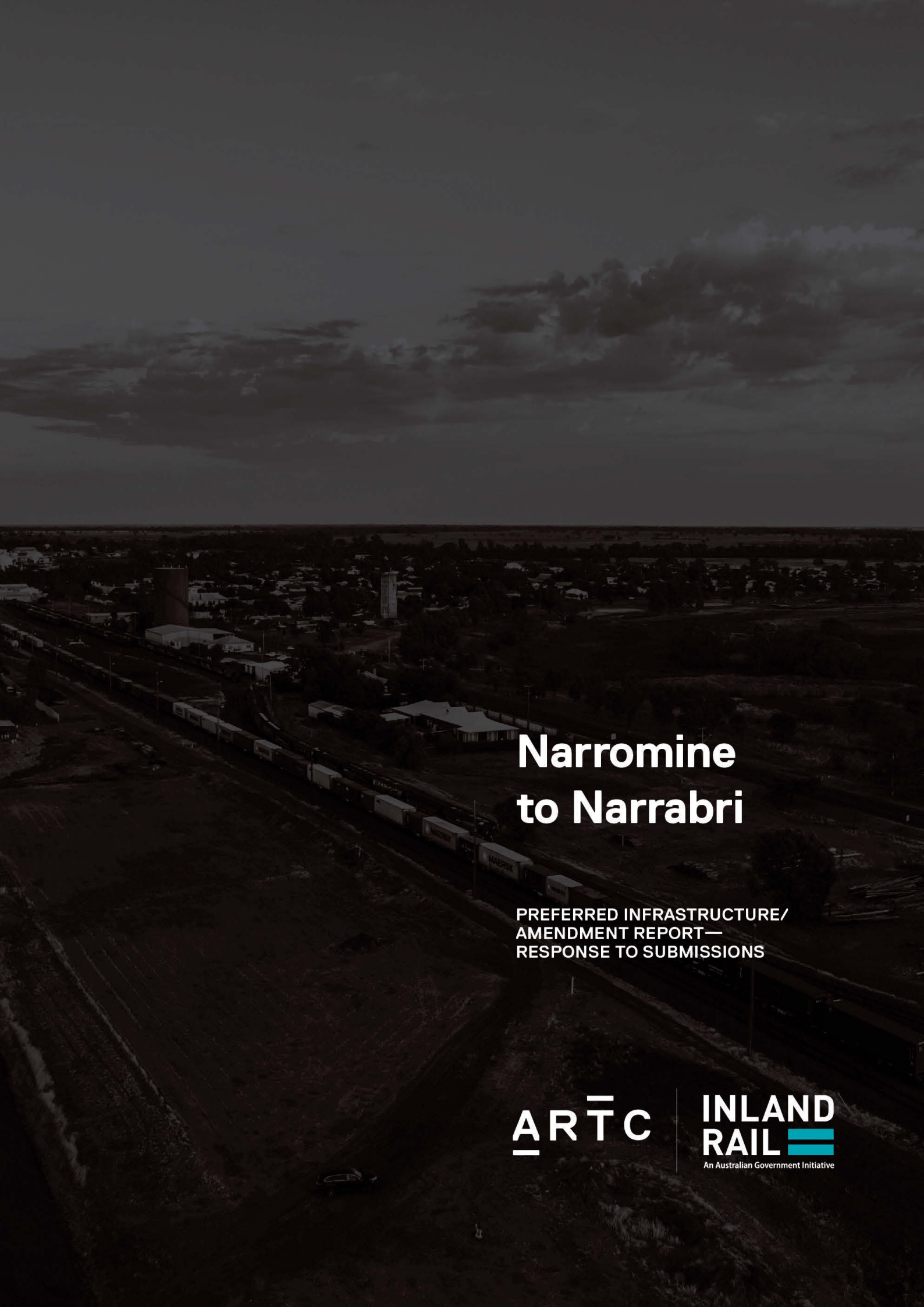

Narromine to Narrabri

PREFERRED INFRASTRUCTURE/ AMENDMENT REPORT— RESPONSE TO SUBMISSIONS

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COVER IMAGE
Existing Walgett rail branch.

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.

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Abbreviations

Abbreviation	Definition
ABS	Australian Bureau of Statistics
ACHAR	Aboriginal Cultural Heritage Assessment Report
AEP	annual exceedance probability
AHIMS	Aboriginal Heritage Information Management System
ALCAM	Australian Level Crossing Assessment Model
Approved Methods	Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales
ARTC	Australian Rail Track Corporation Ltd
AS	Australian Standard
BC Act	*Biodiversity Conservation Act 2016* (NSW)
BDAR	biodiversity development assessment report
BoM	Bureau of Meteorology
CCC	Community Consultative Committee
CEMP	construction environmental management plan
Cth	Commonwealth
dB(A)	decibels (A-weighted)
DCA	Drainage control area
DP	deposited plan
DPIE	NSW Department of Planning, Industry and Environment (now DPE)
DPE	NSW Department of Planning and Environment (previously DPIE)
EIS	environmental impact statement
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW)
EP&A Regulation	*Environmental Planning and Assessment Regulation 2000*
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cth)
EPL	environment protection licence
ISO	International Organization for Standardization
Just Terms Act	*Land Acquisition (Just Terms Compensation) Act 1991* (NSW)
km	kilometres
km^2	square kilometres
km/h	kilometres per hour
LEP	local environmental plan
LGA	local government area
m	metres
mm	millimetre
NEPC	National Environmental Protection Council
NSW EPA	NSW Environment Protection Authority
ONRSR	Office of the National Rail Safety Regulator
PCT	plant community type
QDL	Quantitative design limit
RAP	Registered Aboriginal parties
SEARs	Secretary's environmental assessment requirements (for the EIS)
SIMP	social impact management plan
TEC	threatened ecological communities
TSR	travelling stock reserve

Definitions

Term	Definition
Aboriginal site	A place where physical remains or modification of the natural environment indicate past and 'traditional' activities by Aboriginal people. Site types include artefact scatters, isolated artefacts, burials, shell middens, scarred trees, quarries and contact sites. Includes sites listed on the AHIMS. Also known as Aboriginal objects.
Active control (level crossings)	Where the movement of vehicular or pedestrian traffic across a railway crossing is controlled using devices such as flashing signals, warning sounds, gates and/or boom barriers (or a combination of these), with the device/s activated prior to, and during, the passage of a train through the crossing.
Annual exceedance probability	The chance of a flood of a nominated size occurring in a particular year. The chance of the flood occurring is expressed as a percentage and, for large floods, is the reciprocal of the annual recurrence interval. For example, the 1 per cent annual exceedance probability (1% AEP) flood event is equivalent to the 100-year annual recurrence interval flood event.
Aquifer	A groundwater bearing formation sufficiently permeable to transmit and yield groundwater or water bearing rock.
Ballast	Crushed rock, stone, etc. used to provide a foundation for a railway track. Ballast usually provides the bed on which railway sleepers are laid, transmits the load from train movements, and restrains the track from movement.
Biodiversity	The variety of plant and animal life in the world or in a particular habitat.
Biodiversity offsets	Measures that benefit biodiversity by compensating for the adverse impacts elsewhere of an action, such as clearing for development. Biodiversity offsets work by protecting and managing biodiversity values in one area in exchange for impacts on biodiversity values in another.
Bore	Constructed connection between the surface and a groundwater source that enables groundwater to be transferred to the surface, either naturally or through artificial means.
Borrow pit	An area where material (such as sand, gravel or rock) has been dug for construction use at another location.
Construction compound	An area used as the base for construction activities, usually for the storage of plant, equipment and materials and/or construction site offices and worker facilities.
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 that the environmental risks are properly managed.
Construction noise management level	Construction noise management levels are established in accordance with the *Interim Construction Noise Guideline* (DECC, 2009). They represent the noise level at which there may be some community reaction to noise. Construction noise management levels are not mandatory limits; however, where construction noise levels are predicted or measured to be above the management levels, feasible and reasonable work practices to minimise noise emissions are to be investigated.
Crossing loop	A section of track off to the side of the main track/s that allows a train to move to the side so that another train can pass.
Crown land	Land that is owned by the NSW Government.
Culvert	A structure that allows water to flow under a road, railway, track, or similar obstruction.
Cumulative impacts	Impacts that, when considered together, have different and/or more substantial impacts than a single impact assessed on its own.
Drainage	Natural or artificial means for the interception and removal of surface or subsurface water.
Ecosystem credit	A credit that relates to a vegetation type and threatened fauna species that are reliably predicted by that vegetation type (as a habitat surrogate).
Emission	A substance discharged into the air.
Erosion	A natural process where wind or water detaches a soil particle and provides energy to move the particle.
Flood	Relatively high stream flow that overtops the natural or artificial banks in any part of a stream, river, estuary, lake or dam, and/or local overland flow associated with major drainage before entering a watercourse.
Floodplain	An area of land that is inundated by floods up to and including the probable maximum flood event (i.e. flood prone land).
Freight	Goods transported by truck, train, ship, or aircraft.

Term	Definition
Groundwater	Water that is held in rocks and soil beneath the Earth's surface.
Heritage listed	An item, building or place included on statutory heritage lists maintained by local, State and/or the Australian Government.
Hydrology	The study of rainfall and surface water runoff processes.
Impact	Influence or effect exerted by a project or other activity on the natural, built and community environment.
Inland Rail Program (Inland Rail)	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 kilometres in length. Inland Rail will involve a combination of upgrades of existing rail track and the provision of new track.
$L_{A90(period)}$	The sound pressure level exceeded for 90 per cent of the measurement period.
$L_{Aeq(time)}$	The equivalent continuous sound level for a defined time period.
L_{Amax}	The maximum sound level recorded during the measurement period.
Landscape	All aspects of a tract of land, including landform, vegetation, buildings, villages, towns, cities and infrastructure.
Landscape character	The combined quality of built, natural and cultural aspects that make up an area and provide its unique sense of place.
Level crossing	A place where rail lines and a road cross at the same elevation.
Level crossing protection	The level of control provided at level crossings, which is determined on a case by case basis, and depends on the particular characteristics of a crossing. It generally falls into two categories: passive protection (uses warning signage only) or active protection (uses signage and flashing lights with boom gates).
Level of service	Defined by Austroads as a measure for ranking operating road and intersection conditions, based on factors such as speed, travel time, freedom to manoeuvre, interruptions, comfort and convenience.
Local road	Road used primarily to access properties located along the road.
Made road	A road that has been graded but may or may not be sealed.
Multi-function compound	Large construction compounds proposed for use during construction that would provide a variety of construction-related support services, including storage, assembly, concrete batching and workforce facilities.
PM_{10}	Particulate matter 10 micrometres or less in diameter. Particles in this size range make up a large proportion of dust that can be drawn deep into the lungs. This is a classification of particles by size rather than chemical properties.
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.
Proposal	The construction and operation of the Narromine to Narrabri section of Inland Rail.
Proposal site	The area that would be directly affected by construction works (also known as the construction footprint). It includes the location of proposal infrastructure, the area that would be directly disturbed by the movement of construction plant and machinery, and the location of the storage areas/compounds sites etc. that would be used to construct that infrastructure.
Rail alignment	The exact positioning of the track, accurately defined both horizontally and vertically, along which the rail vehicles operate.
Rail corridor	The corridor within which the rail tracks and associated infrastructure are located.
Rating background level	The underlying level of noise present in an area once transient and short-term noise events are filtered out.
Reference design	An initial functional layout of a project. Used to facilitate understanding of a project, establish feasibility, provide basis for estimating and determine further investigations needed for detailed design.
Risk	Chance of something happening that will potentially have an undesirable effect. It is measured in terms of consequence and likelihood.
Road reserve	A legally defined area of land within which facilities such as roads, footpaths and associated features may be constructed for public travel.
Scour	The erosion of material by the action of flowing water.

Term	Definition
Species credit	The class of biodiversity credits created or required for the impact on threatened species that cannot be reliably predicted to use an area of land based on habitat surrogates. Species that require species credits are listed in the threatened species profile database.
Spoil	Excess soil, rock or dirt excavated from the site.
Sensitive receivers	Land uses that are sensitive to potential flooding, noise, air and visual impacts, such as residential dwellings, schools and hospitals.
State significant infrastructure	Major transport and services infrastructure considered to have State significance as a result of size, economic value or potential impacts.
Stock crossing	A defined location providing the ability for stock (cattle and sheep) to safety cross the rail corridor, via a level crossing or an underpass (culvert or bridge).
Study area	The study area is defined as the wider area including and surrounding the proposal site, with the potential to be directly or indirectly affected by the proposal (e.g. by noise and vibration, visual or traffic impacts). The actual size and extent of the study area varies according to the nature and requirements of each impact assessment technical report.
Surface water	Water flowing or held in streams, rivers and other wetlands in the landscape.
Temporary workforce accommodation facility	A facility used to accommodate the construction workforce for the proposal and provide a range of facilities for the workforce, including accommodation and catering.
Track	The structure consisting of the rails, fasteners, sleepers and ballast, which sits on the formation.
Track formation	See the definition of formation.
Travelling stock reserves	Travelling stock reserves are parcels of Crown land reserved under the *Crown Land Management Act 2016* (NSW) for use by travelling stock.
Visual amenity	The value of a particular area or view in terms of what is seen.
Viewpoint	The specific location of a view, typically used for assessment purposes.
Waste	Includes any matter (whether liquid, solid, gaseous or radioactive) that is discharged, emitted or deposited in the environment in such volume, constituency, or manner as to cause an alteration to the environment.
Watercourse	The path of the main flow of surface water along its extent, variously referred to as streams or rivers (as relevant).
Water table	The surface of saturation in an unconfined aquifer, or the level at which pressure of the water is equal to atmospheric pressure.

Executive summary

Overview

The Australian Government has committed to building a nationally significant piece of transport infrastructure by constructing a high-performance and direct interstate freight rail corridor between Melbourne and Brisbane, via central-west New South Wales (NSW) and Toowoomba in Queensland. Inland Rail will enhance Australia's existing national rail network and serve the growing interstate freight market.

The Inland Rail route, which is about 1,700 kilometres (km) long, involves:

- Using the existing interstate rail line through Victoria and southern NSW
- Upgrading about 400 km of existing track, mainly in western NSW
- Providing about 600 km of new track in NSW and south-east Queensland.

The Inland Rail program has been divided into 13 sections, seven of which are located in NSW. Each of these projects can be delivered and operated independently, with tie-in points on the existing railway.

ARTC is seeking approval to construct and operate the Narromine to Narrabri section of Inland Rail ('the proposal'). The proposal consists of about 306 km of new single-track standard-gauge railway with crossing loops. The proposal would link the Parkes to Narromine section of Inland Rail, located in central-west NSW, with the Narrabri to North Star section of Inland Rail, located in north-west NSW. The proposal also includes changes to some roads to facilitate construction and operation of the new section of railway, and ancillary infrastructure to support the proposal.

Approval and assessment process

The proposal is declared State significant infrastructure and critical State significant infrastructure under Division 5.2 of the *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act). The proposal is subject to assessment and approval by the NSW Minister for Planning. The proposal is also a controlled action under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) and requires approval from the Australian Government Minister for the Environment and Water.

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 NSW Department of Planning and Environment (DPE) ('the SEARs').

The EIS was placed on public exhibition by DPE for a period of 62 days, commencing on 8 December 2020 and concluding on 7 February 2021.

A Response to Submissions Report (the 'EIS Response to Submissions Report') was prepared to respond to the issues raised in submissions made on the EIS. A Preferred Infrastructure/Amendment Report was also prepared to describe the proposed changes to the proposal to minimise its environmental impact and to reflect design development since public exhibition of the EIS.

The Preferred Infrastructure/Amendment Report was placed on public exhibition for a period of 24 days commencing on 31 August 2022 and concluding on 23 September 2022. The EIS Response to Submissions Report was also made publicly available.

During the exhibition period, interested stakeholders and members of the community were able to review the reports online, participate in consultation and engagement activities, and make a written submission to the DPE for consideration in its assessment of the proposal.

Purpose of this report

This report documents and considers the issues raised in community, government agency, organisation and other submissions received by DPE during public exhibition of the Preferred Infrastructure/Amendment Report, in accordance with the requirements of Division 5.2 of the EP&A Act and as directed by the Planning Secretary. ARTC has carefully considered the content of the submissions and has prepared responses to the issues raised.

The report also describes the actions taken since the Preferred Infrastructure/Amendment Report was placed on public exhibition and provides a final set of mitigation measures, which incorporate amendments made to respond to issues raised in submissions and/or those taken into account in additional information.

Overview of submissions

A total of 70 submissions were received as follows:

- Public submissions—46 submissions (from 44 separate submitters)
- Public authority—15 submissions (including four submissions from local councils)
- Organisations—9 submissions.

For the purpose of the issues analysis and responses provided in this report, submissions have been considered and analysed for this Response to Submissions report according to two broad groupings:

- Community—includes local residents, members of the public, landholders and property owners
- Government agency and other key stakeholders—includes government departments and agencies, local councils, regional businesses and representative organisations/community groups.

Each submission was reviewed, and the issues raised have been summarised, categorised and grouped.

Issues raised

The analysis of submissions involved identifying the issues raised and grouping the issues into the following five main issue types identified by the guidelines *State significant infrastructure—preparing a submissions report* (DPIE, 2021):

- The proposal
- Procedural matters
- Environmental, social and economic impacts
- Proposal evaluation
- Issues beyond the scope of the proposal.

Each type of issue was then categorised into key issues and sub-issue categories based on the information and environmental aspects considered by the EIS and Preferred Infrastructure/Amendment Report.

Community

The majority of issues raised by the community related to project development/route selection (20 per cent), followed by issues relating to land use and property (15 per cent).

The most frequently raised issues relating to project development/route selection are:

- Route options that were considered (67 per cent)
- Project development process (33 per cent).

The most frequently raised issues about land use and property are in relation to:

- Operational property impacts (26 per cent)
- Compensation (20 per cent)
- Private access impacts (16 per cent).

Further information on the issues raised in community submissions is provided in section 7 of this report.

Government agencies and other key stakeholders

Key issues raised by government agencies and other key stakeholders included:

- Route selection
- Flooding
- Workforce accommodation
- Management of socio-economic impacts
- Noise and vibration
- Traffic and transport
- Land use and property.

Summaries of the issues raised in submissions, and responses to these issues, are provided in sections 4 to 7 of this report.

Design refinements to the proposal

Following review of the submissions, ARTC does not propose any further changes to the proposal (as amended) as described in the Preferred Infrastructure/Amendment Report.

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. The mitigation measures were amended in the Preferred Infrastructure / Amendment Report.

After consideration of the issues raised in the submissions, and additional work undertaken since exhibition, the mitigation measures have been updated to:

- Make additional commitments to respond to issues raised in the submissions
- Modify the wording in some instances so that the intent of the measure is clearer.

The full set of updated mitigation measures is provided in Appendix B of this report. These measures supersede the measures presented in the EIS and Preferred Infrastructure/Amendment Report.

The next steps

DPE will, on behalf of the NSW Minister for Planning, review the EIS, this Response to Submissions Report, the EIS Response to Submissions Report, and the Preferred Infrastructure/Amendment Report. Once DPE has completed its assessment, DPE will 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 NSW Minister for Planning, who will then approve the proposal (with any conditions considered appropriate) or refuse to give approval to the proposal.

The Minister for Planning's determination, including any conditions of approval and the Environmental Assessment Report, will be published on the Major Projects website following determination.

DPE will assess the impacts to matters of national environmental significance (protected by the EPBC Act) under the Assessment Bilateral Agreement between NSW and the Australian Government. Once NSW has determined the project, it will provide the Australian Government with the approval conditions. The Australian Government will then complete its assessment under the EPBC Act and make recommendations to the Australian Minister for the Environment and Water.

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

If the proposal is approved, construction contractor(s) would be engaged to carry out detailed design and construction of the proposal. ARTC and its construction contractor(s) would continue to engage with stakeholders and the community in the lead up to, and during, construction. The consultation activities, defined by the communication management plan for the proposal, will aim to ensure that:

- The 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.

1. Introduction

1.1 Background

The Australian Government has committed to delivering a nationally significant piece of transport infrastructure by constructing a high performance and direct interstate freight rail corridor between Melbourne and Brisbane, via central-west New South Wales (NSW) and Toowoomba in Queensland. Inland Rail will enhance Australia's existing national rail network and serve the growing interstate freight market.

The Inland Rail route, which is about 1,700 km long, involves:

- Using the existing interstate rail line through Victoria and southern NSW
- Upgrading about 400 km of existing track, mainly in western NSW
- Providing about 600 km of new track in NSW and south-east Queensland.

The Inland Rail program has been divided into 13 sections, seven of which are located in NSW. Each of these projects can be delivered and operated independently, with tie-in points on the existing railway.

Australian Rail Track Corporation Ltd (ARTC) ('the proponent') has developed a program to deliver Inland Rail. ARTC was created after the Australian and state governments agreed in 1997 to the formation of a 'one stop shop' for all operators seeking access to the national interstate rail network.

Across its network, ARTC is responsible for:

- Selling access to train operators
- Developing new business
- Capital investment in the corridors
- Managing the network
- Infrastructure maintenance.

Further information on ARTC and Inland Rail can be found at **artc.com.au** and **inlandrail.artc.com.au**.

1.2 Proposal overview

The proponent is seeking approval to construct and operate the Narromine to Narrabri section of Inland Rail ('the proposal'). The proposal consists of about 306 km of new single-track standard-gauge railway with crossing loops. The proposal also includes changes to some roads to facilitate construction and operation of the new section of railway, and ancillary infrastructure to support the proposal.

The proposal would be constructed to accommodate double-stacked freight trains up to 1,800 metres (m) long and 6.5 m high. It would include infrastructure to accommodate possible future augmentation and upgrades of the track, including a possible future requirement for 3,600 m long trains.

The land requirements for the proposal would include a new rail corridor with a minimum width of 40 m, with some variation to accommodate particular infrastructure and to cater for local topography. The corridor would be wide enough to accommodate the infrastructure currently proposed for construction, as well as possible future expansion of crossing loops for 3,600 m long trains. Clearing of the proposal site would occur to allow for construction and to maintain the safe operation of the railway.

The proposal would be located between the towns of Narromine and Narrabri in NSW. The proposal would link the Parkes to Narromine section of Inland Rail, located in central-west NSW, with the Narrabri to North Star section of Inland Rail, located in north-west NSW.

A description of the proposal (as amended) is provided in section 1.3 and Appendix A of the Preferred Infrastructure/Amendment Report.

1.3 Assessment and approval process

1.3.1 Statutory context

The proposal is declared State significant infrastructure and critical State significant infrastructure under Division 5.2 of the *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act). The proposal is subject to assessment and approval by the NSW Minister for Planning. The proposal is also a controlled action under the *Environment Protection Biodiversity Conservation Act 1999* (Cth) (EPBC Act) (referral reference 2018/8259) and requires approval from the Australian Minister for the Environment.

An environmental impact statement (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 environmental assessment requirements of the Secretary of the (then) NSW Department of Planning, Industry and Environment (DPIE) (now the Department of Planning and Environment (DPE)) ('the SEARs'), dated 9 September 2020. The EIS also supported ARTC's application for approval of the proposal under the EPBC Act.

Further information about the statutory context, approval and assessment requirements is provided in chapter A3 of the EIS.

1.3.2 EIS exhibition

The EIS was placed on public exhibition by DPE for a period of 62 days, commencing on 8 December 2020 and concluding on 7 February 2021.

During the exhibition period, interested stakeholders and members of the community were able to review the EIS online or at display locations, participate in consultation and engagement activities, and make a written submission to DPE for consideration in the assessment of the proposal.

During the exhibition period, submissions were invited from the community and other stakeholders. The receipt of submissions was coordinated and managed by DPE. A total of 116 submissions were received by DPE.

1.3.3 Response to EIS submissions and amendments to the proposal

A Response to Submissions Report (the 'EIS Response to Submissions Report') was prepared to respond to the issues raised in submissions made on the EIS.

Based on community and stakeholder feedback received during the public exhibition of the EIS, ARTC revised the proposal to minimise its environmental impact and to reflect design development since public exhibition of the EIS. A separate Preferred Infrastructure/Amendment Report was prepared to describe the proposed changes. The report also described the actions taken since the EIS was placed on public exhibition and provided a final set of mitigation measures, which incorporated amendments made to respond to issues raised in submissions and/or take into account additional information.

The Preferred Infrastructure/Amendment Report was placed on public exhibition for a period of 24 days commencing on 31 August 2022 and concluding on 23 September 2022. The EIS Response to Submissions Report was also made publicly available.

During the exhibition period, interested stakeholders and members of the community were able to review the reports, participate in consultation and engagement activities (see section 3 of this report), and make a written submission to the DPE for consideration in its assessment of the proposal.

1.4 Purpose and structure of the report

1.4.1 Purpose

In accordance with section 5.17(6)(a) of the EP&A Act, on 30 September 2022 the Planning Secretary directed ARTC to *provide* a Response to Submissions Report that addresses the issues raised in the submissions*.'*

This Response to Submissions Report presents responses to issues raised in submissions received during the exhibition of the Preferred Infrastructure/Amendment Report. The report documents and considers the issues raised in community, government agency, organisation and other submissions received by DPE during public exhibition of the reports in accordance with the requirements of Division 5.2 of the EP&A Act and as directed by the Planning Secretary. ARTC has carefully considered the content of the submissions and has prepared responses to the issues raised.

The report also describes the actions taken since the Preferred Infrastructure/Amendment Report was placed on public exhibition and provides a final set of mitigation measures, which incorporate amendments made to respond to issues raised in submissions and/or those taken into account in additional information.

Following review of the submissions, ARTC does not propose any further changes to the proposal (as amended) as described in the Preferred Infrastructure/Amendment Report.

1.4.2 Scope and structure

This report provides the following information.

- An introduction to the report (section 1)
- An analysis of the submissions received during exhibition of the Preferred Infrastructure/Amendment Report, including number, types of submitter and key issues raised (section 2)
- A description of actions undertaken since exhibition, including additional assessments and the community and stakeholder engagement undertaken in conjunction with exhibition of the Preferred Infrastructure/Amendment Report (section 3)
- Responses to submissions from local councils and NSW Government agencies (sections 4 and 5)
- Responses to submissions from other key stakeholders, including peak bodies and community groups (section 6)
- Responses to issues raised in submissions from members of the public, including property owners (section 7)
- Conclusion, including an updated proposal justification (section 8)
- a reference list (section 9)
- submissions register, including where issues have been addressed in this report (Appendix A)
- list of updated mitigation measures (Appendix B).

2. Analysis of submissions

2.1 Submissions received

During exhibition of the Preferred Infrastructure/Amendment Report, 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 Major Projects NSW Planning Portal website (**planningportal.nsw.gov.au/major-projects/project/41351**). Submissions were accepted by electronic online submission or by post and were provided to ARTC for review and consideration.

A total of 70 submissions were received as follows:

- Public submissions—46 submissions (from 44 separate submitters)
- Public authority—15 submissions (including four submissions from local councils)
- Organisations—9 submissions.

The following information was also recorded by DPE as part of the public submission registration process:

- 44 submissions registered an objection to the proposal
- 10 submissions registered a comment on the proposal
- 5 submissions registered support for the proposal
- 11 submissions registered as agency advice.

For the purpose of the issue analysis and responses provided in this report, submissions have been considered and analysed according to two broad groupings:

- Community—includes local residents, members of the public, landholders and property owners
- Government agency and other key stakeholders—includes government departments and agencies, local councils, regional businesses and representative organisations/community groups.

2.2 Approach to analysing submissions

Each submission was reviewed, and the issues raised were summarised, categorised and grouped. The analysis of submissions involved identifying the issues raised and grouping the issues into the five main issue types identified by the guidelines:

- The proposal
- Procedural matters
- Environmental, social and economic impacts
- Project evaluation
- Issues beyond the scope of the proposal.

Each type of issue was then categorised into key issues (e.g. design features, noise and vibration) and sub-issue categories (e.g. level crossings, construction noise), which were based on the information and environmental aspects considered by the EIS and Preferred Infrastructure/Amendment Report. This provided an understanding of the frequency of the issues that were raised and the key areas of concern.

2.2.1 Review of government agency and key stakeholder submissions

Each agency and key stakeholder submission were reviewed and the issues raised in each were summarised broadly according to the order and headings provided in each submission (where such headings were provided). In some instances, related issues have been grouped under a single heading. The issues raised in each submission, and responses to these issues, are provided per submitter in sections 4, 5 and 6 of this report. Where relevant, input to the responses was sought from the technical specialists who assisted with preparing the EIS, Preferred Infrastructure/Amendment Report and EIS Submissions Report.

Appendix A provides the submissions register, which includes a table identifying government agency and key stakeholder submissions and a cross-reference to where the issues raised have been addressed in this report.

2.2.2 Review of community submissions

An assessment of each community submission was undertaken, with each submission individually reviewed to understand the issues raised. The analysis involved identifying the issues raised and categorising them into key issues and sub-issues.

Responses to the issues raised are provided in section 7 of this report, according to the issue categories. Where relevant, input to the responses was sought from the technical specialists who assisted with preparing the EIS, Preferred Infrastructure/Amendment Report and EIS Submissions Report.

Each issue identified in section 7 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 a number of submissions.

The submissions register (Appendix A) includes a table identifying community submissions using the submission identification numbers provided to submitters by DPE. The table presents, for each submission, a cross reference to where the issues raised in the community submissions have been addressed in section 7 of this report.

Further detail on issues raised in each submission, including background, contextual information and full submissions, is provided in the detailed submissions available via the Major Projects NSW Planning Portal website (**planningportal.nsw.gov.au/major-projects/project/41351**).

2.3 Summary of issues raised

2.3.1 Government agency and key stakeholder issues breakdown

Key issues raised by government agencies and other key stakeholders included:

- Route selection
- Flooding
- Workforce accommodation
- Management of socio-economic impacts
- Noise and vibration
- Traffic and transport
- Land use and property.

Summaries of the issues raised in submissions, and responses to these issues, are provided in sections 4 to 7 of this report.

2.3.2 Community issues breakdown

A breakdown of the issue types for the issues raised in community submissions is shown in Figure 2-1. This figure shows that the majority of issues raised by the community related to project development/route selection (20 per cent), followed by issues relating to land use and property (15 per cent).

The most frequently raised issues relating to project development/route selection are:

- Route options that were considered (67 per cent)
- Project development process (33 per cent).

The most frequently raised issues about land use and property are in relation to:

- Operational property impacts (26 per cent)
- Compensation (20 per cent)
- Private access impacts (16 per cent).

Further information on the issues raised in community submissions is provided in section 7 of this report.

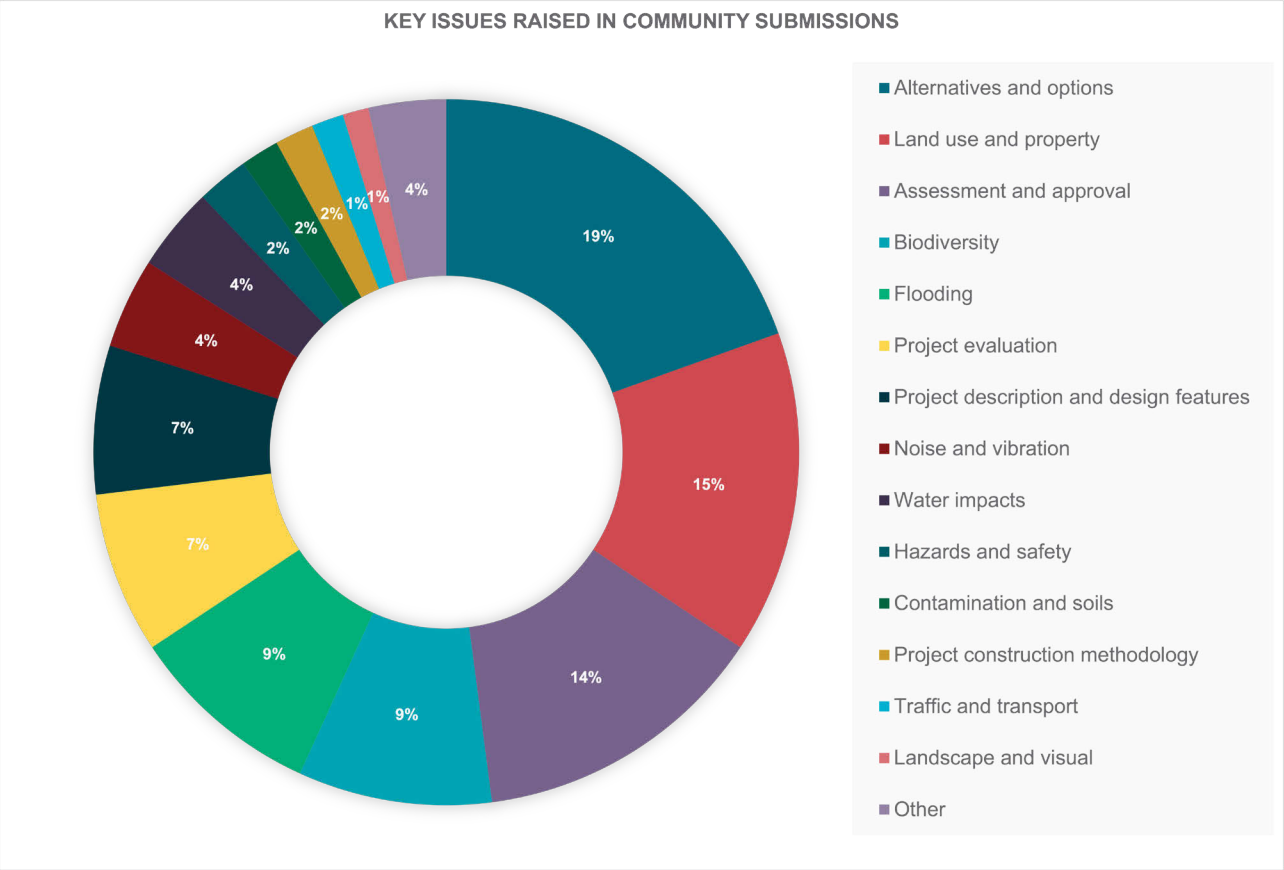

FIGURE 2-1 MAIN ISSUE TYPES FOR COMMUNITY SUBMISSIONS

3. Actions taken since exhibition

3.1 Updated assessment reports

As described in section 4 of the Preferred Infrastructure/Amendment Report, additional assessments were undertaken following exhibition of the EIS to assist with considering and responding to issues raised in submissions and during consultation with stakeholders; assist with assessing the impacts of the proposed amendments; and/or further progress commitments made in the EIS. This included updating some of the technical reports that were prepared to support the EIS based on the additional assessments undertaken.

Updated technical reports for biodiversity, flooding and hydrology and noise and vibration (construction and operation) were prepared and made available during exhibition of the Preferred Infrastructure/Amendment Report.

The updated biodiversity development assessment report has been further updated in consultation with DPE (Biodiversity, Conservation and Science Directorate) (BCS), taking into account the comments provided in the BCS submission (see section 5.1 of this report) as well as discussions with BCS representatives regarding the agreed approach to various matters raised.

3.2 Community and stakeholder engagement

3.2.1 Overview

ARTC's values commit the organisation to active engagement with stakeholders and the community. For Inland Rail, effective communication and stakeholder engagement are fundamental to reducing risk and minimising the potential for social and environmental impacts as far as possible. ARTC believes that identifying, engaging and effectively communicating with stakeholders is critical to the successful delivery of Inland Rail.

Communication and engagement activities for the Preferred Infrastructure/Amendment Report and supporting documentation (including consultation in relation to the amendments to the proposal as described in the report) were delivered using a phased approach.

The first phase occurred during March to August 2022 prior to exhibition of the Preferred Infrastructure/Amendment Report. Key activities during this phase included:

- Conduct of Community Consultative Committee meetings
- Completion of consultation with landowners affected by potential drainage control areas (DCAs)
- Providing updates in regular meetings with elected members and representatives of Australian and NSW Government Departments and local councils.

A summary of the engagement activities and tools during this phase is provided in section 3.2.2.

The second phase of communication and engagement activities took place during public exhibition of the Preferred Infrastructure/Amendment Report. The purpose of this consultation was to raise awareness about the proposal, the proposed amendments and the Preferred Infrastructure/Amendment Report, assist the community and stakeholders to understand the changes since EIS public exhibition, and hear their issues and concerns. Key activities during this phase included:

- Distribution of information to impacted landowners and stakeholders
- Formal briefings and other project updates
- Distribution of the Preferred Infrastructure/Amendment Report and Summary document
- Release of online flood modelling mapping
- Undertaking Community information sessions, support sessions, pop-up information stands and static displays
- General communication via the project website, mailout to all addresses in alignment LGAs, newsletters, social media, advertisements and media.

A summary of the engagement activities and tools during this phase is provided in section 3.2.3.

3.2.2 Consultation prior to exhibition

Additional consultation was undertaken after the activities described in section 3 of the Preferred Infrastructure/Amendment Report and prior to public exhibition of the report. As the report was being finalised at this time, some of these activities were not described in the report. Table 3-1 lists the engagement activities undertaken between March and August 2022, prior to the exhibition of the Preferred Infrastructure/Amendment Report.

TABLE 3-1: CONSULTATION UNDERTAKEN IN MARCH - AUGUST 2022 PRIOR TO PUBLIC EXHIBITION

Activity	Detail
Inland Rail Program website **(https://inlandrail.artc.com.au/where-we-go/projects/narromine-to-narrabri/)**	▸ The project website was updated, advising of the public release of the Preferred Infrastructure/Amendment Report for review and welcoming submissions. This update included links to the documents (hosted on DPE's Major Projects website), the process for formal submission, and information related to planned consultation activities.
Toll-free community information line (1800 732 761) and Inland Rail Program email (inlandrailnsw@artc.com.au)	▸ Requests for information were responded to by the ARTC stakeholder engagement team.

Briefings	▸ Meetings were held with interested community groups to provide a project update and inform them of the approaching Preferred Infrastructure/Amendment Report public exhibition period.
	▸ Briefings occurred with the following stakeholders:
	  ▸ Knitting Nannas New England North West
	  ▸ Bush Heritage Australia.

Drainage control area consultation	▸ Attempted telephone contact with all landowners with drainage control areas on their properties. ▸ Provided maps with identified drainage control areas via email and post to all landowners between March and May 2022.

Advertisements	▸ Advertisements were placed in the following local papers to provide notification about the upcoming exhibition of Preferred Infrastructure/Amendment Report:
	  ▸ Coonabarabran Times
	  ▸ Coonamble Times
	  ▸ The Courier Narrabri
	  ▸ The Gilgandra Weekly
	  ▸ Narromine Star
	  ▸ Dubbo Photo News
	  ▸ Dubbo Daily Liberal
	  ▸ Wee Waa News (The Courier).

Emails to landowners	▸ Pre-notification emails were sent to 160 directly and indirectly impacted landowners. These emailed letters were distributed the week before the public exhibition period and notified stakeholders of the upcoming public exhibition, ongoing consultation activities and the formal submission process.
Emails to key stakeholders	▸ Pre-notification emails were sent to 115 key stakeholders. These emailed letters were distributed the week before the public exhibition period and notified stakeholders of the upcoming public exhibition, ongoing consultation activities and the formal submission process.
Ongoing email and telephone contact with stakeholders	▸ Regular communication was undertaken with Narromine Shire Council, Gilgandra Shire Council, Warrumbungle Shire Council, Coonamble Shire Council and Narrabri Shire Council. ▸ Ongoing engagement was undertaken with the elected representatives as required. ▸ Landowner enquiries were responded to as required. ▸ A quarterly community e-newsletter was sent to the Narromine to Narrabri stakeholder mailing list. This comprehensive database includes contact details of affected impacted landowners, interested community members and business groups. The email notified stakeholders of the upcoming Preferred Infrastructure/Amendment Report public exhibition period.
Community Consultative Committee	▸ Meetings of the Community Consultative Committee occurred in late March 2022 at Narromine, Gilgandra and Narrabri. ARTC provided a project status update, including a summary of key Preferred Infrastructure/Amendment Report activities undertaken since EIS exhibition.

3.2.3 Consultation during exhibition

The Preferred Infrastructure/Amendment Report was placed on public exhibition for 24 days between 31 August 2022 and 23 September 2022. During the exhibition period, government agencies, key stakeholders (including interest groups and organisations) and the community were invited to make written submissions. A summary of the engagement activities and tools used to encourage community and stakeholder participation during the exhibition period is provided in Table 3-2.

TABLE 3-2: CONSULTATION DURING THE PIR/AMENDMENT REPORT EXHIBITION PERIOD

Activity	Detail
Website updates	▸ The Inland Rail Program website (https://inlandrail.artc.com.au/where-we-go/projects/narromine-to-narrabri/) was updated, advising of the public release of the Preferred Infrastructure/Amendment Report for review and welcoming submissions. The update included links to the report (hosted on the Major Projects website), the process for formal submission, and information related to planned consultation activities.
Summary document	▸ A condensed version of the Preferred Infrastructure/Amendment Report, known as the Summary document, was produced to aid in communicating the main topics addressed in the report to members of the public. This was distributed directly to 181 landowners and 139 key stakeholders. About 700 copies were given out to the broader community and other stakeholders.
Emailed letters to key stakeholders	▸ Notification emails were sent to 139 key stakeholders. A formal letter was emailed to key stakeholders, elected representatives and local councils advising of the Preferred Infrastructure/Amendment Report exhibition, ongoing consultation activities and formal submission process. These stakeholders were offered a one-on-one briefing. ▸ A soft copy of the Summary document was also provided with these email notifications.
Letters to landowners	▸ Notification letters were sent to 181 directly and indirectly impacted landowners via registered post. These letters were distributed the week of the public exhibition period and notified stakeholders of the commencement of the public exhibition, ongoing consultation activities and the formal submission process. ▸ Envelopes included the Preferred Infrastructure/Amendment Report (on USB) and the Summary document (hard copy).

