ports and Maritime Administration Act.

Appendix C: Outline Construction Environmental Management Plan of this Submissions Report has been amended to reference the requirement for a maritime traffic management plan as part of the Traffic and transport management sub-plan.

The clarification of restrictions on towing activities on the Murray River is noted.

5.9.2 Traffic and transport (qualitative assessments)

ARTC's use of a qualitative assessment of traffic and transport was raised in Appendix A of the Transport for NSW advice and referred to chapter 9 of the EIS and the EIS Technical Paper 1.

Issue

Transport for NSW noted that the assessment failed to adequately assess the anticipated construction and operational impacts, and made detailed comment on the assumptions, method and models applied in the assessment. A general request was made to provide further information on how the qualitative assessment of traffic and transport issues was undertaken, including justification as to why a quantitative assessment was not undertaken.

These issues were further expanded in Appendix B of the Transport for NSW advice.

Response

As these issues were replicated and further detailed in Appendix B of the Transport for NSW advice, these matters have been responded to in section 5.9.31 to section 5.9.35 of the Submissions Report.

For the qualitative assessment approaches in the EIS Technical Paper 1, a qualitative assessment approach was undertaken for issues where limited information was available, direct impacts from the proposal were considered to be low, or where the mitigation approach includes a clear process for management of an impact during later stages of the proposal. Where relevant, qualitative assessments also included consideration of other quantitative assessments, such as road network performance. This approach is considered sufficient to determine the potential impact and mitigation approach where it has been adopted.

It is also noted that there was an error in section 3.1.5 of Technical Paper 1, which stated a qualitative assessment was undertaken for parking. A quantitative assessment of existing parking and impacts to parking spaces from the proposal was completed and is provided in section 5.1 to section 5.4 (construction) and section 6.5 (operation) in Technical Paper 1.

Additional assessment of traffic and transport, including the use of microsimulation models has been completed as part of the Preferred Infrastructure Report.

5.9.3 Traffic and transport (safety)

Traffic and transport safety was raised in Appendix A of the Transport for NSW advice and referred to chapter 9 of the EIS.

Issue

Transport for NSW noted the commitment under mitigation measure TT7 (now TT10) to undertake road safety audits and risk assessments prior to the commencement of construction where changes to the road network is required.

Transport for NSW requested that the road safety audit team include appropriately qualified Transport for NSW representatives independent of ARTC's project team for enhancement sites where changes to the road network are proposed.

Response

Additional assessments to evaluate and address safety issues raised during consultation and in submissions to minimise the potential safety impacts of the proposal have been completed as part of the Preferred Infrastructure Report. Section 6.1.2.4 of the Preferred Infrastructure Report discusses the analysis of heavy vehicle turn paths at intersections along the haulage routes. The assessment identified where turn paths for articulated heavy vehicles were not achieved, and potential, suitable mitigations options.

Mitigation measure TT7, (now TT10) has been amended to include participation of appropriately qualified personnel independent of the project team in the completion of road safety audits, and use of the Transport for NSW Austroads supplements in addition to the Austroads guidelines. Audit findings would be actioned before construction of the relevant infrastructure, where reasonable and feasible.

5.9.4 Traffic and transport (level crossings)

Level crossings were raised in Appendix A of the Transport for NSW advice and referred to chapter 6 and 9 of the EIS.

Issue

General

Transport for NSW noted level crossings are proposed at interfaces with state roads. Transport for NSW noted that there are significant safety risks associated with level crossings.

Transport for NSW advised it has consistently stated that all interfaces with state roads be grade-separated to provide the maximum safety to road users and eliminate delays created by level crossings.

Transport for NSW requested the inclusion of the Safe System Framework into considerations of level crossing safety.

Olympic Highway at Junee (LX607)

Transport for NSW noted the EIS states (pages 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 for NSW requested justification as to why LX607 Olympic Highway at Junee has not been considered for grade-separation as part of the proposal.

Response

General

Level crossings that are within the scope of the proposal only include those that are required to be modified to accommodate double-stacked freight trains, such as modification to accommodate track realignment. Consideration of the road–rail interface treatment at level crossings that are out of scope does not form part of the proposal.

ARTC will continue to work collaboratively with Transport for NSW to progress road–rail interface solutions during detailed design. In accordance with mitigation measure TT11, input would be sought from relevant stakeholders (such as local councils and Transport for NSW) prior to finalising the detailed design of those aspects of the

proposal that affect the operation of road and other transport infrastructure under the management of these stakeholders.

In addition, in accordance with new mitigation measure TT26, a public level crossing treatment report will be prepared to document the assessment and design process that has been undertaken for level crossings within the proposal scope. The report would be developed in consultation with Transport for NSW and the relevant councils. The report would provide an assessment of road risks consistent with the guideline *Establishing a Railway Crossing Safety Management Plan* (Roads and Traffic Authority, 2011).

Olympic Highway at Junee (LX 607)

Modifications to the current configuration of LX 607 Olympic Highway at Junee are not required to accommodate double-stacked freight trains and as such no works are proposed to this level crossing as a result of the proposal. As outlined in Appendix A of Technical Paper 1, the first step in determining the treatment of road–rail interfaces involves identifying all road–rail interfaces within a proposal site. As no works are required at this level crossing, it was not included in the proposal site or scope of the proposal and grade separation was not considered.

5.9.5 Traffic and transport (management)

Traffic and transport management was raised in Appendix A of the Transport for NSW advice and referred to chapter 9 and 27 of the EIS.

Issue

Transport for NSW queried how the construction traffic transport and access management plan is to be developed or implemented.

Transport for NSW requested that the conditions of approval require the construction traffic transport and access management plan be accepted by Transport for NSW prior to any works commencing.

Response

The request to accept the construction traffic transport and access management plan prior to work commencing is noted. Section 9.6.1 of the EIS states that 'Construction Traffic, Transport and Access Management Plans (CTTAMP) would be developed for each enhancement site as part of the TMP to provide detailed consideration of traffic management, parking, pedestrian diversions and consultation requirements'. Table C-1 of Appendix C: Outline Construction Environmental Management Plan of this Submissions Report specifies that the traffic and transport management sub-plan (of which the construction traffic transport and access management plan is a related strategy) must be prepared in consultation with Transport for NSW, relevant councils and public transport/bus operators.

The construction traffic transport and access management plan will address issues requiring management during construction, including coordination of concurrent activities of the proposal with other projects. This is reflected in an amendment to mitigation measure TT1.

5.9.6 Traffic and transport (track lowering)

Track lowering was raised in Appendix A of the Transport for NSW advice and referred to chapters 6 and 7 of the EIS.

Issue

Impacts to rail over bridges

Transport for NSW noted track lowering will impact the existing rail over bridges. Transport for NSW requested an assessment of the existing structure for drainage and location of new piles in the vicinity of the abutment.

Protection wall

Transport for NSW requested confirmation that the protection wall will conform to Australian Standards and commented that Figure 7.2 of the EIS does not show the protection wall at minimum depth. As per Australian Standard AS5100:2017 Bridge design, Part 1: Scope and general principles (Standards Australia, 2017), does not show how far the new piles are from the existing bridge abutment and does not accurately reflect the depth of track lowering required. Transport for NSW noted that AS5100 section 15.3.4 (e) specifies that the 'Protection Wall' shall extend a minimum of 1.2 m below ground level.

Management of overland flow

Transport for NSW requested 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.

Justification for track lowering solution at Pearson Street bridge and at Edmondson Street bridge

Transport for NSW requested justification for track lowering rather than bridge replacement at Pearson Street bridge enhancement site and at Edmondson Street bridge enhancement site.

Response

Impacts to rail over bridges

Track lowering is proposed at three enhancement sites: Riverina Highway bridge, Billy Hughes bridge and Pearson Street bridge. Drainage infrastructure is discussed in section 7.2.1 of the EIS. As stated in the EIS, existing track drainage within the enhancement sites would be adjusted to suit the new or revised track levels and address any drainage issues. This has included consideration of existing structures and the location of new piles where these occur.

Approvals for track lowering under Transport for NSW assets is expected to follow the Works Authorisation Deed process and where they are not Transport for NSW assets, the required processes of the asset owner would be followed. This process would include structural assessments of the existing asset to ensure detailed design is acceptable. Preliminary assessments have been undertaken to inform the viability of the EIS concept.

Protection wall

Noted. Figure 7.2 of the EIS is intended to show an indicative cross-section of track lowering and the presence of the protection walls, and is not intended to indicate specific measurements.

Update of this figure to show this detail is not proposed for inclusion in this Submissions Report as this detail is captured within the reference design, which has been subject to review by Transport for NSW.

AS5100 section 15.3.4 is relevant to the design of piers, which are not relevant to the scope for track lowering sites. The track lowering at each enhancement site includes deflections walls. These will be designed in accordance with AS5100 section 15.3.6 and developed in consultation with relevant stakeholders, including Transport for NSW.

As such, revision of this figure to show this detail is not warranted.

Management of overland flow

Track lowering is proposed at three enhancement sites. Drainage infrastructure is discussed in section 7.2.1 of the EIS. As stated in the EIS, existing track drainage within the enhancement sites would be adjusted to suit the new or revised track levels and address any drainage issues. This has included consideration of existing structures and the location of new piles where these occur.

A pumped drainage solution is proposed at one site—Riverina Highway bridge enhancement site. The pump would be owned and maintained by ARTC. The existing and proposed drainage details are described and assessed in Technical Paper 11. At this site, overland flow is presently captured in cess drains and traverses the rail corridor via three box culverts into Mudges Canal to the south of the highway overbridge. Under current conditions, minor overland flow occurs from flooding within The Scots School and overtops into the rail corridor. This overland flow travels south in the rail corridor, prior to overspilling and continuing via overland flow to Wilson Street, where it enters Council's piped drainage network.

The proposed track lowering does not extend to the location where the overland flow enters the rail corridor from The Scots School. To prevent potential upstream impacts to The Scots School, the proposal maintains the overland flow from the school entering into the rail corridor. Lowering of the track at the bridge would result in the collection of surface water at the lowest point to the south of the Riverina Highway bridge. To manage overland flow, a pumped drainage solution is proposed, with discharge to the Council drainage system in Wilson Street, as currently occurs. The capacity of the system has been designed to manage flows during a 1% AEP peak event, and includes a duty and standby pump arrangement. Refer to Technical Paper 11 for further discussion on the design capacity of these systems. Assessment of potential failure of the pumped drainage solution would be carried out during detailed design based on the final nominated capacity of the system.

As identified in Technical Paper 11 (Figure 4.14), the rail corridor in the vicinity of the Riverina Highway is affected by a PMF event with depths of over 1 m. During a PMF event, the pump and storage tank would be at capacity and the section of lowered track would be inundated, providing additional storage and as such would not change the extents of the PMF identified in the Bungambrawatha Creek, Lavington, South Albury and West Albury flood study (Albury City Council and Lyall & Associates, 2011). Water would be held in the rail corridor for longer as the lowered track would remain inundated when flood waters recede. Extraction of this water would be managed following these major events as to not impact downstream environments.

As outlined in the response to DPE—BCS, flood modelling at Riverina Highway bridge would be carried out during detailed design, based on the proposed operation of the storage and pump system, to confirm predicted compliance with the quantitative design limits for Inland Rail. The modelling would be undertaken in consultation with Albury City Council. This is reflected in the new mitigation measure HFWQ5.

At Billy Hughes bridge enhancement site, the proposal site is not impacted by flooding. Overland flows external to the rail corridor would be intercepted by cut-off drains and discharge into existing channels. A combination of cess

drains, spoon drains and subsurface drainage would be established to manage surface water captured along the lowered track, which would then be discharged via a drainage pipe, by gravity, to an existing culvert. As noted in Technical Paper 11, the change results in a minor increase in velocity and flood levels (afflux) at the outlet culvert; however, this impact was within the quantitative design limits for the proposal.

At the Pearson Street bridge enhancement site, the existing overland flows drain to adjacent open space, a culvert at chainage 523.315 km, or to Glenfield Drain, which passes beneath the proposal site via a culvert at chainage 523.560 km. The proposal site is not impacted by regional flooding associated with the Murrumbidgee River; however, impact from localised flooding does occur during a PMF event.

As noted in Technical Paper 11, at the south-western extent of the proposal, rail cess drains and ballast cage pits are proposed to collect and convey surface water runoff from the rail formation to the lowered track. Flows would then be transferred east via a reverse-graded pipe that passes below Pearson Street bridge and discharges into the Glenfield drain. The areas to the north-east of the Pearson Street bridge, including the existing cut-off drain, are managed by track cess drains and channels that discharge into the Glenfield drain by batter chutes.

To manage impacts from flooding, which currently overtop the rail line at the proposal, a bund would be provided at the top of the south-eastern cutting to provide the lowered track with flood immunity during a 1% AEP flood event. Changes in flooding due to the bund were concluded to be minor. At the request of Wagga Wagga City Council, a second bund is now proposed on the north-eastern cutting of the rail corridor and would generally have consistent dimensions with and be parallel to the southern bund. Refer to section 3.2 of the Preferred Infrastructure Report for further information on the proposed second bund.

The layout of the proposed drainage and flood mitigation at Pearson Street bridge enhancement site is shown in Figure 5.8 of Technical Paper 11.

Justification for track lowering solution at Pearson Street bridge and Edmondson Street bridge

Alternatives and proposal options are discussed in chapter 6 of the EIS. Potential treatments, including track lowering and bridge replacement, were considered during this phase against the key considerations outlined in Table 6.1 in chapter 6 of the EIS.

Track lowering was confirmed as preferred to bridge replacement at Pearson Street bridge during the options assessment completed at the concept design stage. Track lowering is generally simpler and more cost effective than bridge replacement and there were no major complexities at the enhancement site that warranted further investigation of options.

As outlined in section 6.3.3 of the EIS, track lowering at Edmondson Street bridge was considered; however, it was discounted in preference of bridge replacement, due to a number of considerations. In particular, the replacement of the bridge avoids impacts to Wagga Wagga Yard and Wagga Wagga Station, which would impact on the functionality of the station and passenger access to trains, along with negating the need for an extensive pumped drainage system. A hybrid option was considered where the track would be lowered as much as possible without pumped drainage, with the bridge modified to achieve clearances; however, this option did not provide any benefits compared to the option of replacing the bridge, and would have greatly influenced complexity and cost, with no certainty that bridge modifications would be structurally viable.

5.9.7 Traffic and transport (train volumes)

Train volumes were raised in Appendix A of the Transport for NSW advice and referred to chapter 7 and 9 of the EIS, the EIS Technical Paper 1 and Technical Paper 7.

Issue

Inconsistent train numbers

Transport for NSW noted the use of inconsistent language in the EIS and technical reports to describe the change in train volumes that would occur as a result of the proposal. Section 7.5.1 states up to 18 trains a day in 2025, while section 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.

Freight train forecasts

Transport for NSW noted no information is provided on how future train volumes have been determined. Transport for NSW also noted 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.

Transport for NSW requested additional information on the volume, daily profile, length, and type of trains required to meet the anticipated freight task over the forecast period.

Night-time freight train movements

Transport for NSW noted it is unclear how the proposal results in the daily number of freight trains on the mainline at night (10 pm to 7 am) increasing by only two freight trains (i.e. approx. 25 per cent increase) over 15 years from

proposal commencement, when the daytime number of freight trains is forecast to increase by approximately 100 per cent over the same period.

Transport for NSW noted, after accounting for length changes, the number of freight trains at night within the proposal (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. Transport for NSW requested review of night-time freight train numbers proposed for the proposal to ensure they accurately represent likely operating scenarios.

Assessment of an existing scenario

Transport for NSW noted 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.

Response

Inconsistent train numbers

Noted. There is a minor inconsistency in the wording of these sections. The train volumes are stated as totals; therefore, there would be a total of 18 freight trains per day in the early phase of Inland Rail's operation when all projects are completed (represented as 2025 in the EIS) and up to a total of 20 freight trains per day in 2040 (as the representative design year in the EIS) .

Further information on train numbers is provided in section 1.2.3.2 of this Submissions Report.

Freight train forecasts

Forecast train volumes were developed by ARTC based on tonnage predictions developed as part of the Business Case (ARTC, 2015). The predicted tonnage, and the resultant definition of trains operations required to transport this, is subject to many assumptions that will continue to develop and evolve as the proposal progresses. The EIS assumed a conservative forecast of train volumes (up to two trains per hour) to assess worst-case impacts from the proposal.

The request for additional information is noted. SEARs 2-K and 3-D do not request this detail, and the EIS is considered to have addressed the requirements of these SEARs. Train operations with the proposal are discussed in section 7.6.1 of the EIS, including type, volume (length), frequency (per day). Chapter 9 of the EIS details that up to two trains per hour are assumed to operate with the proposal. As detailed in section 7.6.1 of the EIS, train timetabling would be the responsibility of operators and is not able to be detailed in this stage of the proposal.

Night-time train movements

As noted, forecast train volumes were developed by ARTC based on tonnage predictions developed as part of the Business Case (ARTC, 2015). The forecast train volumes and tonnage predictions form a 'train plan', which provides an indicative basis of future train movements.

The actual train schedules will likely differ from what is assumed in ARTC's train plan as the high-level assessment and modelling of project-to-project journey time involved an approximation of the split of trains between the day and the night periods and does not factor in differing train dynamics, such as stopping to cross other trains (including passenger and Country Rail Network movements), crew changes and refuelling.

Train operating companies provided requirements for their services, including type, number of services, axle loads, train lengths, days of service and preferred times of entry and exit. Departure times will be guided by train operating companies, dependent on market requirements, which will evolve over the operating life of Inland Rail.

A conservative basis has therefore been adopted for night-time movements, using two-trains per hour as advised above (noting that this over-assumes train numbers).

Assessment of an existing scenario

The assessment considers the impacts at level crossings with and without the proposal in 2025 and 2040. An assessment of growth between now and 2025 is not attributed to Inland Rail and is out of scope.

5.9.8 Traffic and transport (intersections)

The issue of intersections was raised in Appendix A of the Transport for NSW advice and referred to chapter 7 and 9 of the EIS.

Issue

Proposed changes to LX605

Transport for NSW noted that the proposal indicates a storage lane on the Olympic Highway and restricted movements to left in, left out at LX605.

Transport for NSW noted that the road works must not decrease the level of safety and functionality of the public road network.

Transport for NSW also noted that the Olympic Highway is outside of the study area and ARTC's jurisdiction. Transport for NSW requested evidence of Transport for NSW's acceptance of a proposal to add a storage lane on Olympic Highway. Transport for NSW also requested further information regarding the location and design of required U-turn facilities and consultation undertaken with existing users of LX605 about the additional travel time and distance that will be required to access the private property.

Edmondson Street bridge enhancement site

Transport for NSW noted that the proposal would require the road surface to be raised 2.8 m above the existing road surface at Edmondson Street bridge. This height was noted as significant (more than 10 per cent) with the permanent 60 km/h speed zone.

Transport for NSW noted that 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.

Transport for NSW requested 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. Transport for NSW requested consideration be given to any additional width requirements on Edmondson Street bridge that may be required to allow for this upgrade.

Kemp Street bridge enhancement site

Transport for NSW noted that the proposal would require the road surface to be raised 2.6 m above the existing road surface at Kemp Street bridge. Transport for NSW also noted the adjoining intersection does not appear to be compliant with current road safety standards.

Transport for NSW also noted that raising Kemp Street bridge must not decrease the level of safety and functionality of the Olympic Highway (HW78), and the intersection design must meet current safety standards. Transport for NSW requested further information about the anticipated operational impacts to road safety on the adjoining Kemp Street road network and intersections (Olympic Highway/Seignior Street) and the proposed measures to mitigate impacts.

Response

Proposed changes to LX605

The design solution for LX605 as presented in the exhibited proposal focused on addressing the existing compliance issues, through activation of the crossing and mitigation of the short-stacking issue between the crossing and the Olympic Highway. The design solution proposed minimal modifications to the Olympic Highway by prohibiting right hand turns with a concrete median barrier and installing storage lanes adjacent to the Olympic Highway.

In response to concerns in submissions and agency advice received on the exhibited proposal, the design solution has been amended to address existing non-compliances by realigning the track and level crossing by up to 16 m south from the current level crossing location. This design solution maintains the ability for vehicles to perform both left- and right-hand turns into and out of the level crossing and does not decrease the safety and functionality of the road network.

The proposed changes to LX605 are discussed further in section 3.2 of the Preferred Infrastructure Report.

Edmondson Street bridge enhancement site

The height of the replacement Edmondson Street bridge has been designed to ensure the required vertical clearance of 7.1 m of the rail line is achieved for the operation of the proposal.

The scope of the proposal is to modify existing infrastructure to provide the required clearances for the operation of double-stacked freight trains, using a like-for-like replacement approach, where feasible. The vertical grade of the replacement Edmondson Street bridge was designed to avoid the requirement for adjustment or reconfiguration of adjacent intersections, including the Sturt Highway/Edward Street intersection, and achieve the desirable minimum sight distance requirements.

Consideration of potential future capacity issues at the intersection of Sturt Highway and Edmondson Street is not within the scope of the proposal. Similarly, widening of the Edmondson Street bridge to resolve traffic capacity issues does not form part of the proposal. The existing road reserve is constrained on both sides by private properties, utilities and the existing drainage system. The detailed design would consider treatments that can influence and improve safety of the adjacent intersections, such as through non-skid surfaces.

Kemp Street bridge enhancement site

The height of the Kemp Street bridge has been designed to ensure the required vertical clearance of 7.1 m of the rail line is achieved for the operation of the proposal.

With the steeper grades, a 50 km/h design speed for Kemp Street bridge has been adopted to achieve the desirable minimum sight distance requirements of *Austroads Guidelines Part 3: Geometric Design* (Austroads, 2021a). The design achieves the desirable criteria for the k-value (the horizontal distance along which a one percent change in grade occurs on the vertical curve) of Kemp Street to achieve a reaction time of 2 seconds for the 50 km/h design speed.

Minor modification to the intersection of Kemp Street and Olympic Highway/Seignior Street is required, with the intersection relocated further west to allow the raising of Kemp Street to achieve safety standards.

ARTC will continue to consult with Transport for NSW and Junee Shire Council during detailed design of the proposal.

5.9.9 Traffic and transport (active transport)

The issue of active transport was raised in Appendix A of the Transport for NSW advice and referred to chapter 9 of the EIS, and the EIS Technical Paper 1 and Technical Paper 4.

Issue

Disruption to pedestrians during bridge closures

Transport for NSW noted pedestrian routes will be disrupted during construction at several sites, and the requirement to understand the needs of the Cassidy Parade pedestrian bridge users in Wagga Wagga. Transport for NSW also noted that a 2-km pedestrian diversion for six months may be considered unacceptable to users of this infrastructure.

Transport for NSW requested further consideration of alternative access arrangements during the closure/replacement of Cassidy Parade pedestrian bridge.

Bridge gradients and Disability Discrimination Act compliance

Transport for NSW noted 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 at Edmondson Street. Transport for NSW also noted pedestrian routes at Edmondson Street and Kemp Street do not appear to be DDA-compliant.

Transport for NSW requested clarification on if all new pedestrian access will be DDA-compliant, and consideration of the additional grade in the context of the relevant standards and guidelines, and potential mitigation measures.

Active transport links in Wagga Wagga

Transport for NSW referred to the *Wagga Wagga Transport Plan* (Transport for NSW, 2022a). Transport for NSW requested it be included in consultation related to integrating active transport links to align with the *Wagga Wagga Active Travel Plan* (Wagga Wagga City Council, 2016b) and *Wagga Wagga Transport Plan* (Transport for NSW 2022a) under mitigation measure TT16.

Response

Disruption to pedestrians during bridge closures

The impacts to pedestrian routes would occur during construction while bridges are demolished and replaced. The construction schedule has been staged to ensure one bridge remains open at all times, to enable pedestrians and cyclists to be detoured to at least one of the bridges during construction works.

Additional analysis of active travel movements at pedestrian bridges in Wagga Wagga and Junee is provided in section 6.1 of the Preferred Infrastructure Report.

Due to spatial constraints and structural requirements for temporary structures above an active rail corridor (which are similar to those required for a permanent bridge), the construction of temporary pedestrian bridge structures was not progressed as it would increase the construction time, costs, the proposal footprint and impacts on adjacent occupiers.

ARTC has further investigated the construction schedule at Junee and has committed to opening of the new, separate pedestrian bridge (refer to section 3.2.2.1 of the Preferred Infrastructure Report) prior to closure of the Kemp Street bridge.

ARTC has committed to further explore opportunities to reduce the duration of concurrent bridge closures during detailed design, in consultation with the impacted stakeholders. Mitigation measure TT12 (previously TT8) has been updated to reflect this (refer to Appendix B).

Bridge gradients and DDA compliance

To address stakeholder feedback on the need for accessible pedestrian access on the road bridges, the designs at Edmondson Street and Kemp Street bridges have been amended to be compliant with requirements for disability access. A new, separate pedestrian bridge structure is proposed on the eastern side of the Edmondson Street bridge and on the northern side of the Kemp Street bridge which would provide DDA-compliant access.

The design of pedestrian bridges is discussed further in section 3.2.1.1 of the Preferred Infrastructure Report.

Active transport links in Wagga Wagga

As detailed in section 3.2.1.1 of the Preferred Infrastructure Report, the design of Cassidy Parade pedestrian bridge has been changed to align with the proposed cycle path network of the *Wagga Wagga Active Travel Plan*. As this, along with the provision of DDA-compliant access at Edmondson Street and Kemp Street bridges, has fulfilled the intent of mitigation measure TT16, the measure has been deleted.

5.9.10 Traffic and transport (public transport)

The issue of public transport was raised in Appendix A of the Transport for NSW advice and referred to chapters 1 and 9 of the EIS.

Issue

Impacts to parking at Albury Station

Transport for NSW noted that there will be impacts to Albury Station parking, which may impact the distance to the station for alternative parking. Transport for NSW noted there is no provision for temporary staff parking at Albury Station.

Transport for NSW requested confirmation that adequate staff parking will be provided for during construction at Albury Station.

Pedestrian impacts at major train stations

Transport for NSW noted that there are pedestrian impacts at all major stations.

Impacts to coach services

Transport for NSW requested further information on diversions to discuss with coach operators to allow development of plans to eliminate/minimise customer impacts.

Impacts to rail yards used by Transport for NSW

Transport for NSW noted that the EIS is unclear on the operational impacts that construction of the proposal will have at identified yards used by Transport for NSW (NSW Trainlink). Transport for NSW requested further information on the proposal to understand if concurrent Transport for NSW operational activities will be affected. Transport for NSW noted the importance of this information, so the proposal can design controls to maintain or enhance Transport for NSW operational activities, i.e. tanking, decanting, access for direct to loco refuelling, etc.

Response

Impacts to parking at Albury Station

Public parking near Albury Station, on Smollett Street and Railway Place, would be impacted during construction of the proposal, including a temporary loss of 14 designated spaces in the station area and 13 informal spaces that are within a compound for Transport for NSW station workers, for a period of up to eight months. A total of 114 designated parking spaces would remain available within the Albury Station carpark. Review of surrounding streets, including Young Street which contains parking about 200 m from Albury Station, indicates there is generally parking available to accommodate the unavailability of 27 spaces. As most local roads in the area permit kerbside parking, there is considered to be sufficient capacity to absorb the temporary loss of parking for customers and staff. Changes to the Albury Station pedestrian bridge design has resulted in a potential permanent loss of up to six staff parking spaces (refer to section 3.2 of the Preferred Infrastructure Report), in addition to the two public parking spaces identified in the EIS.

A new mitigation measure has been added (TT21), which will require that replacement parking of up to 13 spaces for Transport for NSW station workers will be provided in the vicinity of the station during construction, for the period when the existing Transport for NSW parking compound is unavailable for use due to the construction of the Albury Station pedestrian bridge. The location of the replacement parking will be refined in consultation with Transport for NSW during detailed design and construction planning. A new mitigation measure (TT22) has also been included to manage construction worker travel and parking in order to avoid exacerbating impacts at Albury Station and at other enhancement sites in Wagga Wagga and Junee. This mitigation measure also requires ongoing engagement with Transport for NSW to investigate opportunities to ameliorate residual permanent impacts to parking.

Pedestrian impacts at major train stations

Noted. As stated in the EIS, pedestrian impacts are predicted at Wagga Wagga Station and Albury Station as a direct result of the pedestrian bridges being unavailable for use during their replacement. At Wagga Wagga, the construction schedule has been staged to ensure one bridge remains open at all times to enable pedestrians and cyclists to be detoured to at least one of the bridges during construction works (refer to section 3.2 of the Preferred Infrastructure Report). At Junee, station works would be short term and associated with the removal of an internal pedestrian bridge, which is not operational. Pedestrian access to Junee Station would not be disrupted.

Consistent with mitigation measure TT17 (previously TT12) the construction traffic transport and access management plan will include measures to advise pedestrians of changes to routes and alternative points of access. In association with the communication plan, early warning will be given and general community awareness will be maintained.

Impacts to coach services

Anticipated detours for vehicles, pedestrians and cyclists at Albury, Wagga Wagga and Junee are illustrated in Figures 8-15 and 8-18 of the EIS. Detours would be confirmed during the detailed design process when the construction contractor is appointed, and would be refined in consultation with Transport for NSW and other stakeholders.

As detailed in Appendix F: Engagement report of the EIS, ARTC held meetings with Busabout Wagga Wagga, Makeham's Coach and Bus Service, Allen's Coaches Wagga Wagga and Junee Buses in September 2021 to discuss the proposed detours and potential impacts to bus stops. Mitigation measure TT3 (previously TT2) identifies the commitment for further engagement with Transport for NSW and bus operators during detailed design of the proposal, to confirm impacts to bus routes and bus stops during construction, including for effects on school bus services. Mitigation measure TT17 also requires communication with relevant stakeholders (including Transport for NSW and bus operators) on road diversions and required wayfinding.

Impacts to rail yards used by Transport for NSW

Potential disruption to timetabled services would be minimised through co-ordination of construction planning and the daily ARTC train timetable. A new mitigation measure TT13 has been included requiring that consultation will be carried out with Transport for NSW to minimise potential disruption to operational rail activities carried out by Transport for NSW in rail yards used and to Transport for NSW non-timetabled train services.

5.9.11 Traffic and transport (construction)

The issue of construction was raised in Appendix A of the Transport for NSW advice and referred to chapters 7, 8 and 9 of the EIS, as well as the EIS Technical Paper 1.

Issue

Rail possession durations

Transport for NSW noted that 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 EIS Technical Paper 1, respectively. Transport for NSW noted 72-hour possessions are not typical on the Main South Line but are, however, required by the proposal. Transport for NSW noted that the current possession windows are 60 hours, not 72 hours as proposed. Transport for NSW requested further detailed information around track possession and track lowering prior to construction commencement, with ARTC to confirm application for 72-hour track possession on the Interstate Network.

Traffic management during work at Edmondson Street bridge enhancement site

Transport for NSW noted that there are no details of traffic management for displaced vehicles and residents at Erin Street, Railway Street and Edmondson Street in Wagga Wagga. Transport for NSW requested further information on traffic management in Erin Street, Railway Street and Edmondson Street in Wagga Wagga.

Staging at Edmondson Street and Kemp Street bridge enhancement sites

Transport for NSW noted that it is unclear how the staged replacement of Edmondson Street and Kemp Street road bridges (and associated tie-in works) will be managed to minimise traffic and community impacts. Transport for NSW requested staging plans that show how ARTC will minimise traffic and community impacts over the extended construction period.

Response

Rail possession durations

The EIS Technical Paper 1 incorrectly identified the duration of possessions as full three-day possessions (or 72-hour possessions). This error has not impacted the assessment or conclusions of the assessment.