Briefings	▸ Briefings were offered to a range of key stakeholders, including government agencies, local councils, Traditional Owners and Local Aboriginal Land Councils.
	▸ Briefings occurred with the following stakeholders:
	  ▸ Australian Government Department of Climate Change, Energy, the Environment and Water
	  ▸ Transport for NSW
	  ▸ Gilgandra Shire Council
	  ▸ Narrabri Shire Council
	  ▸ Narromine Shire Council
	  ▸ Warrumbungle Shire Council
	  ▸ NSW Environment Protection Authority
	  ▸ Forestry Corporation of NSW
	  ▸ Narrabri Local Emergency Management Committee
	  ▸ North West Local Land Services.

Community e-news	▸ A community e-newsletter was sent to the stakeholder mailing list. This comprehensive database includes contact details of affected landowners, interested community members and business groups. The e-newsletter provided an overview of the Preferred Infrastructure/Amendment Report exhibition process, where to find more information and how to make a formal submission. ▸ Two Consultation Manager email blasts were also sent to the stakeholder mailing list (separate to the above e-newsletter). The email blasts provided information on the Support Sessions and the 1-day extension of the public exhibition period.
Pop-up information stands	▸ Nine community pop-up information stands were held during the public exhibition period in September 2022. These stands were held across the five local government areas (Narromine, Gilgandra, Warrumbungle, Coonamble and Narrabri) to introduce the Preferred Infrastructure/Amendment Report and provide information on upcoming community events/sessions e.g. the community drop-in sessions and support sessions (see below).

Activity	Detail
Community drop-in sessions	▸ Eight community drop-in sessions were held during the public exhibition period in September 2022, including an online session. The sessions were held across the five local government areas (Narromine, Gilgandra, Warrumbungle, Coonamble and Narrabri) to introduce the Preferred Infrastructure/Amendment Report and provide information on the content, submission process and timelines. ▸ There was a total of 69 attendees across these sessions.
Community support sessions	▸ Four community support sessions were held during the public exhibition period in September 2022. These sessions were held at Narrabri, Narromine and Gilgandra. These additional sessions were to support the community in understanding the PIR/Amendment Report and the submission process. ▸ There was a total of 12 attendees across these sessions.
Static displays	▸ The Preferred Infrastructure/Amendment Report (via USBs) and the Summary document (hard copy) were made available to the public at the following locations: ▸ Narromine Shire Council—118 Dandaloo Street, Narromine ▸ Narromine Library—31/33 Dandaloo Street, Narromine ▸ Gilgandra Library—1 Warren Road, Gilgandra ▸ Gilgandra Shire Council—15 Warren Road, Gilgandra ▸ Gilgandra Service NSW Agency—20 Miller Street, Gilgandra ▸ Baradine Rural Transaction Agency—13–15 Wellington Street, Baradine ▸ Coonamble Shire Council—80 Castlereagh Street, Coonamble ▸ Gulargambone Rural Transaction Agency—39 Bourbah Street, Gulargambone ▸ Narrabri Library—8 Doyle Street, Narrabri ▸ Narrabri Shire Council—46–48 Maitland Street, Narrabri. ▸ Information on upcoming community information events (drop-in and support sessions) as well as 'How to have your say' handouts were made available as part of the static displays.
Distribution of PIR/Amendment Report and Summary document to landowners	▸ The Preferred Infrastructure/Amendment Report (on USB) and the Summary document (hard copy) were sent to 181 landowners via registered post.
Advertisements	▸ Advertisements were placed in the following local papers to provide information about the public exhibition of the Preferred Infrastructure/Amendment Report and the details of the community information sessions: ▸ Coonabarabran Times ▸ Coonamble Times ▸ The Courier Narrabri ▸ The Gilgandra Weekly ▸ Narromine Star ▸ Dubbo Daily Liberal ▸ Dubbo Photo News ▸ Wee Waa News (The Courier).
Social media	▸ Social media channels (Facebook, Instagram) provided an effective means to engage in a targeted manner with key stakeholders. Social media channels were used to advise of the public release of the Preferred Infrastructure/Amendment Report, including the process for formal submissions, and provide information on planned consultation activities. In total four social media posts were activated during the communications campaign.
Community Consultative Committee	▸ All Community Consultative Committee members were notified via email one week before the public exhibition period to assist representatives in remaining informed and engaged. ▸ A formal letter advising of the PIR/Amendment Report public exhibition commencement was provided to the CCC chair. As well as a soft copy version of the Summary document.
Phone and email	▸ Community engagement contact details (phone and email) were published on all advertising. This included the community engagement hotline (1800 732 761) and email **inlandrailnsw@artc.com.au**.
Online flood modelling mapping	▸ An interactive flood modelling map was released showing current flood depth levels during a 1 in 100-year flood event and updated flood modelling showing changes to flood water levels (afflux) due to the Inland Rail alignment. This interactive tool was provided at the community drop-in sessions and on the project website.

Activity	Detail
Notification mailout	▸ Almost 16,000 households across the five Local Government Areas (Narromine, Gilgandra, Warrumbungle, Coonamble and Narrabri) received public exhibition notifications. The mailout included information about the formal submission process and community drop-in and support sessions.
Media release	▸ A media release was produced about the commencement of the public exhibition and where to find further information.

4. Response to public authority submissions—councils

4.1 Narrabri Shire Council

4.1.1 Narrabri alternative route

Issue

Narrabri Shire Council (Council) is concerned that ARTC has not assessed the Narrabri alternative route, which has been submitted by civil engineers and members of the Narrabri community since March 2018. Proponents of this alternative route consider that it would reduce the capital cost of the proposal while also reducing potential flood and other environmental impacts. Their submission is supported by a hydrological study commissioned by the Narrabri Inland Rail Concerned Residents Group. Council is concerned that the selected route would require significant unfunded costs to connect Inland Rail with the proposed Inland Port and the Special Activation Precinct.

Response

A response to the alternative route issue raised by Council was provided in section 4.3.1 of the EIS Response to Submissions Report.

The Inland Rail route selection process between Narromine and Narrabri is documented in the *Narromine to Narrabri Project – Route selection summary report* (ARTC, 2022) ('Route Selection Summary Report'), which was prepared to support the Preferred Infrastructure/Amendment Report (see Appendix B of the Preferred Infrastructure/Amendment Report). Information on the consideration of alternative alignments near Narrabri and the justification for the preferred option selected was provided in the following sections of the Route Selection Summary Report:

- Section 2.4.6—Selection of study area near Narrabri
- Section 2.5—Government announcement of study area
- Section 3.2.2—Selection of rail corridor near Narrabri
- Section 3.3—Finalising the preferred alignment within the focused area of investigation.

As described in section 3.3 of the Route Selection Summary Report, an alternative route near Narrabri was proposed by the community. The alternative route was located about 8 kilometres (km) further to the west of the preferred alignment, outside of the N2N study area. The alternative route is similar to route options 402 and 407 considered in the study area selection process in 2016/17. Where the alternative route crosses the Namoi River and Narrabri Creek floodplain it closely follows, for significant parts, route option 502. Route options 402, 407 and 502 were not pursued further following the decision in 2016/17 to narrow the study area to the Pilliga forest area and, consequently, route options to the west of Narrabri were discounted (see sections 2.4.5 and 2.4.6 of Route Selection Summary Report).

The alternative route identified by the Narrabri Inland Rail Concerned Residents Group is outside of the N2N study area confirmed by the Australian Government and announced on 18 November 2017. The study area was formally acknowledged by the NSW and Australian Governments in 2018.

The alternative alignment proposed is 1 km longer than the N2N proposal, which has a negative impact on the Inland Rail Service Offering; in particular, the critical objective of delivering freight between Brisbane and Melbourne in under 24 hours.

In addition, the alternative route has a longer crossing of the Namoi River/Narrabri Creek floodplain in the one per cent AEP (1% AEP) flood event. It also involves an additional 5-km section of 'greenfield' track, rather than using the existing rail corridor north of Narrabri. It was concluded that the proposed alternative route would not offer additional benefits or substantive reductions in impacts compared to the preferred alignment.

It is noted that the Narrabri Inland Rail Concerned Residents Group suggested that the alternative route would result in construction cost savings. These appear to be related to an overall reduction in bridge structure length when considering the Bohena Creek and Namoi River/Narrabri Creek floodplains. This however needs to be balanced by the additional costs of the proposed rail embankment across Bohena Creek floodplain, additional track in a greenfield environment rather than upgrading the line north of Narrabri, drainage structures for Spring Creek and interfaces with the Narrabri to Walgett Line, Culgoora Road and the Kamilaroi Highway. A cost comparison between the proposed alternative route and the N2N proposal would also need to include costs associated with

significant delays to the proposal development and approval process. Furthermore, any cost comparison would also need to consider the escalation costs of a delay to construction, cost of land acquisition for the greenfield alignment and the delayed economic benefits to Narrabri and the region.

ARTC acknowledges that Narrabri Shire Council has invested significant effort into the ongoing development of the proposed Northern NSW Inland Port, which has been complemented by Australian and NSW Government contributions. ARTC notes complementary initiatives being led by the Australian Government, such as the $44 million Inland Rail Interface Improvement Program, of which Narrabri Shire Council was a proponent for a strategic business case. In March 2021, ARTC announced an increase in the height of the planned bridge over the existing Narrabri to Walgett Line to allow double-stacked container wagons to pass under the bridges. ARTC remains committed to working with Council and key stakeholders about future opportunities associated with Inland Rail.

4.1.2 Flooding

4.1.2.1 Floodplain Risk Management Advisory Committee—issues raised

Issue

Council's Floodplain Risk Management Advisory Committee provided feedback to Council. Issues raised and comments made included:

- ARTC should alter the design to bring affected areas on Wee Waa Road to less than 10 millimetres (mm) or better afflux in the 1% AEP flood events.
- ARTC to confirm that there will be no effects on 20%, 10%, 5%, and 2% AEP events.
- ARTC to confirm there will be no adverse effects on structures for events caused by local runoff with flash flooding.
- The route does not meet Quantitative Design Limits (QDL) for flood afflux (13 habitable buildings and three non-inhabitable buildings for the 1% AEP (1:100 year)).
- There are also 11 habitable buildings with above-floor flooding and 1 habitable building with below-floor flooding that also exceed the QDL for duration. Presumably, this is for the whole Narromine to Narrabri route.

Response

QDLs (formerly referred to as flood management objectives in the EIS Flooding and hydrology assessment (Technical Report 3)) have been proposed, in consultation with the Department of Planning and Environment (DPE), to assess flooding impacts from the proposal relating to increases in afflux, velocity, flood hazard and duration.

The number of habitable and non-habitable buildings where afflux is predicted to exceed the QDL (for events up to and including the 1% AEP) were provided in Table 7.1 and Table 7.4, respectively, of the updated flooding and hydrology assessment report. The impacted buildings were shown on the mapping provided in Appendix I of the updated flooding and hydrology assessment report. The properties with reported afflux QDL exceedances are along Wee Waa Road, adjacent to Narrabri Creek.

In total, 14 habitable buildings and three non-habitable buildings are predicted to experience an exceedance of the afflux QDL across all events modelled (up to and including the 1% AEP).

The buildings predicted to not comply with the QDL for duration (see section 7.3.4 of the updated flooding and hydrology assessment report) are for the entire proposal (between Narromine and Narrabri).

As discussed in the updated flooding and hydrology assessment report, the QDLs apply to all flood events up to the 1% AEP event and across the range of flooding parameters. The proposal has been designed to minimise changes in flood water behaviour; however, due to the interaction and complexity of topography, surface conditions and hydraulic behaviour, there are instances where the QDLs are not achieved based on the current reference design. These areas are locations where impacts may occur that require further design focus, and/or the adoption of additional mitigation measures during detailed design, to eliminate or reduce impacts as far as practicable. This process would commence post-approval and involve further consultation with affected landholders and asset owners. It would include collecting more detailed topographic survey information of ground levels, land use details and soil conditions to inform the detailed design and mitigation treatments.

In accordance with mitigation measure FH1, additional survey, assessment and modelling would be undertaken during detailed design to confirm building floor levels and determine if the proposal could be modified so that flooding characteristics are not worsened or minimised, as far as practicable, up to and including the 1% AEP event (as provided by the QDLs). Designs for bridge and culvert structures, including the one over the Namoi River/

Narrabri Creek, would continue to be developed to comply with the QDLs, so far as is reasonably practicable. This process would be validated through the development of a flood design verification report and through a commitment by ARTC to consult with affected landholders and asset owners during the detailed design development process. As described in the updated flooding and hydrology assessment report, potential residual flooding impacts (i.e. locations where it is not practicable to meet the QDLs), will be managed in accordance with the conditions of approval. Potential design solutions, in addition to providing industry standard scour protection to minimise residual flooding impacts, include:

- replacing culverts with bridges
- increasing the number of culverts and/or further distribution of culverts
- extending scour protection into private land with possible provision for improved property access
- construction of diversion bunds or drainage to protect buildings and land areas.

The ultimate design solution would be subject to detailed design and further consultation with individual landholders and road authorities.

4.1.2.2 Namoi River flooding

Issue

The Narrabri flood model has not been changed from the previous assessment, which is reasonable. The model shows a number of dwellings would experience increased above-floor level flooding by more than 0.01 m.

The locations of the impacted properties are not clear but would appear to be centered around the Wee Waa Road. There are a number of properties that do not satisfy the other flood assessment criteria. The consultant stated they do not have the models to assess how the bridge culvert blockages have been modelled.

Response

The number of habitable and non-habitable buildings where afflux is predicted to exceed the QDL are described above. The numbers quoted by Council's flooding consultant are not consistent with those provided in the updated flooding and hydrology assessment report. Details of the basis for Council's flooding consultant's opinions were not provided. As such, ARTC is not in a position to comment further in relation to this, except by reference to the information available to ARTC, and that has been done in the following responses.

Bridge and culvert blockages have been modelled in accordance with the procedures outlined in *Australian Rainfall and Runoff* (Ball et al, 2019) as described in section 3.7.4 of the updated flooding and hydrology assessment report. These procedures consider a range of storm profiles and durations that include flash flooding from local catchments. The risk of debris blockage at the bridge over Narrabri Creek and Namoi River was described and assessed in section 7.5.4 of the updated flooding and hydrology assessment report.

ARTC is committed to open and ongoing engagement with Council during detailed design and construction. As described above, in accordance with mitigation measure FH1, further flood modelling would be undertaken during detailed design, in consultation with Council and other stakeholders.

4.1.2.3 Mulgate/Horsearm Creek

Issue

Modelling of the local catchments of Mulgate Creek/Horsearm Creek has now been undertaken. The modelling shows that an additional three buildings would be flooded above floor level by the 1% AEP event, and one dwelling would no longer be inundated. This is not correct as there is an instability in the model run. The consultant stated they had advised ARTC of the issue but it has not been resolved.

Response

Modelling of local catchment flooding associated with Mulgate Creek and surrounding creeks was undertaken and is reported in section 7.5.6 of the updated flooding and hydrology assessment report.

ARTC notes the comment from Council's flooding consultant regarding minor discrepancies within the local catchment flood models. ARTC has identified some minor differences of about 6 mm between the existing and operational model runs for Long Gully; however, these differences are located upstream of the proposal and are not predicted to result in material differences in the predicted QDL exceedances.

As described above, in accordance with mitigation measure FH1, during detailed design further flood modelling would be undertaken in consultation with Council and other stakeholders. This would include further consideration of the identified issue.

4.1.2.4 Bohena Creek flooding

Issue

ARTC has provided an addendum report that investigated the impact of the proposal on Bohena Creek. when the discharge estimates from Council's Bohena Creek Flood Study (2019) are adopted. As expected, no impacts on properties were predicted given that the structures have been designed for much higher flows.

Response

ARTC notes the comment from Council's flooding consultant. The alternative approach to the flood assessment for Bohena Creek was provided in section 7.6 of the updated flooding and hydrology assessment report, and provided in detail at Appendix Q. ARTC will undertake further consultation with Council, their flooding consultant and local landholders during detailed design as part of the flood modelling (mitigation measure FH1).

4.1.2.5 Council requirements

Issue

Council requested that:

- the above consolidated feedback is reviewed and fully considered as part of proposal assessment activities
- any flooding matters pertaining to the proposal are managed and mitigated in accordance with best practice and legislative responsibilities/obligations
- ongoing community consultation and meaningful engagement is undertaken in respect of flood risks associated with the proposal
- flood information pertaining to the proposal be provided in a user-friendly and accessible format
- flooding matters and associated social impacts are a keystone of a Social Impact Management Plan (SIMP) for the proposal.

Response

ARTC has reviewed, and will continue to review, feedback from the Council, including technical feedback, as part of its assessment activities.

As described above, in accordance with mitigation measure FH1, further flood modelling would be undertaken during detailed design, in consultation with Council and other stakeholders. The flood modelling would be undertaken in accordance with the guidelines listed in section B3.1.1 of the EIS, and in consultation with relevant local councils and local emergency management committees, DPE, the NSW State Emergency Service, and potentially impacted landholders.

ARTC acknowledges the challenge of presenting flood impacts across the proposal. During detailed design ARTC would work with all stakeholders to present flooding information in a user-friendly and accessible format.

As stated in mitigation measure SE4, the project SIMP would 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. This would include consideration of flooding related impacts.

4.1.3 Biodiversity

Issue

Council noted that the proposal's biodiversity impacts are likely to be of ongoing interest and concern to the community. Council requested that DPE ensure that:

- ARTC meets all of its legislative obligations pursuant to the *Biodiversity Conservation Act 2016* (NSW) and *Environment Protection and Biodiversity Conservation Act 1999* (Cth)
- Appropriate safeguards and control mechanisms are put in place to monitor and manage biodiversity impacts and outcomes
- Council has the opportunity to review and provide feedback on the required Biodiversity Management Plan.

Response

A range of mitigation measures have been proposed to minimise biodiversity impacts as far as practicable. In particular, and in accordance with mitigation measures BD1 and BD2, the potential impacts on biodiversity would continue to be minimised during detailed design and construction planning.

The updated Biodiversity Development Assessment Report (BDAR) (see section 3.1 of this report) has been prepared in accordance with all relevant legislative obligations. It has been reviewed and assessed by the NSW Biodiversity Conservation and Science Directorate (BCS) of the DPE and updated to address BCS comments. Safeguards and control mechanisms to monitor and manage biodiversity impacts and outcomes would be implemented through the various mitigation measures, including preparation of a detailed fauna connectivity strategy (mitigation measure BD6).

ARTC is committed to open and ongoing engagement with Council during detailed design and construction. Council's role in the review and provision of feedback on the management plans will be determined by DPE.

4.1.4 Temporary workforce accommodation facility

Issue

Council does not support the proposed location of the temporary workforce facility, due to the presence of the existing Narrabri Civeo facility, which is currently under capacity, the flood-prone nature of the land, the potential impact on Council services, and the potential for social impacts. Council requested that:

- the facility should be omitted from the project approval
- should it proceed, the facility should be subject to the same rigour of assessment and approval/operating conditions as the current temporary workforce facilities operated in the Shire.

Response

A response to this issue is provided in section 4.3.6 of the EIS Response to Submissions Report. ARTC maintains the commitments to prepare a temporary workforce accommodation plan (SE-C12) and a workforce management plan (SE11 and SE13).

4.1.5 Stakeholder engagement

Issue

Council noted the volume of information required to be assessed during the public exhibition period and the organisational stress this created. The response to Council's previously communicated concerns in relation to stakeholder engagement within the EIS Response to Submissions Report is noted. Council requested that:

- ARTC continues to engage with Council, as a key local stakeholder, in a proactive and meaningful fashion in line with established and proposed mitigation measures
- the community engagement framework is routinely reviewed to respond to changing community and stakeholder needs and expectations and in a sufficiently agile manner
- a SIMP be prepared in relation to the proposal and in consultation with Council prior to final project approval
- formal consultation be undertaken with Council in the preparation of any traffic, transport and access management plan(s)
- formal consultation with Council be undertaken in the preparation of any construction environmental management plans (CEMPs) and associated sub-plans
- ongoing, timely and proactive engagement with Council be undertaken in respect of:
  - use and occupation of local roads (including section 138 approvals being obtained from Council pursuant to the requirements of the *Roads Act 1993* (NSW))
  - potential impacts and interfaces with water and sewer utilities, including an opportunity to review and provide feedback on a utilities management framework
  - local heritage management.
- the proposed traffic, road network and general environmental impacts in respect of proposed Borrow Pit D, located at Jacks Creek be fully considered and managed, including an opportunity to review and provide feedback on any quarry management plans (or their equivalent).

Response

ARTC thanks Council for its ongoing input to the proposal. As described in section 3.5 of the Preferred Infrastructure/Amendment Report, ARTC is committed to ongoing engagement with community and key stakeholders, including Council, during the detailed design and construction of the proposal. In accordance with mitigation measure SE1, ARTC will develop a communication management plan to guide future engagement activities.

ARTC has committed to the preparation of a CEMP and associated sub-plans. Council's role in the review and provision of feedback on the management plans will be determined by DPE.

As identified throughout the SIMP, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans and will be consulted in the development of the proposed plans and actions.

ARTC will comply with all legislative obligations including the *Roads Act 1993* (NSW).

4.1.6 Heritage

Issue

Council restated its previous concerns regarding the reliance on desktop heritage assessments for Aboriginal cultural heritage and historic heritage. It noted the additional ground truthing and analysis that was undertaken to inform decision making as part of the submitted Preferred Infrastructure/Amendment Report documentation. Council requested that:

- Council has the opportunity to provide feedback and input into any subsequent heritage management plan(s)
- ongoing engagement is undertaken throughout the construction phase of the proposal with Council's appointed Heritage Advisor.

Response

Field survey activities completed as part of both the Aboriginal and non-Aboriginal heritage studies are described in the respective technical reports, and a response to this issue is provided in section 4.3.5 of the EIS Response to Submissions Report.

ARTC is committed to open and ongoing engagement with Council during detailed design and construction. Council's role in the review and provision of feedback on the management plans will be determined by DPE.

4.1.7 Traffic and transport

Issue

Council requested that:

- the contents of Council's original submission in relation to traffic and transport matters are appropriately considered and assessed, particularly impacts on the residential road network and community safety, and road condition assessments (including road dilapidation assessment methodology)
- the use of the residential road network for construction traffic, particularly Gibbons Street, is not supported. Internal haul roads should be utilised as far as is reasonably practicable
- Council is afforded with an opportunity to review and provide feedback on the traffic, transport and access management plan(s) and any proposed haul routes prior to proposal approval.

Response

Council's requests are noted. ARTC is committed to open and ongoing engagement with Council during detailed design and construction.

The EIS considers and assesses the potential impacts of construction on the local road network. Mitigation measure TT1 commits ARTC to avoiding or minimising the potential for impacts on the surrounding road and transport network, and property accesses, as far as reasonably practicable. Mitigation measure TT2 provides that input would be sought from relevant stakeholders (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.

As described in section 5.2.4 of EIS traffic and transport assessment (Technical Report 10) the public road network would need to be used to access the haul roads and other construction infrastructure. With regards to The Island Road (which connects with Gibbons Street) this is the only access for construction of the bridge over the Namoi

River, Narrabri Creek and floodplain to the west of Narrabri. It is likely to be used by construction vehicles for approximately 24 months.

The predicted construction traffic movements (per hour) for The Island Road during construction are 2.5 heavy vehicles and 15.5 light vehicles. This is an increase compared to current traffic movements (1.3 heavy vehicles/7.7 light vehicles per hour currently).

The predicted traffic movements in the EIS are indicative and worst-case based on the EIS reference design. While the predicted construction traffic volumes are higher than the typically low existing traffic volumes on roads in the study area, they are not expected to markedly impact traffic conditions in the area. The potential impacts of increased traffic movements will be managed by preparing and implementing a traffic, transport and access management plan (mitigation measure TT7), as part of the CEMP. The plan would include measures, processes and responsibilities to minimise the potential for impacts on the community and the operation of the surrounding road and transport environment during construction. The plan would be developed in consultation with relevant stakeholders, including local councils, Transport for NSW, Forestry Corporation of NSW, emergency services and public transport/bus operators.

Mitigation measure TT8 commits ARTC to consulting with relevant stakeholders (including local councils) to facilitate the efficient delivery of the proposal and to minimise impacts on road users and landholders during construction. Any additional measures identified as an outcome of consultation would be implemented during construction, where reasonable and feasible.

In accordance with mitigation measure TT11, a dilapidation survey would be undertaken of the public roads within the proposed haulage routes prior to and following completion of construction, and provided to the relevant road authority. Pavement condition monitoring would be carried out during works, as required. The dilapidation survey and monitoring would be undertaken by a suitably qualified and experienced professional, and rectification measures would be implemented as needed during and/or following completion of construction to address any damage caused by construction.

4.1.8 Utilities

Issue

Council has previously communicated concern regarding the impacts on local utilities and highlighted the need for a comprehensive utilities investigation to be undertaken. Council requested that:

- Council has the opportunity to review and provide feedback on utility management plan(s) prior to proposal approval
- the cost of upgrade or relocation of Council utility services should be the responsibility of ARTC and undertaken in consultation with Council.

Response

ARTC is committed to open and ongoing engagement with Council during detailed design and construction. Council's role in the review and provision of feedback on the management plans will be determined by DPE.

The costs of utility investigations and relocations required for the proposal would be the responsibility of ARTC.

4.1.9 Landscape and visual amenity

Issue

Council reiterated that there was insufficient information in relation to landscape and visual amenity considerations, as previously communicated to DPE. Landscape and visual amenity remain an issue of considerable local interest. It is not considered appropriate to defer this matter to the detailed design phase. Council requested that:

- Council's input is formally sought to the proposed urban design and landscape plan
- a robust community and stakeholder engagement framework be embedded in the preparation of the abovementioned plan.

Response

ARTC is committed to open and ongoing engagement with Council during detailed design and construction. Council's role in the review and provision of feedback on the management plans will be determined by DPE.

The urban design and landscape plan will include details of the proposed community and stakeholder engagement process.

4.1.10 Noise and vibration

Issue

Council notes the updated noise and vibration assessment report that was provided with the public exhibition documentation, and reiterated the need to adequately consider, assess, manage, and mitigate noise and vibration impacts in relation to the proposal. Council requested that:

- the potential noise and vibration impacts on affected receivers are managed and mitigated in accordance with overarching legislation and best-practice guidelines
- a robust communication management plan is administered and the effectiveness of such a plan be monitored and progressively reported on to the Approval Authority
- Council's input is formally obtained to the proposal's CEMP and supporting sub-plans.

Response

In accordance with mitigation measure CNV3, a construction noise and vibration management plan would be prepared and implemented as part of the CEMP. The plan would include measures, processes and responsibilities to manage and monitor noise and vibration, and minimise the potential for impacts during construction. Notification of impacts would be undertaken in accordance with the communication management plan for the proposal (mitigation measure SE1).

ARTC is committed to open and ongoing engagement with Council during detailed design and construction. Council's role in the review and provision of feedback on the management plans will be determined by DPE.

4.1.11 Waste management

Issue

Council noted the proposed application of the waste minimisation hierarchy and clarification on waste management approaches contained within the addendum documentation.

In relation to waste management considerations, Council requests that DPE ensures:

- a Waste Management Plan is prepared in consultation with Narrabri Shire Council
- all efforts are made to avoid the disposal of proposal-allied waste to Council landfill(s).

Response

ARTC is committed to open and ongoing engagement with Council during detailed design and construction. Council's role in the review and provision of feedback on the management plans will be determined by DPE.

Council's request to avoid disposal of proposal-waste to Council landfills is noted and will be considered in the preparation of the waste management plan.

4.1.12 Social impacts

Issue

Council noted the additional supporting documentation in the form of the addendum social assessment in addition to the analysis of potential cumulative impacts. Council requests that:

- a SIMP is prepared in relation to the proposal, in consultation with Narrabri Shire Council, that addresses the full suite of potential identified social impacts
- a Stakeholder Engagement Coordination Group be established as soon as reasonably practicable. Such a group should meet at least quarterly and include, but not be limited to, key stakeholders (being ARTC and its appointed Contractor, Council, emergency services, and State and Commonwealth agencies).
- a Community Enhancement Fund (or equivalent) be established in relation to the proposal.

Response

A framework SIMP was included in the public exhibition for the Preferred Infrastructure/ Amendment Report. It was prepared in consultation with DPE to provide greater clarity and a 'clear line of sight' between the updated socio-economic mitigation measures provided in the EIS Response to Submissions Report and Preferred Infrastructure/Amendment Report, and implementation by the construction contractor in the delivery phase.

Mitigation measure SE4 provides for preparation of a SIMP 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 SIMP would define specific actions, roles and responsibilities, and a monitoring, reporting and adaptive management framework for construction. The SIMP would be prepared by the construction contractor in accordance with mitigation measure SE4 and in line with the framework SIMP.

ARTC is committed to open and ongoing engagement with Council during detailed design and construction. As identified throughout the SIMP, Council is identified as a key stakeholder in the context of the proposed SIMP management plans and will be consulted in the development of the proposed plans and actions.

The establishment of proposal co-ordination groups will be determined by DPE.

ARTC has an established a community sponsorships and donations program, which has been operating since 2019. The program has four rounds annually and provides funding for individuals and organisations in regional areas along the Inland Rail route that contribute to local and regional prosperity, wellbeing and sustainability

4.1.13 Proposal legacy items

Issue

Council noted that limited information and commitment was contained within the available documentation regarding agreed proposal legacy items, which has created uncertainty and potential lost opportunities.

Council requested that appropriate measures are put in place to formalise and document agreed proposal legacy items. Specific focus should be provided on ensuring proposal legacy items achieve alignment with Council's adopted integrated planning and reporting framework.

Response

As described in section A8.7 of the EIS, where there is benefit to the local community, the potential for retaining facilities installed for construction would be investigated and negotiated in consultation with relevant stakeholders (such as local councils). This could include the potential for retaining bores after construction or leaving some of the infrastructure associated with the temporary workforce accommodation. Any approvals, operating costs and maintenance associated with retaining and using this infrastructure would be the responsibility of the party that takes ownership.

ARTC is currently investigating the feasibility of developing the following legacy projects: housing in Gilgandra; water bores in Gilgandra; and mobile telecommunications coverage along the Narrabri to North Star section of Inland Rail.

ARTC welcomes discussions with Narrabri Shire Council to identify potential legacy items for consideration that are mutually beneficial for the community and the proposal.

4.1.14 Connectivity and grade separation

Issue

Council notes that the current design includes a grade separation of Inland Rail over the Narrabri to Walgett Line at a height that does not allow for double stacking from the Northern Inland NSW Port site. Council reiterates its previous request that ARTC takes the opportunity to raise the line height now, with the view of avoiding retrofitting and associated escalating infrastructure costs.

Council requested that opportunities to bring forward Interface Improvement Program outcomes, and any complementary infrastructure, be considered to provide optimum community benefit.

Response

As noted in section 1.2.4 of the updated proposal description (see Appendix A of the Preferred Infrastructure/Amendment Report), the clearance height of the proposed bridge over the Narrabri to Walgett Line has been raised by a further 2 metres (m) to future-proof the line for double-stacked train operations. This would

allow double-stacked trains on the Narrabri to Walgett Line to access the proposed Northern NSW Inland Port and minimise future interruption to Inland Rail infrastructure and operations.

ARTC notes that the Inland Rail Interface Improvement Program is led by the Australian Government. ARTC remains committed to working with the Australian Government and Council to determine the feasibility of future opportunities associated with Inland Rail.

4.2 Gilgandra Shire Council

4.2.1 Post-approval processes

Issue

Council is disappointed in the major proposal approval process. Despite this, Council expects to be a key stakeholder in the development and implementation of each of the post-approval plans and is ready and willing to be involved in each relevant one.

Council is still concerned about the likely timeframes that may be imposed on it for consultation and/or review of each of the post-approval plans, which at this point are unclear.

DPE and ARTC need to be aware that as a small rural council, it does not have the required staff resources to immediately respond to the many facets of this proposal within ARTC's timeframe expectations; however, Council is willing to be as cooperative as possible, as it realises the benefit of the proposal to its community and the wider nation.

In this respect, Council would appreciate more detailed advice from DPE and ARTC as to:

- the likely timeframe of the likely numerous requests for information/consultation/review over the pre-construction, construction and operation phases
- the extent of Council staff and other resources that will be required for it to respond meaningfully to all requests during each of these phases.

Council would also appreciate discussion with DPE and/or other NSW Government agencies and/or the Federal Government as to how Council may be assisted in securing such staff and resources, considering our small size and distance from the key markets for finding specialist professional staff.

Response

Council's concerns regarding the major projects approval process are noted. The process is implemented by DPE in accordance with the requirements of the EP&A Act.

ARTC is committed to open and ongoing engagement with Council during detailed design and construction and this will include information about timeframes once it becomes available. Council's role in the review and provision of feedback on the management plans will be determined by DPE. Details of the likely timeframes and any support processes would be resolved through direct agreement between DPE and Council. The communication management plan described in chapter A4 and Appendix C of the EIS will include the methodologies and resulting timelines. Refer also to mitigation measure SE1.

4.2.2 Social impact management plan

Issue

Council is appreciative of the framework SIMP being placed on exhibition with the EIS Response to Submissions Report and Preferred Infrastructure/Amendment Report. Council realises that the SIMP is required to be provided as part of the post-approval CEMP process and that neither ARTC nor DPE were legally compelled to exhibit it at this time.

The detail already provided in the framework SIMP under these subject headings reassures Council that many of its concerns relating to social and economic issues raised in its original submission to the EIS have now been taken seriously by ARTC and DPE, and are subsequently being addressed by ARTC.

Council expects to be a key stakeholder in the development and implementation of each of the management plans.

Response

Council's support is noted. A framework SIMP was included in the public exhibition for the Preferred Infrastructure/ Amendment Report. It was prepared in consultation with DPE to provide greater clarity and a 'clear line of sight'

between the updated socio-economic mitigation measures provided in the EIS Response to Submissions Report and Preferred Infrastructure/Amendment Report and implementation by the construction contractor in the delivery phase.

ARTC is committed to open and ongoing engagement with Council during detailed design and construction. In accordance with mitigation measure SE4, the project SIMP would 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. As identified throughout the SIMP, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans and will be consulted in the development of the proposed plans and actions.

4.2.3 Communicating with local communities

Issue

Council is pleased to see the details within the Communication Management Plan section of the framework SIMP. Council notes the extensive details relating to consultation with individual landholders and affected members of the community, but restricts its comments to consultation involving the wider community and particular community organisations mentioned in the framework SIMP.

In particular, Council supports the following and expects full and timely involvement as a key stakeholder in the following:

- communication management plan to be implemented prior to and during construction
- consultation with Council, and Jack Towney Hostel and Jack Towney Aboriginal Corporation
- complaints management system
- consultation with the Aboriginal community.

Response

Council's support is noted. ARTC is committed to open and ongoing engagement with Council during detailed design and construction. In accordance with mitigation measures SE1 and SE2, a proposal-specific communication management plan would be developed, in accordance with the Inland Rail Communications and Engagement Strategy, and implemented prior to and during construction. As identified throughout the SIMP, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans and will be consulted in the development of the proposed plans and actions.

4.2.4 Workforce accommodation

4.2.4.1 Managing the accommodation needs of the construction workforce

Issue

Council realises that although it is not directly responsible for managing accommodation impacts, it is nevertheless a key player in successfully managing the accommodation needs of the construction workforce, and the impacts on its local communities.

As such, Council appreciates being named as an integral stakeholder in the framework SIMP's housing and accommodation plan; however, it also expects to be added:

- as an integral stakeholder in the SIMP's Workforce Management Plan
- as a key stakeholder list (particularly for consultation and feedback) in the temporary workforce accommodation plan.

Response

Council's comments are noted. ARTC recognises Council as a key stakeholder for the proposal.

During the detailed design and construction planning phase, the construction contractor would consider, in consultation with key stakeholders (including Council), the final accommodation arrangements.

ARTC is committed to open and ongoing engagement with Council during detailed design and construction. In accordance with mitigation measures SE11 and SE13, the workforce management plan would include measures to manage local employment and procurement requirements, and include a code of conduct for workers, and would be prepared in consultation with local councils and service providers. In addition, in accordance with mitigation

measure SE-CI2, a temporary workforce accommodation plan would be prepared in consultation with the relevant local council, to guide the design and provision of temporary accommodation.

4.2.4.2 Legacy items

Issue

Council appreciates the willingness of ARTC to engage regarding the potential for Council to retain proposal infrastructure associated with the workforce accommodation facilities for community benefit. Key legacy items of interest to Council include supply and management infrastructure relating to potable water, groundwater, sewer, electricity, waste management and telecommunications.

Response

As described in section A8.7 of the EIS, where there is benefit to the local community, the potential for retaining facilities installed for construction would be investigated and negotiated in consultation with relevant stakeholders (such as local councils). This could include the potential for retaining bores after construction or leaving some of the infrastructure associated with the temporary workforce accommodation. Any approvals, operating costs and maintenance associated with retaining and using this infrastructure would be the responsibility of the party that takes ownership.

ARTC is currently investigating the feasibility of developing the following legacy projects: housing in Gilgandra; water bores in Gilgandra; and mobile telecommunications coverage along the Narrabri to North Star section of Inland Rail.

ARTC welcomes discussions with Gilgandra Shire Council to identify potential legacy items for consideration that are mutually beneficial for the community and the proposal.

4.2.4.3 Mobile accommodation facilities

Issue

Council notes the addition of mobile accommodation facilities in general compounds along the proposal site as well as the Curban multi-function compound. Council understands the flexibility that this mobile accommodation offers, and appreciates that there would be less daily traffic on local roads from workers who may otherwise commute daily to and from the Gilgandra workforce accommodation facility or other accommodation; however, Council is concerned about access to services, amenities and recreation facilities, and the potential for privacy concerns and perceptions regarding safety risks for neighbouring residents.

Council has a strong preference for all workers to be housed in the Gilgandra workforce accommodation facility, and considers that mobile accommodation in general compounds is only used as a last resort, and in such cases under close management and monitoring.

In response to this, Council notes the range of mitigation issues listed in the Workforce Management Plan (as per details in the framework SIMP) including ‘access to mental health services and activities for workers to overcome isolation’ and measures to ‘manage the construction workforce, including a code of conduct’. Council will closely monitor these issues and hold ARTC and the primary contractor to account over these management issues.

Council requests that regular updates are given to council and local communities as to the location and timing of each mobile accommodation facility to be used in the Gilgandra Shire section of the proposal.

Response

ARTC notes Council’s preference for not using mobile accommodation facilities but restates the benefits of improving flexibility of the workforce approach. These include increased productivity for the workforce due to reduced travel times, resulting in shorter construction timeframes and reduced workforce traffic movements on the local road network.

During the detailed design and construction planning phase, the construction contractor would consider, in consultation with key stakeholders (including Council), the final accommodation arrangements.

In accordance with mitigation measure SE-CI2, a temporary workforce accommodation plan would be prepared to guide the design and provision of temporary accommodation. As identified throughout the SIMP, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans and will be consulted in the development of the proposed plans and actions.

4.2.4.4 Location of the Gilgandra workforce accommodation facility

Issue

Council is comfortable with the location of the Gilgandra workforce accommodation facility, and appreciates that detailed consultation will continue to be undertaken with Council and the Jack Towney Hostel regarding its design.

Response

Council's support is noted. During the detailed design and construction planning phase, the construction contractor would consider, in consultation with key stakeholders (including Council and Jack Towney Hostel), the final accommodation arrangements.

4.2.5 Impact on local housing

Issue

Council is concerned by ARTC's attitude to the impact on local housing. Council commends the addition of the additional management measures in the framework SIMP to monitor the availability of rental and tourist accommodation within the LGA; however, it is concerned that there is still no answer as to how this issue may be resolved. By the time the issue is monitored, it will be too late to address the impacts that could be felt keenly in small communities with limited housing opportunities. As such, Council expects further action on this issue.

Response

Council's concern with regard to impact on local housing availability in Gilgandra Shire is noted. The resourcing of large, staged construction projects such as Inland Rail, and the temporal nature of much of that resourcing, are complex and much will be divided along specific technical skill demands. In order to minimise impacts to local housing, ARTC proposes to provide facilities for its non-resident workforce within the temporary workforce accommodation facilities at Narromine South, Narromine North, Gilgandra, Baradine and Narrabri. In addition, as described above, mobile accommodation facilities are proposed to increase workforce productivity, reduce travel times and reduce workforce traffic movements.

ARTC is currently investigating the feasibility of developing a housing legacy project in Gilgandra in consultation with Council, and is committed to open and ongoing engagement with Council about this issue during detailed design and construction.

4.2.6 Impact on local industry and employment

Issue

Council is pleased to see the detail in the 'Industry Participation' and 'Workforce Management' sections of the framework SIMP.

Council is particularly keen to be involved in the further development of the Proposal-Specific Industry Participation Plan which it can see has many benefits for the LGA.

Council is pleased to see the establishment of the Inland Rail Skills Academy and would like to work with ARTC to maximise the Academy's success locally and further develop the proposed initiatives.

Council is also keen to be involved in the further development of the Workforce Management Plan. Council would like to be involved in the identification of skills and the setting of training targets.

Council is keen to collaborate and facilitate working with regional education and training stakeholders to address workforce training needs.

A local hire preference policy as stated in the framework SIMP is fully supported by Council.

The Indigenous employment and training opportunities outlined in the framework SIMP are also fully supported by Council, who would be happy to liaise with local organisations to maximise these opportunities.

Council realises that during operation of the proposal the ongoing employment benefit to the LGA will be minimal.

Response

Council's interest and comments are noted. ARTC is committed to continuing to work with Council on these matters and appreciates Council's support in relation to local workforce training and development.

In accordance with mitigation measures SE6 and SE7, ARTC would continue to support local employment and develop the proposal-specific industry participation plan to manage the potential employment and regional economic benefits of the proposal. As identified throughout the SIMP, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans and will be consulted in the development of the proposed plans and actions.