Track possessions provide an opportunity to undertake extensive work on the rail corridor without the risk of train movements. Under current arrangements, 60-hour rail possessions are scheduled twice per year (March and September, typically) and would still occur without the construction of the proposal. Due to the large extent of work required, consideration is being given to seeking additional possessions up to 60 hours. Final staging of works and detailed possession planning would occur during detailed design planning. Detailed rail possession planning would be documented in the construction environmental management plan, which would be prepared in consultation with Transport for NSW. Refer to section 8.3 and section 8.4.1 of the EIS for further detail.

Planning is carried out well in advance for 60-hour rail possessions and requires an extensive notice period to inform affected communities, engage relevant stakeholders, and requires overall approval by the ARTC business. Changes do occur due to other events and incidents, or weather. Accordingly, it is critical to note that adequate advance notice is available to inform the community of planned possessions, and the associated durations of construction work. This would be addressed through the communication plan and the various sub-plans to the construction environmental management plan.

Traffic management during work at Edmondson Street bridge enhancement site

The EIS identifies that on-street parking would be displaced along Erin Street (two parking spaces for nine months) and Little Best Street (informal parking on the eastern side and western side of the street from Donnelly Avenue to Edmondson Street for nine months). Parking along Edmondson Street within the enhancement site is predominantly restricted, as such the EIS identified that no impacts to parking would occur. Therefore, it is not proposed to provide replacement parking, noting that residential properties along these streets have off-street parking. Property access would be maintained for the duration of the construction for other enhancement sites in the Wagga Wagga precinct.

Any changes to access arrangements would need to be undertaken in consultation with the relevant stakeholders and in line with the traffic and transport management sub-plan. The requirement for engagement with impacted property owners prior to and during construction is included in mitigation measures TT17 (previously TT12) and TT19 (previously TT14).

Traffic management on Edmondson Street (to manage school drop-off areas) and Little Best Street is required and would be detailed in the traffic and transport management sub-plan.

On-street parking on Railway Street would be impacted by the new temporary access to the construction compound. Impacts to rear access to one Erin Street property via Railway Street would occur during utility adjustments; however, access to the property would be managed in consultation with the property owner.

The additional construction traffic impact assessment completed for Wagga Wagga is presented in section 6.1 of the Preferred Infrastructure Report. This has included use of microsimulation models and the testing of possible mitigation measures to manage impacts on the road network during the closure of Edmondson Street bridge. Additional mitigation measures identified through these assessments have been identified in the new mitigation measure TT2 and would be implemented in combination the mitigation measures identified in the EIS.

Staging at Edmondson Street and Kemp Street bridge enhancement sites

The sequencing of the construction of bridges was considered during the construction program, with respect to impacts to transport and amenity issues from construction, and the overarching program for Inland Rail. Part of the work occurs within or very close to the rail corridor, which requires track occupation where train movements are temporarily stopped or reduced to ensure safety for construction workers. Opportunities to use track work authorisations in addition to scheduled major rail possessions have been applied in the construction program.

The sequencing of the bridge works at Wagga Wagga was revised to ensure that pedestrians can be detoured to at least one of the three bridges during construction, to minimise impacts to connectivity, while still meeting the schedule requirements of the Inland Rail program and minimising duration of construction in this area.

ARTC has further investigated the construction schedule at Junee to confirm opening of the pedestrian bridge (refer to section 3.2.2.2 of the Preferred Infrastructure Report) prior to closure of the Kemp Street bridge.

As detailed in section 8.8.2 of the EIS, the duration of bridge closures, staging of the works and the required detours would be further refined during detailed design in consultation with Transport for NSW and other relevant stakeholders. Detailed plans for tie-in works would also be provided to Transport for NSW where this interacts with state-controlled roads when seeking the required approvals under Section 138 of the *Roads Act 1993* (NSW). Mitigation measure TT12 (previously TT8) also includes a commitment to further planning to account for continued active transport connectivity.

5.9.12 Traffic and transport (consultation)

The issue of consultation was raised in Appendix A of the Transport for NSW advice and referred to chapters 7, 8 and 9 of the EIS, as well as the EIS Technical Paper 1.

Issue

Response to matters raised by Transport for NSW during design and EIS development

Transport for NSW queried the adequacy of the EIS in addressing SEARs 4-2, 'The Proponent must document the consultation process and demonstrate how the project has responded to the inputs received'.

Transport for NSW noted it had previously raised several key issues with respect to the proposal's design and features and its potential impacts on existing transport, 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. Transport for NSW queried if the EIS adequately outlines how the proposal responds to the issues raised by Transport for NSW during the proposal's design and development of the EIS.

Transport for NSW requested additional information to identify the key issues raised and demonstrate how the proposal has responded to the inputs so far received from Transport for NSW.

Engagement with community and key stakeholders on bridge closures

Transport for NSW noted that 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. Transport for NSW recommended additional 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.

Response

Response to matters raised by Transport for NSW during design and EIS development

Table 5-1 outlines the key issues raised by Transport for NSW during the design and EIS development and how ARTC responded to them.

Further consultation has been completed following exhibition of the EIS, this is outlined in section 3.4 of this Submissions Report and chapter 5 of the Preferred Infrastructure Report.

TABLE 5-1: KEY ISSUES RAISED BY TRANSPORT FOR NSW AND HOW ARTC RESPONDED TO THEM

Key issues raised by Transport for NSW	How ARTC responded to key issues raised by Transport for NSW
The grades of the Kemp Street and Edmondson Street bridges do not provide DDA-compliant pedestrian access	The scope of the proposal is to modify existing infrastructure to provide the required clearances for the operation of double-stacked freight trains, using a like-for-like replacement approach where feasible. The existing road bridges do not provide DDA-compliant pedestrian access and this could not be achieved in the replacement road bridge without requiring a bigger footprint, adjustments to adjacent intersections and property acquisition. ARTC committed to providing DDA-compliant pedestrian access at the Kemp Street and Edmondson Street bridges in mitigation measure in the EIS. Since then, ARTC has developed concept designs for separate pedestrian bridge structures that provide DDA-compliant pedestrian access without requiring substantial changes to the road bridges. Further information on pedestrian bridge structures is provided in section 3.2.1.1 of the Preferred Infrastructure Report.
The grades of Kemp Street and Edmondson Street bridges will have adverse impacts on the road operation and posted speed limit	Section 5.9.8 outlines the design approach at both Edmondson Street and Kemp Street bridges with regard to the posted speed limit. To achieve the required vertical clearance for double-stacked freight trains, the height of the bridge and therefore road grades must increase. Changes to gradients and speeds would require approval by the road authority. Commercial agreements regarding Wagga Wagga City Council assets or assets that are to be transferred to Wagga Wagga City Council have been negotiated separately between ARTC and Wagga Wagga City Council through an interface agreement. As outlined in new mitigation measure TT11, ARTC will consult with relevant stakeholders, such as local councils and Transport for NSW, prior to finalising the detailed design of those aspects of the proposal that affect the operation of road and other transport infrastructure under the management of these stakeholders.
The Kemp Street and Seignior Street intersection should be suitable for heavy vehicles, and potential future B-double vehicles	The existing Kemp Street bridge does not cater for heavy vehicles and is not part of a designated heavy vehicle network. ARTC revised the design of the bridge deck to cater for potential future B-double vehicles. Modification of the approaches to the bridge to cater for potential future B-double vehicles is out of scope for the proposal and is the responsibility of the relevant road authorities.

Key issues raised by Transport for NSW	How ARTC responded to key issues raised by Transport for NSW
Pedestrian bridge detour impacts need to be staged to minimise cumulative impact and the duration of detour reduced	In response to feedback received from stakeholders, including Transport for NSW, ARTC adjusted the construction staging so that the Edmondson Street pedestrian bridge is open before the closure of the Wagga Wagga Station pedestrian bridge and Cassidy Parade pedestrian bridge and Edmondson Street bridge. ARTC has further investigated the construction schedule at Junee and has confirmed that the now separate pedestrian bridge (refer to section 3.2.2.2 of the Preferred Infrastructure Report) would be opened prior to closure of the Kemp Street bridge. As part of mitigation measures TT12 and TT17, ARTC will further plan the construction staging to account for continued active transport connectivity during construction and will regularly consult with relevant stakeholders and the community regarding pedestrian bridge closures.
Vehicle detours need to undergo safety assessments and minimise impacts on the road network and sensitive receivers	There are limited alternative vehicle detour routes in Wagga Wagga and Junee that would be suitable that link to each side of the closed road/bridge, have suitable road classifications and provide the shortest available route. ARTC has committed to numerous mitigation measures in the EIS around further consultation with Transport for NSW (and other affected stakeholders) on the detour routes, communication with the community and notification regarding detour routes and appropriate signage to advise road users of construction activities and road closures. Additional traffic and transport assessment completed as part of the Preferred Infrastructure Report has identified a number of mitigations to improve the operation of the road network during the closure of road bridges in Wagga Wagga and Junee. This is discussed in section 6.1 of the Preferred Infrastructure Report. As per mitigation measure TT1, consideration will also be given to the temporary changing of signal phasing at intersections along the diversion routes in Wagga Wagga, in consultation with Transport for NSW. A new mitigation measure TT2 sets out approaches to improve traffic efficiency at Wagga Wagga and Junee during construction measures, which have been informed by further traffic assessments provided in the Preferred Infrastructure Report. ARTC will investigate further mitigations and will discuss the suitability of the mitigations with Transport for NSW and the relevant council during detailed design.
The drainage design of roads is not adequately described in the reference design	Transport for NSW's comments regarding drainage have been noted and responded to where information has been available during the development of the reference design. ARTC will confirm the final drainage requirements via further drainage assessment in the detailed design stage and will seek acceptance from Transport for NSW through the standard Transport for NSW Works Authorisation Deed process.
The proposal should not decrease the efficiency and safety of the state road network	Transport for NSW's position has been noted and where the proposal requires modification of the state or local road network, the design has aimed to maintain or improve the existing safety and functionality. ARTC will confirm the final design for works on, or that may impact, Transport for NSW assets in the detailed design stage and will seek acceptance from Transport for NSW through the standard Transport for NSW Works Authorisation Deed process.

Engagement with community and key stakeholders on bridge closures

Section 6.4.1 of the EIS details the construction methodology options considered for the road bridge replacements, including different staging options and offline replacement. The alternative construction methodologies to online bridge replacement with temporary road closure were not feasible for reasons such as no having no substantial time saving, increased cost and requirement for private property acquisition. As such, consultation with the community and key stakeholders included the temporary closure of Edmondson Street bridge and Kemp Street bridge and associated detours as required as part of the proposal.

5.9.13 Traffic and transport (mitigation)

The issue of mitigation was raised in Appendix A of the Transport for NSW advice and referred to chapter 27 of the EIS.

Issue

Road dilapidation

Transport for NSW noted mitigation measures TT8 and TT14 appear to focus on potential impacts within the Junee precinct only. Transport for NSW requested mitigation measures TT8 and TT14 be extended to include all precincts and enhancement sites.

Mitigation of construction impacts

Transport for NSW noted that there is limited consideration of temporary changes to facilitate improved traffic efficiency during construction of the proposal. Transport for NSW requested 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.

Transport for NSW noted mitigation measures must include strategies to encourage redistribution of traffic away from work sites and parts of the network that will have to carry extra traffic. Transport for NSW noted that this may include measures such as a variable message sign strategy, awareness campaigns and information sessions, park-and-ride facilities and additional public transport services.

Response

Road dilapidation

Mitigation measure TT12 (previously TT8) was included to address a specific impact from the proposal that was identified at Joffre Street and Pretoria Street at Junee, as works would be required to make this road suitable for the temporary diversion of the Olympic Highway. Mitigation measure TT19 (previously TT14) is applicable to all enhancement sites with specific reference to Wagga Wagga and Junee due to greater impacts predicted. Expansion of mitigation for Junee in TT12 (previously TT8) and TT19 (previously TT14) to all enhancement sites is not required.

Mitigation of construction impacts

The directed construction traffic impact assessments for Wagga Wagga and Junee enhancement sites is presented in section 6.1 of the Preferred Infrastructure Report. This has included use of microsimulation models and the testing of possible mitigation measures to manage impacts on the road network during the closure of Edmondson and Kemp Street bridges. Additional mitigation measures identified through these assessments have been identified in the new mitigation measure TT2 and would be implemented in combination the mitigation measures identified in the EIS.

Elsewhere, SIDRA and link assessments were undertaken on roads along construction routes where the EIS had used data collected prior to January 2020 and where certain criteria was met based on the estimated background peak or daily traffic volumes and volume of construction vehicles. This assessment found that the mitigation measures identified in the EIS are sufficient to address traffic impacts around the enhancement sites outside Junee and Wagga Wagga.

Refer to section 6.1 of the Preferred Infrastructure Report for detail on the directed assessments and outcomes of the additional assessment.

5.9.14 Aboriginal heritage

The issue of Aboriginal heritage was raised in Appendix A of the Transport for NSW advice and referred to chapters 3 and 10 of the EIS.

Issue

Acknowledgement and/or engagement of relevant stakeholders

Transport for NSW noted that the proposal extends into Victoria; but the Waywurru Traditional Owners are not acknowledged in the EIS. Transport for NSW requested ARTC to acknowledge the Waywurru [Waveroo] people as the Traditional Owners of the lands south of the Murray River.

Transport for NSW noted some Registered Aboriginal Parties do not appear to be Traditional Owners of the locations within the proposal site. Transport for NSW requested that further site surveys and engagement of Registered Aboriginal Parties include knowledge holders from Country.

Cultural awareness

To improve outcomes for cultural heritage, Transport for NSW noted that there needs to be a mechanism to ensure all workers onsite understand how to care for Aboriginal heritage and what to do if unexpected finds occur.

Transport for NSW requested consideration of 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). Transport for NSW requested that cultural awareness is implemented for staff, and tools developed to ensure all staff have knowledge and understanding of the importance of caring for Aboriginal heritage.

Response

Acknowledgement and/or engagement of relevant stakeholders

The request to acknowledge the Waywurru people as the Traditional Owners of the lands south of the Murray River is noted; however, the proposal does not extend into Victoria, as the proposal site boundary terminates on the Murray River bridge prior to the Victorian land side. Further, a request for registration of Registered Aboriginal Parties for the proposal was placed in *The Border Mail*, which is distributed within the Albury–Wodonga area. This request was made to Aboriginal people with an interest in the study area to register as stakeholders to be involved in further consultation completed as part of the assessment.

The processes for identifying Registered Aboriginal Parties was conducted with reference to the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010c) and in consultation with Heritage NSW, as well as in response to location-specific requirements.

Cultural awareness

The comment regarding improving outcomes for cultural heritage is noted. The requirement for cultural and historic heritage awareness training and the implementation of an unexpected finds protocol is reflected in mitigation measure AH3 and AH4, respectively.

This training would be carried out for all personnel working on the proposal. The training would provide information on known heritage site and places, along with specific requirements to avoid impacts and the heritage unexpected finds protocol. The tools used for this training would be developed and detailed in Appendix C: Outline Construction Environmental Management Plan of this Submissions Report.

5.9.15 Land use and property

Land use and property was raised in Appendix A of the Transport for NSW advice and referred to chapter 12 of the EIS.

Issue

Transport for NSW noted a number of property acts are missing from the EIS. Transport for NSW noted that where it is necessary 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).

Transport for NSW requested inclusion of additional relevant acts and policy documents, including NSW Government Property Acquisition Standards, Transport for NSW Property Acquisition Policy, *Transport Administration Act 1988* (NSW), *Roads Act 1993* (NSW), *Public Works and Procurement Act 1912* (NSW) and the Transport for NSW Property Acquisition Process (December 2021).

Response

The EIS refers to the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW), which is the overarching legislation relevant to property acquisition. It is understood that Transport for NSW, as the acquiring authority, would follow all applicable statutory obligations, and all policies and guidelines as appropriate, in carrying out acquisitions under the Act.

5.9.16 Social impacts (Aboriginal community)

Social impacts were raised in Appendix A of the Transport for NSW advice and referred to chapter 13 of the EIS and the EIS Technical Paper 4.

Issue

Transport for NSW noted that there is a lack of detail about how to maximise outcomes for the Aboriginal community, and evidence of shared decision making with local Aboriginal communities.

Transport for NSW also noted that the NSW Government policy under Closing the Gap is to increase shared decision making with Aboriginal communities, peak bodies, local decision makers, and Aboriginal businesses.

Transport for NSW requested consultation on Aboriginal cultural heritage assessments be uplifted to meaningful engagement on the whole proposal and shared decision making consistent with NSW Government policy under Closing the Gap.

Transport for NSW noted parts of the Social Impact Management Plan covering 'way of life', 'health and wellbeing' and 'social impact' need to adequately capture the impact of this proposal on local Aboriginal people. Transport for NSW requested further assessment be completed to understand the impacts on local Aboriginal communities, and a shared decision-making model be adopted.

Transport for NSW noted that the Local and Indigenous Industry Participation Plan for this proposal should be co-designed with NSW Government, Local Decision Making, peak bodies and businesses in a holistic way that also considers cultural heritage values and other impacts on the broader Aboriginal community.

Response

The comment regarding maximising outcomes for Aboriginal communities is noted. ARTC's commitment to Indigenous participation is outlined in the *Inland Rail Indigenous Participation Plan (2020)* and commitments made in the EIS.

Section 7.1.1.1 of the EIS Technical Paper 4 states that desired outcomes for Indigenous participation were raised during consultation, and that ARTC has established policies and procedures to achieve mandatory minimum Indigenous participation requirements. Mitigation measures SI1, SI3, and SI7 include measures to maximise outcomes for the Indigenous community during construction. This includes the development of a local and Indigenous industry plan.

ARTC will continue to use best endeavours to engage with identified parties to further understand cultural connection and how Country can be included into the proposal. As an enhancement project, there is limited new permanent infrastructure required outside of the rail corridor, with most work locations situated in already developed areas. This results in limited opportunities to incorporate connection to Country principles in the design. Replacement of built structures would need to reflect the non-Aboriginal heritage values of the area to be integrated into the built heritage landscape. The available opportunities are those outlined in Table 10.4 of the EIS.

During operation, ARTC will explore with the local community, including relevant Indigenous groups, ways to enhance aesthetic value and community cohesion across the social locality through a community investment program, which may include the maintenance or improvement of green areas, which is reflected in mitigation measure SI8.

ARTC clarifies that Appendix E of the EIS Technical Paper 4 is a preliminary social impact management plan that outlines the monitoring framework for each management plan (refer to section 10.1 of the EIS Technical Paper 4), including the desired outcome, indicators, performance targets, method of tracking, frequency of monitoring and responsibility. ARTC will work with the principal contractor to further refine the targets as part of the preparation of the final social impact management plan.

Management plans that include specific measures to manage impacts and enhance benefits for Indigenous people, including the workforce management plan, the local and Indigenous industry participation plan, the community wellbeing plan and the operations communication and engagement plan (table 10.1, 10.2, 10.4 and 10.5 of the EIS Technical Paper 4). Impacts to Indigenous people in terms of 'way of life, 'health and wellbeing' and 'social impact' have been considered in sections 7, 8 and 9 of the EIS Technical Paper 4, with the management plans prescribing requirements to manage impacts and enhance benefits. The preliminary social impact management plan provides a monitoring framework to evaluate the effectiveness of the management plans.

5.9.17 Social impacts (disability)

The issue of disability was raised in Appendix A of the Transport for NSW advice and referred to chapter 13 of the EIS and the EIS Technical Paper 4.

Issue

Transport for NSW noted that the social impact management plan does not include employment and training targets for people with disability. Additionally, Transport for NSW noted that the targeting of local businesses should also include social procurement for enterprises that employ people with disability. Transport for NSW requested the inclusion of employment roles for people with disability.

Response

Transport for NSW's comments regarding the targets presented in the preliminary social impact management plan are noted. The final social impact management plan will be developed in the next phase of the proposal and will consider the appropriateness of including the suggested targets.

5.9.18 Social impacts (procurement)

The issue of procurement was raised in Appendix A of the Transport for NSW advice and referred to chapter 13 of the EIS and the EIS Technical Paper 4.

Issue

Local business procurement

Transport for NSW noted the engagement of local suppliers and businesses should have target measures as a percentage. Transport for NSW requested that target values are captured for provision of supplies and services from local businesses.

Cost and benefit analysis

Transport for NSW noted that there should be an economic appraisal methodology to demonstrate how benefits are being optimised and costs minimised for these local communities.

Mitigation measures

Transport for NSW requested a strategy to maximise social outcomes from the proposal, in addition to mitigating and managing social issues.

Transport for NSW noted that mitigation measure SI3 states that a local and Indigenous industry participation plan will be implemented. Transport requested that it is engaged early to ensure that social procurement and Aboriginal procurement targets are consistent with, or exceed, NSW Government targets, and reflect local community priorities.

Response

Local business procurement

The preliminary social impact management plan, which is in Appendix E of the EIS Technical Paper 4 has a target of at least two contracts with local businesses from different LGAs during construction (noting the proposal site includes the Albury, Lockhart, Greater Hume, Wagga Wagga and Junee LGAs).

As stated in mitigation measure SI11, the final social impact management plan will be prepared to manage the implementation of the proposed socio-economic mitigation measures, and to detail the specific management actions and targets that would be developed in response to these measures. The final social impact management plan will define specific actions, roles and responsibilities, and a monitoring, reporting and adaptive management framework for construction. Targets will be developed with reference to local market conditions.

Cost–benefit analysis

Noted. A large proportion of the benefits of the Inland Rail program stem from improving the connection between regional producers and markets, through both domestic markets in cities and international markets through ports. As such, an incremental cost–benefit analysis (the standard technique for economic appraisal) approach assessing each link of the Inland Rail program individually, and in isolation of the whole program, will not capture the full impact that is expected to be delivered upon completion of the entire Melbourne to Brisbane connection. An evaluation of the likely benefits (economic benefits assessment) of the discrete proposal has been carried out in the EIS Technical Paper 5.

Mitigation measures

The preliminary social impact management plan is included in the EIS Technical Paper 4 and outlines how beneficial social outcomes such as training, employment and procurement will be planned for and facilitated during the next phases of the proposal. ARTC will continue to work with relevant stakeholders in the development of the final social impact management plan, and implementation of the proposed actions.

5.9.19 Noise

The issue of noise was raised in Appendix A of the Transport for NSW advice and made reference to chapter 15 of the EIS, the EIS Technical Paper 6 and Technical Paper 7.

Issue

Operational rail noise impacts at night-time

Transport for NSW noted residential concerns due to proposed additional weight, frequency and length of the trains. Transport for NSW noted night-time noise impacts on the community must be a key consideration for freight operations that are typically 24/7. Transport for NSW requested review of night-time train numbers and confirmation of indicative changes to noise levels as appropriate.

Operational road noise impacts

Transport for NSW requested consideration of low-noise pavement to mitigate operational road noise close to residential areas.

Construction noise impacts

Transport for NSW noted high levels of construction noise around Edmondson Street, particularly during the night.

Response

Operational noise impacts at night-time

The operational rail noise assessment (EIS Technical Paper 7) is based on forecast train volumes developed by ARTC considering tonnage predictions in the Business Case (ARTC, 2015). The EIS assumed a conservative forecast of train volumes (up to two trains per hour) to assess worst-case impacts from the proposal.

Refer to section 5.9.7 of this Submissions Report about the breakdown of freight train numbers over the day and night period.

ARTC has responded to community submissions about noise in section 4.1.11 of this Submissions Report.

An updated Operational Noise and Vibration Assessment has been prepared as part of the Preferred Infrastructure Report, including assessment of the full length of the rail corridor between Albury and Illabo. The assessment has identified a number of reasonable and feasible mitigation measures where predicted noise levels were above the assessment criteria. A summary of the assessment is provided in section 6.2 of the Preferred Infrastructure Report.

ARTC will continue to review and update the operational rail noise assessment to provide mitigation measures with the design.

Operational road noise impacts

The assessment of road noise during operation of the proposal did not identify exceedances of the relevant criteria (refer to EIS Technical Paper 6). As such, further consideration of low noise pavement was not required for the proposal.

Construction noise impacts

Noted. Noise exceedances are predicted to occur during construction at Edmondson Street bridge.

Mitigation measures to reduce noise levels from construction at Edmondson Street bridge include use of portable acoustic screens, carrying out loading and unloading away from sensitive receivers, and using noise source controls such as residential class mufflers. Additional mitigation would be implemented in accordance with the Inland Rail NSW Construction Noise and Vibration Management Framework. An out-of-hours work protocol will be developed as part of the construction noise and vibration management plan to define the process for considering, approving and managing out-of-hours work, including implementation of feasible and reasonable measures, and communication requirements, which is reflected in mitigation measure NV8.

5.9.20 Landscape and visual impacts

Landscape and visual impacts was raised in Appendix A of the Transport for NSW advice and referred to chapter 17 and 27 of the EIS.

Issue

Transport for NSW noted the design mitigation and guidelines for landscape character and visual impacts appear elementary. Transport for NSW queried if specific performance measures adequately consider the operational impacts to visual amenity.

Transport for NSW referred to published guidelines for the design of new road and pedestrian bridges to improve visual amenity. With respect to mitigation measure LV4, Transport for NSW recommends the design of new road and pedestrian bridges also be developed in accordance with *Beyond the Pavement* (TfNSW, 2020) and *Bridge Aesthetics: Design guidelines to improve the appearance of bridges in NSW in consultation with Transport for NSW* (TfNSW, 2023b) and the relevant councils.

Transport for NSW noted that Transport for NSW, and relevant councils, should be involved in the development of the Urban Design and Landscape Plan under mitigation measure LV2. Transport recommended the Urban Design and Landscape Plan for the proposal be developed collaboratively in consultation with Transport for NSW and relevant councils.

Transport for NSW recommended 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 requested additional information on minimisation of 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.

Response

As detailed in the EIS Technical Paper 10, the level of landscape character and visual impacts varies for each enhancement site and has been assessed as negligible-to-low for sites where a minor scope of work is proposed. Landscape and urban design opportunities and constraints have been identified where significant changes are proposed for bridge replacements (refer to Appendix A, Appendix B and Appendix C of the EIS Technical Paper

10). These sites present the greatest opportunity for landscape and urban design treatments to minimise landscape and visual impact on the surrounding community, and capitalise on opportunities to improve amenity. As detailed in mitigation measure LV2, an urban design and landscape plan will be prepared to provide a consistent approach to design, landscaping and landform rehabilitation for the proposal.

Both guidelines will be considered in the further development of the urban design and landscape plan where they are relevant to the work in question. Mitigation measure LV4 has been updated to refer to the *Beyond the Pavement 2020* (Transport for NSW, 2020) and consultation with Transport for NSW and the relevant councils.

Mitigation measure LV2 has been amended to include reference to preparing the urban design and landscape plan in consultation with Transport for NSW and relevant local councils.

Mitigation measure LV3 requires engagement with the Junee Shire Council as the relevant landowner. Mitigation measure LV3 has been amended to also include the requirement for design treatments to be prepared in consultation with Transport for NSW.

Landscape and urban design opportunities and constraints have been identified where significant changes are proposed for bridge replacements (refer to Appendix A, Appendix B and Appendix C of the EIS Technical Paper 10). This included the Edmondson Street bridge and Kemp Street bridge enhancement sites.

As detailed in section 3.2 of the Preferred Infrastructure Report, further design details have been provided and changes identified to the design of the road and pedestrian bridges to improve accessibility. Transport for NSW has been engaged by ARTC concerning these changes as detailed in chapter 5 of the Preferred Infrastructure Report.

5.9.21 Hydrology

The issue of hydrology was raised in Appendix A of the Transport for NSW advice and referred to chapter 18 of the EIS and the EIS Technical Paper 11.

Issue

Quantitative Design Limits

Transport for NSW indicated that it is not aware of any definitive quantitative design limits for hydrological impacts being set, and have had no consultation on the matter. Transport for NSW noted that it has not agreed to the proposed quantitative design limits that relate to road assets and that the use of ‘practicable’ may have the effect of reducing unapproved quantitative design limits .Transport for NSW considered the quantitative design limits unsuitable for the proposal and that they should not be used.

Transport for NSW noted it does not accept any new inundation of the State Road Network, including the pavement and unsealed or unprotected road edges. Transport for NSW noted concessions granted by Transport for NSW for increased afflux where highway upgrades were being planned are not applicable to the proposal and that applying the same quantitative design limits as the Narrabri to North Star (N2NS) Separable Portion 1 or North Star to Border (NS2B) Inland Rail projects was not supported by Transport for NSW.

Transport for NSW noted that the hazard category is no longer relevant to the proposal and can be removed as they are now redundant. Transport for NSW noted the position held by the NSW Government and Transport for NSW is that any road covered by water should not be driven through.

Murrumbidgee River

Transport for NSW noted that the Murrumbidgee River has been omitted from the text on pages 3–9 of the EIS. Transport for NSW noted that the Murrumbidgee River is a permanent water source, which the Inland Rail crosses, and needs to be included. Transport for NSW requested that ARTC update the list of waters with accurate information.

Transport for NSW noted pages 12–18 of the EIS state that, ‘*The Murray River bridge enhancement site is located over and on the eastern bank of the Murray River...’.* Transport for NSW noted that the Murray bridge works comprise the entire length of the Spirit of Progress bridge and that an amendment to include the western bank of the Murray River is required.

Response

Quantitative Design Limits

The quantitative design limits have been proposed in consultation with DPE. The quantitative design limits have been used to assess flooding impacts from the proposal relating to increases in afflux, velocity, flood hazard and duration. These quantitative design limits include specific consideration of hazard to roads, including classified roads managed by Transport for NSW, and as such, ARTC is required to consider these in the flooding assessment.

ARTC notes Transport for NSW's position that the quantitative design limits (including hazard category) for Transport for NSW roads are not suitable. ARTC acknowledges Transport for NSW's position regarding the creation of new inundation of state roads. Input would continue to be sought from relevant road managers during the detailed design of those aspects of the proposal that affect operation of road and other transport infrastructure to manage changes to road safety and operability. This is reflected in a new mitigation measure (TT11).

The EIS Technical Paper 11 concludes that the direct impacts from the proposal on the overall trafficability of highways during a flood event is relatively minor, given the nature of the works. These roads would be expected to be closed due to flooding at locations remote from the proposal, with the rail infrastructure having negligible direct impact on the roads.

In response to clarifications made by Transport for NSW on this comment, further discussion on flooding at Albury Station pedestrian bridge, Albury Station Yard clearances and The Rock Yard clearances enhancement sites is provided in the following sections.

As noted in the EIS Technical Paper 11, the Bungambrawatha Creek, Lavington, South Albury and West Albury flood study (Albury City Council and Lyall & Associates, 2011) identifies the enhancement sites are not affected by flooding up to, and including, the 1% AEP event, but are affected by flooding for a PMF event at depths of up to 1 m. The replacement of the pedestrian bridge is outside of the PMF extent.

The horizontal and vertical shifts of the Main South Line within Albury Yard clearances are estimated to have no impacts to flood behaviour beyond the rail corridor. The works would include realignment of the local drainage to account for the formation shift and, as such, would manage local overland flows similarly to existing conditions.

The Rock Flood Study (WMAWater, 2014) has been used to inform the flood conditions at The Rock Yard clearances enhancement site and surrounding areas. Flood modelling shows that the rail corridor is not overtopped by floodwater up to and including 1% AEP event. Flooding within the enhancement site occurs during the 1% AEP and PMF events.

The proposal at this enhancement site involves the modification of an existing signal gantry structure to provide sufficient clearance. No earthworks or alterations to footings are required at the enhancement site, as such no changes to the existing overland flooding levels, or velocities or provisional hazards at this site. There are no drainage impacts at this enhancement site.

Murrumbidgee River

The Murrumbidgee River catchment was noted in pages 3–9 of the EIS. The railway crosses the river; however, the proposal does not include work on the crossing of the Murrumbidgee River.

The proposal includes work on the truss structure over the bridge, which does not extend over the western bank.

5.9.22 Emergency services

This issue was raised in Appendix A of the Transport for NSW advice and made reference to chapter 24 of the EIS.