4.2.7 Aboriginal community and stakeholder engagement

Issue

Council is pleased to see the inclusion of a detailed Aboriginal Community and Stakeholder Engagement Strategy and action plan as outlined in the framework SIMP. Council would appreciate being added as a stakeholder to that strategy and its implementation.

Response

Council's interest and comments are noted. As noted above, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans and will be consulted in the development of the proposed plans and actions.

In accordance with mitigation measure SE3, a detailed Aboriginal community and stakeholder engagement strategy and action plan would be prepared and implemented at the commencement of the detailed design phase.

4.2.8 Impact on local health and emergency services

Issue

Council is pleased to see the detail in the framework SIMP relating to measures to manage non-resident workforce demand on health and emergency services, including consultation with regional and local emergency services during detailed design and construction, regarding changes to access and accessible routes in case of level crossing delays.

Council is supportive of the suggestion to '*provide or contribute to local medical personnel (e.g. nurse) at the temporary workforce accommodation facilities'* but notes that this will not completely mitigate the pressure on local health services, which needs further discussion.

Council, in conjunction with local and regional health and emergency service agencies, is ready to consult with ARTC in relation to these matters.

Response

Council's interest and comments are noted. As noted above, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans and will be consulted in the development of the proposed plans and actions.

In accordance with mitigation measure SE5, prior to construction ARTC would confirm workforce requirements and the associated requirements for, and availability of, support services (including health, wellbeing and emergency services) to meet the needs of the non-resident construction workforce.

4.2.9 Impact on community health and wellbeing

Issue

Council is pleased to see the topics covered and the detail in the 'Community Health and Wellbeing' section of the framework SIMP.

Where appropriate, Council supports its community in working with ARTC to minimise the impact on the community's wellbeing. Council expects to be involved in the local details of the urban design and landscape plan.

Council cautions that investment by ARTC in community cohesion activities should not compromise the community's ability to speak freely about their thoughts on the proposal and nor should it diminish the need for investment in direct mitigation of specific impacts on the community.

Response

Council's interest and comments are noted. As noted above, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans and will be consulted in the development of the proposed plans and actions.

In accordance with mitigation measure SE4, the project SIMP would be prepared to manage the implementation of the proposed socio-economic mitigation measures (including wellbeing measures), and to detail the specific management actions and targets that would be developed in response to these measures, including consultation, engagement and the complaints management process.

4.2.10 Managing workforce wellbeing and behaviour

Issue

Council is pleased to see the detail and proposed initiatives in the 'Workforce Management' section of the framework SIMP, and is particularly keen to be involved in its further development.

Council commends the development of the 'Workforce Code of Conduct' for all proposal personnel.

Response

Council's interest and comments are noted. As mentioned above, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans, and will be consulted in the development of the proposed plans and actions.

4.2.11 Setting targets and monitoring social and economic impacts

Issue

Council notes the details within the 'Monitoring, review and reporting' section of the framework SIMP. Council has particular interest in these targets and reporting frequencies and expects to be a key stakeholder in the review and reporting process.

Response

Council's interest and comments are noted. In accordance with mitigation measure SE4, the SIMP would define specific actions, roles and responsibilities, and a monitoring, reporting and adaptive management framework for construction. As noted above, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans, and will be consulted in the development of the proposed plans and actions.

4.2.12 Economic assessment

Issue

Council is disappointed that the EIS Response to Submissions Report and the Preferred Infrastructure/Amendment Report does not update the economic assessment and the social assessment in relation to likely economic benefits or costs of the proposal specific to the Gilgandra LGA.

Council considers that it is a failing of the NSW regulatory system that a project as significant as this is only required to prepare an economic assessment for a 'regional study area', and that information for economic impacts on individual affected LGAs is not provided.

Response

Council's concerns are noted. A response to this issue is provided in section 4.2.2 of the EIS Response to Submissions Report.

4.2.13 Traffic and transport

4.2.13.1 Public level crossings

Issue

Council acknowledges the additional work undertaken to improve the deficient traffic modelling related to the impact of level crossings across the proposal and looks forward to working with ARTC on the public level crossing treatment report (mitigation measure TT5) to document the assessment and design of level crossing treatments during detailed design.

Council maintains its strong objection to the construction of such a significant number of passive level crossings in a direct contravention of the stated policy positions of not only the ONSNR and Transport for NSW, but of ARTC itself.

Council notes that the Australian Level Crossing Assessment Model (ALCAM) is an assessment tool used to identify key potential risks at level crossings and to assist in the prioritisation of crossings for upgrades. The risk model is used to support a decision-making process for both road and pedestrian level crossings, and to help determine the most appropriate treatments to improve safety. Although it is a comprehensive tool for the assessment of level crossing hazards, ALCAM cannot be applied in isolation and does not preclude the need for sound engineering judgement. Any risk assessment and treatment also needs to consider other factors.

ALCAM does not provide warrants for upgrades or attempt to define a 'safe' or acceptable level of risk.

Council is aware of lower cost, hazard reduction systems that should be considered for inclusion within the design requirements.

Council requests that, as a condition of consent, ARTC is required to provide a minimum of solar-powered lighting systems on all passive level crossings. The installation of suitable motion sensor-activated street/road lighting can reduce the problem of trains already on the crossing not being visible to approaching drivers at night. Council notes their requirements in relation to lighting at level crossings.

Council further requests the inclusion of a detailed safety and cost analysis in the Level Crossing Report for the inclusion of proximity-based level crossing warning systems such as the Safety Integrity Level (SIL) 2 rated Wavetrain acoustic detection system currently in use within the Australian Pilbara region.

Response

ARTC note Council's concerns and requests in relation to passive level crossings.

ARTC use a consistent safety-based methodology to develop all proposed road-rail interface treatments across the Inland Rail Program. This is aligned with rail safety national law and Office of the National Rail Safety Regulator (ONRSR) guidelines, which require the risks to safety minimised so far as is reasonably practicable. This methodology is detailed in Appendix C of the EIS Traffic and transport assessment (Technical Report 10).

ONRSR administers and regulates the safety of the Australian railway industry under Rail Safety National Law. This methodology has been audited by ONRSR and there were no findings or recommendations. Applying this methodology, it was confirmed that active level crossing controls are not required for all level crossings.

Proposed level crossings with passive controls are either within state forests or on very low-volume Council roads, i.e. less than 20 vehicles per day.

All level crossings are designed to comply with the current ARTC and Australian Standards (*AS1742.7-2016 Manual of uniform traffic control devices Part 7: Railway crossings*). Road safety audits are included as part of the design development process. The road safety audits incorporate the principles of the Safe Systems Framework approach into considerations of level crossing safety.

The requirement to provide lighting at level crossings will be assessed as part of the safety and design reviews during detailed design. Council will be consulted as part of the detailed design process.

While ARTC does not own or operate the trains, there is significant focus at the industry level looking at potential measures that freight operators may be able to use to improve the visibility of their trains, particularly in rural areas. This is strongly supported by industry groups including the ONRSR, the Australasian Railway Association, the Rail Industry Safety and Standards Board, and TrackSAFE.

Wavetrain is currently not approved for use on the ARTC rail network. Where active controls are required, ARTC will install flashing lights, bells and booms barriers, which are the highest form of level crossing control under *AS1742.7-2016 Manual of uniform traffic control devices Part 7: Railway crossings*.

4.2.13.2 Private level crossings

Issue

Council is concerned that there is limited or no visibility on the discussions with private landholders regarding the 30 private level crossings, and ultimate construction of these, which may have significant safety impost on public road infrastructure.

Council is aware of some level crossings being located in such a manner as to result in a stacking distance issue for trucks and agricultural machinery in the event of a train pass by. Furthermore, that any assessments being undertaken may not take into account future changes to vehicular traffic types, such as a move to road trains by the current or subsequent landholder/s.

Council requests that any private level crossing being considered within a distance of 75 m of a public road is included in the Level Crossing Report. This distance simultaneously accounts for the longest of road trains plus another haulage vehicle.

Response

ARTC acknowledges the issues raised regarding private level crossings. As described in section 6.4 of the Preferred Infrastructure/Amendment Report, ARTC is working with landholders to minimise the number of new private level crossings that are proposed. It is noted that, in some cases, level crossings would be required to maintain access within a private property, or between a private property and a public road.

Where a level crossing is proposed on a property, the exact location would be agreed in consultation with the impacted landholder. ARTC would seek to install the level crossing at a location that works best for the landholder, noting that the final location would need to comply with the safety standards and engineering requirements. All level crossings would be designed to comply with the current ARTC and Australian Standards (*AS1742.7-2016 Manual of uniform traffic control devices Part 7: Railway crossings*).

Where a private access road interfaces with Council's road network, ARTC would consult with Council as part of the detailed design process. In accordance with mitigation measure TT2, input would continue to be sought from relevant stakeholders, including councils, prior to finalising the detailed design of those aspects of the proposal that affect operation of road and other transport infrastructure. Mitigation measure TT5 commits ARTC to the preparation of level crossing treatment reports for both public and private roads.

ARTC would comply with the Rail Safety National Law in relation to road and rail interfaces.

4.2.14 Unrealistic sourcing of ballast and capping material

Issue

Council is disappointed the Preferred Infrastructure/Amendment Report does not revise the supply strategy of ballast and capping material presented in the EIS (Chapter A8), which is focused on the Dubbo Regional LGA.

Council disputes the viability of the ballast and capping sourcing strategy, and asserts that the EIS has failed to adequately demonstrate that local sources cannot be found of either existing or future construction material resources. The Council asserts that ARTC and the construction contractor must undertake a quarry material availability assessment to identify all other quarries approved in the LGA prior to construction.

Council requests the undertaking of a detailed sourcing study and associated traffic impact assessment in conjunction with Transport for NSW, Council and existing/potential operators of extractive sites prior to proposal approval and any subsequent inclusion of additional extractive sites. The study must include volume, quality and economic analysis to justify additional extractive sites, and traffic management plans that cater for various potential options for material sourcing and delivery.

The option of sourcing of material from a Dubbo Regional LGA quarry must be justified on a transparent economic basis, and by also considering road damage, road traffic safety concerns and future resource depletion risk for the Council.

The EIS and Preferred Infrastructure/Amendment Report does not make reference to the approved Berakee Quarry, which is located approximately 30 km south-west of Gilgandra within the Gilgandra LGA.

Response

A response to this issue raised by Council is provided in section 4.2.4 of the EIS Response to Submissions Report. ARTC is currently undertaking further investigation of material requirements across the alignment in consultation with the preferred contractor. During the detailed design phase, the construction contractor will continue to develop the mass haul assessment (which would include consideration of potential material sources, including the Berakee Quarry) to provide greater certainty of materials volumes, locations and proposed haul routes. Council will be consulted on these matters during the development of the traffic, transport and access management plan.

4.2.15 Council road and drainage assets

4.2.15.1 Material haulage routes

Issue

Council does not consider the haulage route assessment in the EIS to be representative of a practical material supply strategy for construction of a proposal, with an overall length of 306 km.

Council continues to be concerned that the lack of acknowledgement regarding the likelihood of altered haulage routes of quarry material has resulted in an ineffective risk assessment process for transport and road impacts. Deferment of detailed analysis and risk mitigation until a construction contractor has been awarded is not an optimal approach.

Council requests clear consent directives that ARTC and the primary contractor may only transport extractive material from the site on the designated haulage routes, as specified in the Traffic, Transport and Access Management Plan, except in exceptional natural disaster circumstances.

Where the planned traffic route results in an increase to the average annual daily traffic (AADT) exceeding the trigger in the Council Roads Management Strategy—Road Hierarchy the route must be upgraded prior to any increase in traffic. Council expects that ARTC will be responsible for the design and construction costs associated with all upgrades, in addition to maintaining the road to that standard for the duration of the construction works.

Council requests an early and meaningful role in the preparation of the Traffic, Transport and Access Management Plan and the designation of bulk material haulage routes.

Council would be supportive of a consent condition that required the delivery of 75 per cent of all ballast and capping material to be undertaken by rail to distribution points located at Narromine South and Curban via existing operational networks. Further distribution could then be undertaken on internal haul roads, significantly reducing the risks of road transport.

Response

A response to this issue raised by Council is provided in section 4.2.3 of the EIS Response to Submissions Report. ARTC is currently undertaking further investigation of material requirements across the alignment in consultation with the preferred contractor. During the detailed design phase, the construction contractor will continue to develop the mass haul assessment to provide greater certainty of materials volumes, locations and proposed haul routes.

ARTC has developed third-party agreements with the affected road asset owners, including councils and Transport for NSW. These third-party agreements set-out the consultation and asset owner approval requirements prior to haulage on road assets. Upgrade of routes for haulage is not an explicit requirement of the third-party agreements and shall only be undertaken where deemed necessary by ARTC.

ARTC commits to consultation with Council during preparation of the traffic, transport and access management plan in accordance with mitigation measure TT7.

4.2.15.2 Drainage assets

Issue

Council is pleased that ARTC does not propose to hand back ownership of drainage infrastructure to Council that requires additional management (and associated costs) as a result of the proposal.

Response

Council's response to the matter of drainage assets is noted.

4.2.16 Surface water and flooding issues

4.2.16.1 Flooding and water quality

Issue

Council noted several concerns regarding the updated flooding and hydrology assessment provided with the Preferred Infrastructure/Amendment Report and EIS Response to Submissions Report, specifically:

a) The alteration of flooding impact metrics between assessments promotes confusion for Council and residents attempting to establish long-term impact of the modified proposal
b) The lack of rigour associated with the statement regarding the proposed disposal method of sediment-laden surface water
c) Council requests provision of an explanation regarding the sizing of the drainage control areas, noting that it appeared to be an arbitrary threshold capture of 80 per cent of land with QDL scour/erosion potential exceedances downstream of the rail alignment. In addition, Council requests the actual footprint of drainage control areas be sized to capture 100 per cent of QDL scour/erosion potential exceedances and this be made public to allow the maximum impact to be better understood.

Response

a) QDL assessment criteria

The concerns raised relating to the evolution of the flood impact assessment and the metrics used are noted. Following exhibition of the EIS there has been ongoing refinement of the assessment methodology in consultation with DPE to quantify the modelled changes in flood behaviour. The QDLs proposed in the updated flooding and hydrology assessment report have resulted from this consultation and the considerable assessment of hydrology matters across the Inland Rail Program.

The QDLs are more stringent performance criteria than the flood management objectives adopted in the EIS. Consequently, the updated flooding and hydrology assessment report provides more certainty of predicted changes. While the results presented in the updated flooding and hydrology assessment report differ from those in the EIS, the additional hydrology modelling provides a comprehensive base for the community, local councils and government agencies to assess the acceptability of the anticipated changes in flood behaviour.

Subject to ongoing consultation with DPE and other stakeholders, it is envisaged that the QDLs would form part of the Conditions of Approval and be used during detailed design of the proposal.

b) Stormwater management/Sediment and erosion control

As noted in section 2.3 of the updated proposal description (see Appendix A of the Preferred Infrastructure/Amendment Report), site establishment for construction activities would include installation of drainage and erosion management controls in accordance with the construction environmental management plan (CEMP).

Section 2.9.8 of the updated proposal description (see Appendix A of the Preferred Infrastructure/Amendment Report) notes that sediment basins would generally be emptied prior to rainfall events to provide capacity to capture stormwater runoff. Discharges via an overflow bypass would only occur when the design capacity of the sediment basin is exceeded. This is consistent with the approach recommended in *Managing Urban Stormwater: Soils and Construction, Volume 1* (Landcom, 2004).

c) Drainage control areas

Erosion and scour at structures depend on a number of factors, including flow velocities, local soil types, topography and slope, vegetation cover and watercourse geomorphology. These parameters will be assessed as part of the detailed design, as detailed in sections 7.2.5 and 7.3.2 of the updated flooding and hydrology assessment report.

Drainage control areas (DCAs) are one measure for limiting erosion. DCAs are described in section 7.2.3 of the updated flooding and hydrology assessment report. DCAs have been adopted at locations where the downstream flow velocity exceeded the scour/erosion (velocity) QDL limit beyond the rail corridor. There was predicted to be a natural attenuation of flow velocity at these locations to comply with the QDL within a distance of approximately 50 m from the rail corridor boundary in approximately 80 per cent of these situations. It is expected that compliance with the scour/erosion (velocity) QDL could be achieved at these locations within the DCA, with limited or no requirement for additional velocity attenuation works. This will be confirmed during detailed design when further site assessments and flood modelling are undertaken.

At about 20 per cent of culvert locations, the analysis indicated that downstream flow velocities were predicted to exceed the scour/erosion (velocity) QDL limit at a distance of greater than 50 m beyond the rail corridor boundary (i.e. beyond the boundary of the drainage control areas). Further physical works with the rail corridor and/or the DCA may be required at these locations to reduce velocities to comply with the QDLs.

This approach represented an appropriate balance between the need to provide DCAs to manage flood impacts relative to other increased impacts (such as land acquisition).

The DCAs were established on this basis. Scour/erosion (velocity) QDL exceedances have been reported in Appendix I of the updated flooding and hydrology assessment report, based on the TUFLOW modelling results. Areas of scour/erosion (velocity) QDL exceedances beyond the rail corridor or drainage control areas will be further investigated during detailed design. Site investigations will be undertaken to confirm design parameters and, where required, a combination of mitigation measures may be needed to attenuate flow velocities within the rail corridor or DCA.

Potential design solutions that could be considered, in conjunction with, or as an alternative to, DCAs include:

- replacing culverts with bridges
- increasing the number of culverts and/or distribution of culverts
- energy dissipation devices
- extending scour protection into private land in consultation and agreement with landholders
- construction of diversion bunds or drainage to protect buildings and land areas.

The final design solution would be subject to further consultation with individual landholders. Following these assessments, if DCAs are to be established at specific locations, the size and other details of the DCAs would be finalised.

4.2.17 Groundwater issues

Issue

Council has concerns regarding the proposed construction water source strategy.

As no alternative construction water sources are proposed to that previously identified in the EIS (namely the Lachlan Fold Belt Murray Darling Basin Groundwater Source and the Gunnedah–Oxley Basin Murray Darling Basin Groundwater Source) it is presumed that ARTC remains confident there would be sufficient water available under a controlled allocation for the extraction of groundwater for construction water within the identified water sources.

It is critical to understand that availability within the LTAAEL is only a licensing mechanism and the presence of water bearing strata at any chosen location within a water source is never guaranteed. The EIS and Preferred Infrastructure/Amendment Report provide no hydrogeological evidence that viable groundwater flow rates exist within the nominated water sources to satisfy the estimated 1,400 ML/a construction water requirement.

Council requests the Bore Field Management Plan that is to be prepared as part of the Soil and Water Management Plan be made public as soon as practical to allow existing licensed groundwater users to better understand the likelihood of aquifer interference impacts. This is especially important if the targeted water sources differ from those already nominated and previously unaffected community members only become aware of potential impacts near to commencement of construction.

Response

Council's comments are noted. ARTC is currently undertaking further water supply investigations across the alignment in consultation with the preferred contractor. In accordance with mitigation measures WR1 and WR15, construction water supply options would continue to be explored during detailed design and a bore field extraction plan prepared and provided to DPE Water prior to construction of the proposed bore field bores. The timing for management plans will be determined by DPE.

4.2.18 Agricultural and land use issues

4.2.18.1 Further loss of cropping land for drainage control areas

Issue

Council noted that much of the land to be compulsorily acquired for the 200 new drainage control areas is currently under productive cropping land use. Fencing these areas within the operational rail corridor footprint will create irregular boundary geometry. Modern cropping machinery require large turning sweeps, meaning that boundary irregularities result in loss of productive area far outside the actual fence line.

Council requests that any land acquisition compensation must consider the enduring loss of productive cropping area on the maximum area extent to be affected in consideration of farming methods.

Response

Council's comments are noted. As described in section 6.7.2 of the Preferred Infrastructure/Amendment Report, the drainage control areas, as currently proposed, represent a conservative scenario in terms of additional land requirements. During detailed design, these areas would be refined when further flood modelling is undertaken and the extent of works within each drainage control area is confirmed.

The land required for each drainage control area would be finalised during detailed design in consultation with landholders as part of the property acquisition process.

4.2.18.2 Orphan lots

Issue

Council expects all land purchases required for the proposal that may result in orphan lots be acquired by ARTC and either incorporated into gazetted rail corridor or disposed of by ARTC.

Response

ARTC acknowledges this issue and would continue to engage with Council in relation to the approach to residual land management as part of the property acquisition process.

The proposed management of residual land on completion of the construction phase is addressed in section B12.3.1 of the EIS. It states that some land acquired as part of the acquisition process may not be required for the proposal's operational footprint. The preferred approach for the future use of residual land (including sale or transfer) would be confirmed for each land parcel during detailed design in consultation with Councils, landholders and other relevant agencies. The EIS states that ARTC would maintain their General Biosecurity Duty on all parcels of land while they remain in ARTC's ownership/control.

The assessment of land use impacts presented in the EIS Agriculture and land use assessment (Technical Report 11) discussed the potential impact on lot sizes and the minimum lot requirements in each LGA.

4.3 Narromine Shire Council

4.3.1 Post-approval processes

Issue

Council is disappointed in the major project approval process. Despite this, Council expects to be a key stakeholder in the development and implementation of each of the post-approval plans and is ready and willing to be involved in each relevant one.

Council is still concerned about the likely timeframes that may be imposed on it for consultation and/or review of each of the post-approval plans, which at this point are unclear.

DPE and ARTC need to be aware that as a small rural council, it does not have the required staff resources to immediately respond to the many facets of this proposal within ARTC's timeframe expectations; however, Council is willing to be as cooperative as possible, as it realises the benefit of the proposal to its community and the wider nation.

In this respect, Council would appreciate more detailed advice from DPE and ARTC as to the:

- timeframe of the likely numerous requests for information/consultation/review over the pre-construction, construction and operation phases
- extent of Council staff and other resources that will be required for it to respond meaningfully to all requests during each of these phases.

Council would also appreciate discussion with DPE and/or other NSW Government agencies and/or the Federal Government as to how Council may be assisted in securing such staff and resources, considering our small size and distance from the key markets, for finding specialist professional staff.

Response

Council's concerns regarding the major projects approval process are noted. The process is implemented by DPE in accordance with the requirements of the EP&A Act.

ARTC is committed to open and ongoing engagement with Council during detailed design and construction, and this will include information about timeframes once it becomes available. Council's role in the review and provision of feedback on the management plans will be determined by DPE. Details of the likely timeframes and any support processes would be resolved through direct agreement between DPE and Council. The communication management plan described in chapter A4 and Appendix C of the EIS will include the methodologies and resulting timelines. Refer also to mitigation measure SE1.

4.3.2 Social impact management plan

Issue

Council is appreciative of the framework SIMP being placed on exhibition with the EIS Response to Submissions Report and Preferred Infrastructure/Amendment Report. Council realises that the SIMP is required to be provided as part of the post-approval CEMP process and that neither ARTC nor DPE were legally compelled to exhibit it at this time.

The detail already provided in the framework SIMP under these subject headings reassures Council that many of its concerns relating to social and economic issues raised in its original submission to the EIS have now been taken seriously by ARTC and DPE, and are subsequently being addressed by ARTC.

Council expects to be a key stakeholder in the development and implementation of each of the management plans.

Response

Council's support is noted. A framework SIMP was included in the public exhibition for the Preferred Infrastructure/ Amendment Report. It was prepared in consultation with DPE to provide greater clarity and a 'clear line of sight' between the updated socio-economic mitigation measures provided in the EIS Response to Submissions Report and Preferred Infrastructure/Amendment Report, and implementation by the construction contractor in the delivery phase.

ARTC is committed to open and ongoing engagement with Council during detailed design and construction. In accordance with mitigation measure SE4, the SIMP would 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. As identified throughout the SIMP, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans and will be consulted in the development of the proposed plans and actions.

4.3.3 Communicating with local communities

Issue

Council is pleased to see the details within the Communication Management Plan section of the framework SIMP. Council notes the extensive details relating to consultation with individual landholders and affected members of the community but will restrict its comments to consultation involving the wider community and particular community organisations mentioned in the framework SIMP.

In particular, Council supports the following and expects full and timely involvement as a key stakeholder in the following:

- communication management plan to be implemented prior to and during construction
- complaints management system
- consultation with the Aboriginal community.

Response

Council's support is noted. ARTC is committed to open and ongoing engagement with Council during detailed design and construction. In accordance with mitigation measures SE1 and SE2, a proposal-specific communication management plan would be developed, in accordance with the Inland Rail Communications and Engagement Strategy, and implemented prior to and during construction. As identified throughout the SIMP, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans and will be consulted in the development of the proposed plans and actions.

4.3.4 Workforce accommodation

4.3.4.1 Managing the accommodation needs of the construction workforce

Issue

Council realises that although it is not directly responsible for managing accommodation impacts, it is nevertheless a key player in successfully managing the accommodation needs of the construction workforce, and the impacts on its local communities.

As such, Council appreciates being named as an integral stakeholder in the framework SIMP's housing and accommodation plan; however, it also expects to be added as:

- an integral stakeholder in the SIMP's workforce management plan
- a key stakeholder list (particularly for consultation and feedback) in the temporary workforce accommodation plan.

Response

Council's comments are noted. ARTC recognises Council as a key stakeholder for the proposal.

During the detailed design and construction planning phase, the construction contractor would consider, in consultation with key stakeholders (including Council), the final accommodation arrangements.

ARTC is committed to open and ongoing engagement with Council during detailed design and construction. In accordance with mitigation measures SE11 and SE13, the workforce management plan would include measures to manage local employment and procurement requirements, and include a code of conduct for workers, and would be prepared in consultation with local councils and service providers. In addition, in accordance with mitigation measure SE-CI2, a temporary workforce accommodation plan would be prepared in consultation with the relevant local council, to guide the design and provision of temporary accommodation.

4.3.4.2 Legacy items

Issue

Council appreciates the willingness of ARTC to engage regarding the potential for Council to retain proposal infrastructure associated with the workforce accommodation facilities for community benefit. Key legacy items of interest to Council include supply and management infrastructure relating to potable water, groundwater, sewer, electricity, waste management and telecommunications.

Response

As described in section A8.7 of the EIS, where there is benefit to the local community, the potential for retaining facilities installed for construction would be investigated and negotiated in consultation with relevant stakeholders (such as local councils). This could include the potential for retaining bores after construction or leaving some of the infrastructure associated with the temporary workforce accommodation. Any approvals, operating costs and maintenance associated with retaining and using this infrastructure would be the responsibility of the party that takes ownership.

ARTC is currently investigating the feasibility of developing the following legacy projects: housing in Gilgandra; water bores in Gilgandra; and mobile telecommunications coverage along the Narrabri to North Star section of Inland Rail.

ARTC welcomes discussions with Narromine Shire Council to identify potential legacy items for consideration that are mutually beneficial for the community and the proposal.

4.3.4.3 Mobile accommodation facilities

Issue

Council notes the addition of mobile accommodation facilities in general compounds along the proposal site. Council understands the flexibility that this mobile accommodation offers, and appreciates that there would be less daily traffic on local roads from workers who may otherwise commute daily to and from the Narromine North and Narromine South workforce accommodation facilities or other accommodation. Council is concerned, however, about access to services, amenities and recreation facilities, and the potential for privacy concerns and perceptions regarding safety risks for neighbouring residents.

In response to this, Council notes the range of mitigation issues listed in the Workforce Management Plan (as per details in the framework SIMP) including 'access to mental health services and activities for workers to overcome isolation' and measures to 'manage the construction workforce, including a code of conduct'. Council will closely monitor these issues and hold ARTC and the primary contractor to account over these management issues.

Council requests that regular updates are given to Council and local communities as to the location and timing of each mobile accommodation facility to be used in the Narromine Shire section of the proposal.

Response

ARTC notes Council's preference for not using mobile accommodation facilities but restates the benefits of improving flexibility of the workforce approach. These include increased productivity for the workforce due to reduced travel times, resulting in shorter construction timeframes and reduced workforce traffic movements on the local road network.

During the detailed design and construction planning phase, the construction contractor would consider, in consultation with key stakeholders (including Council), the final accommodation arrangements.

In accordance with mitigation measure SE-CI2, a temporary workforce accommodation plan would be prepared to guide the design and provision of temporary accommodation. As identified throughout the SIMP, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans and will be consulted in the development of the proposed plans and actions.

Issue

Council is still disappointed that the Inland Rail approval process has meant that the level of detail provided now by ARTC regarding Narromine North and Narromine South workforce accommodation facilities is significantly less than that which would have been required if a separate Development Application had to be lodged with Council for the same facilities.

Nevertheless, Council realises that it needs to be a key contributor in the development of the workforce accommodation plan (as specified in mitigation measure SE-CI2 and detailed in the framework SIMP). As such, Council is ready to discuss the details of the Narromine North and Narromine South workforce accommodation facility and the mobile accommodation facilities with the primary contractor.

Response

A response to this issue raised by Council is provided in section 4.4.1 of the EIS Response to Submissions Report.

4.3.4.4 Location of the Narromine North workforce accommodation facility

Issue

Council does not agree with the location of the Narromine North workforce accommodation facility and has a strong preference for workers to be accommodated in an alternate location in the vicinity of the Narromine South multi-function compound.

However, Council still prefers an alternate location for the Narromine South workforce accommodation facility, primarily because of its concern that the workforce accommodation facility would be too close to significant noise-generating structures.

Response

ARTC notes Council's comments on the proposed locations of the two temporary workforce accommodation facilities. During the detailed design and construction planning phase, the construction contractor would consider, in consultation with key stakeholders (including Council), the final accommodation arrangements.

4.3.5 Impact on local housing

Issue

Council is concerned at ARTC's attitude to the impact on local housing.

Council commends the addition of the additional management measure in the framework SIMP to monitor the availability of rental and tourist accommodation within the LGA; however, it is concerned that there is still no answer as to how this issue may be resolved and, by the time the issue is monitored, it will be too late to address the impacts that could be felt keenly in small communities with limited housing opportunities. As such, Council expects further action on this issue.

Response

Council's concern with regard to impact on local housing availability in Narromine Shire is noted. The resourcing of large, staged construction projects such as Inland Rail, and the temporal nature of much of that resourcing, are complex and much will be divided along specific technical skill demands. In order to minimise impacts to local housing, ARTC propose to provide facilities for its non-resident workforce within the temporary workforce accommodation facilities at Narromine South, Narromine North, Gilgandra, Baradine and Narrabri. In addition, as described above, mobile accommodation facilities are proposed to increase workforce productivity, reduce travel times and reduce workforce traffic movements.

ARTC is committed to open and ongoing engagement with Council during detailed design and construction about this issue.

4.3.6 Impact on local industry and employment

Issue

Council is pleased to see the detail in the 'Industry Participation' and 'Workforce Management' sections of the framework SIMP.

Council is particularly keen to be involved in the further development of the Proposal-Specific Industry Participation Plan, which it can see has many benefits for the LGA.

Council is pleased to see the establishment of the Inland Rail Skills Academy and would like to work with ARTC to maximise the Academy's success locally and further develop the proposed initiatives.

Council is also keen to be involved in the further development of the Workforce Management Plan. Council would like to be involved in the identification of skills and the setting of training targets.

Council is keen to collaborate and facilitate working with regional education and training stakeholders to address workforce training needs.

A local hire preference policy, as stated in the framework SIMP, is fully supported by Council.

The Indigenous employment and training opportunities outlined in the framework SIMP are also fully supported by Council, who would be happy to liaise with local organisations to maximise these opportunities.

Council realises that during operation of the proposal the ongoing employment benefit to the LGA will be minimal.

Response

Council's interest and comments are noted. ARTC is committed to continuing to work with Council on these matters and appreciates Council's support in relation to local workforce training and development.

In accordance with mitigation measures SE6 and SE7, ARTC would continue to support local employment and develop the proposal-specific industry participation plan to manage the potential employment and regional economic benefits of the proposal. As identified throughout the SIMP, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans and will be consulted in the development of the proposed plans and actions.

4.3.7 Aboriginal community and stakeholder engagement

Issue

Council is pleased to see the inclusion of a detailed Aboriginal Community and Stakeholder Engagement Strategy and action plan as outlined in the framework SIMP. Council would appreciate being added as a stakeholder to that Strategy and its implementation.

Response

Council's interest and comments are noted. As noted above, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans and will be consulted in the development of the proposed plans and actions.

In accordance with mitigation measure SE3, a detailed Aboriginal community and stakeholder engagement strategy and action plan would be prepared and implemented at the commencement of the detailed design phase.

4.3.8 Impact on local health and emergency services

Issue

Council is pleased to see the detail in the framework SIMP relating to measures to manage non-resident workforce demand on health and emergency services, including consultation with regional and local emergency services during detailed design and construction regarding changes to access and accessible routes in case of level crossing delays.

Council is supportive of the suggestion to '*provide or contribute to local medical personnel (e.g. nurse) at the temporary workforce accommodation facilities'* but notes that this will not completely mitigate the pressure on local health services, which needs further discussion.

Council, in conjunction with local and regional health and emergency service agencies, is ready to consult with ARTC in relation to these matters.

Response

Council's interest and comments are noted. As noted above, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans and will be consulted in the development of the proposed plans and actions.

In accordance with mitigation measure SE5, prior to construction ARTC would confirm workforce requirements and the associated requirements for, and availability of, support services (including health, wellbeing and emergency services) to meet the needs of the non-resident construction workforce.

4.3.9 Impact on community health and wellbeing

Issue

Council is pleased to see the topics covered and the detail in the 'Community Health and Wellbeing' section of the framework SIMP.

Where appropriate, Council supports its community in working with ARTC to minimise the impact on the community's wellbeing. Council expects to be involved in the local details of the urban design and landscape plan.

Council cautions that investment by ARTC in community cohesion activities should not compromise the community's ability to speak freely about their thoughts on the proposal and nor should it diminish the need for investment in direct mitigation of specific impacts on the community.

Response

Council's interest and comments are noted. ARTC is committed to open and ongoing engagement with Council during detailed design and construction. As noted above, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans and will be consulted in the development of the proposed plans and actions.

In accordance with mitigation measure SE4, the project SIMP would be prepared to manage the implementation of the proposed socio-economic mitigation measures (including wellbeing measures), and to detail the specific management actions and targets that would be developed in response to these measures, including consultation, engagement and the complaints management process.

4.3.10 Managing workforce wellbeing and behaviour

Issue

Council is pleased to see the detail and proposed initiatives in the 'Workforce Management' section of the framework SIMP and is particularly keen to be involved in its further development.

Council commends the development of the 'Workforce Code of Conduct' for all proposal personnel.

Response

Council's interest and comments are noted. As noted above, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans and will be consulted in the development of the proposed plans and actions.

4.3.11 Setting targets, and monitoring social and economic impacts

Issue

Council notes the details within the 'Monitoring, review and reporting' section of the framework SIMP. Council has particular interest in these targets and reporting frequencies, and expects to be a key stakeholder in the review and reporting process.

Response

Council's interest and comments are noted. In accordance with mitigation measure SE4, the SIMP would define specific actions, roles and responsibilities, and a monitoring, reporting and adaptive management framework for construction. As noted above, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans and will be consulted in the development of the proposed plans and actions.

4.3.12 Economic assessment

Issue

Council is disappointed that the EIS Response to Submissions Report and the Preferred Infrastructure/Amendment Report does not update the economic assessment and the social assessment in relation to likely economic benefits or costs of the proposal specific to the Narromine LGA.

Council considers that it is a failing of the NSW regulatory system that a project as significant as this is only required to prepare an economic assessment for a 'regional study area', and that information for economic impacts on individual affected LGAs is not provided.

Response

Council's concerns are noted. A response to this issue is provided in section 4.4.1 of the EIS Response to Submissions Report.

4.3.13 Traffic and transport

4.3.13.1 Public level crossings

Issue

Council acknowledges the additional work undertaken to improve the deficient traffic modelling related to the impact of level crossings across the proposal and looks forward to working with ARTC on the public level crossing treatment report (mitigation measure TT5) to document the assessment and design of level crossing treatments during detailed design.

Council maintains its strong objection to the construction of such a significant number of passive level crossings in a direct contravention of the stated policy positions of not only the ONSNR and Transport for NSW, but of ARTC itself.

Council notes that the Australian Level Crossing Assessment Model (ALCAM) is an assessment tool used to identify key potential risks at level crossings and to assist in the prioritisation of crossings for upgrades. The risk model is used to support a decision-making process for both road and pedestrian level crossings and to help determine the most appropriate treatments to improve safety. Although it is a comprehensive tool for the assessment of level crossing hazards, ALCAM cannot be applied in isolation and does not preclude the need for sound engineering judgement. Any risk assessment and treatment also need to consider other factors.

ALCAM does not provide warrants for upgrades or attempt to define a 'safe' or acceptable level of risk.

Council is aware of lower cost, hazard reduction systems that should be considered for inclusion within the design requirements.

Council requests that as a condition of consent, ARTC is required to provide a minimum of solar-powered lighting systems on all passive level crossings. The installation of suitable motion sensor-activated street/road lighting can reduce the problem of trains already on the crossing not being visible to approaching drivers at night. Council notes their requirements in relation to lighting at level crossings.

Council further requests the inclusion in the Level Crossing Report, a detailed safety and cost analysis for the inclusion of proximity-based level crossing warning systems such as the Safety Integrity Level (SIL) 2 rated Wavetrain acoustic detection system currently in use within the Australian Pilbara region.

Response

ARTC note Council's concerns and requests in relation to passive level crossings.

ARTC uses a consistent safety-based methodology to develop all proposed road-rail interface treatments across the Inland Rail Program. This is aligned with rail safety national law and Office of the National Rail Safety Regulator (ONRSR) guidelines which require the risks to safety minimised so far as is reasonably practicable. This methodology is detailed in Appendix C of the EIS Traffic and transport assessment (Technical Report 10).

ONRSR administers and regulates the safety of the Australian railway industry under Rail Safety National Law. This methodology has been audited by ONRSR and there were no findings or recommendations. Applying this methodology, it was confirmed that active level crossing controls are not required for all level crossings.

Proposed level crossings with passive controls are either within state forests or on very low volume Council roads i.e. less than 20 vehicles per day.

All level crossings are designed to comply with the current ARTC and Australian Standards (*AS1742.7-2016 Manual of uniform traffic control devices Part 7: Railway crossings*). Road safety audits are included as part of the design development process. The road safety audits incorporate the principles of the Safe Systems Framework approach into considerations of level crossing safety.

The requirement to provide lighting at level crossings will be assessed as part of the safety and design reviews during detailed design. Council will be consulted as part of the detailed design process.

While ARTC does not own or operate the trains, there is significant focus at the industry level looking at potential measures that freight operators may be able to use to improve the visibility of their trains, particularly in rural areas. This is strongly supported by industry groups including the Office of the National Rail Safety Regulator, the Australasian Railway Association, the Rail Industry Safety and Standards Board and TrackSAFE.

Wavetrain is currently not type approved for use on the ARTC rail network. Where active controls are required, ARTC will install flashing lights, bells and booms barriers, which are the highest form of level crossing control under *AS1742.7-2016 Manual of uniform traffic control devices Part 7: Railway crossings*.

4.3.13.2 Private level crossings

Issue

Council is concerned that there is limited or no visibility on the discussions with private landholders regarding the 30 private level crossings and ultimate construction of these, which may have significant safety impost on public road infrastructure.

Council is aware of some level crossings being located in such a manner as to result in a stacking distance issue for trucks and agricultural machinery in the event of a train pass by. Furthermore, that any assessments being undertaken may not take into account future changes to vehicular traffic type such as a move to road trains by the current or subsequent land owner/s.

Council requests that any private level crossing being considered within a distance of 75 metres of a public road is included within the Level Crossing Report. This distance simultaneously accounts for the longest of road trains plus another haulage vehicle.

Council believes there may be some private properties intersected by the rail corridor that will not have a private level crossing installed following landholder negotiations. In some of these instances there is a risk of a resultant additional public road use for agricultural equipment or stock movements requiring a Temporary Stock Grazing Permit (S138) issued by Council. Either outcome increases risk to the public and incurs a financial and administrative burden on both the land holder and Council.

Council requests ARTC provide a register of allotments or group of allotments under sole ownership that are intersected by the rail corridor without the installation of a private level crossing and reasoning for the lack of private crossing installation at each allotment.

Response

ARTC acknowledges the issues raised regarding private level crossings. As described in section 6.4 of the Preferred Infrastructure/Amendment Report, ARTC is working with landholders to minimise the number of new private level crossings that are proposed. It is noted that, in some cases, level crossings would be required to maintain access within a private property, or between a private property and a public road.

Where a level crossing is proposed on a property, the exact location would be agreed in consultation with the impacted landholder. ARTC would seek to install the level crossing at a location that works best for the landholder,

noting that the final location would need to comply with the safety standards and engineering requirements. All level crossings would be designed to comply with the current ARTC and Australian Standards (*AS1742.7-2016 Manual of uniform traffic control devices Part 7: Railway crossings*).

Where a private access road interfaces with Council's road network, ARTC would consult with Council as part of the detailed design process. In accordance with mitigation measure TT2, input would continue to be sought from relevant stakeholders, including councils, prior to finalising the detailed design of those aspects of the proposal that affect operation of road and other transport infrastructure. Mitigation measure TT5 commits ARTC to the preparation of level crossing treatment reports for both public and private roads.

ARTC would comply with the Rail Safety National Law in relation to road and rail interfaces.

4.3.13.3 Bridges

Issue

Council is concerned the construction of new bridges over roadways will result in increased risk of oversized load vehicular incidents and increased economic burden of restricted route selection on both local agricultural enterprises and wider freight movements.

Council requests that the design criteria for vertical height clearance of all structures constructed over roadways be set a minimum of 6.5 m. Deviation away from this minimum standard should be in consultation with Council and with approval of the relevant road authority.

Response

ARTC notes Council's concerns. The minimum vertical clearances at new rail-over-road bridges are noted in the third-party agreements. Deviation away from these minimum clearances would be adopted in consultation with the Council and with approval of the relevant road authority.

4.3.14 Unrealistic sourcing of ballast and capping material

Issue

Council is disappointed the Preferred Infrastructure/Amendment Report does not revise the supply strategy of ballast and capping material presented in the EIS (Chapter A8), which is focused on the Dubbo Regional LGA.

Council disputes the viability of the ballast and capping sourcing strategy, and asserts that the EIS has failed to adequately demonstrate that local sources cannot be found of either existing or future construction material resources. The Council asserts ARTC and the construction contractor must undertake a Quarry Material Availability Assessment to identify all other quarries approved in the LGA prior to construction.

Council requests the undertaking of a detailed sourcing study and associated Traffic Impact Assessment in conjunction with Transport for NSW, Council and existing/potential operators of extractive sites prior to proposal approval and any subsequent inclusion of additional extractive sites. The study must include volume, quality and economic analysis to justify additional extractive sites, and traffic management plans that cater for various potential options for material sourcing and delivery.

The option of sourcing of material from a Dubbo Regional LGA quarry must be justified on a transparent economic basis, and by also considering road damage, road traffic safety concerns and future resource depletion risk for the Council.

Response

A response to this issue raised by Council is provided in section 4.4.3 of the EIS Response to Submissions Report. ARTC is currently undertaking further investigation of material requirements across the alignment in consultation with the preferred contractor. During the detailed design phase, the construction contractor will continue to develop the mass haul assessment to provide greater certainty of materials volumes, locations and proposed haul routes. Council will be consulted on these matters during the development of the traffic, transport and access management plan.

4.3.15 Council road and drainage assets

4.3.15.1 Material haulage routes

Issue

Council does not consider the haulage route assessment in the EIS to be representative of a practical material supply strategy for construction of a project with an overall length of 306 km.

Council continues to be concerned that the lack of acknowledgement regarding the likelihood of altered haulage routes of quarry material has resulted in an ineffective risk assessment process for transport and road impacts. Deferment of detailed analysis and risk mitigation until a construction contractor has been awarded is not an optimal approach.

Council requests clear consent directives that ARTC and the primary contractor may only transport extractive material from the site on the designated haulage routes, as specified in the Traffic, Transport and Access Management Plan.

Where the planned traffic route results in an increase to the average annual daily traffic (AADT) exceeding the trigger in the Council Roads Management Strategy—Road Hierarchy the route must be upgraded prior to any increase in traffic.

Council expects that ARTC will be responsible for the design and construction costs associated with all upgrades. In addition to maintaining the road to that standard for the duration of the construction works.

Council requests an early and meaningful role in the preparation of the traffic, transport and access management plan and the designation of bulk material haulage routes.

Council would be supportive of a consent condition that required the delivery of 75 per cent of all ballast and capping material to be undertaken by rail to distribution points located at Narromine South and Curban via existing operational networks. Further distribution could then be undertaken on internal haul roads, significantly reducing the risks of road transport.

Response

A response to this issue raised by Council is provided in section 4.4.2 of the EIS Response to Submissions Report. ARTC is currently undertaking further investigation of material requirements across the alignment in consultation with the preferred contractor. During the detailed design phase, the construction contractor will continue to further develop the mass haul assessment to provide greater certainty of materials volumes, locations and proposed haul routes.

ARTC has developed third-party agreements with the affected road asset owners, including councils and Transport for NSW. These third-party agreements set-out the consultation and asset owner approval requirements prior to haulage on road assets. Upgrade of routes for haulage is not an explicit requirement of the third-party agreements and shall only be undertaken where deemed necessary by ARTC.

ARTC commits to consultation with Council during preparation of the traffic, transport and access management plan in accordance with mitigation measure TT7.

4.3.15.2 Drainage assets

Issue

Council is pleased that ARTC does not propose to hand back ownership of drainage infrastructure to Council that requires additional management (and associated costs) as a result of the proposal.

Response

Council's response to the matter of drainage assets is noted.

4.3.15.3 Requirements for third-party agreements

Issue

Council notes that there is significant deferment of specifics related to existing and future Council infrastructure to the execution and enactment of the third-party agreement between ARTC and Council. The third-party agreement details all assets, interfaces, responsibilities and funding arrangements for maintenance of shared assets. Council requests clear consent directions that would be consistent with the following areas:

- A defects liability period be imposed for up to 10 years post construction and 5 years post operations commencing.
- Council expects the road interface with ARTC to commence at the location where road realignments have been imposed on the local road network.
- Council expects that each local Council road impacted by construction haulage is to be subject to a Road Dilapidation Report prior to use for construction. The report is to be prepared by an independent and suitably experienced and qualified road designer/auditor approved by Council.
- Council expects that each local Council road impacted by construction haulage is to be rectified according to the specific classification under the Council's road hierarchy on an ongoing basis during construction, not just as a result of construction completion.
- Council expects all assets transferred to Council will be defect inspected in consultation with, and in attendance of, a Council representative.
- Council expects that where the integrity of assets transferred to Council is compromised during a period of up to 10 years post construction and 5 years post operations commencing, that resultant rectification be the responsibility of ARTC.
- Council expects all road pavement, geometric, hydraulic, barrier, signage and asset-related designs are to be certified by a road designer (as per Transport for NSW requirements), a suitably qualified engineer and a Road Safety Auditor, and provided to Council for concurrence prior to construction.
- Council expects detailed as-built markups and electronic as-built models are to be provided to Council in an agreed format.
- Council expects independent construction certification/verification needs to be undertaken on all Council-owned assets, or Council be advised and be provided the opportunity to attend critical hold points and inspections per the ARTC and Transport for NSW specifications.
- Council expects all materials used in the works on Council assets (apart from general fill and pavements) are to be new products unless otherwise agreed with Council.
- Council expects that any costs incurred related to the execution of requirements under third-party agreements or conducting activities that fall outside the third-party agreement but are directly attributable to the Project are to be reasonably compensated by ARTC.

Response

A response to this issue raised by Council is provided in section 4.4.4 of the EIS Response to Submissions Report. The process and responsibilities for asset design, certification, handover and maintenance will be addressed in the finalised third-party agreements as these matters fall outside the scope of the CSSI assessment and approval. Conditions of approval for the CSSI are anticipated to establish obligations on ARTC to manage construction impacts on and apply necessary mitigations to third-party assets.

4.3.16 Surface water and flooding issues

4.3.16.1 Narromine town levee

Issue

Council is pleased the updated flooding and hydrology assessment report for the Preferred Infrastructure/Amendment Report considers the importance of future construction of the Narromine town levee and that ongoing detailed design of the proposal's integration with the levee will involve direct consultation with Council.

Response

Council's response to the matter of the Narromine town levee is noted. ARTC is committed to open and ongoing engagement with Council during detailed design and construction.

4.3.16.2 Flooding and water quality

Issue

Council noted several concerns regarding the updated flooding and hydrology assessment provided with the Preferred Infrastructure/Amendment Report and EIS Response to Submissions Report, specifically:

a) The alteration of flooding impact metrics between assessments, which promotes confusion for Council and residents attempting to establish long-term impact of the modified proposal.
b) Flooding impacts in the area between McGrane Way and Mitchell Highway. Ascertaining the extent of flood impact has been hampered by the metric change discussed above. Council requests that ARTC convene a dedicated flooding impacts consultation session at Narromine to allow community and Council to better understand the true impact of flooding south and west of Narromine.
c) The lack of rigour associated with the statement regarding the proposed disposal method of sediment-laden surface water.
d) Council requests provision of an explanation regarding the sizing of the drainage control areas, noting that it appeared to be an arbitrary threshold capture of 80 per cent of land with QDL scour/erosion potential exceedances downstream of the rail alignment. In addition, Council requests the actual footprint of drainage control areas be sized to capture 100 per cent of QDL scour/erosion potential exceedances and this be made public to allow the maximum impact to be better understood.

Response

a) QDL assessment criteria

The concerns raised relating to the evolution of the flood impact assessment and the metrics used are noted. Following exhibition of the EIS, there has been ongoing refinement of the assessment methodology in consultation with DPE to quantify the modelled changes in flood behaviour. The QDLs proposed in the updated flooding and hydrology assessment report have resulted from this consultation and the considerable assessment of hydrology matters across the Inland Rail Program.

The QDLs are more stringent performance criteria than the flood management objectives adopted in the EIS. Consequently, the updated flooding and hydrology assessment report provides more certainty of predicted changes. While the results presented in the updated flooding and hydrology assessment report differ from those in the EIS, the additional hydrology modelling provides a comprehensive base for the community, local councils and government agencies, to assess the acceptability of the anticipated changes in flood behaviour.

Subject to ongoing consultation with DPE and other stakeholders, it is envisaged that the QDLs would form part of the Conditions of Approval and be used during detailed design of the proposal.

b) Flooding south of Narromine and request for community meeting

Council's concerns regarding flooding to the south east of Narromine (between The McGrane Way and Mitchell Highway) are noted. As part of the recent Preferred Infrastructure/Amendment Report public exhibition, ARTC provided online flood modelling maps to assist stakeholders and the community in understanding potential flooding impacts at specific locations along the entire alignment. In addition, ARTC held a community information session in Narromine on 8 September 2022, where the project team were available to take people through the online flood modelling maps on screen.

In accordance with mitigation measure FH1, the design would continue to be refined during the detailed design process, where practicable, to not worsen existing flooding characteristics. Flood modelling, and any mitigation identified as an outcome of modelling, would be undertaken in consultation with the Council, the road manager, and potentially impacted landholders.

c) Stormwater management/Sediment and erosion control

As noted in section 2.3 of the updated proposal description (see Appendix A of the Preferred Infrastructure/Amendment Report), site establishment for construction activities would include installation of drainage and erosion management controls in accordance with the CEMP.

Section 2.9.8 of the updated proposal description (see Appendix A of the Preferred Infrastructure/Amendment Report) notes that sediment basins would generally be emptied prior to rainfall events to provide capacity to capture

stormwater runoff. Discharges via an overflow bypass would only occur when the design capacity of the sediment basin is exceeded. This is consistent with the approach recommended in *Managing Urban Stormwater: Soils and Construction, Volume 1* (Landcom, 2004).

d) Drainage control areas

Erosion and scour at structures depend on a number of factors, including flow velocities, local soil types, topography and slope, vegetation cover and watercourse geomorphology. These parameters will be assessed as part of the detailed design as detailed in sections 7.2.5 and 7.3.2 of the updated flooding and hydrology assessment report.

Drainage control areas (DCAs) are one measure for limiting erosion. DCAs are described in section 7.2.3 of the updated flooding and hydrology assessment report. DCAs have been adopted at locations where the downstream flow velocity exceeded the scour/erosion (velocity) QDL limit beyond the rail corridor. There was predicted to be a natural attenuation of flow velocity at these locations to comply with the QDL within a distance of approximately 50 m from the rail corridor boundary in approximately 80 per cent of these situations. It is expected that compliance with the scour/erosion (velocity) QDL could be achieved at these locations within the DCA, with limited or no requirement for additional velocity attenuation works. This will be confirmed during detailed design when further site assessments and flood modelling are undertaken.

At approximately 20% of culvert locations, the analysis indicated that downstream flow velocities were predicted to exceed the scour/erosion (velocity) QDL limit at a distance of greater than 50 metres beyond the rail corridor boundary (i.e. beyond the boundary of the drainage control areas). Further physical works may be required at these locations to reduce velocities to the comply with the QDLs.

This approach represented an appropriate balance between the need to provide drainage control areas to manage flood impacts relative to other increased impacts (such as land acquisition)

The DCAs were established on this basis. Scour/erosion (velocity) QDL exceedances have been reported in Appendix I of the updated flooding and hydrology assessment report based on the TUFLOW modelling results. Areas of scour/erosion (velocity) QDL exceedances beyond the rail corridor or DCAs will be further investigated during detailed design. Site investigations will be undertaken to confirm design parameters and, where required, a combination of mitigating measures may be needed to attenuate flow velocities within the rail corridor or DCA.

Potential design solutions that could be considered, in conjunction with, or as an alternative to, DCAs include:

- replacing culverts with bridges
- increasing the number of culverts and/or distribution of culverts
- energy dissipation devices
- extending scour protection into private land in consultation and agreement with landholders
- construction of diversion bunds or drainage to protect buildings and land areas.

The final design solution would be subject to further consultation with individual landholders. Following these assessments, if DCAs are to be established at specific locations, the size and other details of the DCAs would be finalised.

4.3.17 Groundwater issues

4.3.17.1 Construction groundwater sourcing

Issue

Council has concerns regarding the proposed construction water source strategy.

As no alternative construction water sources are proposed to that previously identified in the EIS (namely the Lachlan Fold Belt Murray Darling Basin Groundwater Source and the Gunnedah–Oxley Basin Murray Darling Basin Groundwater Source) it is presumed that ARTC remains confident there would be sufficient water available under a controlled allocation for the extraction of groundwater for construction water within the identified water sources.

It is critical to understand that availability within the LTAAEL is only a licensing mechanism and the presence of water-bearing strata at any chosen location within a water source is never guaranteed. The EIS and Preferred Infrastructure/Amendment Report provide no hydrogeological evidence that viable groundwater flow rates exist within the nominated water sources to satisfy the estimated 1,400 ML/a construction water requirement.

Council requests the Bore Field Management Plan to be prepared as part of the Soil and Water Management Plan be made public as soon as practical to allow existing licensed groundwater users to better understand the likelihood

of aquifer interference impacts. This is especially important if the targeted water sources differ from those already nominated and previously unaffected community members only become aware of potential impacts near to commencement of construction.

Response

Council's comments are noted. ARTC is currently undertaking further water supply investigations across the alignment in consultation with the preferred contractor. In accordance with mitigation measures WR1 and WR15, construction water supply options would continue to be explored during detailed design, and a bore field extraction plan prepared and provided to DPE Water prior to construction of the proposed bore field bores. The timing for management plans will be determined by DPE.

4.3.18 Agricultural and land use issues

4.3.18.1 Further loss of cropping land for drainage control areas

Issue

Council noted that much of the land to be compulsorily acquired for the 200 new DCAs is currently under productive cropping land use. Fencing these areas within the operational rail corridor footprint will create irregular boundary geometry. Modern cropping machinery require large turning sweeps, meaning that boundary irregularities result in loss of productive area far outside the actual fence line.

Council requests that any land acquisition compensation must consider the enduring loss of productive cropping area on the maximum areal extent to be affected in consideration of farming methods.

Response

Council's comments are noted. As described in section 6.7.2 of the Preferred Infrastructure/Amendment Report, the DCAs, as currently proposed, represent a conservative scenario in terms of additional land requirements. During detailed design, these areas would be refined when further flood modelling is undertaken and the extent of works within each DCA is confirmed.

The land required for each DCA would be finalised during detailed design, in consultation with landholders, as part of the property acquisition process.

4.3.18.2 Orphan lots

Issue

Council expects all land purchases required for the proposal that may result in orphan lots be acquired by ARTC and either incorporated into gazetted rail corridor or disposed of by ARTC.

Response

ARTC acknowledges this issue and would continue to engage with Council in relation to the approach to residual land management as part of the property acquisition process.

The proposed management of residual land on completion of the construction phase is addressed in section B12.3.1 of the EIS. It states that some land acquired as part of the acquisition process may not be required for the proposal's operational footprint. The preferred approach for the future use of residual land (including sale or transfer) would be confirmed for each land parcel during detailed design in consultation with councils, landholders and other relevant agencies. The EIS states that ARTC would maintain their general biosecurity duty on all parcels of land while they remain in ARTC's ownership/control.

The assessment of land-use impacts presented in the EIS Agriculture and land use assessment (Technical Report 11) discussed the potential impact on lot sizes and the minimum lot requirements in each LGA.

4.4 Warrumbungle Shire Council

4.4.1 Post-approval processes

Issue

Council is disappointed in the major project approval process.

Despite this, Council expects to be a key stakeholder in the development and implementation of each of the post-approval plans, and is ready and willing to be involved in each relevant one.

Council is still concerned about the likely timeframes that may be imposed on it for consultation and/or review of each of the post-approval plans, which at this point are unclear.

DPE and ARTC need to be aware that as a small rural council, it does not have the required staff resources to immediately respond to the many facets of this Project within the ARTC's timeframe expectations; however, Council is willing to be as cooperative as possible, as it realises the benefit of the proposal to its community and the wider nation.

In this respect, Council would appreciate more detailed advice from DPE and ARTC as to the:

- timeframe of the likely numerous requests for information/consultation/review over the pre-construction, construction and operation phases
- extent of Council staff and other resources that will be required for it to respond meaningfully to all requests during each of these phases.

Council would also appreciate discussion with DPE and/or other NSW Government agencies and/or the Federal Government as to how Council may be assisted in securing such staff and resources, considering our small size and distance from the key markets for finding specialist professional staff.

Response

Council's concerns regarding the major projects approval process are noted. The process is implemented by DPE in accordance with the requirements of the EP&A Act.

ARTC is committed to open and ongoing engagement with Council during detailed design and construction, and this will include information about time frames once it becomes available. Council's role in the review and provision of feedback on the management plans will be determined by DPE. Details of the likely timeframes and any support processes would be resolved through direct agreement between DPE and Council. The communication management plan described in chapter A4 and Appendix C of the EIS will include the methodologies and resulting timelines. Refer also to mitigation measure SE1.

4.4.2 Social impact management plan

Issue

Council is appreciative of the framework SIMP being placed on exhibition with the EIS Response to Submissions Report and Preferred Infrastructure/Amendment Report. Council realises that the SIMP is required to be provided as part of the post-approval CEMP process and that neither ARTC nor DPE were legally compelled to exhibit it at this time.

The detail already provided in the framework SIMP under these subject headings reassures Council that many of its concerns relating to social and economic issues raised in its original submission to the EIS have now been taken seriously by ARTC and DPE, and are subsequently being addressed by ARTC.

Council expects to be a key stakeholder in the development and implementation of each of the management plans.

Response

Council's support is noted. A framework SIMP was included in the public exhibition for the Preferred Infrastructure/ Amendment Report. It was prepared in consultation with DPE to provide greater clarity and a 'clear line of sight' between the updated socio-economic mitigation measures provided in the EIS Response to Submissions Report and Preferred Infrastructure/Amendment Report and implementation by the construction contractor in the delivery phase.

ARTC is committed to open and ongoing engagement with Council during detailed design and construction. In accordance with mitigation measure SE4, the SIMP would 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.

As identified throughout the SIMP, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans, and will be consulted in the development of the proposed plans and actions.

4.4.3 Communicating with local communities

Issue

Council is pleased to see the details within the Communication Management Plan section of the framework SIMP. Council notes the extensive details relating to consultation with individual landholders and affected members of the community but will restrict its comments to consultation involving the wider community and particular community organisations mentioned in the framework SIMP.

In particular, Council supports the following and expects full and timely involvement as a key stakeholder in the following:

- communication management plan to be implemented prior to and during construction
- consultation with Council and Baradine Showground Trust relating to the showground
- consultation with Council and other stakeholders relating to the Pilliga forests
- complaints management system
- consultation with the Aboriginal community.

Response

Council's support is noted. ARTC is committed to open and ongoing engagement with Council during detailed design and construction. In accordance with mitigation measures SE1 and SE2, a proposal-specific communication management plan would be developed, in accordance with the Inland Rail Communications and Engagement Strategy, and implemented prior to and during construction. As identified throughout the SIMP, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans and will be consulted in the development of the proposed plans and actions.

4.4.4 Workforce accommodation

4.4.4.1 Managing the accommodation needs of the construction workforce

Issue

Council realises that although it is not directly responsible for managing accommodation impacts, it is nevertheless a key player in successfully managing the accommodation needs of the construction workforce, and the impacts on its local communities.

As such, Council appreciates being named as an integral stakeholder in the framework SIMP's housing and accommodation plan; however, it also expects to be added as:

- an integral stakeholder in the SIMP's Workforce Management Plan
- a key stakeholder list (particularly for consultation and feedback) in the temporary workforce accommodation plan.

Response

Council's comments are noted. ARTC recognises Council as a key stakeholder for the proposal.

During the detailed design and construction planning phase, the construction contractor would consider, in consultation with key stakeholders (including Council), the final accommodation arrangements.

ARTC is committed to open and ongoing engagement with Council during detailed design and construction. In accordance with mitigation measures SE11 and SE13, the workforce management plan would include measures to manage local employment and procurement requirements, and include a code of conduct for workers, and would be prepared in consultation with local councils and service providers. In addition, in accordance with mitigation

measure SE-CI2, a temporary workforce accommodation plan would be prepared in consultation with the relevant local council, to guide the design and provision of temporary accommodation.

4.4.4.2 Legacy items

Issue

Council appreciates the willingness of ARTC to engage regarding the potential for Council to retain proposal infrastructure associated with the workforce accommodation facilities for community benefit. Key legacy items of interest to Council include supply and management infrastructure relating to potable water, groundwater, sewer, electricity, waste management and telecommunications.

Response

As described in section A8.7 of the EIS, where there is benefit to the local community, the potential for retaining facilities installed for construction would be investigated and negotiated in consultation with relevant stakeholders (such as local councils). This could include the potential for retaining bores after construction or leaving some of the infrastructure associated with the temporary workforce accommodation. Any approvals, operating costs and maintenance associated with retaining and using this infrastructure would be the responsibility of the party that takes ownership.

ARTC is currently investigating the feasibility of developing the following legacy projects: housing in Gilgandra; water bores in Gilgandra; and mobile telecommunications coverage along the Narrabri to North Star section of Inland Rail.

ARTC welcomes discussions with Warrumbungle Shire Council to identify potential legacy items for consideration that are mutually beneficial for the community and the proposal.

4.4.4.3 Mobile accommodation facilities

Issue

Council notes the addition of mobile accommodation facilities in general compounds along the proposal site. Council understands the flexibility that this mobile accommodation offers, and appreciates that there would be less daily traffic on local roads from workers who may otherwise commute daily to and from the Baradine workforce accommodation facilities or other accommodation. Council is concerned, however, about access to services, amenities and recreation facilities, and the potential for privacy concerns and perceptions regarding safety risks for neighbouring residents.

Council has a strong preference for all workers to be housed in the Baradine workforce accommodation facility, and that any mobile accommodation in general compounds is used sparingly and under close management and monitoring.

Council identified that a key issue that needed resolving as soon as possible was where the onsite sewage will be trucked to and disposed of from the mobile accommodation facilities.

In response to this, Council notes the range of mitigation issues listed in the Workforce Management Plan (as per details in the framework SIMP) including ‘access to mental health services and activities for workers to overcome isolation’ and measures to ‘manage the construction workforce, including a code of conduct’. Council will closely monitor these issues and hold ARTC and the primary contractor to account over these management issues.

Council requests that regular updates are given to Council and local communities as to the location and timing of each mobile accommodation facility to be used in the Warrumbungle Shire section of the proposal.

Response

ARTC notes Council’s preference for not using mobile accommodation facilities but restates the benefits of improving flexibility of the workforce approach. These include increased productivity for the workforce due to reduced travel times, resulting in shorter construction timeframes and reduced workforce traffic movements on the local road network.

During the detailed design and construction planning phase, the construction contractor would consider, in consultation with key stakeholders (including Council), the final accommodation arrangements.

This would include confirming the sewage treatment requirements for the mobile accommodation facilities.

In accordance with mitigation measure SE-CI2, a temporary workforce accommodation plan would be prepared to guide the design and provision of temporary accommodation. As identified throughout the SIMP, Council is

identified as a key stakeholder in the context of all of the proposed SIMP management plans and will be consulted in the development of the proposed plans and actions.

4.4.4.4 Location of the Baradine workforce accommodation facility

Issue

Council notes the change of location of the Baradine workforce accommodation facility adjacent to Camp Cypress Cabin and Caravan Park, within the former Baradine Racecourse, and concurs with this amended location.

Council's key concern with the Baradine workforce accommodation facility is that the cost of the required upgrades to Baradine Sewage Treatment Plant (STP) is to be borne by ARTC, as well as the connection of the site to the towns sewerage system.

Response

ARTC appreciates Council's support for the amended location of the Baradine temporary workforce accommodation facility. During the detailed design and construction planning phase, the construction contractor would consider, in consultation with key stakeholders (including Council and Baradine Showground Trust), the final accommodation arrangements. This would include confirming the sewage treatment requirements for the facility. ARTC would consult with Council to discuss potential upgrades required to the Baradine Sewage Treatment Plant and additional funding to support Inland Rail's requirements.

Issue

Council is still disappointed that the Inland Rail approval process has meant that the level of detail provided now by ARTC regarding Baradine workforce accommodation facility is significantly less than that which would have been required if a separate Development Application had to be lodged with Council for the same facilities. This comment is made in the context of the significant scale of the local impact of the Baradine workforce accommodation facility (i.e. that the addition of 500 people onto the edge of Baradine effectively doubles the town's population).

Nevertheless, Council realises that it needs to be a key contributor in the development of the workforce accommodation plan (as specified in mitigation measure SE-CI2 and detailed in the framework SIMP). As such, Council is ready to discuss the details of the Baradine workforce accommodation facility and the mobile accommodation facilities with the primary contractor.

Response

A response to this issue raised by Council is provided in section 4.5.1 of the EIS Response to Submissions Report.

4.4.5 Project office in Warrumbungle LGA

Issue

Council would be pleased to hear if there is a proposal for a project office and advocates strongly for Baradine as a suitable location.

Response

During the detailed design and construction planning phase, the construction contractor would confirm the requirements for permanent and temporary project offices along the alignment.

4.4.6 Impact on local housing

Issue

Council is concerned by the ARTC's attitude to the impact on local housing.

Council commends the addition of the additional management measure in the framework SIMP to monitor the availability of rental and tourist accommodation within the LGA; however, it is concerned that there is still no answer as to how this issue may be resolved, and by the time the issue is monitored, it will be too late to address the impacts that could be felt keenly in small communities with limited housing opportunities. As such, Council expects further action on this issue.

Response

Council's concern with regard to impact on local housing availability in Warrumbungle Shire is noted. The resourcing of large, staged construction projects such as Inland Rail, and the temporal nature of much of that

resourcing, are complex and much will be divided along specific technical skill demands. In order to minimise impacts to local housing, ARTC proposes to provide facilities for its non-resident workforce within the temporary workforce accommodation facilities at Narromine South, Narromine North, Gilgandra, Baradine and Narrabri. In addition, as described above, mobile accommodation facilities are proposed to increase workforce productivity, reduce travel times and reduce workforce traffic movements.

ARTC is committed to open and ongoing engagement with Council about this issue during detailed design and construction.

4.4.7 Impact on local industry and employment

Issue

Council is pleased to see the detail in the 'Industry Participation' and 'Workforce Management' sections of the framework SIMP.

Council is particularly keen to be involved in the further development of the Proposal-Specific Industry Participation Plan, which it can see has many benefits for the LGA.

Council is pleased to see the establishment of the Inland Rail Skills Academy and would like to work with ARTC to maximise the Academy's success locally and further develop the proposed initiatives.

Council is also keen to be involved in the further development of the Workforce Management Plan. Council would like to be involved in the identification of skills and the setting of training targets.

Council is keen to collaborate and facilitate working with regional education and training stakeholders to address workforce training needs.

A local hire preference policy as stated in the framework SIMP is fully supported by Council.

The Indigenous employment and training opportunities outlined in the framework SIMP are also fully supported by Council, who would be happy to liaise with local organisations to maximise these opportunities.

Council realises that during operation of the proposal the ongoing employment benefit to the LGA will be minimal.

Response

Council's interest and comments are noted. ARTC is committed to continuing to work with Council on these matters and appreciates Council's support in relation to local workforce training and development.

In accordance with mitigation measures SE6 and SE7, ARTC would continue to support local employment and develop the proposal-specific industry participation plan to manage the potential employment and regional economic benefits of the proposal. As identified throughout the SIMP, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans and will be consulted in the development of the proposed plans and actions.

4.4.8 Aboriginal community and stakeholder engagement

Issue

Council is pleased to see the inclusion of a detailed Aboriginal Community and Stakeholder Engagement Strategy and action plan as outlined in the framework SIMP. Council would appreciate being added as a stakeholder to that strategy and its implementation.

Response

Council's interest and comments are noted. As noted above, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans and will be consulted in the development of the proposed plans and actions.

In accordance with mitigation measure SE3, a detailed Aboriginal community and stakeholder engagement strategy and action plan would be prepared and implemented at the commencement of the detailed design phase.

4.4.9 Impact on local health and emergency services

Issue

Council is pleased to see the detail in the framework SIMP relating to measures to manage non-resident workforce demand on health and emergency services, including consultation with regional and local emergency services

during detailed design and construction regarding changes to access and accessible routes in case of level crossing delays.

Council is supportive of the suggestion to 'provide or contribute to local medical personnel (e.g. nurse) at the temporary workforce accommodation facilities' but notes that this will not completely mitigate the pressure on local health services, which needs further discussion.

Council, in conjunction with local and regional health and emergency service agencies, is ready to consult with ARTC in relation to these matters.

Response

Council's interest and comments are noted. As noted above, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans, and will be consulted in the development of the proposed plans and actions.

In accordance with mitigation measure SE5, prior to construction, ARTC would confirm workforce requirements and the associated requirements for, and availability of, support services (including health, wellbeing and emergency services) to meet the needs of the non-resident construction workforce.

4.4.10 Impact on community health and wellbeing

Issue

Council is pleased to see the topics covered and the detail in the 'Community Health and Wellbeing' section of the framework SIMP.

Where appropriate, Council supports its community in working with ARTC to minimise the impact on the community's wellbeing. Council expects to be involved in the local details of the urban design and landscape plan.

Council cautions that investment by ARTC in community cohesion activities should not compromise the community's ability to speak freely about their thoughts on the proposal and nor should it diminish the need for investment in direct mitigation of specific impacts on the community.

Response

Council's interest and comments are noted. As noted above, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans and will be consulted in the development of the proposed plans and actions.

In accordance with mitigation measure SE4, the SIMP would be prepared to manage the implementation of the proposed socio-economic mitigation measures (including wellbeing measures), and to detail the specific management actions and targets that would be developed in response to these measures, including consultation, engagement and the complaints management process.

4.4.11 Managing workforce wellbeing and behaviour

Issue

Council is pleased to see the detail and proposed initiatives in the 'Workforce Management' section of the framework SIMP, and is particularly keen to be involved in its further development.

Council commends the development of the 'Workforce Code of Conduct' for all proposal personnel.

Response

Council's interest and comments are noted. As noted above, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans and will be consulted in the development of the proposed plans and actions.

4.4.12 Setting targets and monitoring social and economic impacts

Issue

Council notes the details within the 'Monitoring, review and reporting' section of the framework SIMP. Council has particular interest in these targets and reporting frequencies, and expects to be a key stakeholder in the review and reporting process.

Response

Council's interest and comments are noted. In accordance with mitigation measure SE4, the SIMP would define specific actions, roles and responsibilities, and a monitoring, reporting and adaptive management framework for construction. As noted above, Council is identified as a key stakeholder in the context of all of the proposed SIMP management plans, and will be consulted in the development of the proposed plans and actions.

4.4.13 Economic assessment

Issue

Council is disappointed that the EIS Response to Submissions Report and the Preferred Infrastructure/Amendment Report does not update the economic assessment and the social assessment in relation to likely economic benefits or costs of the proposal specific to the Warrumbungle LGA.

Council considers that it is a failing of the NSW regulatory system that a project as significant as this is only required to prepare an economic assessment for a 'regional study area', and that information for economic impacts on individual affected LGAs is not provided.

Council is still concerned that neither the social assessment or economic assessment referenced the *Warrumbungle Shire Council Economic Development and Tourism Strategy 2019-2023* (Jenny Rand and Associates, 2019). The strategy contains specific actions relating to local economic opportunities, skills availability and training, and should be explicitly referenced in the social assessment and economic assessment. The details within the strategy must also form the basis for the local details regarding local product and service procurement that will be included in the post-approval Workforce Management Plan.

Response

Council's concerns are noted. A response to this issue is provided in section 4.5.1 of the EIS Response to Submissions Report.

4.4.14 Traffic and transport

4.4.14.1 Public level crossings

Issue

Council acknowledges the additional work undertaken to improve the deficient traffic modelling related to the impact of level crossings across the proposal, and looks forward to working with ARTC on the public level crossing treatment report (mitigation measure TT5) to document the assessment and design of level crossing treatments during detailed design.

Council maintains its strong objection to the construction of such a significant number of passive level crossings in a direct contravention of the stated policy positions of not only the ONSNR and Transport for NSW, but of ARTC itself.

Council notes that the Australian Level Crossing Assessment Model (ALCAM) is an assessment tool used to identify key potential risks at level crossings and to assist in the prioritisation of crossings for upgrades. The risk model is used to support a decision-making process for both road and pedestrian level crossings, and to help determine the most appropriate treatments to improve safety. Although it is a comprehensive tool for the assessment of level crossing hazards, ALCAM cannot be applied in isolation and does not preclude the need for sound engineering judgement. Any risk assessment and treatment also need to consider other factors.

ALCAM does not provide warrants for upgrades or attempt to define a 'safe' or acceptable level of risk.

Council is aware of lower cost, hazard-reduction systems that should be considered for inclusion within the design requirements.

Council requests that as a condition of consent, ARTC is required to provide a minimum of solar powered lighting systems on all passive level crossings. The installation of suitable motion sensor activated street/road lighting can reduce the problem of trains already on the crossing not being visible to approaching drivers at night. Council notes their requirements in relation to lighting at level crossings.

Council further requests the inclusion in the Level Crossing Report (LCR) for the proposal infrastructure, a detailed safety and cost analysis for the inclusion of proximity-based level crossing warning systems such as the Safety Integrity Level (SIL) 2 rated Wavetrain acoustic detection system currently in use within the Australian Pilbara region.

Response

ARTC notes Council's concerns and requests in relation to passive level crossings.

ARTC uses a consistent safety-based methodology to develop all proposed road-rail interface treatments across the Inland Rail Program. This is aligned with rail safety national law and ONRSR guidelines, which require the risks to safety to be minimised so far as is reasonably practicable. This methodology is detailed in Appendix C of the EIS Traffic and transport assessment (Technical Report 10).

ONRSR administers and regulates the safety of the Australian railway industry under Rail Safety National Law. This methodology has been audited by ONRSR and there were no findings or recommendations. Applying this methodology, it was confirmed that active level crossing controls are not required for all level crossings.

Proposed level crossings with passive controls are either within state forests or on very low-volume Council roads, i.e. less than 20 vehicles per day.

All level crossings are designed to comply with the current ARTC and Australian Standards (*AS1742.7-2016 Manual of uniform traffic control devices Part 7: Railway crossings*). Road safety audits are included as part of the design development process. The road safety audits incorporate the principles of the Safe Systems Framework approach into considerations of level crossing safety.

The requirement to provide lighting at level crossings will be assessed as part of the safety and design reviews during detailed design. Council will be consulted as part of the detailed design process.

While ARTC do not own or operate the trains, there is significant focus at the industry level looking at potential measures that freight operators may be able to use to improve the visibility of their trains, particularly in rural areas. This is strongly supported by industry groups, including the Office of the National Rail Safety Regulator, the Australasian Railway Association, the Rail Industry Safety and Standards Board and TrackSAFE.

Wavetrain is currently not type approved for use on the ARTC rail network. Where active controls are required, ARTC will install flashing lights, bells and booms barriers, which are the highest form of level crossing control under *AS1742.7-2016 Manual of uniform traffic control devices Part 7: Railway crossings*.

4.4.14.2 Private level crossings

Issue

Council is concerned that there is limited or no visibility on the discussions with private landholders regarding the 30 private level crossings and ultimate construction of these, which may have significant safety impost on public road infrastructure.

Council is aware of some level crossings being located in such a manner as to result in a stacking distance issue for trucks and agricultural machinery in the event of a train pass by. Furthermore, that any assessments being undertaken may not take into account future changes to vehicular traffic type, such as a move to road trains by the current or subsequent landholder/s.

Council requests that any private level crossing being considered within a distance of 75 m of a public road is included within the Level Crossing Report. This distance simultaneously accounts for the longest of road trains plus another haulage vehicle.

Response

ARTC acknowledges the issues raised regarding private level crossings. As described in section 6.4 of the Preferred Infrastructure/Amendment Report, ARTC is working with landholders to minimise the number of new private level crossings that are proposed. It is noted that, in some cases, level crossings would be required to maintain access within a private property, or between a private property and a public road.

Where a level crossing is proposed on a property, the exact location would be agreed in consultation with the impacted landholder. ARTC would seek to install the level crossing at a location that works best for the landholder, noting that the final location would need to comply with the safety standards and engineering requirements. All level crossings would be designed to comply with the current ARTC and Australian Standards (*AS1742.7-2016 Manual of uniform traffic control devices Part 7: Railway crossings*).

Where a private access road interfaces with Council's road network, ARTC would consult with Council as part of the detailed design process. In accordance with mitigation measure TT2, input would continue to be sought from relevant stakeholders, including councils, prior to finalising the detailed design of those aspects of the proposal that affect operation of road and other transport infrastructure. Mitigation measure TT5 commits ARTC to the preparation of level crossing treatment reports for both public and private roads.

ARTC would comply with the Rail Safety National Law in relation to road and rail interfaces.

4.4.15 Council road and drainage assets

4.4.15.1 Material haulage routes

Issue

Council does not consider the haulage route assessment in the EIS to be representative of a practical material supply strategy for construction of a project with an overall length of 306 km.

Council continues to be concerned that the lack of acknowledgement regarding the likelihood of altered haulage routes of quarry material has resulted in an ineffective risk assessment process for transport and road impacts. Deferment of detailed analysis and risk mitigation until a construction contractor has been awarded is not an optimal approach.

Council requests clear consent directives that ARTC and the primary contractor may only transport extractive material from the site on the designated haulage routes, as specified in the Traffic, Transport and Access Management Plan.

Where the planned traffic route results in an increase to the average annual daily traffic (AADT) exceeding the trigger in the Council Roads Management Strategy—Road Hierarchy the route must be upgraded prior to any increase in traffic is allowable.

Council expects that ARTC will be responsible for the design and construction costs associated with all upgrades, in addition to maintaining the road to that standard for the duration of the construction works.

Council requests an early and meaningful role in the preparation of the Traffic, Transport and Access Management Plan and the designation of bulk material haulage routes.

Council would be supportive of a consent condition that required the delivery of 75 per cent of all ballast and capping material to be undertaken by rail to distribution points located at Narromine South and Curban via existing operational networks. Further distribution could then be undertaken on internal haul roads, significantly reducing the risks of road transport.

Response

A response to this issue raised by Council is provided in section 4.5.2 of the EIS Response to Submissions Report. ARTC is currently undertaking further investigation of material requirements across the alignment in consultation with the preferred contractor. During the detailed design phase, the construction contractor will continue to develop the mass haul assessment to provide greater certainty of materials volumes, locations and proposed haul routes.

ARTC has developed third-party agreements with the affected road asset owners, including councils and Transport for NSW. These third-party agreements set-out the consultation and asset owner approval requirements prior to haulage on road assets. Upgrade of routes for haulage is not an explicit requirement of the third-party agreements and shall only be undertaken where deemed necessary by ARTC.

ARTC commits to consultation with Council during preparation of the traffic, transport and access management plan in accordance with mitigation measure TT7.

4.4.15.2 Drainage assets

Issue

Council is pleased that ARTC does not propose to hand back ownership of drainage infrastructure to Council that requires additional management (and associated costs) as a result of the proposal.

Response

Council's response to the matter of drainage assets is noted.

4.4.15.3 Requirements for third-party agreements

Issue

Council notes that there is significant deferment of specifics related to existing and future Council infrastructure to the execution and enactment of the third-party agreement between ARTC and Council. The third-party agreement details all assets, interfaces, responsibilities and funding arrangements for maintenance of shared assets. Council requests clear consent directions that would be consistent with the following areas:

- A defects liability period be imposed for up to 10 years post construction and 5 years post operations commencing.
- Council expects the road interface with ARTC to commence at the location where road realignments have been imposed on the local road network.
- Council expects that each local Council road impacted by construction haulage is to be subject to a Road Dilapidation Report prior to use for construction. The report is to be prepared by an independent and suitably experienced and qualified road designer/auditor approved by Council.
- Council expects that each local Council road impacted by construction haulage is to be rectified according to the specific classification under the Council's road hierarchy on an ongoing basis during construction, not just as a result of construction completion.
- Council expects all assets transferred to Council will be defect inspected in consultation with, and in attendance of, a Council representative.
- Council expects that where the integrity of assets transferred to Council is compromised during a period of up to 10 years post construction and 5 years post operations commencing, that resultant rectification be the responsibility of ARTC.
- Council expects all road pavement, geometric, hydraulic, barrier, signage and asset related designs are to be certified by a Road Designer (as per Transport for NSW requirements), a suitably qualified engineer and a Road Safety Auditor, and provided to Council for concurrence prior to construction.
- Council expects detailed as-built markups and electronic as-built models to be provided to Council in an agreed format.
- Council expects independent construction certification/verification needs to be undertaken on all Council-owned assets or Council be advised and be provided the opportunity to attend critical hold points and inspections per the ARTC and Transport for NSW specifications.
- Council expects all materials used in the works on Council assets (apart from general fill and pavements) are to be new products unless otherwise agreed with Council.
- Council expects that any costs incurred related to the execution of requirements under third-party agreements or conducting activities that fall outside the third-party agreement but are directly attributable to the Project are to be reasonably compensated by ARTC.

Response

A response to this issue raised by Council is provided in section 4.5.4 of the EIS Response to Submissions Report. The process and responsibilities for asset design, certification, handover and maintenance will be addressed in the finalised third-party agreements as these matters fall outside the scope of the CSSI assessment and approval. Conditions of approval for the CSSI are anticipated to establish obligations on ARTC to manage construction impacts on and apply necessary mitigations to third-party assets.