Issue

Impacts to emergency services and mitigation

Transport for NSW noted in Wagga Wagga delays at level crossings due the construction and operation of the proposal separated emergency services with NSW Ambulance Service HQ and Fire brigade to the south of the line and the NSW Police to the north. Transport for NSW noted the risk that 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 level crossing.

Transport for NSW acknowledged the commitment to undertake consultation with emergency services to identify alternative routes to minimise travel time delays and recommended that this consultation include the Local Emergency Management Committee, or similar, for each precinct.

Communication management plan

Transport for NSW requested the communication management plan include measures to ensure ongoing consultation with Transport for NSW, to inform emergency service providers about the locations of level crossings, and changes to access routes and road conditions.

Response

Impacts to emergency services and mitigation

Mitigation measure TT4 (previously TT3) and TT17 (previously TT12) have been identified to manage the impacts during construction due to road closures or disruptions. These identify emergency services as a general stakeholder group. Mitigation measures TT4 and TT17 have been amended to include reference to consultation with the Local Emergency Management Committee.

Consultation with emergency services that has been carried out since the exhibition of the EIS is documented in chapter 5 of the Preferred Infrastructure Report.

Communication management plan

Mitigation measures TT1, TT4 and TT17 include the requirement for engagement with Transport for NSW and/or emergency services to manage potential disruption to level crossings or other public roads as a result of construction, or required detours during construction. Mitigation measure TT17 requires ongoing communication with Transport for NSW and emergency providers.

The proposal does not change the location of level crossings and does not propose new level crossings.

The requirements of the communication management plan, as outlined in mitigation measure SI10, have been amended to include ongoing consultation with Transport for NSW, and the requirement to inform emergency services of changes to access routes and road conditions.

5.9.23 Climate change

This issue was raised in Appendix A of the Transport for NSW advice and made reference to chapter 25 of the EIS.

Issue

Transport for NSW noted that no reference is made to *Australian Rainfall and Runoff Guidelines* (ARR2019) (Geoscience Australia, 2019). Transport requested consideration of inclusion of this reference to consider climate change and climatic factors, particularly when undertaking hydrology studies.

Response

The consideration of this guideline is documented in section 3.3.4 and section 3.3.5 of the EIS Technical Paper 11. This includes climate change sensitivity analysis.

The climate change assessment included modelling of a climate change scenario, including a 20 per cent increase in rainfall intensity, based on guidance in ARR2019.

5.9.24 Cumulative impacts

The issue of cumulative impacts was raised in Appendix A of the Transport for NSW advice and referred to chapter 26 of the EIS.

Issue

Impact assessment

Transport for NSW considered the cumulative impacts chapter of the EIS to be incomplete. Transport for NSW noted that the EIS has only assessed the cumulative impacts in relation to other projects in the area. Transport for NSW requested that the cumulative impact assessment is also completed for 'potential material impacts on features'. Of particular relevance to Transport for NSW 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. Transport for NSW requested further assessment for potential cumulative impacts on key matters.

Engagement

Transport for NSW advised of road construction work that is scheduled to be completed within similar timeframes to the proposed construction. Transport for NSW requested ongoing consultation with ARTC to prevent cumulative impacts between the proposal and concurrent Transport for NSW projects.

Response

Impact assessment

The cumulative impact assessment presented in chapter 26 of the EIS has considered the potential for impacts of multiple major projects being under construction at the same time, consistent with DPE's guidance and practice notes. This is based on a search of available online resources at the time of assessment. The assessment of the diversions required during construction of the proposal in Wagga Wagga and Albury have been assessed.

As stated, where impacts from construction traffic from multiple enhancement sites is predicted on common local roads, this has been assessed collectively in the EIS Technical Paper 1. Significant impacts from cumulative traffic generation are expected during the diversionary period in Wagga Wagga. Further assessment of traffic and transport impacts during construction of the proposal in Wagga Wagga is provided in section 6.1.2 of the Preferred Infrastructure Report.

Where construction of the proposal would overlap with other projects, including the Project EnergyConnect (NSW—Eastern Section), cumulative impacts from traffic generation would occur on arterial roads such as the Olympic Highway and Sturt Highway. Based on the low traffic generation associated with the construction of the proposal and the capacity of the highways and arterial roads, it was concluded that the road network would be able to accommodate traffic movements for these projects.

The assessment completed, as detailed above, is considered sufficient to identify potential material impacts on features such as the surrounding road network.

Engagement

Noted. Mitigation measure TT1 has been amended to include consideration of other projects, in addition to aspects of the proposal that may require changes to the road network.

5.9.25 Performance measures

The issue of performance measures was raised in Appendix A of the Transport for NSW advice and referred to chapters 1 and 27 of the EIS.

Issue

Transport for NSW noted that the EIS does not adequately address the proposal-specific performance outcomes. Transport for NSW requested 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.

Response

The performance outcomes for the proposal are addressed in section 27.4 of the EIS, including a summary of how the EIS addresses relevant performance outcomes. Regarding the proposal-specific performance outcomes raised, the EIS has addressed these points through:

- using scheduled rail possessions for construction to avoid disruption to the operation of the rail network for larger, more complex activities that require work within the rail corridor
- avoiding impacts to parking, where practicable, including containing construction worker parking within the proposal site
- maintaining access to properties during construction
- designing pedestrian bridges to be DDA-compliant and commitment to provide DDA-compliant access for pedestrians at Edmondson Street and Kemp Street bridges
- completing road safety audits during the detailed design phase for the Edmondson Street and Kemp Street bridges, with design using Austroads- and NSW-specific supplements
- further investigating detours and the impact on the road network within Wagga Wagga during construction. As noted, this is most effectively done during the detailed design phase when construction planning is underway by the construction contractor.

Additional assessment of traffic and transport is provided in section 6.1 of the Preferred Infrastructure Report, including the impact to the road network during the closure of Edmondson Street bridge and Kemp Street bridge.

5.9.26 Utilities

The issue of utilities was raised in Appendix A of the Transport for NSW advice and referred to Appendix D of the EIS.

Issue

Transport for NSW noted that the EIS Appendix D has not identified any utilities that services Transport for NSW stations, yards, or sidings. Transport for NSW requested further information on utilities on Transport for NSW assets.

Transport for NSW also noted that many utilities that service Transport for NSW stations are found underneath the rail corridor and are not the responsibility of a gas or water 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 for NSW not the rail infrastructure operator (ARTC).

Response

The location of utilities within the proposal site, or that would cross the proposal site, has been determined based on the current stage of design development. Further assessment will be carried out during detailed design to confirm utilities that may be impacted by the proposal. This will involve consultation with asset owners and relevant stakeholders, as outlined in section D.3 of the EIS. Development agreements will be established with relevant asset owners, including local councils and Transport for NSW, to manage alterations to services and other assets.

5.9.27 Strategic context

The issue of strategic context was raised in Appendix A of the Transport for NSW advice and referred to chapter 2 of the EIS.

Issue

Transport for NSW noted that section 2.5 of the EIS refers to an outdated strategy document; Transport for NSW noted the recently updated *Future Transport Strategy: Our Vision for transport in NSW (2022b)* (Future Transport Strategy). Transport for NSW requested the strategic context of the proposal be assessed against the latest Future Transport Strategy and its supporting policies and plans.

Response

Noted. The Future Transport Strategy (Transport for NSW, 2022) had not been published at the time of the EIS.

The revised Future Transport Strategy underpins and supports the State Infrastructure Strategy and sets strategic directions and outcomes for customer mobility in NSW. It is delivered through a series of supporting plans, including the *Regional NSW Services and Infrastructure Plan* (Transport for NSW, 2018b). The strategy is based on three outcomes:

- connecting our customers' whole lives
- successful places for communities
- enabling economic activity.

To support these outcomes, the strategy has 14 strategic directions to guide achievement of the outcomes. In defining strategic directions, the strategy notes Inland Rail will:

- create investment opportunities and boost regional economies, and position regional businesses to take advantage of global markets
- create opportunities for passenger services on Inland Rail to further enhance the connectivity and coverage of regional rail for customers.

Strategic direction E1 includes that freight networks and supply chains are efficient and reliable. Under this direction, action E.1.2b is to undertake planning to optimise the benefits from Inland Rail in NSW.

Inland Rail (including the proposal) is considered to be consistent with the objectives of the latest Future Transport Strategy 2022. Mitigation for the proposal includes consultation with Transport for NSW. Through this process, ARTC will continue to work with Transport for NSW to optimise the benefits from Inland Rail in NSW, including maintaining opportunities for connectivity between Inland Rail and the Country Regional Network.

5.9.28 Spelling and grammar

This issue was raised in Appendix A of the Transport for NSW advice and made reference to Appendix C of the EIS.

Issue

Transport for NSW noted chapter 4 of the EIS mentions 'Womes' Gate Lane. Transport for NSW requested that the spelling is amended to 'Wornes' Gate Lane.

Response

The spelling error in chapter 4 and Appendix C of the EIS is noted. Any reference to Wornes Gate Lane in this Submissions Report and associated documents has adopted the correct terminology.

5.9.29 General comments

This issue was raised in Appendix A of the Transport for NSW advice.

Issue

Construction standards

Transport for NSW noted the EIS references only Austroads guides in relation to design standards for public roads. Transport for NSW requested explicit acknowledgement that ARTC must meet the standards set in Transport for NSW's published supplements in addition to those in the Austroads guides.

Australian Level Crossing Assessment Model

Transport for NSW noted that the EIS uses statements related to using Australian Level Crossing Assessment Model (ALCAM) and that it is not a strategic forecasting tool, as it does not take into account the growth in heavy vehicle types.

Future planning

Transport for NSW noted that with the expansion of the road network available to performance-based standards vehicles there is concern that this proposal has not adequately considered the impacts of the Inland Rail on future road use.

Transport for NSW noted that if the preferred corridor changes, sufficient storage length for road trains must be provided, and intersections may need to be realigned. Transport for NSW requested it is consulted to ensure the strategic lens for the Inland Rail caters for heavy vehicles up to 60 m long and a width for oversize and/or overmass vehicles of 8 m to 10 m.

Transport for NSW noted that for upgrade of a level crossing from passive to active controls on a terminating road, the vehicle stacking space between the track and the parallel road should be adequate for the longest vehicle type using the crossings. Transport for NSW requested that all new intersections have a minimum storage length of 70 m, to account for current design vehicles (36.5 m), plus potential for a future, larger higher productivity vehicle design (60 m).

Transport for NSW requested that the design should consider future planning needs, particularly at Pearson Street. Transport for NSW noted that the design of Pearson Street bridge works should not preclude future duplication of the bridge.

Future freight transport

Transport for NSW noted that the EIS implies that the Inland Rail program will be reducing trucks on the road. Transport for NSW stated its position that Inland Rail will not necessarily reduce trucks on the road; however, it may reduce the increased growth in heavy vehicles. Transport for NSW noted that the impact of Inland Rail on truck numbers needs to be in the context of the growing freight task and to acknowledge that road/rail work in conjunction with each other, rather than stating that one is better or more efficient than the other.

Transport for NSW noted 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.

New technologies

Transport for NSW queried the consideration of new technological solutions for both road and rail, and noted consideration should be given to new and emerging technologies relating to rail and road for future assessments.

Response

Construction standards

Mitigation measure TT10 (previously TT7) has been revised to outline that the road safety audits will be carried out by independent advisors and be prepared in accordance with the Transport for NSW Austroads supplements in addition to the Austroads guidelines. It has also been amended to state that audit findings would be actioned before construction of the relevant infrastructure, where reasonable and feasible.

A new mitigation measure (TT11) has been added to require ARTC to seek input from relevant stakeholders, including Transport for NSW prior to finalising the detailed design of those aspects of the proposal that affect the operation of road and other transport infrastructure under the management of Transport for NSW.

Australian Level Crossing Assessment Model

The selection of road–rail interface treatments is based on a consistent safety-based methodology, which is aligned with rail safety national law and Office of the National Rail Safety Regulator (ONRSR) guidelines, which require the risks to safety to be minimised so far as is reasonably practicable. This methodology is detailed in Appendix A of the EIS Technical Paper 1. The ALCAM is a key input into the Level Crossing Risk Tool which ARTC uses in developing treatments for in-scope level crossings on Inland Rail. ARTC's Level Crossing Risk Tool is the only national Level Crossing risk tool that has been endorsed by state and territory ministers and ONRSR. ALCAM

considers the proportion of heavy vehicles in determining the 'risk score' from both a likelihood and consequence perspective, and in determining risk scores, from a future proofing perspective, 2040 road and rail traffic volumes are used. For state roads, Transport for NSW have reviewed the traffic data inputs.

Further assessment of level crossings has been carried out in section 6.1.3.4 and 6.1.3.5 of the Preferred Infrastructure Report.

Future planning

ARTC confirms that the requirements for PBS vehicles have been considered in the design to date and would continue to be considered as the design progresses. The proposal would be designed, constructed and operated in accordance with the conditions of approval and all relevant road design standards and requirements.

Transport for NSW's requirements if the preferred corridor changes are noted; however, at this time, ARTC do not propose to change the preferred corridor.

The proposal would be designed, constructed and operated in accordance with the conditions of approval and all relevant road design standards and requirements. ARTC will continue to work collaboratively with Transport for NSW to progress road–rail interface solutions during detailed design. In accordance with mitigation measure TT11, input would be sought from relevant stakeholders (such as including local councils and Transport for NSW) prior to finalising the detailed design of those aspects of the proposal that affect the operation of road and other transport infrastructure under the management of these stakeholders.

Information provided to ARTC about the potential future duplication of the Pearson Street bridge has been included in the scope for detailed design of the proposal for further consideration of this requirement.

Future freight transport

Chapter 2 of the EIS outlines the existing freight task situation and the need for Inland Rail. Continued growth in freight volumes is giving rise to a range of increasingly complex challenges for government, industry and the community. Over the last four decades, the Australian freight task has quadrupled, with major increases evident in road and rail transport. Inland Rail is therefore needed to respond to the growth in demand for freight transport and address existing freight capacity and infrastructure issues.

New technologies

Transport for NSW's comment is noted. ARTC will consider new and emerging technologies in future assessments, as relevant.

5.9.30 Traffic and transport (traffic impacts—assumptions)

Transport for NSW made comment on several assumptions that were applied in the traffic and transport impact assessment. These issues were further detailed in Appendix B of the Transport for NSW advice.

Issue

Development and suitability of each precinct study area

Transport for NSW stated that 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. Transport for NSW queried if the impacts of construction vehicles following similar paths to different origins/destinations within the construction zone and arriving at the nearest arterial road have been considered in full. Transport for NSW requested 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.

Traffic volume assumptions for peak hour flows

Transport for NSW stated that one-way peak hour flows for highways and rural roads were based on the measured Annual Average Daily Traffic Volume (AADT) on the Hume Highway over nine months in 2018. Transport for NSW requested justification for the assumption that the volumes were consistent for all highways and rural roads.

Occupancy rate assumption

Transport for NSW stated that the assessment assumed an average occupancy rate of 1.5 workers per vehicles. Transport for NSW stated that this assumption is not supported by Transport for NSW's *Guide to Traffic Generating Development* (TfNSW, 2002) and requested further information on the basis of this assumption.

Train speed assumptions

Transport for NSW stated that existing train speeds were stated in the assessment as 80 km/h with published estimated impacts; however, Transport for NSW stated that trains are actually travelling at 40 km/h to 60 km/h (as measured), which increases queueing times.

Response

Development and suitability of each precinct study area

For the majority of enhancement sites, the review of the temporal and spatial distribution of construction routes to the nearest arterial road indicates that the routes do not result in an overlap of construction vehicles on local roads.

Where enhancements sites are predicted to result in overlap, the assessment combined the vehicle generation to assess the impact collectively. For example, this approach was completed for the following sites: Albury Station pedestrian bridge enhancement site; Albury Yard clearances enhancement site; and Riverina Highway bridge enhancement site, which are referred to collectively as Albury Station and Surrounds. Construction vehicles following similar paths to different enhancements sites to the nearest arterial road have been considered in full in these instances with assessment undertaken based on cumulative peak construction traffic volumes.