4.4.16 Surface water and flooding issues

4.4.16.1 Flooding and water quality

Issue

Council noted several concerns regarding the updated flooding and hydrology assessment provided with the Preferred Infrastructure/Amendment Report and EIS Response to Submissions Report, specifically:

a) The alteration of flooding impact metrics between assessments, which promotes confusion for Council and residents attempting to establish long-term impact of the modified proposal.
b) The lack of rigour associated with the statement regarding the proposed disposal method of sediment-laden surface water.

c) Council requests an explanation regarding the sizing of the drainage control areas noting that it appeared to be an arbitrary threshold capture of 80 per cent of land with QDL scour/erosion potential exceedances downstream of the rail alignment. In addition, Council requests the actual footprint of drainage control areas be sized to capture 100 per cent of QDL scour/erosion potential exceedances and this be made public to allow the maximum impact to be better understood.

Response

a) QDL assessment criteria

The concerns raised relating to the evolution of the flood impact assessment and the metrics used are noted. Following exhibition of the EIS there has been ongoing refinement of the assessment methodology in consultation with DPE to quantify the modelled changes in flood behaviour. The QDLs proposed in the updated flooding and hydrology assessment report have resulted from this consultation and the considerable assessment of hydrology matters across the Inland Rail Program.

The QDLs are more stringent performance criteria than the flood management objectives adopted in the EIS. Consequently, the updated flooding and hydrology assessment report provides more certainty of predicted changes. While the results presented in the updated flooding and hydrology assessment report differ from those in the EIS, the additional hydrology modelling provides a comprehensive base for the community, local councils and government agencies to assess the acceptability of the anticipated changes in flood behaviour.

Subject to ongoing consultation with DPE and other stakeholders, it is envisaged that the QDLs would form part of the Conditions of Approval and be used during detailed design of the proposal.

b) Stormwater management/sediment and erosion control

As noted in section 2.3 of the updated proposal description (see Appendix A of the Preferred Infrastructure/Amendment Report), site establishment for construction activities would include installation of drainage and erosion management controls in accordance with the CEMP.

Section 2.9.8 of the updated proposal description (see Appendix A of the Preferred Infrastructure/Amendment Report) notes that sediment basins would generally be emptied prior to rainfall events to provide capacity to capture stormwater runoff. Discharges via an overflow bypass would only occur when the design capacity of the sediment basin is exceeded. This is consistent with the approach recommended in *Managing Urban Stormwater: Soils and Construction, Volume 1* (Landcom, 2004).

c) Drainage control areas

Erosion and scour at structures depend on a number of factors, including flow velocities, local soil types, topography and slope, vegetation cover and watercourse geomorphology. These parameters will be assessed as part of the detailed design, as detailed in sections 7.2.5 and 7.3.2 of the updated flooding and hydrology assessment report.

Drainage control areas (DCAs) are one measure for limiting erosion. DCAs are described in section 7.2.3 of the updated flooding and hydrology assessment report. DCAs have been adopted at locations where the downstream flow velocity exceeded the scour/erosion (velocity) QDL limit beyond the rail corridor. There was predicted to be a natural attenuation of flow velocity at these locations to comply with the QDL within a distance of approximately 50 m of the rail corridor boundary in approximately 80 per cent of these situation. It is expected that compliance with the scour/erosion (velocity) QDL could be achieved at these locations within the DCA, with limited or no requirement for additional velocity attenuation works. This will be confirmed during detailed design when further site assessments and flood modelling are undertaken.

At approximately 20 per cent of culvert locations, the analysis indicated that downstream flow velocities were predicted to exceed the scour/erosion (velocity) QDL limit at a distance of greater than 50 m beyond the rail corridor boundary (i.e. beyond the boundary of the drainage control areas). Further physical works may be required at these locations to reduce velocities to the comply with the QDLs.

This approach represented an appropriate balance between the need to provide DCAs to manage flood impacts relative to other increased impacts (such as land acquisition).

The DCAs were established on this basis. Scour/erosion (velocity) QDL exceedances have been reported in Appendix I of the updated flooding and hydrology assessment report based on the TUFLOW modelling results. Areas of scour/erosion (velocity) QDL exceedances beyond the rail corridor or DCAs will be further investigated during detailed design. Site investigations will be undertaken to confirm design parameters and, where required, a

combination of mitigating measures may be needed to attenuate flow velocities within the rail corridor or drainage control area.

Potential design solutions that could be considered in conjunction with, or as an alternative to, DCAs include:

- replacing culverts with bridges
- increasing the number of culverts and/or distribution of culverts
- energy dissipation devices
- extending scour protection into private land in consultation and agreement with landholders
- construction of diversion bunds or drainage to protect buildings and land areas.

The final design solution would be subject to further consultation with individual landholders. Following these assessments, if DCAs are to be established at specific locations, the size and other details of the DCAs would be finalised.

4.4.17 Groundwater issues

Issue

Council has concerns regarding the proposed construction water source strategy.

As no alternative construction water sources are proposed to that previously identified in the EIS (namely the Lachlan Fold Belt Murray Darling Basin Groundwater Source and the Gunnedah–Oxley Basin Murray Darling Basin Groundwater Source) it is presumed that ARTC remains confident there would be sufficient water available under a controlled allocation for the extraction of groundwater, for construction water within the identified water sources.

It is critical to understand that availability within the LTAAEL is only a licensing mechanism and the presence of water-bearing strata at any chosen location within a water source is never guaranteed. The EIS and Preferred Infrastructure/Amendment Report provide no hydrogeological evidence that viable groundwater flow rates exist within the nominated water sources to satisfy the estimated 1,400 ML/a construction water requirement.

Council requests the Bore Field Management Plan to be prepared as part of the Soil and Water Management Plan be made public as soon as practical to allow existing licensed groundwater users to better understand the likelihood of aquifer interference impacts. This is especially important if the targeted water sources differ from those already nominated and previously unaffected community members only become aware of potential impacts near to commencement of construction.

Response

Council's comments are noted. ARTC is currently undertaking further water supply investigations across the alignment in consultation with the preferred contractor. In accordance with mitigation measures WR1 and WR15, construction water supply options would continue to be explored during detailed design and a bore field extraction plan prepared and provided to DPE Water prior to construction of the proposed bore field bores. The timing for management plans will be determined by DPE.

4.4.18 Agricultural and land use issues

4.4.18.1 Further loss of cropping land for drainage control areas

Issue

Council noted that much of the land to be compulsorily acquired for the 200 new DCAs is currently under productive cropping land use. Fencing these areas within the operational rail corridor footprint will create irregular boundary geometry. Modern cropping machinery require large turning sweeps, meaning that boundary irregularities result in loss of productive area far outside the actual fence line.

Council requests that any land acquisition compensation must consider the enduring loss of productive cropping area on the maximum area extent to be affected in consideration of farming methods.

Response

Council's comments are noted. As described in section 6.7.2 of the Preferred Infrastructure/Amendment Report, the DCAs, as currently proposed, represent a conservative scenario in terms of additional land requirements. During detailed design, these areas would be refined when further flood modelling is undertaken and the extent of works within each drainage control area is confirmed.

The land required for each drainage control area would be finalised during detailed design in consultation with landholders as part of the property acquisition process.

4.4.18.2 Orphan lots

Issue

Council expects all land purchases required for the proposal that may result in orphan lots be acquired by ARTC and either incorporated into gazetted rail corridor or disposed of by ARTC.

Response

ARTC acknowledges this issue and would continue to engage with Council in relation to the approach to residual land management as part of the property acquisition process.

The proposed management of residual land on completion of the construction phase is described in section B12.3.1 of the EIS. It states that some land acquired as part of the acquisition process may not be required for the proposal's operational footprint. The preferred approach for the future use of residual land (including sale or transfer) would be confirmed for each land parcel during detailed design in consultation with councils, landholders and other relevant agencies. The EIS states that ARTC would maintain their general biosecurity duty on all parcels of land while they remain in ARTC's ownership/control.

The assessment of land use impacts presented in the EIS Agriculture and land use assessment (Technical Report 11) described the potential impact on lot sizes and the minimum lot requirements in each LGA.

5. Response to public authority submissions—other agencies

5.1 Biodiversity Conservation and Science Directorate (BCS)

5.1.1 Biodiversity

5.1.1.1 Method for calculating offsets

Issue

BCS believes that there are deficiencies with the calculation of fauna connectivity prescribed impacts that will impact on the credit obligation. Concerns raised include:

- the analysis of the aperture and openness value of each underpass/culvert proposed to be used in the offset calculations should be revised to consider the relative widths of single culverts rather than culvert banks
- any proposed dedicated culverts with an unsuitable openness or aperture value for target species should be removed from offset calculations
- a definition and appropriate justification behind the condition metrics of moderate, good and excellent for target fauna relating to bridge clearances should be provided
- if appropriate justification relating to the suitability of bridge clearances cannot be provided, it is recommended that all bridges are removed from residual prescribed impact calculations for aerial species
- the requirement for mitigation scoring to consider prescribed impacts to connectivity as well as prescribed impacts resulting from train strike should be provided
- the accredited assessor should liaise with BCS when refining the residual prescribed impact assessment, given its complexity and impact on the biodiversity credit obligation
- the outcomes of BCS's audit of Table 10.12 to 10.17 of the BDAR should be reviewed and the sensitivity rating, risk assessment and credit markup revised accordingly
- the minor errors in section 10 of the BDAR identified in the BCS submission should be revised.

Response

BCS's comments with regard to the methodology and approach developed by the accredited assessor for the calculation of prescribed impacts are noted. ARTC has undertaken further consultation with BCS on their recommendations in their submission. The agreed discussion outcomes have informed the updated BDAR. Issue

BCS believes that the linkage between the method and the credit obligation in the Koala expert report is not clear. BCS requests the following updates should be undertaken:

- the Koala expert report should confirm how the following pieces of information were used to inform the report:
  - the standard Koala survey advice provided to the accredited assessor
  - Plant Community Types associated with the Koala in the Threatened Biodiversity Data Collection
  - Koala use tree list in the Koala Habitat Information Base Technical Guide
- further information should be provided in the Koala expert report regarding the species which conform to the *Preferred Koala Food Trees*, and which species are considered to be primary and secondary food trees
- further justification should be provided for the use of Koala generational persistence to determine the species polygon
- greater clarity is required in the "species credit polygon" section of the Koala expert report to summarise the steps taken to determine the final Koala species polygon. This should be prepared in consultation with BCS
- justification should be provided for the Koala species polygon extent associated with the Koala scat record located to the northwest of Gilgandra.

Response

BCS's comments on the independent expert's report are noted. ARTC has undertaken further consultation with BCS and the recommendations in their submission have been addressed in the revised expert report, which is appended to the updated BDAR.

Issue

BCS believes that the area of impact for each species credit species needs to be reviewed to ensure all data sources (BDAR, BAM-C and spatial data) are consistent.

Response

The very minor discrepancy in total area of impact in credit species mapping is noted and has been amended in the updated BDAR.

5.2 Department of Planning and Environment (DPE) Water

5.2.1 Hydrology and flooding

5.2.1.1 Flooding mitigation measures

Issue

The design process for works near watercourses should include geomorphic, vegetation, and watercourse sensitivity assessments, and the development of appropriate rehabilitation measures. This recommendation can be included in the mitigation measures by updating mitigation measures FH2 and FH5 in line with the recommendations provided.

Response

Mitigation measures FH2 and FH5 have been updated (see Appendix B of this report) as follows:

- FH2 has been updated to make reference to inclusion of geomorphological assessments as part of the proposed site-specific assessments
- FH5 has been updated to be consistent with the updated flooding and hydrology assessment report.

Issue

Post-construction geomorphology monitoring of watercourses should be required over a time period that includes at least four occasions of watercourse inundation. They believe that this would ensure the mitigating measures are achieving the designed outcome.

Response

In accordance with new mitigation measures FH6 (see Appendix B of this report), ARTC will prepare and implement a geomorphological monitoring program following the completion of construction. The monitoring program will be developed in consultation with DPE (which would include DPE Water).

5.2.1.2 Groundwater

Issue

ARTC is required to replace any government monitoring bores that are decommissioned due to the proposal within 18 months and recommends that a commitment to this should be required. Consultation with DPE Water will be required to establish the bore design criteria and bore location prior to replacement.

Response

In accordance with new mitigation measure WR6 (see Appendix B of this report), ARTC commits to replacing any government monitoring bores that are decommissioned due to the proposal within 18 months following completion of construction. ARTC will consult with DPE Water to establish the bore design criteria and bore location prior to replacement.

5.3 Department of Primary Industries (DPI) Fisheries

5.3.1 Aquatic ecology

5.3.1.1 Fish passage

Issue

The design of bridges, culverts and waterways crossings should be in accordance with the document *Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings* (NSW Fisheries 2003) and the *Policy and Guidelines for Fish Habitat Conservation and Management (Update 2013)*.

Response

A response to this issue is provided in section 5.6.1 of the EIS Response to Submissions Report.

Issue

Consideration should be given to the detailed design of any scour protection below watercourse crossing structures to ensure that fish passage is not impeded.

Response

A response to this issue is provided in section 5.6.1 of the EIS Response to Submissions Report.

5.3.1.2 Riparian buffer zones

Issue

Adequate riparian buffer zones should be maintained adjacent to the watercourses that will be crossed as part of this proposal. Where disturbance is inevitable, environmental management plans will be prepared to minimise the extent of the disturbance footprints and re-establish riparian and aquatic habitat features.

Response

A response to this issue is provided in section 5.6.2 of the EIS Response to Submissions Report.

5.3.1.3 Construction Environmental Management Plan (CEMP)

Issue

DPI Fisheries should be consulted with regards to a number of subplans of the CEMP, including the:

- Aquatic Biodiversity Management Plan
- Soil and Water Management Plan
- Rehabilitation Plan.

DPI Fisheries recommends that these subplans:

- aim to minimise, avoid, and mitigate the loss of key fish habitats
- detail the stockpiling of felled timber from construction for use as snags (large woody debris) to rehabilitate and improve the habitat quality of key fish habitats as part of the rehabilitation strategy or Aquatic Biodiversity Management Plan.

Response

A response to this issue is provided in section 5.6.3 of the EIS Response to Submissions Report.

5.4 NSW Environmental Protection Authority (EPA)

5.4.1 Noise and vibration

5.4.1.1 Out-of-hours work

Issue

Mitigation for out-of-hours works (OOHW) in Table 10.1 and Table 10.2 of the Updated noise and vibration assessment—construction and other operations (Technical Report 8) are outside of proposal hours (6 am to 6 pm) and not outside of the standard hours in the *Interim Construction Noise Guideline* (DECC, 2009).

NSW EPA recommends that:

- out-of-hours mitigation (and the OOHW protocol) be based on *Interim Construction Noise Guideline* outside standard hours
- the Preferred Infrastructure/Amendment Report be amended to illustrate the mitigation outside standard hours from the *Interim Construction Noise Guideline*.

Response

As described in section A8.8.2 of the EIS, a key purpose of the proposed small increase in working hours outside of the *Interim Construction Noise Guideline* recommended standard hours is to minimise associated disruptions to the community by reducing the length of construction, as far as practicable.

These are referred to as the primary proposal construction hours, with any construction activities outside these referred to as OOHW (refer to section 5.2.2 of the EIS Response to Submissions Report for further response to justification for the primary proposal construction hours).

In accordance with mitigation measure CNV3, a construction noise and vibration management plan would be prepared and implemented as part of the CEMP, in accordance with the Inland Rail NSW *Construction Noise and Vibration Management Framework* and *Interim Construction Noise Guideline*. The plan would include measures, processes and responsibilities to manage and monitor noise and vibration, and minimise the potential for impacts during construction. Further information about the requirements for the construction noise and vibration management plan are provided in Chapter D5 of the EIS and Table 10.1 of the Updated noise and vibration assessment—construction and other operations (Technical Report 8).

ARTC acknowledges that consideration is needed for shoulder periods and weekends where the primary proposal construction hours propose work during the ICNG out-of-hours period. In recognition of this, ARTC proposes the application of additional management measures to those contained in Table 10.1 in Technical Report 8, as shown in Table 5-1 (new measures shown in **bold text**).

TABLE 5-1 ADDITIONAL MANAGEMENT MEASURES—CONSTRUCTION NOISE (UPDATED)

Time period	CNML, dB(A)	Perception	Exceedance of CNML, dB(A)	Management measures
All hours	>75 dB(A)	Highly affected	-	RO, CO
OOHW rest period evening Monday to Sunday 6 pm to 10 pm (including public holidays)	35	Noticeable	< 5	CO1
		Clearly audible	5–15	CO1
		Moderately intrusive	15–25	CO1, CO2
		Highly intrusive	>25	CO1, CO2, RO (>2 consecutive periods)
OOHW sleep period Night Monday to Sunday 10 pm to 6 am (including public holidays)	25	Noticeable	< 5	CO1
		Clearly audible	5–15	CO1
		Moderately intrusive	15–25	CO1, CO2, RO (>2 consecutive periods)
		Highly intrusive	>25	CO1, CO2, RO, AA (>2 consecutive periods)

Time period	CNML, dB(A)	Perception	Exceedance of CNML, dB(A)	Management measures
OOHW shoulder period **Monday to Friday (6 am to 7 am)** **Saturday and Sunday (6 am to 8 am)** **(including public holidays)**	**35**	**Noticeable**	**< 5**	**CO1, LIW**
OOHW weekend **Saturday (1 pm to 6 pm)** **Sunday (8 am to 6 pm)** **(including public holidays)**	**35**	**Noticeable**	**< 5**	**CO1, RO**

Notes: OOHW: Out Of Hours Work. CNML: Construction Noise Management Level
CO – Communication. RO – Respite Offer. AA – Alternate Accommodation. LIW – Low Impact Works (works that generate low levels of noise at the nearest receivers including light vehicle movements, deliveries, site shed set up, toolbox talks, generators, hand-tools)

In summary, work would be restricted to low-impact noise activities during the morning shoulder periods. For weekend works, in addition to notification and communication of upcoming works, respite schedules would also apply. Respite would be provided every second weekend (commencing at 1 pm on Saturday and concluding at 7 am on Monday) to impacted receivers, other than works that may be necessary for safety or emergency purposes.

Issue

A justification, other than convenience, is required for outside standard hours works in accordance with section 2.3 of the *Interim Construction Noise Guideline*, regardless of whether noise levels are predicted to be below the night-time Noise Management Levels.

They note that there is a requirement to implement all feasible and reasonable mitigations, management measures, and work practices to minimise noise in accordance with section 6 and Figure 1 of the *Interim Construction Noise Guideline*.

Response

As noted in section 5.2.2 of the EIS Response to Submissions Report, a key purpose of the proposed small increase in working hours outside of the *Interim Construction Noise Guideline* recommended standard hours is to minimise associated disruptions to the community by reducing the length of construction, as far as practicable. This is not a justification of convenience – rather, it is intended to benefit the community overall.

The proposed increase in the working hours was described in section A8.2.2 of the EIS together with the justification for this increase. The extended construction working hours are proposed to reduce the overall construction program of this proposal, minimising the impact to the community and making efficient use of a highly specialised and in-demand workforce. It is estimated that construction duration could be reduced by up to six months. Earlier completion would bring considerable benefits to the community (in terms of reducing the construction period) and would reduce the duration of construction-related disruption.

Issue

ARTC should be required to provide evidence of support from the surrounding community to carry out works outside standard hours, as per section 2.3 of the *Interim Construction Noise Guideline*.

Response

A response to this issue is provided in section 5.2.2 of the EIS Response to Submissions Report.

Issue

Given there are significant predicted impacts from construction of the proposal, any approval for the proposal should contain conditions requiring early implementation of mitigation and respite periods during construction.

Response

Where property treatments for operational noise may be required, these would be brought forward into the early work program where feasible to provide benefits as early as possible. The expected application of respite periods for OOHW and extended working hours is described in section 5.2.2 of the EIS Response to Submissions Report.

Where residents are likely to be subjected to lengthy periods of noise or vibration, they may be eligible for respite offer. The purpose of such an offer is to provide residents with respite from an ongoing impact in accordance with updated Table 10.1. Additionally, where receivers are impacted during out-of-hours weekend works, a respite period will be provided to ensure that no single receiver is impacted for two consecutive periods of weekend work. Respite will be provided every second weekend commencing at 1 pm on Saturday and concluding at 7 am on Monday.

5.4.1.2 Clarification on terms used

Issue

It is not clear what the 'rail earthworks green zone' and 'rail earthworks red zone' descriptors mean in the contour maps in Part 5 of Appendix I of the Updated noise and vibration assessment—construction and other operations (Technical Report 8). These zones should be described in terms of potential noise and vibration impacts and mitigation.

Response

As described in section 5.1.1 of the updated noise and vibration assessment—construction and other operations, due to the large proposal extents and rural or remote nature of a large proportion of the proposal there are significant portions of the proposal site that are sufficient distance from noise sensitive receivers such that noise impacts are not anticipated.

As a result, some identified locations would be suitable for works within the primary proposal construction hours (i.e. outside recommended standard hours) and for OOHW (if required) without any predicted impacts at noise sensitive receivers. These areas, predominantly located within Pilliga East State Forest, are shown as rail earthworks green zone in Appendix I of the Updated noise and vibration assessment—construction and other operations report.

The rail earthworks red zone represents areas where there are predicted construction noise impacts to sensitive receivers. These areas would be subject to the construction noise and vibration mitigation measures described in section 8.2 of the Preferred Infrastructure/Amendment Report.

5.5 North West Local Land Services

5.5.1 Land use and agriculture

5.5.1.1 Consultation

Issue

North West Local Land Services requests to be consulted regarding TSR R44590 in relation to providing access to the waterpoint on Spring Creek.

Response

As described in section 6.7.1 of the EIS Response to Submissions Report, ARTC confirms that access across the proposal site would be provided under the Bohena Creek bridge. In accordance with mitigation measure LP12, ARTC would continue to consult with North West Local Land Services during detailed design to confirm how impacts on travelling stock reserves would be minimised during construction and operation. Alternative access arrangements would be made as required, subject to maintaining rail safety.

5.5.1.2 Culverts

Issue

North West Local Land Services notes the importance of functioning culverts and requests that formal culvert management occurs, including:

- desilting and debris removal
- a program for annual inspection
- 'trigger' points to reinstate culvert functionality.

Response

A response this issue is provided in section 7.5.2 of the EIS Response to Submissions Report.

5.5.1.3 Travelling stock reserve (TSR)

Issue

North West Local Land Services objects to the proposed rail alignment through TSR R27999 (lot 6 of DP1195493 and lot 7 of DP1195493).

The mitigation measures proposed to manage the impacts of the railway alignment along the south-eastern portion of the TSR are insufficient. There is considered to be an unacceptably high risk to human and livestock in the vicinity of the Narrabri Sewage Treatment Plant where the corridor narrows to 25 metres.

The following concerns regarding the report (Use Impact Assessment—North Narrabri Section of Travelling Stock Route and Proposed Route of Inland Rail (Appendix F of the Preferred Infrastructure/Amendment Report)), are raised:

- The scope of the report is limited to reducing the risk of the currently proposed rail alignment rather than considering the implications of all options to protect the safety of people and livestock such as establishing an alternative TSR area or re-aligning the rail corridor.
- The report has based recommendations on unknown levels of risk, for example:
  - *'*Once noise / vibration levels and effects on stock are known*'* suggests the effects of a large, fast-moving train near livestock of various ages and types is unknown.
  - 'Effects on moving stock are variable and will depend on individual animal circumstances……Meanwhile animals that have not seen these pressures before may react unpredictably' highlights the difficulty in predicting animal behaviour and the associated inability to feasibly quantify risk to adequately protect human and livestock safety.

Response

ARTC acknowledges North West Local Land Services' (LLS) ongoing concerns regarding the potential safety risks of the existing Travelling Stock Route (TSR) at Narrabri North adjacent to the proposal.

Section 6.7.2 of the Preferred Infrastructure/Amendment Report provided information on the amended proposal and proposed mitigations to address LLS's concerns, which is expanded as follows:

- The rail corridor has been moved as far south as possible within the TSR, up to existing Auscott siding's fence to meet essential rail engineering requirements (curve radius of 800 m).
- As the corridor moves south, the available width for the TSR increases from 25 m to 45 m. The narrowest point of the TSR of 25 m would still exist in front of the wastewater treatment plant due to localised constraints but is considered manageable for stock movement by the independent expert on animal behaviour.
- Provision of steel cattle yard type fencing approximately 1,000 m in length between the TSR and rail corridor.
- A stock underpass (7 x 3 m) will be installed close to the one already existing under the Newell Highway, with the rail alignment to be raised.

The amended proposal was presented to LLS, who raised concerns with elements of the design including the bottleneck near the wastewater treatment plant, lack of overall space, the significant length of stock lane running parallel to the proposed rail line and safety risks posed by the type of fencing.

Since then, ARTC has investigated an alternative TSR alignment and Newell Highway crossing in consultation with LLS to address their concerns and these are described below.

Alternative TSR alignment

Rerouting the TSR to the north of the Narrabri wastewater treatment plant would mitigate the LLS's primary concerns with the amended proposal, being the width constraints and the stock lane running directly adjacent to the new rail line.

The alternative TSR alignment would require the acquisition of private land and ARTC has no direct ability to compulsorily acquire land for TSRs.

Any land acquired would require reconfiguration of a privately owned pumped bore irrigation system, as well as ensuring appropriate land tenure for the bore and the associated pump infrastructure.

The landowner immediately to the west of the TSR has a pumped bore, which is used to irrigate adjoining land through the use of ditches and drains. Any land acquired, therefore, would also require a reconfiguration of the

irrigation system (reprofiling of ditches and drains), as well as ensuring appropriate land tenure for the bore and the associated pump infrastructure.

LLS advised that more space away from the rail line is the most effective risk mitigation and is their preferred option, although LLS are aware of the challenges around land acquisition.

Newell Highway crossing

Rerouting the TSR to the south across the Newell Highway would mitigate the LLS's primary concerns about width constraints and the stock lane running directly adjacent to the new rail line. The TSR would cross the Newell Highway further south than the current arrangement, therefore a new stock crossing of the highway would need to be constructed as either a stock underpass or a stock overbridge.

The underpass option would cross the highway, Inland Rail, and the existing rail siding and require major modification of the Newell Highway in this area, with a significant length of the highway needing to be raised and rebuilt to accommodate the underpass. This introduces a number of technical, construction, stakeholder and approval challenges, as well as significant cost impacts.

The overpass option would also cross the highway, Inland Rail, and the existing rail siding, which would involve similarly significant technical, construction, stakeholder, and approval challenges, as well as significant cost impacts. This option is further constrained by the presence of high voltage transmission lines on the north-western side of the highway.

Management of surface water flows in flood events is complex in both alternatives to avoid consequential impacts to the highway and surrounding land uses.

ARTC considers neither the alternative TSR alignment or the alternative crossing of the Newell Highway to be feasible for the reasons outlined above.

Upon receipt of LLS's latest submission, ARTC has further investigated safety risk-management measures and proposes an additional design amendment in the form of a stock barrier to aid in mitigation of the visual and noise impacts of the adjacent rail corridor on stock moving through the TSR at its narrowest point. The proposed stock barrier would improve the safety and functionality of the TSR by reducing the risk of spooking and stampede caused by the noise and sight of passing trains. ARTC has discussed the proposed stock barrier with LLS, who do not necessarily share this view, as the 25-m wide corridor at the wastewater treatment plant would remain, as would the reduction in overall laneway width from 100 to 45 m.

Barrier specifications would be agreed following consultation with LLS during detailed design and would be reviewed and endorsed by an independent expert on animal behaviour. Potential solutions include upgrading from standard steel cattle yard type fencing to 3-m tall stock fencing with poly belt sheeting approximately 1,000 m in length, between the TSR and rail corridor. This type of fencing would assist in managing safety risks, as it would be strong enough to resist some animal pressure due to reactionary movements and avoid potential animal injury.

New mitigation measure LP16 (see Appendix B of this report) commits ARTC to designing and installing a stock barrier and alteration of fencing within the TSR to assist in the management of stock movements, prior to operation of the proposal along the TSR at this location.

In accordance with mitigation measure LP12, LLS would continue to be consulted during detailed design to confirm how impacts on TSRs would be minimised during construction and operation. This would involve agreeing on further mitigation measures to improve functionality and safety, including optimisation of the stock barrier design, configuration of holding yards, user briefings and operational solutions.

In accordance with mitigation measure LP24, ARTC would develop a 'call train control' process which would assist TSR users to schedule stock movement to minimize interaction with or avoid passing trains and manage potential safety risks.

5.6 Heritage NSW—Aboriginal

5.6.1 Consultation

Issue

Heritage NSW requests evidence that consultation was kept continuous between the EIS Aboriginal Cultural Heritage Assessment Report (ACHAR) (Technical Report 6) and the Addendum ACHAR. Heritage NSW requires consultation with registered Aboriginal parties to be continuous, with an unexplained break of more than six months not permitted.

Response

Consultation with the registered Aboriginal parties has been ongoing throughout the submissions phase of the proposal and includes the activities listed Table 5-2.

TABLE 5-2 SUMMARY OF CONSULTATION ACTIVITIES WITH RAPS SINCE PREPARATION OF THE ACHAR

Date	Activity
June 2020	Formal consultation on the draft ACHAR
December 2020–February 2021	Public exhibition of the EIS (formal letter with offer of briefing and community information sessions)
February 2021	Proposal update and invitation to participate in Narrabri geotechnical field work
May–June 2021	Proposal update and invitation to participate in Narromine geotechnical field work
December 2021	Addendum ACHAR consultation and proposal update
February 2022	Follow up consultation on Addendum ACHAR
August 2022	Consultation with ARTC's Social Performance and First Nations Engagement representatives
August 2022	Public exhibition of Preferred Infrastructure/Amendment Report (formal letter with offer of briefing and community information sessions)

Issue

Heritage NSW should be consulted following the completion of additional surveys and test excavations to ensure adequate mitigation and conservation measures are employed.

Response

As detailed in the ACHAR, Addendum ACHAR and mitigation measures, ARTC is committed to ongoing consultation with Heritage NSW for all survey, excavation and management plan preparation in accordance with the relevant guidelines.

In accordance with mitigation measure AH10, the Aboriginal cultural heritage management plan would be prepared in consultation with registered Aboriginal parties and Heritage NSW. Mitigation measure AH10 has been amended (see Appendix B of this report) to include reference to all proposed additional surveys (mitigation measures AH3, AH4, AH5, AH6, AH8 and AH9), to clarify that Heritage NSW will be consulted prior to the surveys being undertaken.

5.6.2 Impacts to scar trees

Issue

Heritage NSW requests clarification on the number of scarred trees that will be impacted, as the Addendum ACHAR notes that 29 scarred trees are either likely or potentially impacted by the proposal. They state that this is a large number of high significance items potentially lost.

Heritage NSW states that avoidance and protection are to be explored in the first instance at all localities. They highlight that where this is not possible, the following is to occur:

- further consultation with the registered Aboriginal parties should be undertaken
- detailed recording (including 3D modelling) of the trees
- long-term preservation measures detailed.

Response

As stated in section B6 of the EIS and in the ACHAR, a total of 29 culturally modified trees are located within the construction footprint and are expected to be either impacted or potentially impacted. Table 9.1 in the ACHAR presents the detailed analysis of the direct or potential impacts, based on proximity to the proposed construction footprint. The assessment presents the most conservative scenario based on the reference design. During detailed design, the construction footprint would be refined when detailed construction planning is undertaken.

The Addendum ACHAR identified an additional two culturally modified trees that would be located within the amended construction footprint; however, these would be able to be protected insitu (in accordance with mitigation measure AH7).

In accordance with mitigation measure AH1, detailed design and construction planning would avoid direct impacts on culturally sensitive areas, including identified items/sites of Aboriginal heritage significance, as far as reasonably practicable. Opportunities to avoid indirect impacts on identified items/sites of Aboriginal heritage significance would also be identified. In accordance with mitigation measure AH6, impacts on those trees confirmed to be scarred trees would be avoided as far as practicable. If impacts are unavoidable, the tree would be photographed and catalogued prior to removal, in consultation with the registered Aboriginal parties, by an appropriately qualified archaeologist. Mitigation measure AH6 (see Appendix B of this report) has been amended to include the additional items suggested by Heritage NSW.

As stated in mitigation measure AH2, the detailed salvage methodology would be prepared in consultation with relevant registered Aboriginal parties and in consultation with Heritage NSW. It would be documented in the Aboriginal cultural heritage management plan (AH10) and would include requirements in relation to the management of, and care and control plans for, salvaged objects, including scarred trees. This would include consideration of detailed recording (including 3D modelling) of scar trees to be removed and long-term preservation measures.

5.6.3 Aboriginal Cultural Heritage Management Plan (ACHMP)

Issue

Heritage NSW generally recommends that all survey and test excavation be completed prior to any approvals so that the proposal and the department are fully informed of all Aboriginal cultural heritage values located within and in the vicinity of the impact areas; however, for the proposal, the completion of additional surveys and excavations can occur post-approval following an ACHMP. The ACHMP must detail all conservation measures explored and implemented, and mitigation where conservation is not possible.

Heritage NSW will provide advice on the draft ACHMP prior to approval by DPE. Recommended draft conditions for inclusion in the ACHMP were provided.

Response

Mitigation measure AH10 commits to preparing the ACHMP in consultation with registered Aboriginal parties and Heritage NSW.

The draft conditions for inclusion in the ACHMP are noted. DPE will be responsible for the preparation and finalisation of the Conditions of Approval for the proposal.

Issue

Heritage NSW states that potential for burials in alluvium landforms needs to be considered and mapped in the ACHMP.

Response

A response to this issue is provided in section 5.9 of the EIS Response to Submissions Report.

5.7 Transport for NSW

Transport for NSW identified a number of issues that were detailed in Appendix A of their submission.

5.7.1 Traffic and transport

5.7.1.1 Maritime requirements

Issue

The proposal includes crossing the Macquarie, Castlereagh, and Namoi/Barwon rivers, all of which are Navigable Waters under Maritime legislation.

A Marine Traffic Management Plan is required for works on or over a navigable waterway where safety, environmental and access outcomes may be adversely affected to ensure that any adverse outcomes to navigation for commercial and recreational vessels are minimised.

There is no mention in the EIS or Preferred Infrastructure/Amendment Report of maritime requirements. The following is required:

- The traffic and transport section of the Preferred Infrastructure/Amendment Report should be updated to include consideration of requirements under Maritime legislation.
- The legislative requirements in the Preferred Infrastructure/Amendment Report should be updated to include the *Maritime Safety Act 1998* (NSW) and the *Ports and Maritime Administration Act 1995* (NSW).
- All vessels associated with the proposal should comply with relevant NSW marine legislation.
- ARTC must provide assurance that it will conform to all relevant requirements under maritime legislation.

Response

The EIS recognises the need for navigational clearances in relation to design of bridges (see section A7.3.4 of the EIS) and during construction (see section A8.4.5 of the EIS). This is also repeated in the updated proposal description (see Appendix A of the Preferred Infrastructure/Amendment Report).

Transport for NSW's responsibilities regarding navigable waters are noted. Any restrictions for watercraft as a result of the construction of the proposal would be planned prior to commencing construction and undertaken in accordance with the *Marine Safety Act 1998* (NSW), the *Ports and Maritime Administration Act 1995* (NSW) and other related legislation.

Further consultation with Transport for NSW, councils and other stakeholders will be undertaken during detailed design to confirm requirements and arrangements for new bridges over navigable waters.

New mitigation measures TT6 and TT12 (see Appendix B of this report), commit ARTC and its contractors to managing works in accordance with maritime legislation. The mitigation measures also include the requirements for a maritime traffic management plan.

Issue

A minimum of one navigable channel span must be open to navigation at all times unless approved by Transport for NSW.

Specific requirements for the Macquarie River viaduct are provided in Transport for NSW's letter dated 8 February 2021.

Response

As noted in section 2.4.5 of the updated proposal description (see Appendix A of the Preferred Infrastructure/Amendment Report), provided there is enough water present, a barge would be used to construct the bridge piers for the bridges over the Macquarie River and Narrabri Creek/Namoi River. All other bridges would be constructed by conventional means with no permanent obstruction to water navigation.

The construction contractor would manage barge movements to ensure that the impacts on inbound and outbound maritime traffic are minimised. In addition, a navigational channel would be kept open during construction, unless otherwise approved by Transport for NSW. As such, impacts on maritime traffic during construction are anticipated to be minor and manageable. In accordance with new mitigation measure TT6, a navigational impact assessment would be undertaken during detailed design to ensure disruptions to watercraft are minimised as far as practicable and any safety and hazard issues are appropriately mitigated.

It is anticipated that waterway access in the vicinity of the bridges would be partially restricted for construction and safety purposes. Depending on the final construction method, authorisation and approval from Transport for NSW would be required with respect to any obstruction to navigation in addition to navigational marks, signage and marine notices required.

ARTC confirms that Transport for NSW's requirements for the Macquarie River viaduct as per Transport for NSW's letter dated 8 February 2021, have been and will continue to be considered as the design progresses.

ARTC and its contractors will manage works in navigable waters in accordance with maritime legislation and the requirements of Transport for NSW. New mitigation measure TT12 provides for a maritime traffic management plan to be prepared (in consultation with Transport for NSW) and implemented to ensure that any adverse outcomes to navigation for commercial and recreational vessels are minimised as far as practicable.

Issue

All bridges need to be set to achieve flood immunity to the 100-year average recurrence interval so that impacts to navigation are minimised.

Response

The Macquarie River, Castlereagh River, Namoi River and Narrabri Creek are not accessible for large watercraft due to variable shallow water depth and presence of snags along the river in the vicinity of the proposal site. The Macquarie River is constrained by weirs at North Dubbo and Narromine. The Castlereagh River, Namoi River and Narrabri Creek are shallow with extensive sand banks during normal flow conditions.

As described in section 1.2.4 of the updated proposal description (see Appendix A of the Preferred Infrastructure/Amendment Report), the approximate bridge heights would be:

- Macquarie River—21.7 m
- Castlereagh River—11.4 m
- Namoi River—13.6 m.

These clearances are greater than the existing bridges that exist in the vicinity of the proposal site and are above the 1% AEP flood levels.

5.7.1.2 Overbridge design

Issue

A minimum of 6.5 m vertical clearance should be provided on all classified roads for oversize overmass requirements. As such the design of the Mitchell Highway rail overbridge will need to be updated.

Response

ARTC has sought Transport for NSW's endorsement to provide vertical clearance in accordance with Austroads *Guide to Road Design*, which has a provision of a minimum 5.4 m vertical clearance for the Mitchell Highway, to achieve an effective design solution while providing value for money.

ARTC has sought information from Transport for NSW to understand the quantum of vehicles using this existing section of the Mitchell Highway that exceed the 4.6 m (and/or 5.4 m vertical clearance) to confirm the appropriateness of 5.4 m minimum vertical clearance. ARTC note that a 6.5 m vertical clearance is contained in Schedule 2 of the draft Work Authorisation Deed and ARTC will continue to work collaboratively with Transport for NSW to agree on an appropriate solution.

5.7.1.3 Grade separation

Issue

There are significant safety risks associated with the proposed level crossing interfaces with State roads, particularly where new interfaces will be created, as road users are unaccustomed to level crossings on this route. As such, all interfaces with State roads should be grade separated to provide the maximum safety to road users and eliminate delays created by level crossings.

The Safe System Framework should be included with considerations of level crossing safety.

Response

ARTC notes Transport for NSW's position in relation to classified roads.

ARTC uses a consistent safety-based methodology to develop all proposed road-rail interface treatments across the Inland Rail Program. This is aligned with rail safety national law and ONRSR guidelines which require the risks to safety to be minimised so far as is reasonably practicable. This methodology is described in Appendix C of the EIS Traffic and transport assessment (Technical Report 10).

ONRSR administers and regulates the safety of the Australian railway industry under Rail Safety National Law. This methodology has been audited by ONRSR and there were no findings or recommendations. The audit report was provided to Transport for NSW.

By applying this methodology and using inputs validated by Transport for NSW, higher order treatments such as additional grade separation, are not considered justified as part of the proposal.

The proposed treatments (flashing lights, bells and boom barriers) are the highest form of level crossing control under *AS1742.7-2016 Manual of uniform traffic control devices Part 7: Railway crossings*.

Road safety audits are included as part of the design development process. The road safety audits incorporate the principles of the Safe Systems Framework approach into considerations of level crossing safety.

ARTC notes that in October 2020, the Federal Government committed $150 million to grade separate additional road–rail crossings of classified roads (state and regional) across the Inland Rail alignment, with the NSW Government contributing an additional $37.5 million. Of relevance to the proposal, the Castlereagh Highway and Tomingley Road were prioritised for grade separation under this initial program.

As part of the May 2022 Federal Budget, the Federal Government made an additional $300 million commitment to the grade separation program. The Federal funding is contingent on the NSW Government's provision of an additional $75 million funding commitment in line with the 80:20 funding split. Transport for NSW is responsible for determining priorities and delivering this program and they have indicated that a number of additional road–rail interfaces along the proposal have been prioritised for grade separation with this additional funding.

ARTC will continue to work collaboratively with Transport for NSW to progress road–rail interface solutions during detailed design. In accordance with mitigation measure TT2, input would be sought from relevant stakeholders (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.

In addition, in accordance with mitigation measure TT5, a public level crossing treatment report would be prepared to document the assessment and design of the level crossing process design and assessment process that has been undertaken. 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). Justification would be provided where no works are proposed on existing level crossings.

5.7.1.4 Construction access routes

Issue

Transport for NSW has concerns that that the Gibbons Street/Newell Highway intersection has inadequate storage and deceleration auxiliary lane lengths (both north and south bound) to cater for the extra heavy vehicle movements generated by the proposal.

The proposed haul route goes through a residential area and passes two aged care facilities, a hospital, and a childcare facility. A risk assessment and justification for use of this route during construction is required.