Further assessment of traffic and transport completed as part of the Preferred Infrastructure Report has included consideration assessment of networked traffic modelling to assessment of overlap of construction vehicles and detoured traffic. This assessment is provided in section 6.1 of the Preferred Infrastructure Report.

Traffic volume assumptions for peak hour flows

The assessment did not assume that traffic volumes were consistent for all highways and rural roads; however, the traffic count for the Hume Highway was used as representative of the background regional traffic environment for the purpose of analysis of daily and seasonal traffic (as detailed in section 4.2 of the EIS Technical Paper 1).

As noted in section 3.1.2 of Technical Paper 1, traffic volumes for the assessment of impacts from the proposal were sourced from a combination of:

- AADT data for the Hume Highway that was sourced from the NSW Traffic Volume Viewer (Transport for NSW, 2021)
- AADT data provided by local councils
- 24-hour and 10-hour peak period traffic surveys completed for the proposal at selected locations.

Where traffic volume data was not available for specific roads, traffic volumes used for the assessment were estimated based on recorded traffic volumes on adjacent road segments. The study area for the assessment includes numerous roads, and completion of traffic surveys on each road was not considered to be feasible. It is common practice for traffic assessments to include representative count locations, which are applied to other equivalent roads within a study area. Traffic volumes were determined based on roads within the study area that have a similar configuration and serve a similar function, or as a proportion of higher order roads based on consideration of the road type, connectivity and surrounding land uses using conservative (worst-case) assumptions.

The additional traffic and transport assessment completed as part of the Preferred Infrastructure Report included supplementary traffic and pedestrian surveys. Traffic and pedestrian count data was collected on Thursday 8 June 2023 to support the additional traffic and transport assessments. The surveys completed include:

- vehicle counts using cameras at intersections in Albury, Wagga Wagga, Culcairn, Henty, Uranquinty, Yerong Creek and Junee
- automatic traffic count (tubes) in Wagga Wagga, Albury, The Rock, and Junee
- vehicle travel time surveys in Wagga Wagga
- pedestrian counts in Wagga Wagga (Cassidy parade pedestrian bridge, Wagga Wagga Station pedestrian bridge and Edmonson Street bridge) and Junee (Kemp Street bridge).

The data was used as a basis to determine future background traffic volumes by applying annual growth rate of two per cent (compounded) to the existing background traffic volumes. A detailed section describing the survey data collected is provided in section 6.1.1 of the Preferred Infrastructure Report.

Occupancy rate assumption

The *Guide to Traffic Generating Development* (TfNSW, 2002) does not provide specific guidance for occupancy rates per vehicle for construction workforce. As stated in the EIS Technical Paper 4, it is expected that around 10 per cent of the total workforce could be sourced from the local area. This is due to a combination of factors including the workforce skill requirements and construction methodology. Consequently, the proposal would require a large proportion of the required workforce to be sourced from outside the local area and for short periods during rail possessions. Subject to confirmation by the construction contractor, workers could travel to/from sites via private bus transport, reducing the proportion of private vehicles.

It is highly likely that a large proportion of the workforce would be transported to enhancement sites via buses, increasing the occupancy rate above 1.5. To provide a conservative assumption on vehicle generation, and allow flexibility for a proportion of workers to travel via private vehicle if preferred, an occupancy rate of 1.5 workers per vehicle was applied. Further, the number of vehicles generated by the proposal is relatively low, and the application of a lower vehicle occupancy rates would have negligible change to the assessment outcomes.

The proposed Inland Rail standard program construction hours (referred to as primary construction hours in the EIS) for the proposal are 6:00 am to 6:00 pm, seven days a week. Peak construction vehicles would also be expected during possession periods, during which work outside of the Inland Rail standard program construction hours would occur. As part of the transport and traffic assessment (refer to Technical Paper 1 of the EIS, and the further assessment completed for Appendix C of the Preferred Infrastructure Report, the peak construction workforce has been assessed as arriving and departing during the peak hour period for background traffic. However, based on traffic surveys completed, peak hours were generally determined to be between 7:00 am and 9:00 am, and 2:45 pm and 5:00 pm. The construction workforce would predominantly be expected to arrive and depart at enhancement sites outside of these peak periods. While occupancy rates included in the EIS are considered appropriate, the assessment also provides a conservative assumption for the assessment of worst-case impacts.

Train speed assumptions

Transport for NSW's comment regarding the variability in train speeds is noted.

As part of the Preferred Infrastructure Report, additional traffic and transport assessment has utilised observed level crossing closure times for June 2023 to determine queuing at level crossings. For short-term analysis horizons, the observed average weekday level crossing closure durations and frequencies were adopted. For future year scenarios, a factor of 1.5 was applied to the duration and frequency of level crossing activations to allow for the running of longer trains (on average) as part of Inland Rail. This factor has been applied on an estimated 50 percent increase of train lengths (i.e. from 1,200 m to 1,800 m lengths) travelling at existing speeds. Further information on the assumptions and outcomes of the additional assessments is provided in section 6.1.3 of the Preferred Infrastructure Report.

ARTC will enter into a Rail Safety National Law interface agreement with the relevant road manager for all public level crossings. This will address the joint management of risks once the proposal is operational.

5.9.31 Traffic and transport (traffic impacts—methodology)

Transport for NSW expressed the opinion that the assessment failed to adequately address the anticipated construction and operational impacts, and made comment on the methodology applied. These issues were further detailed in Appendix B of the Transport for NSW advice.

Issue

Selection of model technique

Transport for NSW stated that the assessment methodology does not refer to the *Traffic Modelling Guidelines* (Roads and Maritime Services, 2013). Transport for NSW recommends transport modelling be undertaken for the proposal, using industry standard guidelines, and consider the guidance provided on model technique selection.

Use of traffic data

Transport for NSW noted proportional traffic volume data was estimated based on recorded traffic volumes on adjacent road segments and roads within each precinct, where traffic data is not available (e.g. Table 4.4 of Technical Paper 1). Transport for NSW expressed that 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 Wagga Wagga and Junee precincts.

In addition, Transport for NSW stated that some traffic volume information is old and may not be indicative of current traffic conditions, or consider the effect of the COVID-19 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 for NSW recommended 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.

Traffic growth rate method

Transport for NSW expressed that it is unclear whether static or annual growth rates have been used in the development of future traffic volumes across each precinct. Transport for NSW requested further information on the development of growth rates.

Response

Selection of model technique

As part of the Preferred Infrastructure Report, additional modelling for traffic and transport assessment has been completed. This included completion of a microsimulation model for the assessment of the Edmondson Street bridge and Kemp Street bridge closures.

As part of the development of the microsimulation traffic models, ARTC provided iterative reports to Transport for NSW and DPE for feedback. These reports included overall methodology, development of the base year model

outlining how the model had been calibrated and validated, and results of the modelling and potential mitigation. Detailed results from the modelling is discussed in section 6.1 of the Preferred Infrastructure Report.

Traffic data

Both 10-hour and 24-hour traffic surveys were completed as part of the assessment in both Wagga Wagga and Junee between 22 to 24 June 2021. As noted, where survey data was not available for certain roads, volumes were conservatively estimated from survey counts completed on surrounding roads, which is considered sufficient to inform the assessment.

The additional traffic and transport assessment completed as part of the Preferred Infrastructure Report included supplementary traffic and pedestrian surveys. Traffic and pedestrian count data was collected on Thursday 8 June 2023 to support the additional traffic and transport assessments. The surveys completed include:

- vehicle counts using cameras at intersections in Albury, Wagga Wagga, Culcairn, Henty, Uranquinty, Yerong Creek and Junee
- automatic traffic count (tubes) in Wagga Wagga, Albury, The Rock, and Junee
- vehicle travel time surveys in Wagga Wagga
- pedestrian counts in Wagga Wagga (Cassidy parade pedestrian bridge, Wagga Wagga Station pedestrian bridge and Edmonson Street bridge) and Junee (Kemp Street bridge).

The data was used as a basis to determine future background traffic volumes by applying annual growth rate of two per cent (compounded) to the existing background traffic volumes. A detailed section describing the survey data collected is provided in section 6.1.1 of the Preferred Infrastructure Report.

Traffic growth rate method

The traffic growth rate method has been detailed Section 4.2.3 of the EIS Technical Paper 1 and outlines the process for applying growth rates for future traffic volumes, including consultation with Transport for NSW.

As noted above, the annual growth rate in Wagga Wagga has been updated as per the output of the Wagga Wagga Strategic Transport Model.

5.9.32 Traffic and transport (traffic impacts—modelling)

Transport for NSW made comment on the modelling approach applied in the traffic and transport impact assessment. These issues were detailed in Appendix B of the Transport for NSW advice.

Issue

Transport for NSW expressed issues with the modelling approach. SIDRA (intersection software) may be acceptable to use, but Transport for NSW stated that limitations for modelling select sections and scenarios along the study area. Transport for NSW noted 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. Transport for NSW stated that there are locations where SIDRA networks should have been used, and other locations where a microsimulation model is warranted.

Transport for NSW identified 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
- changes in arrival rates to intersections.

As an example, Transport for NSW stated that 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 m at this location. Transport for NSW stated that 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.

Response

As part of the Preferred Infrastructure Report, additional modelling for traffic and transport assessment has been completed. This included completion of a microsimulation model for the assessment of the Edmondson Street bridge and Kemp Street bridge closures.

Additional SIDRA modelling was also completed at key intersections. Where intersections are in close proximity and are likely to affect or be effected by the adjacent intersection operations, and microsimulation models were not applied, multiple intersections were assessed using the network facility within SIDRA. SIDRA network modelling was completed for Albury precinct at the following locations:

- Borella Road / Schubach Street / Short Street
- Young Street / Borella Road
- Hume Highway (West) / Borella Road
- Hume Highway (East) / Borella Road
- Young Street / Wilson Street.

A summary of the traffic and transport addendum is provided in section 6.1 of the Preferred Infrastructure Report.

5.9.33 Traffic and transport (traffic impacts—justification)

Transport for NSW requested a review of the adopted modelling technique across each precinct and justification for the approach taken. These issues were detailed in Appendix B of the Transport for NSW advice.

Issue

Borella Road and Hume Highway intersection model (Albury Station and surrounds)

Transport for NSW stated that the use of a single-site model at the Borella Road and Hume Highway intersection is considered unsuitable, and recommended a network model to assess the performance of the interchange due to the proximity of the east and west intersections. Transport for NSW stated that congestion has been observed as occurring at the interchange during peak periods.

Models applied for Albury Station and surrounds, Billy Hughes bridge, Table Top Yard clearances, Culcairn Yard clearances, Henty Yard clearances and Yerong Creek Yard clearances

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

- Borella Road (four intersections)—Albury Station and surrounds
- Wagga Road (two intersections)—Billy Hughes bridge
- Table Top Road (two intersections)—Table Top Yard clearances
- Balfour Street (two intersections)—Culcairn Yard clearances
- Sladen Street (two intersections)—Henty Yard clearances
- Plunkett Street (two intersections)—Yerong Creek Yard clearances.

Use of SIDRA for level crossings and reporting

Transport for NSW stated that the assessment has considered the modelled level of service (LoS) 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. Transport for NSW stated that this approach is not considered appropriate for level crossings due to the anticipated number of services in the peak hour (about two 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 for NSW recommended 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. Transport for NSW expressed that there are numerous inconsistencies across the reported results which required review by ARTC.

Qualitative assessment of cumulative impacts

Transport for NSW stated that the assessment includes a qualitative assessment of the cumulative impacts of the proposal in conjunction with other projects within proximity to the proposal sites. Transport for NSW requested further information on how the qualitative assessment was undertaken, including justification as to why a quantitative assessment was not undertaken.

Response

Borella Road and Hume Highway intersection model (Albury Station and surrounds)

As noted above, as part of the Preferred Infrastructure Report, intersections in close proximity have been assessed using the network facility within SIDRA. These results are presented in section 6.1 of the Preferred Infrastructure Report.

Models applied for Albury Station and surrounds, Billy Hughes bridge, Table Top Yard clearances, Culcairn Yard clearances, Henty Yard clearances and Yerong Creek Yard clearances

As noted above, as part of the Preferred Infrastructure report, intersections in close proximity have been assessed using the network facility within SIDRA. SIDRA network modelling was completed at locations identified by Transport for NSW, with the exception of Table Top Yard.

The relatively low number of construction vehicle volumes generated by the proposal at the Table Top Yard enhancement site is not expected to significantly alter the current performance of intersections along construction routes.

Use of SIDRA for level crossings and reporting

The *Traffic Modelling Guidelines* (Roads and Maritime Services, 2013) does not clearly articulate what modelling program is best used to assess level railway crossing impacts.

The EIS included assessment of level crossings using SIDRA, an industry accepted modelling software for intersections. The use of SIDRA is not directly applicable to the modelling of level crossings, however no guidance on accepted modelling techniques for level crossings exists.

As noted by TfNSW, the presentation of 95th percentile queues can be used to provide results indicative of queuing during a level crossing closure.

As part of the Preferred Infrastructure Report, the scope of additional assessment included completion of a microsimulation model for Wagga Wagga (construction and operation) and Junee (construction only), where more significant traffic impacts are predicted to occur from the proposal. Additional SIDRA assessment was completed at selected locations, based on consideration of the relevant level of construction-related impacts of the proposal, compared to background traffic volumes.

As part of the Preferred Infrastructure Report, the level crossings at Fernleigh Road and Bourke Street / Docker Street in Wagga Wagga, and Balfour Street in Culcairn were modelled during operation of the proposal, including additional consideration of level crossing closure times based on observed train speeds. To allow for an increased proportion of trains that are 1,800 m in length during operation of the proposal, a factor was also applied to conservatively allow for an increase in the average closure time at a level crossings.

The assessment within the Preferred Infrastructure Report did not include all level crossings within the enhancement sites; however, traffic performance at these locations was not predicted to be significantly impacted during operation of the proposal, and presentation of 95th percentile queues has not been completed.

ARTC is investigating the closure durations of the level crossing on the Olympic Highway, Junee. Mitigation measure SI9 includes that ARTC will investigate opportunities to reduce the duration of level crossing closures at this location.

Results presented in the Preferred Infrastructure Report includes 95th percentile queuing. A summary of the assessment is provided in section 6.1 of the Preferred Infrastructure Report.

Quantitative assessment of cumulative impacts

As part of the cumulative impact assessment, the expected temporal and spatial overlaps of projects were considered to determine where concurrent activities impacting similar routes may occur. It is noted that the typically small size of construction activities associated with the proposal generates relatively low volumes of traffic with minimal operational traffic sites (refer to section 5.9.31 of this Submissions Report).

The potential for significant impacts (potentially requiring quantitative assessment) was not identified.

5.9.34 Traffic and transport (traffic impacts—Wagga Wagga precinct and enhancement sites)

Transport for NSW expressed the opinion that the assessment failed to adequately assess the anticipated construction and operational impacts within the Wagga Wagga precinct, and made comment on the methodology applied in the precinct. These issues were detailed in Appendix B of the Transport for NSW advice.

Issue

Use of SIDRA modelling software

The EIS 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.

Impacts at key intersections adjacent to the proposal

Transport for NSW stated that significant congestion has been observed at key intersections adjacent to the proposal area under normal traffic conditions during peak periods. Transport for NSW also stated that modelling undertaken by Transport for NSW suggests that the intersection between the Sturt Highway and Lake Albert Road is performing worse than the results presented in Table 5.31 of Technical Paper 1, with vehicle queues extending beyond Railway Street during peak periods.

Transport for NSW stated that significant congestion is also being observed during peak times at the Sturt Highway and Docker Street intersection. Transport for NSW stated that these conditions would be expected to deteriorate further due to the diversion of traffic while Edmondson Street bridge is closed and during operation of the proposal, due to more frequent, longer, and slower trains passing.

Use of Wagga Wagga City Council's EMME model

Transport for NSW advised that Wagga Wagga City Council may have an EMME model (forecasting model) that may assist in the traffic and transport assessment undertaken for the EIS.

Assessment of impacts during the closure of Edmondson Street bridge

Transport for NSW stated that 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.