Response

As described in section 5.2.4 of the EIS Traffic and transport assessment (Technical Report 10) the public road network would need to be used to access the haul roads and other construction infrastructure. With regards to The Island Road (which connects with Gibbons Street) this is the only access for construction of the bridge over the Namoi River, Narrabri Creek and floodplain to the west of Narrabri. It is likely to be used by construction vehicles for approximately 24 months.

The predicted construction traffic movements (per hour) for The Island Road during construction are 2.5 heavy vehicles and 15.5 light vehicles. This is an increase compared to current traffic movements (1.3 heavy vehicles/7.7 light vehicles per hour currently).

The predicted traffic movements in the EIS are indicative and worst case, based on the EIS reference design. While the construction traffic volumes provided are large when compared to the typically low existing traffic volumes on roads in the study area, they are not expected to markedly impact traffic conditions in the area. The potential impacts of increased traffic movements will be managed by preparing and implementing a traffic, transport and access management plan (mitigation measure TT7), as part of the CEMP.

As described in section 6.1.1 of Technical Report 10, temporary intersection treatments and management may be required at various locations to accommodate haulage and other movements, particularly where the haul road crosses major public roads. The treatments would vary depending on the location, traffic conditions and haulage movements. The treatments would be defined in the traffic, transport and access management plan, which would be prepared and implemented as part of the CEMP (in accordance with mitigation measure TT7). The plan would include measures, processes and responsibilities to minimise the potential for impacts on the community and the operation of the surrounding road and transport environment during construction. The plan would be developed in consultation with relevant stakeholders, including local councils, Transport for NSW, Forestry Corporation of NSW, emergency services (e.g. NSW Police Force) and public transport/bus operators.

Additionally, mitigation measure TT8 commits ARTC to consulting with relevant stakeholders (including Transport for NSW) to facilitate the efficient delivery of the proposal and to minimise impacts on road users and landholders during construction. Any additional measures identified as an outcome of consultation would be implemented during

construction, where reasonable and feasible. This would include consideration of sensitive land uses such as hospitals and aged care facilities.

Issue

The conditions of approval should require the construction traffic, transport and access management plan to be accepted by Transport for NSW prior to any works commencing.

Response

Transport for NSW's request is noted. As noted in the above response, a traffic, transport and access management plan would be developed in consultation with relevant stakeholders, including Transport for NSW, in accordance with mitigation measure TT7.

Issue

Proposed intersection designs for construction access points are to be accepted by Transport for NSW, and built by ARTC, prior to any track works commencing.

Due to the high volume of additional vehicles turning on and off the classified road network, assessment of turning warrants and swept path analysis should be completed to ensure the safety of the network.

Response

As noted in the above response, temporary intersection treatments would be considered in the traffic, transport and access management plan, which would be developed in consultation with Transport for NSW.

5.7.1.5 Construction standards

Issue

The Preferred Infrastructure/Amendment Report references Austroads guides only in relation to design standards for public roads. Transport for NSW requires explicit acknowledgement that ARTC must meet the standards set in Transport for NSW's published supplements in addition to those in the Austroads guides.

Response

With reference to public roads, mitigation measure TT4 commits to undertaking road safety audits in accordance with relevant Austroads guidelines. This is considered appropriate given the context.

ARTC would work with Transport for NSW to ensure that standards set in Transport for NSW's published supplements are considered as part of the detailed design, where relevant. In accordance with mitigation measure TT2, ARTC commits to seeking 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.

5.7.1.6 Cumulative impacts with Narrabri Special Activation Precinct

Issue

Transport for NSW requests that rail and road interfaces, and timing for proposal, are considered in the context of the Narrabri Special Activation Precinct. They note that connection roads into the Narrabri Special Activation Precinct should not introduce new rail crossings onto the network.

Response

Transport for NSW's comment is noted.

As described in section A6.3.1 of the EIS, connectivity and interoperability are key characteristics of the Inland Rail Program and its outcomes. Inland Rail is a strategic enhancement of the national freight supply chain, which allows connectivity for regional Australia.

ARTC has been working closely with Narrabri Shire Council to ensure that the design of the proposal is considered in the context of the Narrabri Special Activation Precinct, noting that the precinct planning is currently in the preliminary stages only and will be delivered much later than Inland Rail. An example of the collaboration Inland Rail undertakes with local government has been outlined by Narrabri Shire Council who have noted that the Narrabri Special Activation Precinct design includes a grade separation of Inland Rail over the Narrabri to Walgett Line at a height that does not allow for double stacking from the Northern Inland NSW Port site (N2IP). As noted in section 1.2.4 of the updated proposal description (see Appendix A of the Preferred Infrastructure/Amendment Report),

however, the clearance height of the proposed bridge over the Narrabri to Walgett Line has been raised by a further 2 m to future proof the line for double-stacked train operations. This would allow double-stacked trains on the Narrabri to Walgett Line to access the proposed Northern NSW Inland Port and minimise future interruption to Inland Rail infrastructure and operations.

In accordance with mitigation measure TT2, input would continue to be sought from relevant stakeholders prior to finalising the detailed design of those aspects of the proposal that affect operation of road and other transport infrastructure.

5.7.2 Flooding

5.7.2.1 State road flooding and Quantitative Design Limits (QDLs)

Issue

The EIS and Preferred Infrastructure/Amendment Report indicate that highways and roads will experience adverse flooding impacts because of the proposal. Transport for NSW does not accept any new inundation of the State road network, including the pavement and unsealed or unprotected road edges.

Transport for NSW are concerned that the assumed QDLs proposed are not suitable. The QDLs used for Inland Rail Narrabri to North Star currently require extensive mitigation. The QDL concessions granted for the Narrabri to North Star project, where highway upgrades are planned, are not applicable to the proposal.

The position held by the NSW Government, and Transport for NSW, is that any road covered by water should not be driven through and, as such, the references to 'Hazard Category' can be removed as they are now redundant.

Response

QDLs (formerly referred to as flood management objectives in the EIS Flooding and hydrology assessment (Technical Report 3)) have been proposed, in consultation with DPE, to assess flooding impacts from the proposal relating to increases in afflux, velocity, flood hazard and duration. These QDLs 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 concern that the QDLs (including hazard category) for their roads are not suitable. ARTC will hold further discussions with DPE and Transport for NSW to finalise a suitable QDL.

The updated flooding and hydrology assessment concludes that the direct impacts from Inland Rail on the overall trafficability of highways during a flood event is relatively minor. It was also noted that roads would be expected to be closed due to flooding at locations remote from the proposal.

In accordance with mitigation measure FH1, the design of the proposal would continue to be refined, where practicable, to not worsen existing flooding characteristics for flood events up to and including the 1% AEP event. ARTC will document any QDL departures and seek agreement with affected landholders, including Transport for NSW. Further information on the approach to managing departures from the QDLs is provided in section 4.1.2 of this report.

As advised to Transport for NSW in the meeting on 14 September 2022 and by letter on 20 September 2022, ARTC is confident that the detailed design process will result in the proposal meeting or improving on the flood modelling results outlined in the Preferred Infrastructure/ Amendment Report. This process will be validated through the development of a flood design verification report and through a commitment by ARTC to fully consult with affected landholders and roads authorities, including Transport for NSW, during the detailed design development process. In addition, ARTC also confirms that it will continue to work collaboratively with Transport for NSW to investigate opportunities in the detailed design to mitigate the impact of flooding, including existing afflux in more regular nuisance flooding events where that design outcome does not create any adverse impact on surrounding areas.

Issue

Transport for NSW requests a complete map of drainage control locations.

Response

Detailed mapping of the proposal, including drainage control areas, was provided in the Map Book (parts D and E, operational series).

As described in section 6.7.2 of the Preferred Infrastructure/Amendment Report, the drainage control areas, as currently proposed, represent a conservative scenario in terms of additional land requirements. During detailed design, these areas would be refined when further flood modelling is undertaken and the extent of works within

each drainage control area is confirmed. The land required for each drainage control area would be finalised during detailed design in consultation with landholders, as part of the property acquisition process.

ARTC is committed to ongoing consultation with Transport for NSW and can provide further information as required.

5.7.3 Land use

5.7.3.1 Acts and policy documents

Issue

Transport for NSW states that the following acts and policy documents are to be included in the relevant statutory framework for property acquisitions in the Preferred Infrastructure/Amendment Report:

- NSW Government Property Acquisition Standards
- Transport Property Acquisition Policy
- Transport Administration Act 1988 (NSW)
- Roads Act 1993 (NSW)
- Public Works and Procurement Act 1912 (NSW)
- Transport for NSW Property Acquisition Process (December 2021).

Response

The Preferred Infrastructure/Amendment Report refers to the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW), which is the overarching property acquisition legislation. It is understood that Transport for NSW as the acquiring authority, and ARTC when representing Transport for NSW as acquiring authority, would follow all applicable statutory obligations, and all policies and guidelines as appropriate, in carrying out acquisitions under the Act.

Issue

Severance of properties may result in new accesses and increased movement of stock, and oversized and/or overmass vehicles on public roads. Transport for NSW requires explicit acknowledgement that ARTC will consult with Transport for NSW and the relevant road authority in relation to mitigating impacts of property severance on classified roads.

Response

Transport for NSW's request is noted. In accordance with mitigation measure TT2, input would be sought from relevant stakeholders (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. This would include where any new accesses are provided to private properties that have the potential to impact classified roads.

5.7.4 Noise and vibration

5.7.4.1 Noise curve clarification

Issue

Clarification on the curve LAmax source noise level in Table 23 of updated operational noise and vibration report is requested, noting this is inconsistent with other Inland Rail EISs.

Response

ARTC acknowledges that the correction factors for the LAmax sources noise at curves are variable between assessments. Higher levels of correction were applied in earlier models; however, later models were informed by monitoring data made available in completed sections. Using these, a more detailed review brought down the correction factors, especially for Lmax. For the proposal, a +6 dB correction was applied to both the LAeq and LAmax for curves between 300 and 500 m. The lower level has been adopted on the basis that the proposal is a greenfield development with all new rail being engineered to control curving noise. The updated noise and vibration assessment—operational rail report should therefore read as +6 dB instead of +3 dB. Based off the original assessment and corrections, the closest sensitive receiver is considered for mitigation, and this correction does not alter this outcome.

5.7.5 Visual impacts

5.7.5.1 Train headlights

Issue

The visual impact assessment should consider the impact of headlights on transport users of the Newell Highway.

Response

The proposal has been designed in accordance with relevant rail design guidelines as described in section A7.2.2 of the EIS. Potential impacts of train headlights on road users, including the Newell Highway, would be further considered during detailed design. If required, potential measures could include operational procedures to dip train headlights, hard barriers or vegetation planting.

5.7.6 Proposal description

5.7.6.1 Future connection of the Binnaway to Gwabegar rail line

Issue

The proposed railway alignment will intersect with the non-operational Binnaway to Gwabegar line but will not provide a connection to this line. This will isolate approximately 30 km of rail line from the Inland Rail route north to Gwabegar and it is requested that this be reconsidered.

Provision of a four-way connection at Curban would ensure freight trains from Gilgandra and Coonamble do not need to do a run-around on mainline to transit to their desired destinations. Measures to preserve the corridor should be considered to ensure these future connections can be built.

Response

As described in section A6.3.1 of the EIS, connectivity and interoperability are key characteristics of the Inland Rail program and its outcomes. Inland Rail is a strategic enhancement of the national freight supply chain, which allows connectivity for regional Australia. In accordance with that strategic intent, the following connectivity principles provide guidance for connecting Inland Rail to the existing rail network:

- ARTC is committed to working collaboratively with stakeholders to ensure their future connectivity requirements can be accommodated.
- Direct connectivity is only considered when no reasonably efficient connection is already available or will be available once Inland Rail is constructed.

It is acknowledged that connecting regional Australia is an important consideration for Inland Rail; however, the connections must also be genuinely needed, with enough existing or future rail traffic to ensure that the value-for-money and other relevant criteria can also be demonstrated.

ARTC has undertaken consultation with Transport for NSW and other relevant stakeholders about the connectivity requirements between Inland Rail and the existing rail lines. The proposed connectivity with other rail lines is described in sections 1.2.5 and 1.2.6 of the updated proposal description (see Appendix A of the of the Preferred Infrastructure/Amendment Report). The majority of the proposed junctions are possible future connections. Approval for these connections is sought as part of the proposal. The possible future connections would be constructed by ARTC as required. Any other connections are not part of the scope of the proposal for which approval is being sought and would need to be subject to separate approval in the future, if required.

5.7.6.2 Future planning

Issue

Given the expansion of the road network to Performance Based Standards vehicles the following must be considered:

- Transport for NSW must be consulted to ensure the strategic lens for Inland Rail caters for heavy vehicles up to 60 m long and a width for over mass/oversize vehicles of 8 to 10 m.
- All intersections must 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).
- The Newell Highway should adopt a growth rate of 2.2% per annum and other State road corridors should use a growth rate of 1.7% per annum, to align with *Traffic on Rural Roads* projections.

Response

ARTC confirms that the requirements for Performance Based Standards 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.

ARTC will continue to work collaboratively with Transport for NSW to progress road–rail interface solutions during detailed design. In accordance with mitigation measure TT2, input would be sought from relevant stakeholders (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. In addition, in accordance with mitigation measure TT5, a public level crossing treatment report would be prepared to document the assessment and design of level crossing process design and assessment process that has been undertaken. The report would be developed in consultation with Transport for NSW and the relevant councils.

Issue

Consideration should be given to new and emerging technologies relating to rail and road in future assessments.

Response

Transport for NSW's comment is noted. ARTC will consider new and emerging technologies in future assessments, as relevant.

5.7.7 Social impacts

5.7.7.1 Communication management plan

Issue

The communication management plan must also include measures to ensure ongoing consultation with Transport for NSW, so that emergency service providers are informed about the locations of level crossings, and changes to access routes and road conditions.

Response

Mitigation measure SE2 provides that the communication management plan would include measures to ensure ongoing consultation with local emergency services providers, to inform providers about the locations of level crossings, and changes to access routes and road conditions.

5.7.7.2 Benefits of the proposal

Issue

Engagement of local suppliers and businesses should have target measures as a percentage.

Response

In accordance with mitigation measure SE4, the project Social Impact Management Plan (SIMP) would 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 SIMP would 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.

Issue

There should be an economic appraisal methodology to demonstrate how benefits are being optimised, and costs minimised, for local communities.

Response

Transport for NSW's comment is noted. ARTC is committed to working with local communities to meet their needs and deliver customer benefits. These opportunities will unfold as the proposal moves towards the commencement of construction. Responses to this issue, as raised by councils, are provided in section 4 of the EIS Response to Submissions Report.

Ernst and Young was engaged by the Commonwealth Department of Infrastructure, Transport, Regional Development and Communications to identify the sustained economic uplift flowing to the regions as a result of the operation of Inland Rail. Regional intelligence reports for each of the four study regions (Queensland, Northern NSW, Southern NSW and Victoria) have been produced as part of this study which are available at https://www.inlandrail.gov.au/understanding-inland-rail/publications-and-reports.

Issue

There needs to be a strategy to maximise social outcomes from the proposal, not just mitigate or manage social issues.

Response

The framework SIMP that was placed on exhibition with the Preferred Infrastructure/Amendment Report and EIS Response to Submissions Report clearly 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 DPE in the development of the SIMP and implementation of the proposed actions.

5.7.7.3 Social Impact Management Plan

Issue

The social impact management plan does not include employment and training targets for people with a disability or social procurement for enterprises that employ people with a disability. These targets should be included.

Response

Transport for NSW's interest in the targets presented in the SIMP are noted. The SIMP, to be developed in the next phase of the proposal, in accordance with mitigation measure SE4, will consider the appropriateness of including the suggested targets.

Issue

The safety awareness program does not include a program on safety around level crossings for schools in the vicinity of level crossings. Transport for NSW requests that this be provided.

Response

There are no schools in the vicinity of level crossings proposed as part of the proposal. In accordance with mitigation measure SE15, the rail safety awareness program will be developed and implemented, prior to the operation of Inland Rail, to educate the community regarding safety around trains. Development of the rail safety program will include consideration of the wider communities in which Inland Rail will operate and the composition and needs of groups for targeted education.

5.7.7.4 Aboriginal communities

Issue

There is a lack of detail about how to maximise outcomes for Aboriginal communities and there is no evidence of shared decision making with local Aboriginal communities. Further work is required to understand the impacts on local Aboriginal communities and a shared decision-making model should be adopted.

Response

Transport for NSW's interest in maximising outcomes for Aboriginal communities is noted. ARTC's commitment is outlined in the *Aboriginal Community and Stakeholder Engagement Preliminary Framework* that was publicly exhibited. Established and ongoing engagement with Aboriginal stakeholders and communities centres around understanding impacts and shared visions for maximising outcomes such as training, employment, and procurement for Aboriginal people and businesses.

Mitigation measure SE3 provides for preparation and implementation of a detailed Aboriginal community and stakeholder engagement strategy and action plan at the commencement of the detailed design phase, to require that:

- information about the proposal is shared with Aboriginal stakeholders and communities in a timely manner
- strong relationships between ARTC and Aboriginal stakeholders and communities are built and maintained

- local Aboriginal cultural and community values are identified and understood
- opportunities to reflect Aboriginal community and cultural values in infrastructure or other outcomes of the proposal are identified and implemented.

5.7.8 Cultural heritage

5.7.8.1 Cultural heritage induction

Issue

To improve outcomes for cultural heritage, there needs to be a mechanism to ensure all workers onsite understand how to care for Aboriginal cultural heritage and what to do if unexpected finds occur. ARTC should:

- develop a toolbox video to inform workers of the importance of Aboriginal cultural heritage sites and what to do if any artefacts are found (unexpected finds)
- implement an unexpected finds procedure, for staff and develop tools to ensure all staff have knowledge and understanding of the importance of caring for Aboriginal heritage.

Response

Transport for NSW's interest in improving outcomes for cultural heritage is noted. Mitigation measure AH11 establishes the intent to provide cultural awareness training as part of the Aboriginal cultural heritage management plan. Mitigation measure AH12 sets out the intent to provide unexpected find procedures as part of the Aboriginal cultural heritage management plan.

5.7.8.2 Registered Aboriginal Parties

Issue

Transport for NSW believes that some registered Aboriginal parties do not appear to be Traditional Owners of the proposal locations. They state that ARTC should ensure that in future site surveys, registered Aboriginal parties are knowledge holders from Country.

Response

The processes for identifying registered Aboriginal parties has been conducted with reference to the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010a) and in consultation with Heritage NSW, as well as in response to location-specific requirements.

5.8 Heritage NSW—Non-Aboriginal

Issue

Heritage NSW stated that they have no further comments on non-Aboriginal heritage.

Response

The comments from Heritage NSW are noted.

5.9 Water NSW

Issue

Water NSW states that no Water NSW land, assets, or infrastructure is likely to be impacted by the proposal and, as such, they have no comment on the proposal.

Response

The comments from Water NSW are noted.

5.10 DPI Agriculture

Issue

DPI Agriculture supports the commitment to ongoing consultation with the community and key stakeholders in the lead up to, and during, detailed design and construction, including the development of a communication management plan to guide future engagement with the local community and other key stakeholders.

DPI Agriculture states that they have no further issues or changes in relation to the Preferred Infrastructure/Amendment Report.

Response

The comments from DPI Agriculture are noted.

5.11 Central West Emergency Management Region (EMR)

5.11.1 Consultation

Issue

Central West EMR acknowledged and appreciated the consultation undertaken by ARTC to date, including attendance at several Local and Regional Emergency Management Committee meetings. Ongoing consultation with the Local Emergency Management Committee would greatly benefit the communities.

Response

Central West EMR's comments are noted. ARTC is committed to open and ongoing engagement with Central West EMR, Local and Regional Emergency Management Committees and emergency service providers. In accordance with mitigation measures SE1 and SE2, a proposal-specific communication management plan would be developed and implemented prior to and during construction. This would include measures to ensure ongoing consultation with local emergency services providers, to inform providers about the locations of level crossings, and changes to access routes and road conditions.

5.11.2 Social impact management plan

Issue

The updated SIMP had addressed several of the concerns raised by the Local Emergency Management Committee. More defined and achievable targets should be provided to ensure that the hazards and impacts identified in the SIMP are addressed.

Response

Central West EMR's comments are noted. In accordance with mitigation measure SE4, the SIMP would define specific actions, roles and responsibilities, and a monitoring, reporting and adaptive management framework for construction. Appropriate targets would be considered during development of the SIMP.

5.11.3 Impact on local health and emergency services

Issue

Several Local Emergency Management Committees have expressed concern over the strain that will be placed on front-line emergency services. While the SIMP (Table 4-3—workforce management) specifically addresses the demand on local health and emergency services, it does not identify an acceptable minimum standard that the contactor must supply for onsite healthcare for the non-residential workforce accommodation. This minimum standard should be identified through genuine consultation with the Local Emergency Management Committee where concerns are addressed directly.

Response

Central West EMR's comments are noted. ARTC is committed to open and ongoing engagement with Central West EMR, Local and Regional Emergency Management Committees and emergency service providers. In accordance with mitigation measure SE5, prior to construction, ARTC would develop strategies and measures for the support services (including health, wellbeing and emergency services) to meet the needs of the non-resident construction

workforce. These would be developed in consultation with local councils and service providers (including health and emergency service providers) and would be detailed in the workforce management plan.

5.11.4 Emergency response

Issue

Central West EMR identified the following in relation to emergency response:

- Evacuation management strategies for the temporary workforce accommodation sites should be clearly defined. Workers are being housed away from their normal social and support networks and in the event of an emergency this may place additional strain on a small community evacuation facility that could be avoided with sufficient prior preparation.
- In addition to the proposed quarterly updates to local and regional emergency service providers, it would be beneficial to have a fortnightly update in print provided to the respective Local Emergency Management Committees, including the information provided in the submission.
- Details of the support that would be offered onsite in the event of an emergency should be provided. This is particularly important given there will be high-risk activities, such as remote work, heavy machinery and hot works, being undertaken in remote areas such as the Pilliga forests. The resources that should be considered are onsite paramedics with access to all-terrain vehicles and appropriately trained personnel who can undertake basic firefighting.

Response

Central West EMR's comments and suggestions are noted. ARTC agrees that emergency response arrangements will be important during construction. A range of mitigation measures have been proposed to address this including:

- Minimising impacts to roads and traffic for the public and emergency services (mitigation measures TT7, TT8, TT9 and TT10)
- Managing flooding and bushfire risk (mitigation measures FH4 and LP23)
- Workforce accommodation management and arrangements (SE-CI2 and SE11).

ARTC is committed to open and ongoing engagement with Central West EMR, Local and Regional Emergency Management Committees and emergency service providers. in accordance with mitigation measure SE11, the workforce management plan would be developed in consultation with local councils and service providers, including local and regional health and emergency services providers.

6. Response to other key stakeholder submissions

6.1 Auscott Properties Limited (Auscott)

6.1.1 Flooding

Uncertainties in the flood modelling

Issue

Auscott highlights the uncertainty in the updated flooding and hydrology assessment and states the assessment:

- is unclear if Auscott's existing warehouse facilities are included in the 3,628 non-habitable buildings referred to in the assessment as currently exposed to flood risk
- does not identify the 28 non-habitable buildings where there would be afflux QDL exceedances following construction of the proposal and whether this includes Auscott's existing warehouse facilities
- does not quantify impacts from increases in flood levels from the proposal to Auscott's land in the 1% AEP event, noting the mapping in the assessment suggests that the increase will be in excess of 100 mm
- indicates that the flood exceedances of the proposal will be further reviewed in the detailed design stage and further measures taken at that point to avoid, minimise or manage flooding impacts
- indicates that further flood modelling would be undertaken during detailed design to confirm compliance with QDLs.

Auscott asserts that they cannot make a meaningful and detailed submission in relation to flood impacts due to the uncertainties listed above.

Auscott submits that the proposal should not be permitted to cause any increase in existing flood levels at their land. They also submit that the proponent should be required to implement sufficient mitigation measures to avoid any exacerbation of flood risk at their land during and after construction of the proposal.

Response

All buildings (including warehouses and silos) within the Auscott property have been classified as either habitable or non-habitable buildings in accordance with the definitions associated with the QDLs.

One non-habitable building has been identified as being at risk of above-floor flooding in the existing 1% AEP event, and is part of the 3,628 non-habitable buildings (for the whole proposal) identified within the updated flooding and hydrology assessment report.

The 28 non-habitable buildings subject to departures from the afflux QDL were listed in Table 7.6 of the updated flooding and hydrology assessment report. They were also shown on the mapping provided in Appendix I of the updated flooding and hydrology assessment report. None of the non-habitable or habitable buildings within the Auscott property have been predicted to experience a departure from the afflux QDL.

The predicted afflux on Auscott's property is shown in Appendix I of the updated flooding and hydrology assessment report (refer to Figure 1.4.101 for the 1% AEP event with blockage). An afflux of up to 200 mm is predicted at the south western area of the property, beyond the hard stand areas.

The proposal has been, and would continue to be, designed to minimise the potential for flooding risks. In accordance with mitigation measure FH1, the design would continue to be refined (where practicable) during the detailed design process, to not worsen existing flooding characteristics for flood events, up to and including the 1% AEP event.

The additional flood modelling, and any mitigation identified as an outcome of modelling, would consider floodplain risk management plans and the QDLs provided in the updated flooding and hydrology assessment report. This would be undertaken in consultation with the relevant local council and local emergency management committees, DPE, the NSW State Emergency Service and potentially impacted landholders.

Where it is not practical to eliminate departures from the QDLs through design changes, ARTC will manage these in accordance with the Conditions of Approval issued by DPE. Further information on the management of departures from the QDLs is provided in section 4.1.2 of this report.

6.1.2 Approval process

Granting of approval

Issue

Auscott queries whether the consent authority has sufficient information before it to properly understand and assess the flood impacts of the proposal. In particular, they highlight insufficiencies in information in circumstances where the flood assessment:

- foreshadows further flood modelling being required post-approval to assess impacts
- proposes the development of mitigation measures to occur post approval.

Response

Since exhibition of the EIS, ARTC has undertaken regular consultation with DPE including a total of 13 meetings with the hydrology working group (attended by DPE's independent hydrologist and representatives from DPE, BCS and ARTC). These meetings have discussed the approach to the assessment with agreed outcomes adopted in the updated flooding and hydrology assessment.

The updated flooding and hydrology assessment was undertaken and prepared by a team of qualified and experienced professionals in accordance with the SEARs, and relevant guidelines and requirements. In particular, the assessment was undertaken in accordance with *Australian Rainfall and Runoff* (Ball, et al., 2019).

In accordance with mitigation measure FH1, during the detailed design process, the design would continue to be refined, where practicable, to not worsen existing flooding characteristics. This would include further detailed flood modelling. The additional flood modelling, and any mitigation identified as an outcome of modelling, would be undertaken and determined in consultation with impacted landholders. During this process, ARTC would provide more detailed information to landholders regarding the effects of the proposal at their properties and proposed mitigation and management measures.

Recommended mitigation measures are provided to ensure flooding and hydrology related matters are further managed throughout detailed design, construction and operation to avoid, minimise, manage or offset the predicted impacts as far as practicable. This is a standard approach to impact assessments in NSW for SSI projects.

6.1.3 Land use and agriculture

Property acquisition

Issue

Auscott notes that the proponent proposes to compulsorily acquire parts of their land. As such, they would be entitled to compensation in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW) for any decrease in the value of the remainder of their land. This would include value decreases due to increased flood impacts.

Despite this, Auscott submits that the proponent should be required to avoid and mitigate flood impacts from the proposal on private land in the first instance.

Response

All property acquisitions would be undertaken in consultation with landowners. In accordance with mitigation measure LP2, and as described in section B12.5.1 of the EIS, acquisition would be undertaken in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW) and the land acquisition reforms announced by the NSW Government in 2016, which can be viewed online at: **finance.nsw.gov.au/land-property/land-acquisition-reform-2016**.

Compensation would be determined in accordance with the statutory obligations under the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW). The Centre of Property Acquisition NSW is a resource available to impacted landholders and provides information on the type of compensation payable under current legislation (see **propertyacquisition.nsw.gov.au/compensation-types**).

Whether the approach to acquire property interests is either by agreement or compulsory acquisition under the *Land Acquisition (Just Terms Compensation) Act 1991*, ARTC is committed to adhering to the guiding principles and standards established by the Centre of Property Acquisition NSW.

Refer to: **propertyacquisition.nsw.gov.au/standards-and-principles.** Where possible, voluntary property acquisitions would be pursued.

ARTC's approach to avoiding and mitigating flood impacts from the proposal is outlined above.

6.2 North West Protection Advocacy (NWPA)

6.2.1 Biodiversity

Impacts to the Pilliga forest

Issue

NWPA objects to the proposed route alignment through the Pilliga forest, stating it should go around it to the west providing benefit to the Coonamble and Burren Junction region.

Response

A response to this issue is provided in section 6.8 of the EIS Response to Submissions Report.

Accuracy of data

Issue

NWPA shares their concern about the accuracy of the data used for the biodiversity assessment. NWPA raises concern that biodiversity surveys were conducted during severe drought.

Response

A response to this issue is provided in section 8.3.1 of the EIS Response to Submissions Report.

Impacts to flora and fauna

Issue

NPWA is concerned that the proponent does not have a plan for the restoration of culturally significant plants.

NWPA queries if the proposed route alignment has the potential to impact endangered Regent Honeyeaters or their habitats around the north-east corner of the Santos Leeward Facility. NWPA asks if the cumulative impact on the Regent Honeyeaters from the Leewood Facility and the proposal has been considered.

Response

A response to the culturally significant plants issue is provided in sections 9.1.3 and 9.5.2 of the EIS Response to Submissions Report.

A response to the cumulative biodiversity issue is provided in section 6.8.3 of the EIS Response to Submissions Report.

6.2.2 Flooding

Flooding on the proposed route alignment

Issue

NWPA highlights potential issues regarding flooding around the proposed route alignment near the Santos Leewood Facility, noting that:

- the Leewood Facility is located on a drainage line
- the proposal only includes two culverts to the north of Leewood Facility. Noting the proximity of the proposed route alignment and number of culverts NWPA asks if ARTC has:
  - consulted with Santos about the proposed alignment on the northern side of the Leewood Facility and the risk of holding back the natural flow of drainage
  - considered the risk of the ponds at the Leewood Facility overflowing or failing.

Response

The flood modelling undertaken for the updated flooding and hydrology assessment report includes two banks of culverts to manage flow along the drainage line located near the Santos Leewood Facility. The modelling predicts negligible flooding issues in this area that would affect the facility from floods up to and including the 1% AEP event.

An assessment of the risk of ponds at the Santos Leewood Facility failing has not been undertaken by ARTC. This is because, on the basis of Santos' assessment, the ponds have been designed by Santos with a spillway capacity designed to pass the 0.01% AEP event (1 in 10,000 year event) and a design storage allowance sized to provide storage for a volume equivalent to the 1% AEP (1 in 100 years) and a storm event containment of 1% AEP (1 in 100 years) for 72 hours. The ponds have been built to appropriate engineering standards and are subject to regular monitoring and inspections (Santos, 2018). Accordingly, the risk to the ponds from events up to the 1% event is negligible.

ARTC has undertaken, and will continue to undertake consultation with Santos about the proposal. This will include consultation regarding potential risks associated with the rail line and ponds.

NSW Flood Inquiry

Issue

NWPA asks if the flood assessment has considered the recommendations of the NSW Flood Inquiry regarding:

- placing essential services and infrastructure above the flood planning level
- maintaining functionality of services during floods.

Response

In the context of the NSW Flood Inquiry, Inland Rail would not be classified as an essential service or infrastructure. The inquiry referred to essential services as power, telecommunications, water, water treatment, waste disposal, police stations, fire stations, hospitals, nursing homes, schools and airports. Critical infrastructure being that directly associated with these services as well as roads used to access the services infrastructure.

The SEARs for the proposal require ARTC to nominate and justify the flood planning level. Section 3.2.1 of the updated flooding and hydrology assessment report nominates and justifies the 1% AEP level as the flood planning level for the proposal. All essential infrastructure associated with the proposal will be installed/constructed above this flood planning level and the proposal itself will be operational during flooding events up to and including the 1% AEP.

The proposal will be designed with reference to the QDLs (see section 3.2.2 of the updated flooding and hydrology assessment report). The QDLs identify specific design criteria for the proposal such as afflux for residences, other building, infrastructure and land areas based on the specific land use. The QDLs for sensitive infrastructure identify an afflux of 10 mm for any flood event up to and including the 1% AEP.

In accordance with mitigation measure FH1, further flood modelling would be undertaken during detailed design in consultation with the relevant local council and local emergency management committees, DPE, the NSW State Emergency Service and potentially impacted landholders. This will include consideration of potential impacts to essential services and infrastructure.

6.2.3 Noise and vibration

Cumulative noise impact

Issue

NWPA asserts that no cumulative noise and vibration impact has been conducted to assess the potential cumulative impacts from the proposal and the Leewood Facility.

Response

Figure D1.2 in section D1.3 of the EIS shows the potential timing of the projects considered at the time the cumulative assessment was prepared. This demonstrates that, by the time the proposal is expected to start construction, several proposals are likely to be complete, with some proposals overlapping with the timing of the proposal.

The approach to the cumulative impact assessment for the EIS is described in chapter D5. The assessments undertaken by individual specialists considered the information on projects as available at the time the EIS was prepared.

The potential for cumulative noise and vibration impacts from the proposal and the Narrabri Gas Project (including the Leewood Facility) were considered in section D1.4.9 of the EIS.

6.2.4 Project justification

2015 Business Case

Issue

NWPA states that the proposal is likely to go over budget due to the flooding, biodiversity and property issues cause by the proposed route alignment.

Response

A response to this issue is provided in section 10.2 of the EIS Response to Submissions Report.

6.2.5 Climate change

Use of diesel fuel

Issue

NWPA raises that diesel fuel use is not in line with Australia's national greenhouse gas reduction targets nor is it a secure energy source.

Response

A response to this issue is provided in section 6.2.1 of the EIS Response to Submissions Report.

6.3 Wando Conservation and Cultural Centre Inc (Wando CCC)

6.3.1 Climate change

Use of diesel fuel

Issue

Wando CCC objects to the proposal in its current form due to the proposed use of diesel fuel and considers the rail line should be electrified. They cite that diesel fuel use is not in line with Australia's national greenhouse gas reduction targets nor is it a secure energy source.

They also state that Inland Rail will further contribute to use of fossil fuels by co-location with Santos and over-reliance on coal transportation in the business case.

Response

A response to the potential electrification of the operating rail line issue is provided in section 6.2.1 of the EIS Response to Submissions Report.

The proposal and the Narrabri Gas Project are independent projects. Neither project relies on the other to justify its need. There are no current plans to transport gas or other materials from the Narrabri Gas Project on Inland Rail.

ARTC prepared a business case for Inland Rail in 2015 at the request of the Australian Government (*Inland Rail Programme Business Case* (ARTC, 2015)). 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. This included analysing estimates of market take up.

Addressing detailed comments on the business case or financial viability of Inland Rail is not within the scope of this Response to Submissions Report.

6.3.2 Air quality

Inadequate assessment

Issue

Wando CCC states that the EIS air quality assessment was deficient as there appeared to be no consideration of particulate pollution, and the greenhouse gas and climate implications have been studiously downplayed.

Response

A response to the adequacy of the air quality assessment issue is provided in section 8.3.9 of the EIS Response to Submissions Report.

A climate change assessment was undertaken in accordance with SEARs as described in chapter D4 of the EIS. As described in section A5.3.1 of the EIS, a key overall benefit of Inland Rail is that moving freight by rail is four times more fuel efficient than moving freight by road. Carbon emissions will be reduced by 750,000 tonnes per year and truck volumes will be reduced in more than 20 of our regional towns (based on a 2050 estimate).

The proposal would form part of the rail network managed and maintained by ARTC. Train services would be provided by a variety of operators. In accordance with mitigation measure AQ3, locomotive emissions would be managed in accordance with the air quality management requirements specified in the rollingstock operator's environment protection licence.

6.3.3 Flooding

Flooding on the proposed route alignment

Issue

Wando CCC asserts that flooding of the proposed route alignment is concerning considering recent flooding in the vicinity of the Santos Leewood Facility.

Response

The flood modelling undertaken for the updated flooding and hydrology assessment report includes culverts to manage flow along the drainage line located near the Santos Leewood Facility. The modelling predicts negligible flooding issues in this area that would affect the facility from floods up to and including the 1% AEP event.

6.3.4 Biodiversity

Impacts to the Pilliga forests

Issue

Wando CCC requests the proposed route alignment be rerouted to avoid the Pilliga forests due to its biodiversity value.

Response

A response to this issue is provided in section 6.13 of the EIS Response to Submissions Report.

Offsets

Issue

Wando CCC attest that the offsets required by the proposal cannot be sourced and are unacceptable in light of the findings of the recent *NSW Effectiveness of the Biodiversity Offsets Scheme* (Audit Office of NSW, 2022) report. Wando CCC requests that the assessment be reformulated as the assumptions embodied within it are not tenable considering the audit report.

Response

The updated biodiversity assessment was undertaken in accordance with the SEARs, the *Biodiversity Assessment Method* (DPIE, 2020b), and relevant legislation and guidelines, as described in section B1.1.1 of the EIS. Any future changes to the scheme in response to the above-mentioned review are a matter for the NSW Government.

Impacts to the Australian Wildlife Conservancy

Issue

Wando CCC highlights that the proposed route alignment comes within 500 m of a rewilding project. They are concerned that impacts from noise, vibration, light, and atmospheric pollution levels have not been assessed or made public in this area.

Response

A response to this issue is provided in section 6.8.5 of the EIS Response to Submissions Report.

6.3.5 Aboriginal heritage

Cultural heritage of the Pilliga Forest

Issue

Wando CCC highlights that the Gomeroi people, who are the Traditional Owners of the Pilliga Forest, are seeking protection for the forest under the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth) to ensure its protection.

Response

Wando CCC's issue has been noted. At all times it is a requirement for ARTC to comply with the Commonwealth and New South Wales cultural heritage legislation.

It is noted that one of the purposes of the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth) is to protect areas and objects that are of particular significance to Aboriginals in accordance with Aboriginal tradition.

At the time of assessment of the proposal, there were no Aboriginal places declared within the construction footprint. Aboriginal cultural values, including in relation to Aboriginal places, were discussed in consultation with the registered Aboriginal parties and information provided in sections 6.6 and 6.7 of the Aboriginal cultural heritage assessment report (Technical Report 6), as well as being taken into consideration in the impact assessment and recommendations in the assessment report and the EIS.

ARTC will continue to consult with registered Aboriginal parties, which includes representatives of NTSCORP who represent the Gomeroi people, to minimise impacts on Aboriginal heritage as the proposal progresses into the detailed design and construction planning phases, in accordance with the mitigation measures and the conditions of approval.

6.3.6 Project description

Relationship with Narrabri gas project

Issue

Wando CCC raises concern about potential future use of the proposal by the Santos Leewood Facility and that the route was selected for the benefit of Santos.

Response

The proposal and the Narrabri Gas Project are independent projects. Neither project relies on the other to justify its need. There are no current plans to transport gas or other materials from the Narrabri Gas Project on Inland Rail.

6.3.7 Out of scope

Issue

Wando CCC requests justification for major upgrades on the Moree to Newcastle railway, specifically between Narrabri and Baan Baa.

Response

These issues are not within the scope of this proposal and it is outside the scope of this report to provide responses to these matters.

6.4 APA Group

6.4.1 Consultation

Marsden to Dubbo pipeline

Issue

APA Group highlights that the proposal bridges the existing Marsden to Dubbo high-pressure gas pipeline, which is located adjacent to the Main Western Rail Line to the east of Narromine. Consultation regarding this crossing has occurred between APA Group and ARTC, and APA Group look forward to ongoing engagement.

Response

ARTC notes APA Group's comments. ARTC will continue to work collaboratively with key stakeholders including APA Group to manage key utility interfaces with the proposal. In accordance with mitigation measure TT2, input would be sought from relevant stakeholders (including utility providers) during the development of the detailed design.

Western Slopes Pipeline

Issue

APA Group highlights that the northern extent of the proposed route alignment intersects with the eastern extent of the proposed Western Slopes Pipeline (WSP). The WSP is proposed to support the delivery of gas from the Narrabri Gas Project to the East Coast Transmission Grid.

APA Group suggests that due to this intersection, the proponent should consult with Santos on this matter.

Response

ARTC notes APA Group's comments. ARTC will continue to work collaboratively with key stakeholders, including APA Group, to manage key utility interfaces with the proposal. In accordance with mitigation measure TT2, input would be sought from relevant stakeholders (including utility providers) during the development of the detailed design.

6.5 National Parks Association of NSW (NPA)

6.5.1 Biodiversity

Impacts to the Pilliga forest

Issue

NPA strongly opposes construction of the proposal through the Pilliga forests. NPA believes that the statement that the route selection 'represents a balance between community, economic and environmental costs' ignores the:

- severe damage that would be inflicted on the Pilliga forests
- loss of future options to improve biodiversity outcomes through the management of these forests as an integrated landscape.

NPA asserts that neither the EIS or Preferred Infrastructure/Amendment Report adequately grapples with the concept of ecological integrity, reducing it to the offset costs of the direct footprint. NPA states that the reports ignore the broader damage to ecosystems caused by fragmentation, barriers, and loss of landscape connectivity.

They highlight that degradation of landscape scale ecosystem processes would result in:

- loss of biodiversity values
- greater drying and fire risk
- reduced capacity for carbon storage.

NPA emphasises that the Pilliga forest is a unique and valuable environment, as shown by its status as a National Biodiversity Hotspot. They highlight that the Pilliga forest sits within the Brigalow Belt South Bioregion and note that only 1 per cent of the Brigalow Belt South Bioregion is currently protected. NPA highlights that this is far below the International Union for the Conservation of Nature target of declaring 17 per cent of each nation's lands as

Protected Areas. Further, NPA notes this is far below the recent 30 per cent target announced by the Commonwealth under the 30by30 initiative.

NPA requests that the state forest be gazetted as a Protected Area under the *National Parks and Wildlife Act 1974* (NSW).

NPA states that the environmental impacts associated with the proposal are so extreme as to be contrary to Australia's obligations under the Convention for Biological Conservation and they expect the Commonwealth to refuse the proposal approval under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

Response

A response to why the proposal traverses the Pilliga forests is provided in section 6.8 of the EIS Response to Submissions Report.

ARTC acknowledges the biodiversity values of the Brigalow Belt South bioregion, which contains the Pilliga forests. The updated biodiversity development assessment report has been prepared in accordance with the SEARs and the *Biodiversity Assessment Method* (DPIE, 2020b). In accordance with the relevant biodiversity guidelines, the updated assessment includes consideration of biodiversity and landscape impacts such as fire and habitat fragmentation.

The proposed approach to identifying and managing offsets to mitigate the impact of vegetation clearing is described in section B1.5.1 of the EIS. Mitigation measures BD1 and BD2 commit to continuing to minimise the potential impacts on biodiversity during detailed design and construction planning. In accordance with BD1, vegetation clearing would be limited to the minimum necessary to construct the proposal and allow for its effective operation. Mitigation measure BD2 provides that, where appropriate, facilities within the multi-function compounds and temporary workforce accommodation would be located to further minimise or avoid impacts on native vegetation, where practicable.

Compliance with international and Commonwealth conservation targets and the reservation of land under the *National Parks and Wildlife Act 1974* (NSW) are matters for the Commonwealth and NSW governments.

The approval or otherwise of the proposal is a matter for the Commonwealth Minister for the Environment and Water and the NSW Minister for Planning.

6.6 Narrabri Inland Rail Concerned Residents Group (NIRCRG)

6.6.1 Alternatives and options

Narrabri alternative route

Issue

NIRCRG is concerned that ARTC has not assessed the Narrabri alternative route, which has been proposed by experts and members of the Narrabri community since March 2018. Proponents of this alternative route consider that it would reduce the capital cost of the proposal while also reducing potential flood and other environmental impacts. Their submission is supported by a hydrological study commissioned by the NIRCRG.

Response

A response to Narrabri Shire Council's issue on the Narrabri alternative route is provided in section 4.1.1 of this report.

6.7 NSW Farmers

6.7.1 Flooding

Durability and safety

Issue

NSW Farmers raised concerns about the track record of the proponent when it comes to maintaining and repairing infrastructure that it is responsible for. They note that the alignment will not be constructed to the 1% AEP and without any freeboard. They state that that leaves the proposal vulnerable to flooding.

NSW Farmers states that landowners around Bogan Gate and south of Parkes have said ARTC:

- does not adequately maintain its infrastructure
- is not responsive to requests to repair or service existing infrastructure, including culverts and fences.

Response

All essential infrastructure associated with the proposal will be installed/constructed above the 1% AEP flood level, and the proposal itself would be operational during flooding events up to and including the 1% AEP. The proposal has been designed to ensure that the 1% AEP flood level is no higher than the shoulder of the embankment formation. It should be noted that the ballast and track sit above this formation, providing in excess of 670 mm freeboard from the 1% AEP event to the top of rails.

ARTC does not agree with the views which NSW Farmers' submission attributes to landholders around Bogan Gate and south of Parkes,

As noted in section 7.5.2 of the of the EIS Response to Submissions Report, maintenance requirements and procedures for ARTC's drainage infrastructure are captured by the relevant Environmental Management Framework for the proposal (as described in section D5.2 of the EIS) and implementation of ARTC's existing operational procedures relating to structure inspections. These procedures are supplementary to ARTC's asset management system, which outlines mandatory and routine inspections to effectively maintain ARTC's assets.

ARTC undertakes regular track patrols to ensure the safe and efficient operation of the network. The frequency of these inspections varies between corridors and depends on the volume of traffic, weather and condition/type of assets on the section of track.

Environmental site inspections are another component of ARTC's inspection regime. An annual schedule is developed in consultation with the relevant corridor managers and includes triggers for non-scheduled inspections. Environmental site inspections are undertaken by ARTC's environment advisors and focus on areas of risk such as waterways, known heritage items, sensitive flora or fauna, and works in proximity to sensitive receivers.

Residents or other stakeholders can contact ARTC regarding asset or environmental issues (including vegetation management or culvert blockages) via the Enviroline service (via: Contact Us—ARTC, 1300 550 402 or enviroline@artc.com.au), which is available 24 hours/7 days a week.

Design around Backwater Cowal

Issue

NSW Farmers states that landholders still have concerns around the treatment of the design in the area of the Backwater Cowal. They suggest the amended design does not account for the construction of a levee around Narromine. NSW Farmers notes that the additional culverts have alleviated some concern; however, they state that for the issue to be resolved the line needs to be constructed as a viaduct up to 2 km long.

Response

ARTC notes the concerns of landholders in the area of Backwater Cowal and has and will continue to undertake consultation with affected landholders and other stakeholders.

Discussion regarding the Narromine levee, as proposed in the *Narromine Town Floodplain Risk Management Study and Plan Update* (Lyall & Associates, 2021), was provided in section 7.8.1 of the updated flooding and hydrology assessment report.

The flooding assessment undertaken during development of the floodplain risk management plan (Lyall & Associates, 2021) concluded that the construction of the Inland Rail project would not compromise the level of flood protection afforded by the preferred flood mitigation scheme defined in the plan. The assessment also identified that the construction of the proposal would result in only a minor increase in the extent and depth of inundation upstream of the rail corridor when compared to post-preferred flood mitigation scheme conditions. Therefore, the proposal would not limit or preclude the potential future levee bank works.

ARTC does not concur with the NSW Farmers' suggestion that a viaduct is required across the Backwater Cowal. Flood modelling carried out as part of the updated flooding and hydrology assessment report predicts that flood impacts can be managed as described in the assessment.

The proposal has been, and would continue to be, designed to minimise the potential for flooding risks. In accordance with mitigation measure FH1, the design would continue to be refined (where practicable) during the

detailed design process, to not worsen existing flooding characteristics for flood events, up to and including the 1% AEP event.

The additional flood modelling, and any mitigation identified as an outcome of modelling, would consider the proposed Narromine town levee, floodplain risk management plans and the QDLs provided in the updated flooding and hydrology assessment report. This would be undertaken in consultation with Narromine Shire Council, local emergency management committees, DPE, the NSW State Emergency Service and impacted landholders.

Design in Warrumbungles watershed

Issue

NSW Farmers raises concern about the impact of the proposal in the Warrumbungles watershed. They note some identification of QDLs has occurred; however, NSW Farmers believes that without detailed design there is still concern that those structures will convert sheet flows into channel flow, even if the velocities can be managed within acceptable parameters.

NSW Farmers asserts that changes to the nature of flows beyond land owned by ARTC cannot be authorised without an easement granted by the landowner.

Response

ARTC notes NSW Farmers' concerns in relation to the Warrumbungles watershed. ARTC has undertaken, and will continue to undertake consultation with affected landowners and other stakeholders. ARTC acknowledges that constructing the proposal across farmland and other areas could affect the existing hydrological regime in the vicinity of the proposal. The proposal seeks to minimise these impacts by including bridges and culverts in the railway embankment and associated works to manage discharge into neighbouring land. In accordance with mitigation measure FH1, the design would continue to be refined during the detailed design process, to minimise impacts as far as practicable.

ARTC is committed to consulting with landholders during the detailed design process, with the intention of reaching agreement on the final arrangements where practicable. Alterations to flows due to the proposal would be managed in consultation with landholders. As noted, ARTC would seek to minimise flow changes and impacts as far as practicable.

6.7.2 Water

Groundwater drawdown

Issue

NSW Farmers suggests that the approach to water sourcing has changed. The initial approach in the EIS was that water would be sourced from 12 borefields that would take water from below the Great Artesian Basin. The approach in the Preferred Infrastructure/Amendment Report is different in that the approach now targets more water from the shallow aquifers. NSW Farmers state that sinking new bores near existing bores can lead to the situation where significant drawdowns render existing bores largely used for stock and domestic purposes redundant.

Response

The primary potential source of groundwater for general construction purposes is still the deep borefields, as proposed in the EIS. In accordance with mitigation measure WR1, ARTC is currently undertaking further investigation of construction water supply options across the alignment in consultation with the preferred contractor. This is in order to minimise the range of impacts that may eventuate through borefield drawdown. The options under consideration includes reuse of excess water from the Narrabri Gas Project or other suitable facilities in the area, and lease and/or purchase of existing water access licences from surrounding landholders. During the detailed design phase, the construction contractor will continue to develop the construction water supply to provide greater certainty of water volumes, quality and source locations.

The amended proposal, as described in the Preferred Infrastructure/Amendment Report, includes consideration of groundwater bores for potable water purposes at the Narromine North and Baradine temporary workforce accommodation facilities. In accordance with mitigation measure WR5, water volumes required to be extracted from groundwater bores for construction water and potable water would be confirmed, and the appropriate approvals would be obtained, prior to extraction. Monitoring would be undertaken during extraction to ensure volumes stipulated by licence requirements are not exceeded. In addition, in accordance with mitigation measure WR-CI1, further investigation would be undertaken to determine the potential for the bores associated with the Narromine

North and Baradine temporary workforce accommodation facilities to cause groundwater drawdown impacts. This would include ensuring any impacts to existing bores are below the *NSW Aquifer Interference Policy* (DPI, 2012b) minimal impact considerations.

6.7.3 Business case

Cost-benefit analysis

Issue

NSW Farmers believes that the failure to conduct a proper cost-benefit analysis for route selection, in favour of what it says is a misleading multi-criteria analysis, has ensured the fastest route is preferred and the economic assessment emphasises the benefits without any robust examination of the costs and risks of the proposal.

NSW Farmers suspects that the continued focus on the service offering results in very few benefits (if any) to the regional communities who will bear the burden of the infrastructure, because providing local benefits is not a consideration weighted highly in the multi-criteria analysis.

Response

A response to this issue is provided in section 6.6.5 of the EIS Response to Submissions Report. Further information on route selection and the alternatives considered is provided section 5.1 the Preferred Infrastructure/Amendment Report and in the Route Selection Summary Report (Appendix B of the Preferred Infrastructure/Amendment Report).

6.7.4 Biodiversity

Adequacy of the assessment

Issue

NSW Farmers asserts that the vegetation categories adopted in the revised biodiversity assessment report are not correct, in that:

- Eucalyptus microcarpa has been misidentified as Eucalyptus pilligaensis
- land has not been properly categorised as derived grasslands.

Response

Eucalyptus microcarpa identification

The updated biodiversity development assessment report has been prepared by qualified and experienced ecologists who are accredited under the NSW Biodiversity Assessment Method (BAM) 2020. BCS has reviewed the updated biodiversity development assessment report and accompanying data in detail.

It is noted that vegetation in the Narromine area is highly variable, with dominant species changing back and forth throughout the area. Survey data documented in the updated biodiversity development assessment report has identified that seven eucalypt species were recorded in the area south of the Macquarie River, comprising Pilliga Box (*Eucalyptus pilligaensis*), Inland Grey Box (*Eucalyptus microcarpa*), Fuzzy Box (*Eucalyptus conica*), Yellow Box (*Eucalyptus melliodora*), Bimble/Poplar Box (*Eucalyptus populnea*), River Red Gum (*Eucalyptus camaldulensis*) and Blakely's Red Gum (*Eucalyptus blakelyi*).

The plant community type classification for the updated biodiversity development assessment report included a variety of tasks, including review of regional mapping, soil mapping, landscape, topography, and species composition of plots. The survey methodology and classification has been developed in consultation with BCS.

Inland Grey Box (*Eucalyptus microcarpa*) occurs predominately south of Narromine and immediately north of the Macquarie River on the edges of the floodplain. Inland Grey Box was recorded in Webbs Reserve, along Webbs Siding Road and Dappo Road where it occurred as the dominant tree species. It also occurred along Tomingley Road outside the construction footprint. North of Narromine, particularly in areas away from the floodplain and creeks, Inland Grey Box was rarely recorded, with Pilliga Box (*E. pilligaensis*) becoming more common within the construction footprint.

The occurrence of Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-Eastern Australia (endangered) and Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Peneplain, Nandewar and Brigalow Belt South Bioregions (endangered) has been identified in the proposal site

within Webbs Reserve, along Webbs Siding Road and Dappo Road. The BC Act occurrence of the community occurs near Narromine (see updated biodiversity development assessment report, Table 5.3 and Figure 5.1a). The community was also identified as occurring north of the Macquarie River in the wider study area. The EPBC Act occurrence of this community occurs in the same location (see updated biodiversity development assessment report, Table 7.1 and Figure 7.1a). Changes to the construction footprint following the previous exhibition period resulted in additional areas of this EEC alongside Dappo Road being impacted. These have been included in the updated biodiversity development assessment report.

ARTC is confident in the adequacy of the biodiversity assessment and no further changes to the findings are proposed.

Land categorisation

Derived grasslands have been categorised in accordance with the Biodiversity Assessment Method (BAM) 2020, which requires assignment to the original plant community type from which the derived plant community type has developed. For areas identified as derived grasslands they have been assigned to the nearby parent native woodland community, in consultation with BCS.

See also the response to BCS's submission in section 5.3.1 of the EIS Response to Submissions Report.

Issue

NSW Farmers believes the ecological assessment is inadequate as it does not consider clearing required as part of the proposal beyond the construction footprint, for things like haul roads and all-weather access across private land.

Response

The construction footprint for the proposal includes all areas that would be directly affected by construction works for the proposal as described in the Preferred Infrastructure/Amendment Report. It includes the location of proposal infrastructure, the area that would be directly disturbed by the movement of construction plant and machinery (including proposed haul roads and access tracks), and the location of the storage areas/compounds sites that would be used to construct the infrastructure.

ARTC is committed to minimising the potential impacts of the proposal and is investigating opportunities to reduce actual impact areas, where practicable. The area that would be directly impacted by construction activities would depend on factors such as the presence of significant vegetation; constructability; construction management and safety considerations; landform; slopes and anticipated sub-soil structures. Direct impacts would be reduced as far as practicable through refinements during detailed design.

In the event that additional areas are required for construction then these would be assessed in accordance with the requirements of the EP&A Act at that point in time.

6.7.5 Noise and vibration

Adequacy of the assessment

Issue

NSW Farmers states that the noise and vibration assessments for both construction and operation of the proposal have not adequately considered the impacts on sleep disturbance.

NSW Farmers notes that landholders with properties as close to 100 m from the alignment are being told that mitigation is not required. NSW Farmers suggests that any dwelling within 400 m of the alignment will likely not comply, and that acoustic treatment is required. They also suggest that night-time sleep disturbance will likely occur in dwellings beyond that 400 m radius.

Response

Responses to the approach to assessment of potential sleep disturbance impacts during construction and operation and mitigation (including the method of identifying properties that qualify for mitigation consideration) is provided in section 6.6.7 of the EIS Response to Submissions Report.

The requirement for noise mitigation is not based on a distance-based measure as suggested. Whether properties would be eligible for mitigation is determined by the methodology and criteria outlined within the *Rail Infrastructure Noise Guideline* (NSW EPA, 2013).

As noted previously in section 6.6.7 of the EIS Response to Submissions Report, received railway noise levels would be validated based on the final detailed design in an operational noise and vibration report. Work would then

be undertaken to investigate the noise mitigation options for affected sensitive receivers. This would be determined on a case-by-case basis considering a range of environmental, engineering and site-specific factors. Landholder preferences would also be considered.

These commitments by ARTC are described in mitigation measures ONV1 to ONV3. The conditions of approval would supplement these commitments and provide an assurance framework for community members for the resolution of operational noise matters.

Conditions of approval

Issue

NSW Farmers asserts that noise and vibration conditions need to be imposed to:

- limit construction noise to normal daytime construction hours only to ensure that impacts on sensitive receivers from construction noise are acceptable
- require mitigation and management strategies to be applied to construction noise as per the Transport for New South Wales *Construction Noise and Vibration Strategy* (ST-157/4.1)
- require ARTC to undertake site inspections of sensitive receiver locations and commit ARTC to carrying out works for acoustic attenuation treatments at sensitive receiver locations prior to the completion and operation of the line
- require ARTC to conduct a detailed assessment of sleep disturbance impacts arising from the proposal as per the World Health Organisation's *Night Noise Guidelines for Europe* criterion (49dBA external, windows open) and commit the ARTC to carrying out works for acoustic attenuation treatments at sensitive receiver locations prior to the completion and operation of the line
- require the appointment of an independent acoustic advisor for the proposal
- specify an acceptable operational noise and vibration criteria that is appropriate, considering the acoustic sensitivity of the rural environment
- undertake operational noise validation during operation of the proposal
- require the preparation of an operational noise compliance report, which is to be made freely available to the public.

Response

Notwithstanding the conditions of approval for the proposal, which are a matter for DPE to consider, mitigation measure CNV3 commits ARTC to prepare and implement a construction noise and vibration management plan as part of the CEMP. The construction noise and vibration management plan will establish more detailed assessment and consideration of sensitive receiver locations and noise exposure, along with management measures prepared in consultation with the NSW EPA to adopt appropriate construction hours. Mitigation and management strategies are outlined in the *Inland Rail NSW Construction Noise and Vibration Management Framework* (Appendix L of the EIS).

With regard to operational phase impacts, the proposal has been assessed against the *Rail Infrastructure Noise Guideline* (NSW EPA, 2013). The *Rail Infrastructure Noise Guideline* sets out existing policy on suitable noise criteria. As noted above, ARTC has committed to the preparation of an operational noise and vibration report to validate noise levels against the final detailed design and implement mitigation measures for sensitive receivers. ARTC has Independent Environmental Representatives for each NSW section of Inland Rail and a team of acoustic advisors that will assess, monitor and validate noise and vibration in the design, construction and operation phases. In accordance with mitigation measure ONV5, operational noise and vibration compliance monitoring would 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. The results of monitoring would be included in an operational noise and vibration compliance report, prepared in accordance with the conditions of approval. The need for any additional feasible and reasonable mitigation measures would be identified as an outcome of the monitoring.

Conditions of approval—rollingstock

Issue

NSW Farmers believes it is trite to say that the noise from the rollingstock will be regulated under the *Protection of the Environment Operations Act 1997* (NSW) (POEO Act) by the Environment Protection Authority. NSW Farmers states that this regulation does not obviate the need for conditions on the approval to specify what type of rollingstock can be used on the proposal.

Response

ARTC will be the railway manager for Inland Rail, with the line to be operated as an 'open access railway'. Freight rail operators that are suitably licensed in NSW would be able to reserve track time from ARTC to use the line. In NSW, these operators will be responsible for holding the environment protection licences that have noise requirements for locomotives. The NSW EPA is responsible for issuing these licences which contain an approved list of locomotives and operational noise levels. For example, current environment protection licences cover the approval for new classes of locomotive which comply with the noise limits set out by the NSW EPA. It is anticipated that operations on Inland Rail will be governed under the same licence regime which is established practice for railway operations in NSW.

6.7.6 Property impacts

Access, fragmentation and severance

Issue

NSW Farmers reiterates numerous concerns which it says are held by landholders relating to property access, including:

- how properties, or parts of properties, are to be accessed where they become landlocked as a result of the proposal
- how parts of properties are to be accessed and used where they are severed and sterilised by the proposed alignment
- how access between paddocks and farms is to be maintained where existing access points will be impeded by the alignment (and its embankments)
- how and where the level crossings are proposed to be constructed and what are the proposed design parameters (will they accommodate the transport of machinery as well as livestock)
- the viability of paddocks for their existing land use as a consequence of interference or inconvenience caused by the alignment of the rail corridor
- the extent to which any proposed access points will be serviceable during flood or heavy rainfall events
- how access to travelling stock reserves will be impacted by the proposal and the consequences of this on farming operations
- how access will be impacted between properties of separate ownership that are run as a family cooperative, with access to shared road networks and farming infrastructure.

NSW Farmers asserts that the proponent has still not made any real commitments in relation to how access, fragmentation and severance issues are to be resolved.

NSW Farmers emphasises that they consider the verbal assurances to landholders that access issues will be resolved during detailed design to be inadequate and note that the Preferred Infrastructure/Amendment Report states that impacts will be minimised as far as practicable. They state that this approach is contrary to item 5 of the SEARs, which requires the proponent to demonstrate that the proposal minimises impacts to property and businesses including through the:

- maintenance of appropriate access to properties
- minimisation of displacement of existing land use activities, dwellings and infrastructure.

They also note that item 5 of the SEARs requires ARTC to address agricultural land use impacts, including in relation to:

(a) division or fragmentation of property and changes to property management which could lead to the loss of viability

(b) property access and the efficient and safe crossing of the rail corridor by machinery and livestock

(c) connectivity of property infrastructure severed by the rail corridor

(d) livestock exclusion/management to minimise harm and losses.

NSW Farmers asserts that this approach is unacceptable because once consent is granted the proposed alignment would be 'locked in'. They state this is problematic because of:

- the significant impact caused by the current alignment
- the lack of meaningful engagement with landholders
- unexplored opportunities to avoid these impacts by making amendments to the proposed alignment
- the lack of steps to avoid access issues, fragmentation or sterilisation of land taken by the proponent (beyond a desktop review of the cadastre) without careful consideration as to the impacts of severing properties that are run together (but may be in different ownership).

Response

Further assessment of potential property impacts, including property severance, was undertaken and provided in section 7.6.5 of the Preferred Infrastructure/Amendment Report. The assessment considered the following scenarios regarding impacts on private land:

- change in public road access
- change in internal access arrangements
- severance, potential isolation of a portion of a landholding
- severance of a landholding
- acquisition on the external boundary of a landholding.

Each of these scenarios was discussed in detail, with additional information on how the property negotiation process would facilitate the management and mitigation of potential impacts in a manner that is sensitive to the needs of each individual landholder.

ARTC acknowledged and previously responded to this issue in section 6.6.9 of the EIS Response to Submissions Report. In accordance with mitigation measure LP1, the design and construction planning would continue to be refined to minimise potential impacts on land uses and properties as far as reasonably practicable. Consultation with landholders would be ongoing during detailed design, to identify feasible and reasonable measures and opportunities to minimise impacts on their operations/properties.

All property acquisitions would be undertaken in consultation with landholders and in accordance with the requirements of the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW). Appropriate management measures would be developed, documented and agreed as part of the property acquisition consultation process, where practicable.

In accordance with mitigation measure LP3, during the property acquisition process, ARTC would seek agreement with affected landholders, to guide property-level design requirements and the management of construction on, or immediately adjacent to, private properties. Each impacted property owner would be consulted to identify and understand the operational needs of their property and the activities conducted upon it, with a view to seeking tailored agreements to reflect agreed outcomes. Agreements may include (for example):

- measures to minimise property impacts, including on agricultural operations
- specific measures to ensure that operations, including the movement of livestock and farm machinery are able to be maintained as efficiently as possible
- measures to manage severance impacts as they relate to each property, where practicable, including appropriate movement arrangements (such as new or adjusted accesses to the public road network or internal access networks), divestment or amalgamation opportunities
- required adjustments to, and/or replacement of affected structures, such as livestock handling yards, fencing, silos, holding pens, barns, etc
- assistance to reconfigure farming operations to accommodate the alteration in land use.

ARTC commits to working with landholders to develop measures to minimise the impacts of the new rail corridor on internal property access arrangements as far as practicable. In accordance with mitigation measure LP7, where the proposal affects internal property access arrangements, input would be sought from relevant landholders prior to finalising the detailed design. Where changes to internal property access arrangements are required, ARTC would consult with relevant property owners/occupants regarding alternative access arrangements, and identify feasible and reasonable measures to minimise impacts on existing operational arrangements/properties.

New mitigation measure LP17 (see Appendix B of this report) commits ARTC to preparing a Consultation Protocol to inform landholders and provide clarity of how ARTC will interact with them in relation to the design process, property changes, acquisition steps and processes with the aim of reaching agreement on these matters.

Other mitigation measures relevant to addressing the potential impacts of the proposal on properties and agricultural enterprises include:

- LP10—Livestock fencing would be provided in agricultural areas (as required) to minimise the risk of livestock–train collisions. The preferred fencing arrangements would be confirmed in consultation with landholders.
- LP22—Farm water pipelines, dams and drainage channels would be replaced or reinstated in consultation with landowners/landholders to ensure continuity of stock and domestic water supplies prior to removal of existing impacted infrastructure.
- LP24—ARTC will develop a 'call train control' process to enable landholders to use levels crossings as stock crossings. Details of the 'call train control' process will be provided to agricultural landholders prior to the commencement of operations.

Compulsory acquisition—conditions of approval

Issue

NSW Farmers suggests that there is some acknowledgement that the approach to compulsory acquisition stated in the EIS was misguided and that certain things are not compensable under the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW) (Just Terms Act) and that there will be instances where the Just Terms Act will not apply.

NSW Farmers suggests that important matters that fall outside the scope of the Just Terms Act be regulated by conditions imposed on any consent.

NSW Farmers requests compensation for impacts on farms beyond the scope of the Just Terms Act. They request conditions be imposed similar to those used for State significant mining, petroleum and extractive industry developments.

Response

ARTC does not consider that the approach to compulsory acquisition outlined in the EIS is misguided or inaccurately represents the matters considered under the Just Terms Act.

A response to this issue is provided in section 6.6.12 of the EIS Response to Submissions Report. Also refer to response above in relation to access, fragmentation and severance.

Conditions of approval are a matter for DPE to consider, but it is important to note that CSSI approvals are separate from the Just Terms Act.

Fencing

Issue

NSW Farmers reiterated concerns that ARTC has been unwilling to commit to an adequate fencing standard. NSW Farmers state that conditions of approval should specify, at a minimum, the following in relation to fencing:

- the required fencing standards should detail the type of fencing and include details of strainers and creek crossings
- compliance with relevant Australian Standards for steel products/welded mesh to ensure that the products used are durable
- compliance with requirements relating to exempt development for rural fencing, comply with manufacturer specifications, and entrance gates must not open outwards.

Response

A response to this issue of fencing standards is provided in section 6.6.13 of the EIS Response to Submissions Report.

The conditions of approval for the proposal are a matter for DPE to consider.

6.7.7 Traffic and access

Adequacy of the traffic assessment

Issue

NSW Farmers believes that the traffic assessment remains inadequate. They state that the traffic and transport assessment has not been comprehensively revised to reflect varying train speeds or the additional analysis done by Wagga Wagga City Council about wait times at level crossings.

NSW Farmers states that the level crossings at Tomingley Road, the Castlereagh Highway, Eumungerie Road and Yarrandale Road must be grade separated. They note rail over road is preferable because this approach has less impacts to adjoining rural land and provides increased opportunities for access under the rail alignment (provided clearances are acceptable) and avoids the need for wide embankments to support elevated roads.

NSW Farmers asserts the revised traffic and transport assessment also does not anticipate the actual volume of traffic movements particularly during harvest time.

Response

The proposed Narromine to Narrabri section of Inland Rail is new greenfield section rather than existing brownfield section of track that travels through Wagga Wagga and, therefore, is not comparable.

As noted in section 4.6.3 of the Preferred Infrastructure/Amendment Report, the assessment of potential delays to road traffic at level crossings contained within EIS Technical Report 10—Traffic and transport assessment has been updated having regard to expected conditions in the proposal area, as opposed to Wagga Wagga. The updated assessment assumes trains travel between 80 and 115 km/hr depending on axle loads.

With regards to NSW Farmer's suggestion that the traffic and transport assessment does not anticipate the actual volume of traffic movements, particularly during harvest time, the traffic and transport assessment methodology included traffic volume information from traffic surveys undertaken in November 2018 and February 2019, as described in section 3.3. of Technical Report 10. This information was used to represent typical (average) conditions within the study area and was the basis for assessing travel delay and queue lengths at the proposed Castlereagh Highway level crossing. The prevailing drought conditions at the time the surveys were undertaken affected the harvest period, however, and it is noted that the traffic surveys may not be representative of the levels and types of vehicles during a typical harvest period.

As such, additional traffic counts were undertaken in November 2020 during a harvest period that produced a higher than average yield. During this period, higher traffic volumes were experienced along some of the roads in the study area, particularly from heavy vehicles. To understand the potential impacts of higher levels of traffic activity, the traffic analysis at the Castlereagh Highway level crossing was updated using harvest period traffic volumes (see section 3.2.2.4 of the EIS Response to Submissions report). The assessment found that there would still be a maximum delay of 96 seconds in the opening year of 2026 and a maximum delay of 121 seconds in 2040 (based on 115 km/hr train speed). The maximum queue length in the opening year and 2040 would be greater than that described in the EIS—at 66 and 74 m, respectively.

Regarding the need to grade separate level crossings at Tomingley Road, the Castlereagh Highway, Eumungerie and Yarrandale Road, refer to section 5.7.1 of this report.

6.7.8 Consultation

Inadequate community participation

Issue

NSW Farmers asserts that community consultation is a fundamental feature of the assessment regime for SSI. They believe the community consultation being advanced by the proponent falls well below the threshold for what is acceptable.

NSW Farmers suggests that there are issues with the community consultation process, including:

- reference designs for the proposal have not been provided to landholders
- discussions with landholders continue to be advanced on the basis of concept designs, which do not provide sufficient information to allow any assessment to be made of the impacts on particular properties
- there has been a failure to exhibit the reference designs as part of the Preferred Infrastructure/Amendment Report, meaning that there is still simply no objective information by which landholders and other stakeholders can assess whether the claims made by the proponent in the EIS regarding the acceptability of the proposal's impacts are fair and accurate
- NSW Farmers believes that the proponent's refusal to produce the reference designs is an attempt to stymie objections by withholding key information that could inform an independent assessment.

Response

ARTC does not agree with NSW Farmers' comments in this regard. A response to the issues is provided in section 6.6.2 of the EIS Response to Submissions Report.

As per DPIE's *Community Participation Plan and Undertaking Engagement Guidelines for State Significant Projects*, the preparation of the EIS and Preferred Infrastructure/Amendment Report involved an iterative process of impact assessment and design refinement, development of mitigation measures and consultation with the community, stakeholders and government agencies.

The reference design for the proposal for which planning approval is being sought was presented in the EIS and the Preferred Infrastructure/Amendment Report (Appendix A - Updated proposal description) and updated Map Book. Section 4.2 of the Route Selection Summary Report provides a summary of the consultation and engagement activities for the route selection and reference design development process. Between February 2018 and October 2020, ARTC held approximately 500 meetings with landholders as the study area was narrowed to the focused area of investigation and then the final rail corridor.

Over this time, the reference design evolved and involved many iterations and refinements, incorporating a range of considerations at each stage. Key environmental issues were examined throughout the design development process. Consultation has been carried out with affected stakeholders (including landholders) to identify key potential impacts at an early stage. Where practicable, impacts have been avoided or appropriate mitigation measures developed in response to this input. This has resulted in a number of design changes that have mitigated some of the potentially significant impacts.

Consultation regarding proposed amendments

Issue

NSW Farmers highlights that the location of all seven of the crossing loops in the exhibited EIS have changed following the closure of the exhibition period. They note crossing loops at Burroway, Balladoran and Armatree/ Tonderburine have been moved onto impacted landholders' land without prior notice and consultation with them.

NSW Farmers also suggests that changes to public road alignments and crossing points were first advanced to individual landholders in the context of discussions about compulsory acquisition. They state that that was the first time that it became clear that the proponent was proposing to change road alignments in some instances, requiring the acquisition of more privately held land. NSW Farmers suggests that this only occurred after the EIS had been exhibited and the opportunity for submissions had closed.

NSW Farmers states that these represent the failure of the proponent to meaningfully consult landholders.

Response

The proposed amendments were developed in consultation with potentially affected landholders and other relevant stakeholders, as described in sections 3.4.1 and 3.4.3 of the Preferred Infrastructure/Amendment Report.

Communication of flooding impacts

Issue

NSW Farmers asserts that the revised mapping relating to flooding does not operate at a farm scale. NSW Farmers states without details of the locations and design of crossings, and details around location of culverts and treatment within the identified drainage control areas, it still remains impossible for a landholder to understand and properly respond to the impact of the proposal on adjoining properties.

Response

A response to this issue is provided in section 6.6.15 of the EIS Response to Submissions Report. In addition, as described in section 4.3.2 of the Preferred Infrastructure/Amendment Report, ARTC will continue to undertake consultation with a broad range of stakeholders, including landholders. This consultation would include property acquisition discussions and ongoing consultation during detailed design. Any individual landholders, including those not affected by property acquisition, can request information regarding the proposal that is specific to their property. Where the request relates to flooding impacts ARTC would provide property specific information and mapping as required.

New mitigation measure LP17 (see Appendix B of this report) commits ARTC to preparing a Consultation Protocol to inform landholders and provide clarity of how ARTC will interact with them in relation to the design process, property changes, acquisition steps and processes with the aim of reaching agreement on these matters. The Consultation Protocol will assist landholders with understanding the interface points and the points in the design cycle where more information will be available.

Consultation and information about drainage control areas

Issue

NSW Farmers noted that following their submission on the EIS and DPE's independent review of the EIS flooding and hydrology assessment report (Technical Report 3), ARTC now propose the addition of drainage control areas to manage flood flow velocities. These appeared on maps being shown to landholders with no explanation of what they would be used for. They assert that it wasn't until the Preferred Infrastructure/Amendment Report was exhibited that information on the potential extent of works was provided, with no actual details provided.

NSW Farmers requests information on what:

- drainage control areas would be used for
- structures and other drainage management measures would be used in these areas
- impact structures in those areas would have on the productivity of farms.

NSW Farmers notes that the proponent's approach to the above issues is that they will be resolved by further farm scale modelling and discussions with landholders. NSW Farmers asserts that this approach is entirely unsuitable because the impacts of the proposal must be known before any approval can be given.

Response

Table 3.1 of this report notes that between March and May 2022, ARTC completed the notification and consultation with landholders potentially affected by drainage control areas. Landholders who will potentially be impacted by drainage control areas were initially contacted by phone. Landholders who answered the phone were given a brief overview of the potential drainage control areas.

Where landholders didn't answer the phone, a message was left (if possible) to advise that information would be provided via email and/or post—based on previous preferences for receiving information. The majority of landholders who received phone messages returned the call. Information, including a map with the highlighted area(s), were provided to all landholders via email or post.

A follow up call to every landholder was attempted over the following weeks, unless requested otherwise. These follow up calls were timed so that the landholders had had time to receive and review the information provided. The follow calls provided further information and responded to questions raised by landholders.

Erosion and scour at structures is dependent on a number of factors, including flow velocities, local soil types, topography and slope, vegetation cover and watercourse geomorphology. Drainage control areas are just one measure for limiting erosion, and further detailed site assessments and design are required to confirm whether a combination of mitigating measures may be required. Potential design solutions that could be considered, in conjunction with or as an alternative to drainage control areas, include:

- replacing culverts with bridges
- increasing the number of culverts and/or distribution of culverts
- energy dissipation devices
- extending scour protection into private land in consultation and agreement with landholders
- construction of diversion bunds or drainage to protect buildings and land areas.

As described in section 6.7.2 of the Preferred Infrastructure/Amendment Report, the drainage control areas, as currently proposed, represent a conservative scenario in terms of additional land requirements. During detailed design, these areas would be refined when further flood modelling is undertaken and the extent of works within each drainage control area is confirmed. The extent of works could include but not be limited to:

- no physical works (velocity management structures), with erosion protection provided by either existing or planted vegetation
- construction of drainage channels
- construction of concrete aprons
- installation of rock boulders (rip-rap).

The land required for each drainage control area would be finalised during detailed design, in consultation with landholders.

DPE site visit

Issue

NSW Farmers volunteers to facilitate a site visit with DPE along the proposed route alignment to help convey the impact of the proposal.

Response

Noted. This is a matter for DPE's consideration.

6.7.9 Approval process

Conditions of approval—flooding

Issue

NSW Farmers asserts that conditions must be imposed that require that the development be carried out in accordance with the QDLs. They state conditions must also ensure that the impacts of the development must be managed within the existing rail corridor. They state changes to the natural characteristics of flows cannot occur without a registered easement.

Response

The proposal has been, and would continue to be, designed to minimise the potential for flooding risks. During the detailed design process, any mitigation identified as an outcome of additional flood modelling would consider the QDLs provided in the updated flooding and hydrology assessment report. Where it is not practical to eliminate departures from the QDLs through design changes, alterations to flows due to the proposal would be managed in consultation with landholders. As noted, ARTC would seek to minimise flow changes and impacts as far as practicable.

Further information on the management of departures from the QDLs is provided in section 4.1.2 of this report.

Also refer to response flooding in section 6.7.1 of this report.

Conditions of approval—telecommunications

Issue

NSW Farmers asserts that the conditions of approval must require the development of a robust public telecommunications network prior to construction of the rail line beginning.

Response

The provision of a public telecommunications network within this section of Inland Rail is not within the scope of the proposal. As noted below, the details of the 'call train control' requirements and protocol would be provided to landholders prior to the commencement of operations.

Call train protocol

Issue

NSW Farmers highlights that many landholders will have to cross the line to go to and from their properties. They state that approval conditions must be imposed that require any call train protocol to be development in consultation with landholder and peak industry groups. NSW Farmers states that protocol should also provide for arrangements relating to biosecurity, bushfire and general access to the alignment.

Response

In accordance with mitigation measure LP24, ARTC would develop a 'call train control' process to enable landholders to use levels crossings as stock crossings. Details of the 'call train control' process will be provided to agricultural landholders prior to the commencement of operations.

Existing procedures and asset management systems

Issue

NSW Farmers notes that ARTC rely on their existing procedures and asset management systems. NSW Farmers asserts that conditions must be imposed that require the establishment a mandated protocol for dealing with matters raised by landholders, including nominated response times.

Response

As noted in section 7.5.2 of the of the EIS Submissions Report, procedures for complaints handling and ongoing communication with the community are captured by the relevant Environmental Management Framework for the proposal (as described in section D5.2 of the EIS) and implementation of ARTC's existing operational procedures relating to complaints handling.

Residents or other stakeholders can contact ARTC via the Enviroline service (via: Contact Us—ARTC, 1300 550 402 or **enviroline@artc.com.au**), which is available 24 hours/7 days a week.

Approval of detailed design

Issue

NSW Farmers request approval conditions that require the Planning Secretary to approve the proposal's detailed design prior to construction beginning.

They state that those detailed designs should include details of:

- culverts
- works within drainage control areas
- crossings and bridges.

The detailed design must comply with the performance criteria established by any approval, irrespective of the cost to the ARTC of meeting the criteria.

Response

The proposal has been, and would continue to be, designed to minimise the potential for flooding risks. In accordance with mitigation measure FH1, additional survey, assessment and modelling would be undertaken during detailed design to confirm building floor levels and determine if the proposal could be modified so that flooding characteristics are not worsened or minimised as far as practicable, up to and including the 1% AEP event (as provided by the QDLs). This process would be independently validated through the development of a flood design verification report and through a commitment by ARTC to consult with affected landholders and asset owners during the detailed design development process.

Scope of the assessment

Issue

NSW Farmers asserts that there are a number of essential elements of the proposal that are either being deliberately excluded from the scope or are being advanced on the basis that impacts will be dealt with elsewhere, including:

- Longer trains: The Preferred Infrastructure / Amendment Report makes it clear that approval is not being sought for 3,600-m-long trains. The impacts of longer trains should be considered as part of the proposal because longer trains can be run on the line, notwithstanding the ARTC's assertions that approval is not currently sought for their use.
- Additional clearing outside the construction footprint: As a practical matter access to the alignment for construction purposes will require the construction of all-weather access points. These are alluded to in the proposal but the impacts are not specifically considered. These should be included as part of any biodiversity assessment and their impacts conditioned. Alternatively, if these impacts have not been considered, conditions should be imposed to make it clear that those activities are not authorised under any approval.
- Limited authorisation of borrow pits: The proposal only seeks approval for four borrow pits and does not consider the impact of the haulage of material from those pits to the alignment. Contractors are now being told to find their own way when it comes to sourcing rock for the proposal. The impacts on haulage routes to and from the authorised borrow pits must be assessed before any approval can be granted. To the extent that material will need to come from other sources, conditions must be clear that no other pits are authorised to be used for the purpose of the proposal and that separate approval for any other pits and the impacts of the haulage route must be considered as part of a separate application.
- Access to groundwater: Commercial arrangements have been made with the Gilgandra Shire Council for it to sink a number of bores for the purpose of providing water to the proposal. Arguably, that work is unlawful in that it was carried out prior to any approval of the proposal. Conditions should be imposed to make it clear that a separate approval would be required to authorised existing bores used for other purposes to be used for the purpose of the proposal.
- Grade-separated level crossings: The proposal is being advanced on the basis that level crossings will be installed at Tomingley Road, the Castlereagh Highway, Eumungerie Road and Yarrandale Road. The impact of the installation of level crossings on those roads is clearly unacceptable. The ARTC is seeking to advance the installation of level crossings at the Castlereagh Highway at Curban and Tomingley Road at Narromine under the guise that they are part of a separate program of works as part a grade-separated road and rail interfaces program funded by the NSW and Australian governments. In a greenfield scenario, the need for a crossing arises directly as a result of the proposal. The conditions of consent should require a grade-separated level crossing at those locations. The associated changes to the road alignment to construct those crossings, ideally as rail over road because of the benefits to farm movements on either side of a road, must be considered before any decision is made to approve the proposal.
- Possible future connections to other rail lines: A number of connections to the existing rail network are foreshadowed but approval for those connections in not sought as part of the proposal. If the proposal is to have any benefits to the regional community conditions must be imposed that require those connections to be constructed.

Response

Train lengths

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 trains operations in the future.

Additional clearing outside the construction footprint

A response to this issue is provided in section 6.7.4 of this report.