Transport for NSW stated that 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. Transport for NSW stated that assessment of road closures, diversions, construction traffic and associated travel times does not:

- consider the existing Wagga Wagga City Council strategic and demand models that exist for the Wagga Wagga precinct
- consider the cumulative impact of rerouted vehicles on the performance of alternative routes already operating at, or near, capacity.

Transport for NSW recommended that a microsimulation model that 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 for NSW and Wagga Wagga City Council, due to the anticipated changes in route choice and expected delays across the wider road transport network.

Response

Use of the SIDRA modelling software

As part of the Preferred Infrastructure Report, additional modelling for traffic and transport assessment has been completed. This included completion of a microsimulation model for the assessment of the Edmondson Street bridge closure and operation of the proposal in Wagga Wagga.

As part of the development of the microsimulation traffic models, ARTC provided iterative reports to Transport for NSW and DPE for feedback. These reports included overall methodology, development of the base year model outlining how the model had been calibrated and validated, and results of the modelling and potential mitigation. Detailed results from the modelling is discussed in section 6.1 of the Preferred Infrastructure Report

Impacts at key intersections adjacent to the proposal during construction and operation

The detailed results from the additional modelling is discussed in section 6.1 of the Preferred Infrastructure Report supports assessment provided in the EIS.

The construction assessment acknowledges that the diversion of construction traffic during the closure of Edmondson Street bridge would result in significant impacts due to diverted traffic placing increased pressure on intersections along alternative routes.

This includes increased queuing and delays for vehicles at key intersections. While the observations and modelling outcomes stated in Transport for NSW's advice are noted. As part of the traffic and transport addendum, mitigation has been identified to improve operation of the road network during closure of Edmondson Street bridge.

During operation, the additional assessment has applied revised assumptions concerning the duration and frequency of level crossing activations (refer to section 5.9.30 of this Submissions Report, and section 6.1 of the Preferred Infrastructure Report). This found that the impacts of the extended level crossing closures in 2025 and 2040 are limited to some worsening performance of intersections on Docker Street close to the Docker Street level crossing. Average travel times across the level crossing increase by a maximum of 11.5 per cent in 2025 in the northbound direction in the AM peak and 17.8 per cent in the northbound direction on the same level crossing in the PM peak. The Fernleigh Street level crossing shows moderate impacts with the highest increase in travel times in the northbound direction in 2040 by seven per cent.

Use of Wagga Wagga City Council's EMME model

As noted above, as part of the Preferred Infrastructure Report, additional modelling for traffic and transport assessment has been completed. This included completion of a microsimulation model for the assessment of the Edmondson Street bridge closure and operation of the proposal in Wagga Wagga.

The Wagga Wagga Strategic Transport Model was utilised in development of the microsimulation model for the proposal.

Detailed results from the modelling is discussed in section 6.1 of the Preferred Infrastructure Report.

Assessment of impacts during the closure of Edmondson Street bridge

As noted above, as part of the Preferred Infrastructure Report, additional modelling for traffic and transport assessment has been completed in consultation with Wagga Wagga City Council and Transport for NSW. This included completion of a microsimulation model for the assessment of the Edmondson Street bridge closure and operation of the proposal in Wagga Wagga. A large proportion of the road network in Wagga Wagga was included in the model, which allowed for modelled redistribution of traffic across the broader network during this scenario. A summary of the results of this assessment is presented in section 6.1 of the Preferred Infrastructure Report.

The assessment tested possible mitigation measures to manage impacts on the road network during the closure of Edmondson Street bridge. Additional mitigation measures identified through these assessments have been identified in the new mitigation measure TT2 and would be implemented in combination the mitigation measures identified in the EIS.

5.9.35 Traffic and transport (traffic impacts—Junee precinct and enhancement sites)

Transport for NSW expressed the opinion that the assessment failed to adequately assess the anticipated construction and operational impacts within the Junee precinct, and made comment on the methodology applied in the precinct. These issues were detailed in Appendix B of the Transport for NSW advice.

Issue

Use of the SIDRA modelling software

Single intersection modelling software SIDRA was used to assess the impacts of the proposal on multiple intersections and a level crossing within the Junee precinct.

Impacts during the closure of Kemp Street bridge

Transport for NSW noted that reported results indicate that performance would worsen during the proposed 11-month closure of Kemp Street bridge. Transport for NSW also noted 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.

Assessment of the Olympic Highway level crossing at Junee

Transport for NSW noted that 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. Transport for NSW noted that 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.

Use of estimated traffic volumes

Transport for NSW noted that the assessment relies on heavily estimated traffic volumes as inputs into the SIDRA models due to no additional traffic data being collected.

Alternative modelling approach

Transport for NSW recommended that a microsimulation model that 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 for NSW and Junee Shire Council due to the considerable number of construction vehicle volumes and anticipated re-routing.

Response

Use of the SIDRA modelling software

The EIS included assessment of level crossings and intersections using SIDRA, an industry accepted modelling software for intersections. The use of SIDRA is not directly applicable to the modelling of level crossings, however no guidance on accepted modelling techniques for level crossings exists.

As part of the Preferred Infrastructure Report, the scope of additional assessment in Junee included the completion of a microsimulation model for Junee during construction, where more significant traffic impacts are predicted to occur from the proposal.

The agreed scope for the Preferred Infrastructure Report did not require assessment of all level crossings within the enhancement sites; however, traffic performance at these locations was not predicted to be significantly impacted during operation of the proposal, and presentation of further assessments at these locations has not been completed.

ARTC is investigating the closure durations of the level crossing at the level crossing on the Olympic Highway, Junee. Mitigation measure SI9 includes that ARTC will investigate opportunities to reduce the duration of level crossing closures at this location.

Impacts during the closure of Kemp Street bridge

As part of the Preferred Infrastructure Report, the duration of road bridge closure has been increased from eight to 12 months (refer to section 3.2.2.2 of the Preferred Infrastructure Report).

As noted above, as part of the Preferred Infrastructure Report, additional modelling for traffic and transport assessment has been completed. This included completion of a microsimulation model for the assessment of the Kemp Street bridge closure. A summary of the assessment is provided in section 6.1 of the Preferred Infrastructure Report.

Assessment of the Olympic Highway level crossing at Junee

There was an error in tables 5.42 and 5.43 of Technical Paper 1 and 398 vehicles per hour had been used for both one-way and two-way traffic flows.

As noted above, as part of the Preferred Infrastructure Report, additional modelling for traffic and transport assessment has been completed. This included completion of a microsimulation model for the assessment of the Kemp Street bridge closure. A summary of the assessment is provided in section 6.1 of the Preferred Infrastructure Report.

Use of estimated traffic volumes

The additional traffic and transport assessment completed as part of the Preferred Infrastructure Report included supplementary traffic and pedestrian surveys. Traffic and pedestrian count data was collected on Thursday 8 June 2023 to support the additional traffic and transport assessments. The surveys completed in Junee include:

- vehicle counts using cameras at intersections
- automatic traffic count (tubes)
- pedestrian counts at Kemp Street bridge.

The data was used as a basis to determine future background traffic volumes by applying annual growth rate of two per cent (compounded) to the existing background traffic volumes. A detailed section describing the survey data collected is provided in section 6.1.1 of the Preferred Infrastructure Report.

Alternative modelling approach

As noted above, as part of the Preferred Infrastructure Report, additional modelling for traffic and transport assessment has been completed. This included completion of a microsimulation model for the assessment of the Kemp Street bridge closure. A summary of the assessment is provided in section 6.1 of the Preferred Infrastructure Report.

6. Conclusion

The Inland Rail Albury to Illabo proposal is critical state significant infrastructure and is subject to assessment and approval in accordance with Part 5, Division 5.2 of the *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act).

An EIS was prepared to address the requirements of Division 5.2 of the EP&A Act, the SEARs, Part 8 Division 5 of the EP&A Regulation and with consideration of the *State Significant Infrastructure Guidelines* (DPE, 2021b). The EIS was placed on public exhibition by the DPE between 17 August 2022 and 28 September 2022, and submissions were invited.

In accordance with section 5.17(6)(b) of the EP&A Act, on 13 April 2023 the Planning Secretary directed ARTC to submit a Preferred Infrastructure Report, in addition to a Submissions Report, that provides further assessment of the proposal impacts and proposed changes to the proposal.

This Submissions Report documents and considers the issues raised in community and organisation submissions, and other government agency advice received by DPE in accordance with section 5.17(6)(a) of the EP&A Act. ARTC has carefully considered the content of the submissions and has prepared responses to the issues raised, with the responses provided in this Submissions Report. The Submissions Report also describes the actions taken since the EIS was placed on public exhibition. Information about the need for, and justification of, the proposal as part of Inland Rail is provided in the EIS. This Submissions Report provides further information, in response to submissions received, about how the proposal has developed and how the potential impacts would be managed.

6.1 Updated proposal justification

The proposal, as part of Inland Rail, is needed to respond to the growth in demand for freight transport, and address existing freight capacity and infrastructure issues. The proposal is a critical component of Inland Rail and is required to enable Inland Rail to operate.

The Inland Rail program is a nationally significant transport initiative. It will respond to a forecast increase in demand for freight transport between Melbourne and Brisbane, and provide long-term benefits, including improved productivity, improved network efficiency and reliability, safety improvements, sustainability benefits, and reduced lifecycle costs.

A proposal of this scale would inevitably have some impacts on the local environment and community. The proposal would incorporate environmental management and design features to ensure that potential impacts are managed and mitigated as far as practicable.

The key biophysical potential impacts to the biophysical environment are identified to occur generally during construction. The proposal would remove native vegetation, and biodiversity offsets would be finalised and implemented to address the residual impacts of the proposal on biodiversity values. Other temporary biophysical impacts to watercourses, groundwater and air quality would occur during construction. Construction of the proposal would also result in noise impacts to sensitive receivers, particularly during out of hours works, and traffic impacts particularly during closure of road bridges in Wagga Wagga and Junee. Other amenity impacts during construction include dust and visual impacts. The majority of the potential construction-related impacts would be effectively mitigated by implementing best-practice construction management measures.

Operational impacts primarily consist of noise, air quality and traffic impacts as result of larger and more frequent trains along the rail corridor and visual and heritage impacts as result on new and more prominent bridges across the rail corridor. Additional assessment of operational noise and traffic impacts was completed as detailed in the Preferred Infrastructure Report and mitigation measures have been updated to minimise impacts on sensitive receivers as result of the proposal (as described in Appendix B: Updated Mitigation Measures of this Submissions Report).

To manage the potential impacts identified by the EIS and Preferred Infrastructure Report, and in some cases reduce them completely, a range of mitigation measures would be implemented during construction and operation of the proposal. The environmental performance of the proposal would be managed by the implementation of the construction and operational environmental management frameworks. These frameworks would also ensure compliance with relevant legislation and any conditions of approval.

The potential remains for residual impacts from the proposal. Though reduced there is potential for residual impacts associated with construction and rail noise, the loss of some heritage fabric along the existing rail line, longer and more frequent level crossing closures and the traffic detours during construction at Wagga Wagga and Junee, and changes to open space at Junee. The detailed design for the proposal would be developed with the objective of minimising potential impacts on the local and regional environment and local community, having regard to the principles of ecologically sustainable development defined by clause 193 of the EP&A Regulation.

The design and construction methodology would continue to be developed aligned with this objective, taking into account the input of stakeholders. The potential residual construction and operational impacts of the proposal are considered manageable with the implementation of the proposed mitigation and management measures.

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Appendix A Submissions Register

A.1 Community and organisation submissions

TABLE A-1: COMMUNITY AND ORGANISATION SUBMISSIONS REGISTER

Submissions Report ID	DPE submission ID	Submitter ID	Name[1]	Section where issues addressed in Submissions Report
1	SE-47617212	S-47617211		4.1.3.1, 4.1.10.2, 4.1.11.1, 4.1.11.4, 4.1.11.6.
2	SE-47623957	S-47623956		4.1.7.9, 4.1.11.4.
3	SE-47647208	S-47648206		4.1.1.1, 4.1.2, 4.1.11.1, 4.1.11.4, 4.1.22.
4	SE-47662486	S-47662485		4.1.10.2, 4.1.11.4
5	SE-47662503	S-47662502		4.1.7.9, 4.1.10.2
6	SE-47667207	S-47667206		4.1.7.9, 4.1.7.11, 4.1.11.4
7	SE-47942464	S-47942463		4.1.2, 4.1.7.2, 4.1.10.2, 4.1.10.3, , 4.1.12.2, 4.1.23.1, 4.1.12.2
8	SE-48035467	S-48035466		4.1.4.4, 4.1.4.7, 4.1.7.9, 4.1.22.1, 4.1.23.1
9	SE-48199957	S-48199956		4.1.2, 4.1.4.5, 4.1.7.2, 4.1.7.6, 4.1.7.9, 4.1.7.11, 4.1.11.2, 4.1.11.4.
10	SE-48214959	S-48214958		4.1.2, 4.1.23.1.
11	SE-48233709	S-48233708		4.1.2, 4.1.3.2, 4.1.7.2, 4.1.7.6, 4.1.7.9, 4.1.10.2, 4.1.11.4
12	SE-48347987	S-48347986		4.1.7.9, 4.1.10.2, 4.1.10.3
13	SE-48372477	S-48372476		4.1.7.2, 4.1.9.2, 4.1.11.2, 4.1.11.4, 4.1.11.5, 4.1.14.2, .
14	SE-48409709	S-48409708		4.1.1.1, 4.1.2, 4.1.7.2, 4.1.7.9, 4.1.11.4
15	SE-48428721	S-48428720		4.1.2, 4.1.7.9, 4.1.10.2, 4.1.11.4
16	SE-48459997	S-48459996		4.1.7.2, 4.1.7.6, 4.1.7.9, 4.1.7.11, 4.1.9.2, 4.1.10.2, 4.1.11.4
17	SE-48486207	S-48486206		4.1.2, 4.1.7.2, 4.1.7.9, 4.1.10.2, 4.1.11.4, 4.1.12.2, 4.1.18.3
18	SE-48501214	S-48501213		4.1.2, 4.1.3.1, 4.1.3.5, 4.1.3.6, , 4.1.4.1, 4.1.9.2, 4.1.11.1, 4.1.11.4, 4.1.18.1, 4.1.18.3
19	SE-48532958	S-48532957		4.1.2, 4.1.7.9, 4.1.7.11, 4.1.7.10, 4.1.4.5, 4.1.7.7, 4.1.8.1, 4.1.10.2, 4.1.10.3
20	SE-48533211	S-48533210	Qube	4.2.2
21	SE-48551484	S-48551483		4.1.2, 4.1.7.9, 4.1.10.2, 4.1.23.1, 4.1.23.2.
22	SE-48557213	S-48557212		4.1.4.6, 4.1.8.1
23	SE-48582707	S-48582706		4.1.2, 4.1.6.1, 4.1.7.9, 4.1.7.11, 4.1.9.2, 4.1.10.3, 4.1.11.6, 4.1.22.1
24	SE-48636465	S-48636464		4.1.2, 4.1.4.2, 4.1.4.7, 4.1.11.1, 4.1.22.1
25	SE-48636707	S-48636706		4.1.2, 4.1.7.2, 4.1.11.4, 4.1.18.3
26	SE-48665965	S-48665964	Junee Railway Workshop	4.2.1
27	SE-48698458	S-48698457		4.1.2, 4.1.3.1, 4.1.3.5, 4.1.4.5, 4.1.7.2, 4.1.7.9, 4.1.7.11, 4.1.11.1, 4.1.11.2, 4.1.11.4, 4.1.11.6, 4.1.19.1
28	SE-48699721	S-48699720		4.1.10.2.

Submissions Report ID	DPE submission ID	Submitter ID	Name[1]	Section where issues addressed in Submissions Report
29	SE-48703976	S-48703975		4.1.2, 4.1.7.1, 4.1.7.9, 4.1.7.11, 4.1.7.12, 4.1.10.3 4.1.11.4, 4.1.11.6, 4.1.18.4
30	SE-48722716	S-48722715		4.1.2.
31	SE-48726459	S-48726458		4.1.2, 4.1.7.9, 4.1.7.11, 4.1.10.2, 4.1.11.1, 4.1.11.6
32	SE-48741989	S-48741988		4.1.2, 4.1.3.3, 4.1.3.5, 4.1.5.5, 4.1.7.2, 4.1.7.9, 4.1.10.3, 4.1.22.1.
33	SE-48742746	S-48742745		4.1.2, 4.1.4.5, 4.1.7.9, 4.1.11.4
34	SE-48742978	S-48742977		4.1.2, 4.1.8.1, 4.1.9.2, 4.1.11.6
35	SE-48743227	S-47662502		4.1.6.1, 4.1.7.9, 4.1.10.2
36	SE-48744504	S-48744503		4.1.2, 4.1.7.2, 4.1.7.11, 4.1.11.4
37	SE-48745773	S-48745772		4.1.2, 4.1.10.3.
38	SE-48745785	S-48745784		4.1.2, 4.1.7.11, 4.1.11.4, 4.1.22.1
39	SE-48745798	S-48745797		4.1.2, 4.1.7.9, 4.1.7.11, 4.1.11.4, .
40	SE-48754473	S-48754472		4.1.2, 4.1.4.1, 4.1.4.7, 4.1.7.9, 4.1.7.11, 4.1.11.1, 4.1.11.4, 4.1.11.6, 4.1.18.1
41	SE-48754708	S-48754707		4.1.2, 4.1.7.2
42	SE-48754716	S-48754715		4.1.2, 4.1.4.5, 4.1.14.3.
43	SE-48755976	S-48755975		4.1.2, 4.1.3.1, 4.1.6.1, 4.1.7.11, 4.1.11.6
44	SE-48755978	S-48755977		4.1.2, 4.1.4.6, 4.1.7.11, 4.1.8.1, 4.1.9.2, 4.1.11.4, 4.1.11.6, 4.1.14.2
45	SE-48756475	S-48756474		4.1.11.1, 4.1.11.4, 4.1.11.6.
46	SE-48774958	S-48774957		4.1.10.2, 4.1.3.5, 4.1.11.6, 4.1.9.2.
47	SE-48787457	S-48787456		4.1.11.6, 4.1.18.2, 4.1.18.1, 4.1.6.1, 4.1.7.7, 4.1.14.3, 4.1.14.2, 4.1.20.1, 4.1.10.1, 4.1.17.1, 4.1.2.
48	SE-48790709	S-48790708		4.1.2, 4.1.10.3, 4.1.10.2, 4.1.11.4, 4.1.11.5, 4.1.11.6, 4.1.7.9.
49	SE-48790785	S-48790784		4.1.7.11, 4.1.2.
50	SE-48791713	S-48791712		4.1.3.4, 4.1.4.3, 4.1.7.8.
51	SE-48791718	S-48791717		4.1.7.9, 4.1.2.
52	SE-48793727	S-48793726		4.1.2, 4.1.10.2, 4.1.7.9, 4.1.7.11, 4.1.11.4.
53	SE-48799207	S-48799206		4.1.2.
54	SE-48799710	S-48799709		4.1.3.1, 4.1.7.9, 4.1.11.4, 4.1.2.
55	SE-48801466	S-48801465		4.1.2.
56	SE-48802480	S-48802479		4.1.7.9.
57	SE-48803721	S-48803720		4.1.10.3.
58	SE-48804960	S-48804959		4.1.10.1, 4.1.10.2, 4.1.7.11, 4.1.7.2, 4.1.4.5,4.1.18.3, 4.1.11.4, 4.1.2.
59	SE-48805458	S-48805457		4.1.2.
60	SE-48805716	S-48805715		4.1.6.1, 4.1.7.11, 4.1.4.5.
61	SE-48809224	S-48809223		4.1.2, 4.1.19.14.1.19.1
62	SE-48811958	S-48811957	Lockhart Shire Council	4.3.1.
63	SE-48811987	S-48811986		4.1.11.4, 4.1.7.3, 4.1.9.2, 4.1.2.
64	SE-48813239	S-48813238		4.1.2, 4.1.10.2, 4.1.7.2, 4.1.7.9, 4.1.18.3, 4.1.11.3, 4.1.9.2, 4.1.7.5.

Submissions Report ID	DPE submission ID	Submitter ID	Name[1]	Section where issues addressed in Submissions Report
65	SE-48813708	S-48813707		4.1.10.2, 4.1.2, 4.1.11.4, 4.1.7.11, 4.1.18.2, 4.1.11.2, 4.1.10.3, 4.1.7.7.
66	SE-48814730	S-48814729		4.1.2.
67	SE-48814959	S-48814958		4.1.11.6, 4.1.23.2, 4.1.10.2.
68	SE-48815713	S-48815712		4.1.2, 4.1.10.2, 4.1.7.2, 4.1.7.9, 4.1.18.3, 4.1.9.2, 4.1.7.5, 4.1.11.3.
69	SE-48815740	S-48815739	ErinEarth	4.2.3
70	SE-48824208	S-48824207	Committee 4 Wagga Wagga	4.2.4
71	SE-48826212	S-48826211		4.1.10.2, 4.1.10.3, 4.1.7.9, 4.1.7.11, 4.1.14.3, 4.1.7.2, 4.1.11.4, 4.1.11.1, 4.1.3.6, 4.1.2.
72	SE-48826459	S-48826458		4.1.6.1, 4.1.2.
73	SE-48827457	S-48827456		4.1.11.1, 4.1.11.6, 4.1.2, 4.1.3.1.
74	SE-48827459	S-48827458		4.1.7.9, 4.1.10.3, 4.1.2, 4.1.6.1.
75	SE-48828707	S-48828706		4.1.3.7, 4.1.3.5, 4.1.10.2, 4.1.7.2, 4.1.7.9, 4.1.6.1, 4.1.2, 4.1.11.4, 4.1.18.1, 4.1.4.2, 4.1.10.3.
76	SE-48828962	S-48828961		4.1.2, 4.1.7.11, 4.1.11.4, 4.1.18.3.
77	SE-48829490	S-48829489		4.1.10.3, 4.1.18.3, 4.1.11.6, 4.1.7.11, 4.1.2.
78	SE-48829498	S-48829497		4.1.6.1, 4.1.7.11, 4.1.2, 4.1.10.3.
79	SE-48829516	S-48829515		4.1.11.4, 4.1.9.2, 4.1.2, 4.1.7.9, 4.1.10.2.
80	SE-48829520	S-48829519		4.1.2, 4.1.7.11, 4.1.18.3.
81	SE-48829523	S-48829522		4.1.22.1, 4.1.7.9, 4.1.4.5, 4.1.10.1, 4.1.21.1.
82	SE-48830490	S-48830489		4.1.2.
83	SE-48830524	S-48830523		4.1.2, 4.1.10.1, 4.1.10.3, 4.1.7.9, 4.1.7.11, 4.1.15.1, 4.1.23.2, 4.1.10.2, 4.1.3.3.
84	SE-48831463	S-48831462		4.1.7.9, 4.1.7.11, 4.1.11.4, 4.1.18.3, 4.1.11.1, 4.1.2.
85	SE-48831467	S-48831466		4.1.7.9, 4.1.11.4.
86	SE-48832980	S-48832979		4.1.2, 4.1.7.11, 4.1.7.5, 4.1.7.2, 4.1.11.1.
87	SE-48833728	S-48833727		4.1.2, 4.1.7.9.
88	SE-48836476	S-48836475		4.1.12.1, 4.1.10.2, 4.1.7.2, 4.1.7.3, 4.1.4.5, 4.1.14.3, 4.1.11.4.
89	SE-48836478	S-48836477		4.1.2, 4.1.7.9, 4.1.7.11, 4.1.10.3.
90	SE-48839464	S-48839463		4.1.2.
91	SE-48839734	S-48839733		4.1.3.1, 4.1.2, 4.1.1.
92	SE-48839744	S-48839743	The Scots School Albury	4.2.5
93	SE-48840207	S-48840206		4.1.7.11, 4.1.2.
94	SE-48840211	S-48840210		4.1.2.
95	SE-48844218	S-48844217		4.1.11.1, 4.1.10.2, 4.1.3.6, 4.1.3.1, 4.1.3.5, 4.1.2.
96	SE-48844240	S-48844239		4.1.22.1, 4.1.7.11, 4.1.10.3, 4.1.11.4.
97	SE-48844245	S-48844244		4.1.7.9, 4.1.7.11, 4.1.11.4, 4.1.9.2, 4.1.2.
98	SE-48844253	S-48844252		4.1.2, 4.1.22.1, 4.1.8.1, 4.1.4.5, 4.1.11.4.

Submissions Report ID	DPE submission ID	Submitter ID	Name[1]	Section where issues addressed in Submissions Report
99	SE-48844264	S-48844263		4.1.11.1, 4.1.9.2, 4.1.3.2.
100	SE-48849464	S-48849463		4.1.2, 4.1.10.1, 4.1.11.4, 4.1.7.11.
101	SE-48852209	S-48852208		4.1.2, 4.1.7.9.
102	SE-48853207	S-48844244		See Submission ID 97
103	SE-48853215	S-48853214		4.1.10.3, 4.1.7.2, 4.1.7.9, 4.1.11.4, 4.1.3.2.
104	SE-48853229	S-48853228	Wagga Wagga City Council	4.3.2.
105	SE-48853275	S-48853274	Henty Community Development Committee	4.2.6
106	SE-48853707	S-48853706		4.1.2, 4.1.7.2, 4.1.10.1, 4.1.7.9, 4.1.10.2, 4.1.3.1.
107	SE-48854208	S-48854207		4.1.11.4, 4.1.11.3, 4.1.11.6, 4.1.14.3.
108	SE-48854726	S-48854725		4.1.11.4, 4.1.18.3, 4.1.11.1, 4.1.11.6.
109	SE-48856219	S-48856218		4.1.2, 4.1.3.1, 4.1.11.4, 4.1.10.2, 4.1.9.2, 4.1.7.9, 4.1.7.11, 4.1.9.1, 4.1.13.1, 4.1.19.1.
110	SE-48856462	S-48856461	Riverina Sustainable Food Alliance	4.2.7
111	SE-48856464	S-48856463		4.1.7.2, 4.1.7.9, 4.1.11.4, 4.1.4.5, 4.1.2.
112	SE-48856720	S-48856719		4.1.2, 4.1.7.9.
113	SE-48857229	S-48857228	Junee Shire Council	4.3.3.
114	SE-48858277	S-48858276		4.1.2.
115	SE-48858975	S-48858974		4.1.11.4, 4.1.7.11, 4.1.7.9, 4.1.3.2, 4.1.10.2, 4.1.2, 4.1.9.2.
116	SE-48859209	S-48859208		4.1.11.4, 4.1.7.11, 4.1.2, 4.1.1, 4.1.10.1, 4.1.22.1.
117	SE-48859459	S-48859458		4.1.11.4, 4.1.9.2.
118	SE-48859723	S-48859722		4.1.2, 4.1.7.2, 4.1.10.1, 4.1.7.3, 4.1.7.9, 4.1.14.3, 4.1.11.1.
119	SE-48859984	S-48859983		4.1.9.2, 4.1.10.2, 4.1.4.1, 4.1.11.4, 4.1.6.1.
120	SE-48859987	S-48859986		4.1.2.
121	SE-48861210	S-48861209		4.1.3.5, 4.1.7.9, 4.1.2, 4.1.11.2, 4.1.7.2, 4.1.7.12.
122	SE-48862957	S-48862956		4.1.22.1, 4.1.2, 4.1.7.9, 4.1.7.11, 4.1.18.1, 4.1.11.4, 4.1.23.1, 4.1.11.6, 4.1.3.1.
123	SE-48863215	S-48863214		4.1.22.1, 4.1.2, 4.1.4.6, 4.1.23.2, 4.1.5.5, 4.1.23.1.
124	SE-48863709	S-48863708		4.1.9.2, 4.1.10.2, 4.1.2, 4.1.7.11, 4.1.7.9.
125	SE-48865498	S-48865497		4.1.2, 4.1.22.1, 4.1.7.9.
126	SE-48865524	S-48865523		4.1.11.1, 4.1.11.6, 4.1.11.4, 4.1.2.
127	SE-48868480	S-48868479		4.1.7.1, 4.1.2, 4.1.7.2, 4.1.3.7.
128	SE-48869961	S-48869960		4.1.7.2, 4.1.7.3, 4.1.7.11, 4.1.10.2, 4.1.2.
129	SE-48871458	S-48871457		4.1.10.3, 4.1.22.1, 4.1.6.1, 4.1.3.1, 4.1.9.1, 4.1.1.1, 4.1.3.7, 4.1.3.6.
130	SE-48871974	S-48871973		4.1.7.9, 4.1.2.
131	SE-48872969	S-48872968		4.1.3.1, 4.1.19.1, 4.1.11.6, 4.1.9.2, 4.1.4.2, 4.1.7.5, 4.1.7.11, 4.1.2.

Submissions Report ID	DPE submission ID	Submitter ID	Name[1]	Section where issues addressed in Submissions Report
132	SE-48873994	S-48874243		4.1.6.1, 4.1.3.1, 4.1.3.2, 4.1.2, 4.1.23.2, 4.1.7.9, 4.1.11.4, 4.1.11.6, 4.1.7.11, 4.1.23.1, 4.1.7.2, 4.1.4.5, 4.1.22.1.
133	SE-48873996	S-48873995		4.1.3.1, 4.1.7.9, 4.1.11.6, 4.1.2.
134	SE-48873998	S-48873997	NSW Farmers Association	4.2.8
135	SE-48874208	S-48871457		See Submission ID 129
136	SE-48874963	S-48874962		4.1.2, 4.1.11.6.
137	SE-48875221	S-48875220		4.1.7.9, 4.1.11.4, 4.1.2, 4.1.3.7.
138	SE-48875237	S-48875236		4.1.2, 4.1.7.2, 4.1.10.2, 4.1.11.4.
139	SE-48875247	S-48875246		4.1.10.1, 4.1.7.2, 4.1.7.9, 4.1.11.6, 4.1.5.1, 4.1.16.1, 4.1.4.5, 4.1.2, 4.1.5.6, 4.1.5.2, 4.1.5.3, 4.1.5.4, 4.1.7.12, 4.1.7.4, 4.1.7.3, 4.1.5.7, 4.1.8.1, 4.1.14.1, 4.1.3.5, 4.1.14.3, 4.1.22.1, 4.1.14.2, 4.1.7.1, 4.1.10.3.
140	SE-48875957	S-48875956		4.1.11.1, 4.1.11.4, 4.1.2, 4.1.3.7.
141	SE-48985965	S-48985964		4.1.1.1, 4.1.2.
142	SE-48985968	S-48985967		4.1.10.2, 4.1.2, 4.1.11.4, 4.1.11.6, 4.1.18.3.
143	SE-48985971	S-48985970		4.1.1.1, 4.1.2, 4.1.3.5, 4.1.3.7, 4.1.4.2, 4.1.4.7, 4.1.7.9, 4.1.10.2, 4.1.10.3, 4.1.19.1, 4.1.22.1, 4.1.23.1
144	SE-48987462	S-48987461		4.1.11.4.
145	SE-48991958	S-48991957		4.1.2, 4.1.6.1, 4.1.9.2, 4.1.10.2,4.1.18.3, 4.1.22.1, 4.1.23.1

1. Submitter names have been withheld.

A.2 NSW Government or Agency advice register

TABLE A-2: NSW GOVERNMENT OR AGENCY ADVICE REGISTER

Name	Section where issues addressed in Submissions Report
NSW Department of Planning and Environment—Biodiversity Conservation and Science Directorate	5.1
NSW Department of Planning and Environment—Crown Lands	5.2
NSW Department of Planning and Environment—Heritage NSW—Aboriginal Cultural Heritage	5.3
NSW Department of Planning and Environment—Heritage NSW—Non-Aboriginal Heritage	5.4
NSW Department of Planning and Environment—Water	5.5
NSW Department of Primary Industries—Agriculture	5.6
NSW Department of Primary Industries—Fisheries	5.7
NSW Environmental Protection Authority	5.8
Transport for NSW	5.9