Borrow pits

The proposal, for which approval is being sought, only includes four proposed borrow pits. Construction of the proposal would require a range of materials, as described in section A8.10.2 of the EIS and section 2.10.2 of the updated proposal description (Appendix A of the Preferred Infrastructure/Amendment Report). The volumes of materials estimated are preliminary and would be further refined during detailed design. The final materials supply strategy would be confirmed by the construction contractor(s) during construction planning. Subject to any additional approvals required, this may include commercial quarries or borrow pits not identified in the EIS and Preferred Infrastructure/Amendment Report.

Indicative access routes to each borrow pit were shown in the updated Map Book. The access routes were selected based on a range of considerations, such as following existing tracks, where practicable, and minimising impacts on properties and public roads. The traffic and transport assessment undertaken for the EIS considered the movement

of traffic associated with material deliveries (borrow pits, capping and ballast, and precast concrete). While it was noted that traffic volumes would vary depending on the activities undertaken, a worst-case scenario for each construction area was assessed based on estimated total traffic volumes generated during site establishment/finishing, and rehabilitation and main construction activities (as shown in Table 5.5 in Technical Report 10—Traffic and transport assessment). While the assessment didn't differentiate between workforce movements and material deliveries, it did consider movements associated with borrow pits and therefore appropriately assessed the relevant impacts.

Groundwater

As described in section A8.7 of the EIS, where there is benefit to the local community, the potential for retaining facilities installed for the construction of the proposal would be investigated and negotiated in consultation with relevant stakeholders.

Gilgandra Shire Council is currently working to develop a water bore legacy project, which could provide long-term benefits for the community and could also sell water to Inland Rail, from deep aquifers that limit competition with existing stock and domestic bores.

The availability of water for the proposal is a common interest point and an area in which Council identified it could play an important role. Council will install four test water bores focused on investigating opportunities and the relevant approvals have been obtained by Council. The establishment of water bores and extraction of water can only proceed following the relevant approvals being obtained, licences being granted and viable water flows existing and being proven.

Should water extraction be viable, the bores would be commissioned and made available to construction contractors building Inland Rail on a cost recovery/full operational cost basis. Once the construction period is completed, the bores would be community infrastructure to use for community purposes. These uses include but are not limited to:

- emergency water supply for firefighting
- water supply for Council to undertake road maintenance
- supplementary stock and domestic supply during drought or individual property issues such as equipment breakdown
- community facility improvement such as improved water supply at a hall or recreation area.

Further information is provided on Gilgandra Shire Council's website **gilgandra.nsw.gov.au/Live/Works-Projects/Water-Bore-Legacy-project.**

Grade separations

A response to this issue is provided in section 6.7.7 of this report.

Future connections

A response to this issue is provided in section 4.2.3 of the EIS Response to Submissions Report.

Refusal of the proposal

Issue

NSW Farmers state that approval for the proposal must be refused until ARTC has:

- undertaken a detailed analysis regarding the properties most likely to experience access, fragmentation and severance issues
- consulted with relevant landholders regarding appropriate measures that can be implemented to mitigate access, fragmentation and severance issues where possible, including via amendments to the proposed alignment, and identified proposed locations of easements for access, the placement of level crossings, and the location, height and width of under bridge access points
- identified those parcels that are likely to be severed, fragmented or otherwise severely impacted by the proposal and commit to appropriately compensating those landholders for not only the acquisition of that land but the loss of value of the businesses that rely on that land.

Alternatively, they request that the approval include a mediator (nominated by the landholder, not the ARTC) be appointed to mediate any disputes between the ARTC (or its contractors) and landholders relating to issues around access and farm impacts. They state that the costs of the mediator should be borne by ARTC, and the mediator should be working on the basis that the affected landholders are to be no worse off as a result of the proposal.

NSW Farmers notes that matters may not be capable of being adequately compensated under the relevant compulsory acquisition legislation and that unless enforced by conditions of approval, the approach to the management of costs will leave landholders without all-weather access to their properties. This would be an unacceptable outcome.

Response

As noted in mitigation measures LP1 to LP7, consultation on these matters with each landholder would be undertaken with a view to seeking tailored agreements to reflect agreed outcomes. All reasonable and feasible measures would be implemented to avoid and minimise impacts to individual property owners. Mechanisms will be in place to resolve disputes in relation to construction and impacts to property and infrastructure.

6.8 Australian Plants Society NSW Limited

6.8.1 Biodiversity

Impacts to the Pilliga forest

Issue

Australian Plants Society NSW Limited (Australian Plants Society NSW) strongly objects to the proposed route alignment through the Pilliga forests that would result in the removal of at least 1,800 hectares of intact bushland.

Australian Plants Society NSW highlights that the Pilliga forest is of exceptional environmental value and sits within the Brigalow Belt South Bioregion. They note that only 1 per cent of the Brigalow Belt South Bioregion is currently protected. Australian Plants Society NSW highlights that this is far below the International Union for the Conservation of Nature target of declaring 17 per cent of each nation's lands as Protected Areas. Further, Australian Plants Society NSW notes this is far below the recent 30 per cent target announced by the Commonwealth under the 30by30 initiative. Australian Plants Society NSW also believes that the proposal does not align with Australia's commitments to follow the objectives of the Australia's Biodiversity Conservation Strategy 2010–2030.

The proposal would split areas of intact and high-quality vegetation, including at least one listed threatened ecological community, within a National Biodiversity Hotspot.

Response

A response to why the proposal traverses the Pilliga forests is provided in section 6.8 of the EIS Response to Submissions Report.

ARTC acknowledges the biodiversity values of the Brigalow Belt South bioregion, which contains the Pilliga forests. The updated biodiversity development assessment report has been prepared in accordance with the SEARs and the *Biodiversity Assessment Method* (DPIE, 2020b). In accordance with the relevant biodiversity guidelines, the updated assessment includes consideration of biodiversity and landscape impacts (including cumulative impacts) such as threatened species, threatened ecological communities, fire and habitat fragmentation.

The proposed approach to identifying and managing offsets to mitigate the impact of vegetation clearing is described in section B1.5.1 of the EIS. Mitigation measures BD1 and BD2 commit to continuing to minimise the potential impacts on biodiversity during detailed design and construction planning. In accordance with BD1, vegetation clearing would be limited to the minimum necessary to construct the proposal and allow for its effective operation. Mitigation measure BD2 provides that, where appropriate, facilities within the multi-function compounds and temporary workforce accommodation would be located to further minimise or avoid impacts on native vegetation, where practicable.

Impacts to the Australian Wildlife Conservancy

Issue

Australian Plants Society NSW questions how the proposed route alignment could be located within the same patch of woodland where the Australian Wildlife Conservancy has set up a fenced conservation reserve to protect native fauna and flora, including the re-introduction of threatened fauna.

Response

A response to this issue is provided in section 6.8.5 of the EIS Response to Submissions Report.

Offsetting

Issue

Australian Plants Society NSW stated that they consider it unacceptable to offset areas of vegetation that already have a conservation designation and conservation land use (or informal-conservation tenure and land-use). They also stated that they do not accept that biodiversity offsets will negate the impacts of loss of flora and fauna and, resulting bushland fragmentation and habitat loss, caused by the proposal.

Response

The Pilliga forests through which the proposal passes are state forests that do not have overall conservation status.

A response to this issue is provided in section 6.4 of the EIS Response to Submissions Report.

Independent assessment

Issue

Australian Plants Society NSW advocated for an independent auditing and assessment body to be established to assess the biodiversity merits of the proposal, against current NSW and Commonwealth Government objectives for biodiversity and conservation.

Response

The establishment of an independent body as suggested by the submitter is a matter for the NSW Government.

6.8.2 Proposal description

Route alignment

Issue

Australian Plants Society NSW urges the proponent to realign the railway route to take advantage of the large amount of established agriculture land to the west of the Pilliga forests. They also suggested that a route could be moved further west to use the Castlereagh Highway, which they suggested appears to hardly support any intact bushland between Wingadee and Gilgandra. They strongly advocate that the route be altered to reduce clearing.

Response

A response to why the proposal traverses the Pilliga forests (and doesn't use agricultural land to the west of the forests) is provided in section 6.8 of the EIS Response to Submissions Report.

As described in section 3.3.1 of the EIS Response to Submissions Report, the Planning Secretary directed ARTC to provide a preferred infrastructure report to include (among other matters) appropriate justification and information on the design of the proposal and alternative rail alignments considered, particularly near the towns of Narromine and Narrabri, and how these alternatives were analysed to inform the selection of the preferred route. In response to this direction, further information on the route history and option selection process was provided in the Preferred Infrastructure/Amendment Report and supporting Route Selection Summary Report. This included consideration of options to the west near the Castlereagh Highway and Coonamble.

As described in section A1.5.1 of the EIS, ARTC is committed to minimising the potential impacts of the proposal and is investigating opportunities to reduce actual impact areas where practicable. The area that would be directly impacted by construction activities would depend on factors such as the presence of significant vegetation; constructability; construction management and safety considerations; landform; slopes and anticipated sub-soil structures. Direct impacts would be reduced as far as practicable through refinements during detailed design.

6.9 Koala Action Inc. (KAI) and Queensland Koala Crusaders Inc. (QKC)

6.9.1 Biodiversity

Impacts to the Pilliga forest

Issue

KAI and QKC object to the proposed route alignment through the Pilliga forest, emphasising that they consider the proposal's potential impacts on native vegetation and wildlife unacceptable. In particular they raise concerns around listed threatened species (including the koala) and other native fauna, loss of hollow-bearing trees, cumulative biodiversity impacts and fragmentation of bushland and habitats.

Response

A response to this issue is provided in section 9.1.1 of the EIS Response to Submissions Report.

Clearing of vegetation and wildlife corridors

Issue

KAI and QKC stated that the proposal passes through heavily vegetated areas of immense value to the native fauna, including travelling stock reserves at Bohena Creek and the Macquarie River. About 52 per cent of the proposal site is native vegetation, including about 1,120 hectares (ha) of native woodland and forest vegetation and 565 ha of native and derived native grassland. KAI and QKC stated that further reduction of these important sources of food, shelter and dispersal opportunities was incomprehensible.

The proposal would also result in fragmentation of biodiversity corridors, including those within and between the Pilliga forests, Warrumbungles National Park, the Namoi River and areas such as Mount Kaputar National Park.

KAI and QKC also objects to the clearing of any vegetation along Crown Land, travelling stock routes, waterways, road reserves or in agricultural land noting that this vegetation can be important for fauna movements.

Response

A response to this issue is provided in section 9.1.1 of the EIS Response to Submissions Report.

Animal strike

Issue

KAI and QKC stated that the proposal would result in mortality to fauna from collisions with trains, electrocution, wire strikes, and rail entrapment. KAI and QKC considers that the proposal is likely to result in significant injury and mortality of wildlife from strike as:

- the high speed of trains utilising the rail line will prevent train drivers from stopping quickly for wildlife
- approaching trains flush animals such as microbats and birds from roost sites
- train lights disorient nocturnal animals
- owls and other birds of prey often utilise rail infrastructure as hunting grounds
- scavenger species regularly frequent rails to feed on carcasses
- animals can fly or glide into the train, noting that the risk of collision will increase depending on the size of the train
- frogs become more vulnerable to strike during rain events when individuals are more likely to be active.

KAI and QKC stated that most train-strike impacts are likely to occur in the Pilliga forests given the extensive area of native vegetation and limited fencing of the rail corridor. These include threatened species including Black-striped Wallaby, Koala, Squirrel Glider, Barking Owl, Glossy Black Cockatoo and Pale-headed Snake.

Response

A response to this issue is provided in section 6.2.2 of the EIS Response to Submissions Report.

Loss of hollow bearing trees

Issue

KAI and QKC asserts that the avoidance component of the mitigation hierarchy has not been implemented to the greatest extent as the current route alignment has impacts to hollow bearing trees. They stated that they do not think the proposed mitigation measures would be sufficient to avoid impacts to biodiversity.

Response

A response to this issue is provided in section 9.1.1 of the EIS Response to Submissions Report.

Aquatic biodiversity impacts

Issue

KAI and QKC highlights that the proposal site includes three rivers (Macquarie River, Castlereagh River and Namoi River), up to 121 creeks and other intermittent unnamed water features. They emphasise that these locations need to be protected from negative impacts associated with the development and ongoing use of the proposed rail, such as clearing, fragmentation, pollution, weed spread (i.e. avoidance and mitigation). Further, they state that the existing riparian vegetation needs to be enhanced and conserved to retain its ecological value.

Response

A response to this issue is provided in section 5.6.2 of the EIS Response to Submissions Report.

Fauna connectivity strategy

Issue

KAI and QKC recommend that pre- and post- construction monitoring of fauna movement patterns is required to determine if the goals of the Preliminary Fauna Connectivity Strategy are being met.

KAI and QKC queries if the strategy will use fauna sensitive design planning and implementation (i.e. a strategy that utilises a combination of design measures, such as overpasses, culverts, fauna furniture, strategic fencing, etc.). They highlight the importance of fauna furniture while noting their design must consider their flaws e.g., koalas will not use canopy bridges; predators use fauna culverts to hunt. They stated that land bridges should be preferred in locations of significant habitat connectivity.

KAI and QKC recommended resources that could assist ARTC with fauna sensitive design planning and implementation.

Response

A response to this issue is provided in section 9.1.3 of the EIS Response to Submissions Report.

Land bridges are considered unlikely to be feasible or effective for this proposal, due to the costs involved and unsuitable topography in key parts of the alignment.

The preliminary fauna connectivity strategy that is appended to the updated biodiversity development assessment report would be finalised during detailed design in accordance with mitigation measure BD6. In preparing the final strategy, ARTC would consult with relevant stakeholders and review examples from other projects.

6.9.2 Climate change

Vegetation clearance

Issue

KAI and QKC asserts that all native vegetation along the proposed route alignment must be retained to reduce the impact of climate change.

Response

ARTC is committed to minimising the potential impacts of the proposal and is investigating opportunities to reduce actual impact areas, where practicable. The area that would be directly impacted by construction activities would depend on factors such as the presence of significant vegetation; constructability; construction management and safety considerations; landform; slopes and anticipated sub-soil structures. Direct impacts would be reduced as far as practicable through refinements during detailed design.

7. Response to community submissions

This section provides a summary of issues raised by the community, including members of the public and property owners, and responses to the issues raised. The approach to reviewing and responding to submissions is described in section 2.2 of this report. As described in section 2.2, each issue identified in this section 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 a number of submissions.

The submissions register (Appendix A) includes a table identifying community submissions using the submission identification numbers provided to submitters by DPE. The table presents, for each submission, a cross reference to where the issues raised in the community submissions have been addressed in this section.

Further detail on issues raised in each submission, including background, contextual information and full submissions, is provided in the detailed submissions available via the Major Projects NSW Planning Portal website (**planningportal.nsw.gov.au/major-projects/project/41351**).

The responses to issues raised include a number of references to the mitigation measures that would be implemented to avoid or minimise the potential impacts of the proposal. Further information about the mitigation measures (as updated) is provided in section 8 and Appendix B of this report.

7.1 Assessment and approval process

7.1.1 Assessment process

7.1.1.1 Independence of the EIS process

Issue

Submitters raised concerns about the independence of the EIS process. Issues raised included:

- Reports and studies should be completed by an independent organisation
- Full details of report funding should be made public
- Reports should be reviewed by unbiased independent qualified professional as there are many inconsistencies.

Submission numbers

SE-48695793, SE-48722712

Response

Responses to issues about the independence of the EIS process and how the EIS was reviewed are provided in sections 8.1 and 8.2 of the EIS Response to Submissions Report.

7.1.1.2 Adequacy of assessments

Issue

A submitter raised concerns about whether thorough environmental (including hydrology) studies were undertaken, and the potential future impacts of this in terms of cost to rectify damage caused.

Submission numbers

SE-48722712

Response

Responses to issues raised about the adequacy and validity of the EIS, and the specialist assessments undertaken to support the EIS, are provided in sections 8.2 and 8.3 of the EIS Response to Submissions Report. In addition, the further environmental assessment undertaken in support of the Preferred Infrastructure/Amendment Report provides additional rigour to the assessment process and the mitigation and management framework. Section 4 of the Preferred Infrastructure/Amendment Report summarises the additional environmental assessment undertaken since EIS exhibition, which includes flooding and hydrology, biodiversity, noise and vibration, Aboriginal cultural heritage and traffic.

7.1.1.3 Future design and assessment

Issue

A submitter raised concerns that figures and maps showing proposal design information in the EIS changed in the Preferred Infrastructure/Amendment Report, which reduces trust in the reporting. The submitter noted that the detailed design could result in the figures and maps changing again and asked how ARTC would address this. Another submitter raised concerns that the EIS contained bridge and culvert lengths that are shorter than those in ARTC's documented plans.

Submission numbers

SE-48700736

Response

As described in section 1.2.1 of the Preferred Infrastructure/Amendment Report, in accordance with clause 192(2) of the (then) *Environmental Planning and Assessment Regulation 2000* (the EP&A Regulation), an application may, with the approval of the Planning Secretary, be amended at any time before the application is determined.

ARTC proposed a number of design amendments to the proposal (described in the Preferred Infrastructure/ Amendment Report) to address issues raised during consultation and in submissions, and to minimise the potential impacts of the proposal. The Preferred Infrastructure/Amendment Report was prepared to consider the proposed amendments to the exhibited proposal in accordance with section 5.17(b) of the EP&A Act and clause 192(3) of the EP&A Regulation. A description of the proposed amendments, along with a justification, are provided in section 6 of the Preferred Infrastructure/Amendment Report. The proposal (as amended) would be subject to assessment by DPE in accordance with the requirements of the EP&A Act.

Any further amendments to the proposal during or following detailed design would be subject to the assessment and approval requirements of Division 5.2 of EP&A Act. Further information is provided in section D5.4.2 of the EIS.

7.1.2 Other assessment and approval issues

7.1.2.1 Reference design used

Issue

A submitter raised concerns about farmers being asked to make decisions about their properties based on a reference design, rather than detailed design.

Submission numbers

SE-48698519

Response

The assessment presented in the EIS is based on a reference design and indicative construction methodology, and is considered sufficient to assess the environmental impacts, and inform the risks and issues potentially associated with the proposal. The further development of measures and design responses to respond to the identified issues and risks (including those identified for land use and property) is a matter for detailed design and construction planning, which would be undertaken in accordance with the mitigation measures (provided in Appendix B of this report) and the conditions of approval, and in consultation with individual landowners. This is consistent with current practice for major project assessments in NSW and elsewhere.

ARTC is committed to continuing to work with affected landowners in the post-approval and detailed design phases. New mitigation measure LP17 (see Appendix B of this report) commits ARTC to preparing a Consultation Protocol to inform landowners and provide clarity of how ARTC will interact with them in relation to the design process, property changes, acquisition steps and processes with the aim of mitigating impacts of the proposal and reaching agreement on these matters.

7.1.2.2 Mitigation measures

Issue

Submitters raised concerns about the adequacy of the proposed mitigation measures in the EIS and the EIS Response to Submissions Report. Issues raised included:

- The measures put forward are not going to solve the issues raised

- ARTC, landowners and community have completely different ideas about mitigation and the result that mitigation delivers.

Submission numbers

SE-48700736, SE-48744210

Response

The mitigation measures were developed as an outcome of a range of detailed specialist investigations, with the input of relevant specialists, and consistent with relevant guidelines and policies (including the *State significant infrastructure guidelines – preparing an environmental impact statement* (DPIE, 2022)). The measures are consistent with those proposed for other approved State significant infrastructure projects, including other Inland Rail projects in NSW.

As described in section 8.2 of the Preferred Infrastructure/Amendment Report, after consideration of the issues raised in submissions on the EIS and additional work undertaken since exhibition of the EIS, the mitigation measures were updated to:

- Make additional commitments to respond to issues raised in the submissions
- Modify the wording in some instances so that the intent of the measure is clearer
- Respond to the findings of further assessments and the amendments described in the Preferred Infrastructure/Amendment Report.

Further updates to the measures have been undertaken as described in Appendix B.

The proposal would be designed, constructed and operated in accordance with the conditions of approval and all other relevant legislative requirements and approvals. The assessments undertaken to support the EIS, and the detail provided, are consistent with the requirements of the SEARs and relevant guidelines, as noted above. Measures to address property-specific issues would be developed as part of the detailed design process, in accordance with the mitigation measures and conditions of approval.

ARTC would continue to work with all potentially affected landowners/landholders to minimise potential impacts in accordance with the mitigation measures and the conditions of approval. Consultation with landowners would be ongoing during detailed design to identify feasible and reasonable measures to minimise impacts on their operations/properties.

7.1.2.3 Precautionary principle

Issue

Submitters expressed the view that the proposal needs to be conducted in line with the precautionary principle, which requires that the government and the proponent have a social responsibility to protect the public from exposure to harm where scientific investigation has found a plausible risk.

Submission numbers

SE-48698519, SE-48700711, SE-48700736, SE-48741961, SE-48695774

Response

ARTC is committed to applying the principles of ecologically sustainable development in assessing the proposal, including the precautionary principle, in accordance with appropriate legislation and policy requirements as they relate to the assessment. ARTC notes the issues raised in the submissions but does not agree with the assertion made in its analysis of the precautionary principle.

The SEARs and clause 7(1)(f) of Schedule 2 of the EP&A Regulation require an EIS to provide '*the reasons justifying the carrying out of the development, activity or infrastructure in the manner proposed, having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development set out in subclause (4)*'. This justification, which is provided in chapter D6 of the EIS and updated in section 8.1 of this report, includes consideration of the precautionary principle.

The EIS contains a large number of mitigation measures that are designed to avoid, mitigate, offset or manage the environmental impact or harm that may otherwise be caused by the proposal. ARTC is not proposing to postpone any measures in light of any uncertainty about the assessment, or the risks or impacts being assessed. Instead, mitigation measures have been provided where these impacts cannot be avoided. Accordingly, ARTC considers the EIS will allow the NSW Minister for Planning to apply the precautionary principle in determining the proposal.

ARTC submits that the assessments in the EIS and the Preferred Infrastructure/Amendment Report indicate that there is no threat of serious or irreversible environmental damage from the proposal. ARTC notes the fundamentals of the precautionary principle, which requires an appropriate risk-weighted approach to assess the merits of projects and appropriately avoid, manage and mitigate impacts described in the EIS. The EIS and the planning approval process is a mechanism to allow the Minister to assess whether this has been appropriately applied.

7.1.2.4 Agreements regarding access

Issue

A submitter states that they will not agree to any future commitments with regards to access until proposal approval is received.

Submission numbers

SE-48739207

Response

The comment from the submitter is acknowledged. ARTC respects the rights of landowners to permit or deny access to their properties. During detailed design ARTC would undertake further consultation with individual landowners.

7.1.3 Adequacy of the EIS Response to Submissions Report

7.1.3.1 Adequacy of the responses provided

Issue

Submitters raised concerns about the adequacy of the responses provided in the EIS Response to Submissions Report. Issues raised included:

- A generic categorisation of concerns and grouping of individuals together was undertaken, which did not address specific issues
- Difficulty finding where specific issues are addressed
- ARTC has indicated that issues will be addressed later, including after construction was completed
- Concerns that issues raised in the previous submissions were not adequately addressed in the EIS Response to Submissions Report, that the responses provided did not address the issues raised.

Submission numbers

SE-48404215, SE-48698995, SE-48700736, SE-48722712, SE-48700711, SE-48732462, SE-48741961, SE-48744210

Response

As described in section 2.2 of the EIS Response to Submissions Report, each issue identified in sections 7 to 10 of that report was 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 was provided to each grouped issue summary, which may be relevant across a number of submissions. This is in accordance with the approach used to prepare response to submissions reports for major projects where large numbers of submissions are received, and is consistent with the guidelines *State significant infrastructure—preparing a submissions report* (DPIE, 2021). Appendix A to the EIS Response to Submissions Report provided a list of the community submissions (by submission identification (ID) number) and identified where responses to the issues raised can be found in the report. A similar approach has been used for this report.

Further detail on issues raised in each submission, including background, contextual information and full submissions, is provided in the detailed submissions available via the Major Projects NSW Planning Portal website (**planningportal.nsw.gov.au/major-projects/project/41351**).

Where specific issues are identified in submissions on the Preferred Infrastructure/Amendment Report that submitters felt had not been adequately addressed previously, these issues and responses have been included in the relevant sub-sections in this section of the report and responses provided (e.g. route options, amenity impacts, etc.).

ARTC's approach to environmental management is described in section D5.2 of the EIS, including its commitment to manage its environmental responsibilities and environmental performance. Much of the detail cannot be finalised until a construction contractor is appointed, as they will be responsible for the day-to-day activities onsite. Further detail on the post approval process in NSW can be found at **planningportal.nsw.gov.au/major-projects/assessment/post-approval**. The proposed post-approval plans would be prepared in accordance with the mitigation measures, conditions of approval, discipline-specific guidelines, consultation with key stakeholders, and the guidance presented in the technical reports that support the EIS.

The EIS and EIS Response to Submissions Report identify that the majority of mitigation measures would be addressed before construction is completed (where there are ongoing operational monitoring requirements as mitigation measures these have also been identified). Timing of the implementation of the mitigation measures is proposed for each measure (see Appendix B), commensurate with when the anticipated impacts that require mitigating are expected to occur.

7.1.3.2 Inaccuracies and use of disclaimers

Issue

A submitter notes that there could be inaccuracies in the Preferred Infrastructure/Amendment Report and that is why the report denies liability. The submitter states that what is described in the Preferred Infrastructure/Amendment Report conflicts with the known facts, the impacts, the lack of any justifications or viability on environmental, social or economic grounds.

Submission numbers

SE-48732462

Response

As described in section 8.2 of the EIS Response to Submissions Report, the purpose of the legal disclaimer provided in consultants' reports (including the EIS) is to confirm the limitations that apply to the contractual relationship between the client and consultant, including in relation to data supplied. Liability does not extend to anything outside the scope of work as contracted.

In accordance with clause 6(f) of Schedule 2 of the EP&A Regulation, the person/s preparing an EIS are required to make a declaration to the effect that:

(i) the statement has been prepared in accordance with this Schedule, and

(ii) the statement contains all available information that is relevant to the environmental assessment of the development, activity or infrastructure to which the statement relates, and

(iii) that the information contained in the statement is neither false nor misleading.

This declaration has been duly made for the EIS and is provided after the contents page in the main EIS document.

The Preferred Infrastructure/Amendment Report and supporting technical reports were prepared in accordance with the requirements of the EP&A Act, Schedule 2 of the EP&A Regulation and the SEARs, as well as relevant issue-specific assessment guidelines and policies. The Preferred Infrastructure/Amendment Report and technical reports were reviewed by DPE and other relevant NSW Government agencies, to confirm they were adequate prior to being finalised and placed on public exhibition. NSW Government agencies were also invited to provide submissions during the public exhibition period. Responses to the issues raised in these submissions are provided in section 5 of this report. DPE also sought input from independent peer reviewers, and this input—and responses from ARTC—would be considered by the assessment officers prior to determination by the NSW Minister for Planning.

Issue

A submitter noted that the statement in the EIS Response to Submissions Report that DPE is responsible for the adequacy of the EIS documentation is inappropriate and misleading.

Submission numbers

SE-48744210

Response

ARTC retains responsibility for the technical accuracy of all reports which form the EIS. The adequacy review process by DPE and other relevant NSW Government agencies (as described above) provides a process for independent review of the report contents prior to the formal submission of the documents.

7.2 Consultation

7.2.1 Adequacy of the consultation process

7.2.1.1 Consultation process

Issue

Concerns were raised about the adequacy of the consultation process, how the community has been consulted, the tools used, and the level of information provided to individual landowners. Issues raised included:

- The consultation process is inadequate for a project of this size
- Concerns raised have been disregarded
- ARTC is refusing to consult over the preferred route for the proposal
- Landowners are waiting on consultation
- No information has been received in relation to changes proposed in the Preferred Infrastructure/Amended Report
- The confidential engagement in 2015 has affected trust
- Lack of consultation is a common issue with Inland Rail
- No recognition that the 1800 number was not functional in 2016/17
- Concerns regarding provision of adequate and timely information about the proposal and in response to queries
- Failure to positively engage with the community, and address issues, concerns and grievances.

Submission numbers

SE-48698519, SE-48668962, SE-48689983, SE-48699724, SE-48700711, SE-48700736, SE-48701472, SE-48722712, SE-48741961, SE-48741986, SE-48744210

Response

A response to issues raised about the adequacy of the consultation process is provided in section 8.4.1 of the EIS Response to Submissions Report.

In accordance with DPE's *Community Participation Plan* and *Undertaking Engagement Guidelines for State Significant Projects* (DPE, 2022), the preparation of the EIS and Preferred Infrastructure/Amendment Report involved an iterative process of impact assessment and design refinement, development of mitigation measures and consultation with the community, stakeholders and government agencies.

The reference design for the proposal for which planning approval is being sought was presented in the EIS and the Preferred Infrastructure/Amendment Report (Appendix A - Updated proposal description) and updated Map Book. Section 4.2 of the Route Selection Summary Report provides a summary of the consultation and engagement activities for the route selection and reference design development process. Between February 2018 and October 2020, ARTC held approximately 500 meetings with landowners as the study area was narrowed to the focused area of investigation and then the final rail corridor.

Over this time, the reference design evolved and involved many iterations and refinements, incorporating a range of considerations at each stage. Key environmental issues were examined throughout the design development process. Consultation has been carried out with affected stakeholders (including landowners) to identify key potential impacts at an early stage. Where practicable, impacts have been avoided or appropriate mitigation measures developed in response to this input. This has resulted in a number of design changes that have mitigated some of the potentially significant impacts.

The proposed amendments were developed in consultation with potentially affected landowners and other relevant stakeholders, as described in sections 3.4.1 and 3.4.3 of the Preferred Infrastructure/Amendment Report.

The Preferred Infrastructure/Amendment Report was placed on public exhibition for a period of 24 days commencing on 31 August 2022 and concluding on 23 September 2022. The EIS Response to Submissions Report was also made publicly available.

During the exhibition period, interested stakeholders and members of the community were able to review the reports, participate in consultation and engagement activities (see section 3 of this report), and make a written submission to the DPE for consideration in its assessment of the proposal.

Issue

A submitter raised concerns that they had not received a notification of the start of the Preferred Infrastructure /Amendment Report exhibition period.

Submission numbers

SE-48736215

Response

As described above, the Preferred Infrastructure/Amendment Report was placed on public exhibition for a period of 24 days commencing on 31 August 2022 and concluding on 23 September 2022. The EIS Response to Submissions Report was also made publicly available. ARTC undertook a range of notifications to inform the community and stakeholders about the exhibition of the Preferred Infrastructure/Amendment Report including website updates, emails and advertisements (see section 3.2.2 of this report).

7.2.2 Information provided during consultation

7.2.2.1 Detail provided in consultation sessions and mapping

Issue

Concerns were raised about the level of detail and type of information provided during consultation, and its adequacy in conveying information about the proposal and its impacts, particularly in relation to impacts to individual properties. Issues raised included:

- The maps used during consultation sessions were not up to date (a map prepared in 2020 was used during a consultation session in 2022)
- Maps are not sufficiently detailed to provide the information required prior to agreement
- A lack of design detail has been provided, particularly that relevant to farming operations
- Local knowledge has not been considered
- Only minor details have been released.

A submitter raised concerns that details regarding the proposed use of their property during construction (for concrete batching and topsoil storage) were not provided in the formal acquisition documents and no details have been given in response to further requests.

Submission numbers

SE-48698519, SE-48699724, SE-48699459, SE-48739207, SE-48741961

Response

As noted above, a response to issues raised about the adequacy of the consultation process is provided in section 8.4.1 of the EIS Response to Submissions Report.

The level of detail available on the project will continue to increase as the design is developed during detailed design. New mitigation measure LP17 (see Appendix B of this report) commits ARTC to preparing a Consultation Protocol to inform landowners and provide clarity about how ARTC will interact with them in relation to the detailed design process, property changes, acquisition steps and processes with the aim of mitigating impacts and reaching agreement on these matters.

7.2.2.2 Response provided to request to interpret flooding information

Issue

A submitter raised concerns about interpreting the new flooding information, requesting detailed design information to understand impacts to their property as it relates to Quanda Quanda Creek and potential erosion impacts. The submitter identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48700736

Response

ARTC acknowledges the submitter's concern that their issue had not been addressed. While ARTC believes adequate responses to these issues were provided in the EIS Response to Submissions Report, further consideration is provided below.

ARTC acknowledges landowners' interests in the potential change to their properties that may eventuate through the proposal. The flood information provided in the Preferred Infrastructure/Amendment Report and updated flooding and hydrology assessment report, supported by the online flood mapping, provides landowners and interested parties with the anticipated change in flood behaviour based on the reference design.

The documents present the flood assessment outcomes with a level of technical detail required to support the assessment of the proposal and the determination of impacts. ARTC acknowledges that the flood information is complex, and that interpretation of the information contained in the updated flooding and hydrology assessment report, including the mapping, requires support. During the detailed design process, ARTC is committed to continued engagement with landowners to:

- Present and explain the proposal design
- Explain the flood assessment and impact mitigation process
- Interpret and explain the flood mapping, the proposal's conformity with the quantitative design limits, and the implications and impacts of the changes in flood behaviour and drainage systems on properties and patterns of land use
- Iteratively work with landowners to design out or accommodate non-conformities through revised proposal design or mitigation measures
- Reach agreement on the solutions and outcomes arrived at.

In accordance with new mitigation measure LP17, ARTC commits to preparing a Consultation Protocol to inform landowners and provide clarity of how ARTC will interact with them in relation to the design process, property changes, acquisition steps and processes with the aim of mitigating impacts and reaching agreement on these matters The protocol would establish the opportunity for facilitated discussions with landowners, the ability to mediate outcomes, and to seek independent expert hydrology advice on the design and outcomes.

7.2.2.3 Response to contacts

Issue

Concerns were raised in relation to the adequacy and timeliness of responses to community contacts. Issues raised included:

- No response to a detailed submission provided in February 2021, with submissions not addressed in the EIS Response to Submissions Report
- Lack of follow up to a call to the 1800 number
- Continued failure of ARTC to provide timely, responsive and inclusive consultation will cause problems during detailed design, construction and operation.

Submission numbers

SE-48744210, SE-48732462

Response

ARTC has conducted extensive consultation throughout the proposal planning phase, as described in the response in section 7.2.1.1 of this report. ARTC acknowledges that there may be some instances where consultation may not have met the expectations of stakeholders. On these occasions, ARTC seeks to rectify any issues as promptly as possible, ensuring that consultation practices adhere to values of building trust, credibility and visibility. Individual submissions are managed as described in the response in section 7.1.3.1 of this report. ARTC does not specifically contact all parties who make a submission.

Issue

A submitter queried whether DPE and the NSW Planning Minister will meet the farming community to understand the significance of the impacts on their farming business. The submitter identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48700736

Response

This is a matter for the DPE and the NSW Planning Minister to consider.

7.2.2.4 Consultation on route alignment options and changes

Issue

Concerns were raised about the level of consultation during the option selection process and the perception that consultation was inadequate. Issues raised included:

- The community was not consulted about all options
- Consultation for the Burroway to Curban section was inadequate
- Lack of transparency and availability of information
- The reports summarising the results of the process (including MCA reports) have discrepancies and inaccuracies, and the dates do not represent when they were released
- Proof that meetings took place is needed
- No response to the community petition made in 2017 has been received.

Submission numbers

SE-48722712

Response

The Route Selection Summary Report (Appendix B of the Preferred Infrastructure/Amendment Report) summarises the process followed in analysing and selecting a range of route options that progressed to consultation and further investigation. Consultation on all potential options was not undertaken, as preliminary screening of options is necessary to address technical viability and macro-level impacts. As such, consultation proceeded on feasible options where community feedback could contribute to the selection of preferred options.

As a result, consultation regarding any one segment of the alignment, including Burroway to Curban, should be in the context of the overall proposal alignment determination and the options available to establish viable routes. Information on the study area and the narrowing down of options to the preferred route was released at various milestones and following key decision points.

7.2.3 Community Consultative Committee

7.2.3.1 Concerns with the Community Consultative Committee process

Issue

Concerns were raised about the Community Consultative Committee (CCC) process, the conduct of the meetings and information provided. Issues raised included:

- Reporting requirements have not been followed
- No meetings were held between the release of the EIS in 2020 and March 2022
- Limited time for community issues to be addressed once meetings restarted
- Concerns with the behaviour and independence of the Chair
- Reporting of meetings, including to members, has been inadequate
- Reports have contained errors and inadequacies
- ARTC did not respond to observer's questions at the Gilgandra meeting
- A combined Narromine to Narrabri CCC meeting needs to be held
- Issues with the CCC raised in my original submission have not been addressed
- Involvement in CCC meetings has been disappointing and not worth the effort

- The community has not been allowed to ask questions, and concerns raised, or suggestions made, have been ignored
- CCCs are extensively used by DPE and should have clear consistent avenues where community can have meaningful engagement.

Submission numbers

SE-48744210, SE-48741986, SE-48741961, SE-48722712

Response

A response to concerns about the CCC process and meetings is provided in section 8.4.2 of the EIS Response to Submissions Report. The Narromine to Narrabri CCC first met in January 2019 following DPE's appointment of the independent chairperson. The CCC subsequently met a further four further times during 2019 while the EIS was under preparation. Meetings in 2020 commenced in February with further meetings curtailed due to COVID until December when an opportunity arose to meet at the commencement of the EIS exhibition period. During 2021 and the early part of 2022, COVID restrictions again limited the opportunity to meet while the Preferred Infrastructure/Amendment Report was in preparation.

Following each meeting, minutes were prepared by the CCC chairperson and issued to members and posted on the project website, along with any additional material requested through or presented to the committee. Annual reports have also been published.

The purpose of the CCC is to provide a forum for facilitated discussion between the proponent and representatives of the community, stakeholder groups and the local councils on issues related directly to the proposal.

7.3 The project – design features and operation

7.3.1 Project description

7.3.1.1 Assessment of 3,600-metre long trains

Issue

A submitter expressed concern that the proposal does not include the operation of 3,600 m trains, which are to be assessed in a future approval.

Submission numbers

SE-48700736

Response

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, including the assessment of environmental impact, would be required for longer train operations in the future.

7.3.1.2 Stock underpasses

Issue

A submitter asked about the location of stock underpasses.

Submission numbers

SE-48700736

Response

As described in the response in section 9.11.4 of the EIS Response to Submissions Report, the EIS and Preferred Infrastructure/Amendment Report do not set out detailed and specific provisions in terms of rail corridor crossings (including stock crossings) within private properties, as these need to be determined in consultation with individual affected property owners/operators. Issues and potential impacts in relation to property severance, operations and access to and within properties are considered in chapter B12 of the EIS, with further detail provided in the EIS Agriculture and land use assessment (Technical Report 11) and the EIS Social assessment (Technical Report 13).

ARTC commits to working with landowners to develop measures to minimise the impacts of the new rail corridor on internal property access arrangements, as far as practicable. In accordance with mitigation measure LP7, where the proposal affects internal property access arrangements, input would be sought from relevant landowners prior to finalising the detailed design. Where changes to internal property access arrangements are required, ARTC would consult with relevant property owners/occupants regarding alternative access arrangements, and identify feasible and reasonable measures to minimise impacts on existing operational arrangements/properties. These matters would be taken into consideration as part of the property acquisition process in accordance with mitigation measures LP3.

7.3.2 Level crossings

7.3.2.1 Design of level crossings

Issue

A submitter requested confirmation that all level crossings will be active crossings with boom gates and lights, noting that there have been previous fatal accidents at crossings where drivers could not see a train coming at speed due to dust from local farming activities.

Submission numbers

SE-48695793

Response

A response to issues raised about the safety and design of level crossings, including the approach to considering treatment options for the interaction of public roads and the rail corridor, is provided in section 7.2.1 of the EIS Response to Submissions Report. Section 4.2.13 of this report provides further discussion regarding level crossing safety.

The level crossings have been designed to suit the current road arrangements. Further refinements undertaken during detailed design would consider the vehicle types that need to be catered for at level crossings. In accordance with mitigation measure TT2, input would be sought from relevant stakeholders 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.

Freight trains on ARTC's networks must be operated in accordance with ARTC's rules and procedures, which include the following related to train visibility:

- Trains must have a working headlight fitted to the leading locomotive and travel with the headlight switched on 'full' when the train is moving on the ARTC network
- Where provided, number lights on the leading end of the leading locomotive must be lit during travel
- If provided, locomotive ditch lights or fog lights must be switched on when the locomotive is moving on the Main Line
- Rail traffic horns must be sounded during approach to level crossings. When the horns are sounded (at level crossings) the ditch/fog lights in some locomotives automatically flash on and off to make them more visible.

Mitigation measure TT4 provides that public level crossings would be designed in accordance with relevant guidelines and standards. These would include *AS 1742.7:2016 Manual of uniform traffic control devices, Part 7: Railway crossings* (Standards Australia, 2016), *Guideline: Lighting for railway crossings* (Roads and Maritime Services, 2013, *Guide to Road Design Part 4: Intersections and Crossings* (Austroads, 2021a) and ARTC standards, including provision of warning signage, line marking and other relevant controls. *Guideline: Lighting for railway crossings* specifies that lighting should be provided at public level crossings, and that this should illuminate the road alignment both on approach to the crossing and at the crossing, where appropriate.

In addition, in accordance with mitigation measure, TT5, a public level crossing treatment report would be prepared to document the level crossing process design and assessment process that has been undertaken. 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). A justification would be provided where no works are proposed on existing level crossings.

All road users on public roads need to comply with NSW road rules and drive to the conditions if dust is obscuring their vision.

7.3.2.2 Call train control and mobile coverage

Issue

Submitters noted that ARTC would develop a 'Call train control' process to enable landowners to use level crossings as stock crossings. Issues raised included:

- How this would be done without mobile phone coverage
- Whether ARTC will install towers to provide mobile coverage.

A submitter identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48698519, SE-48700736, SE-48700711

Response

A response to the issue of mobile coverage and impacts on stock during operation is provided in section 9.11.6 of the EIS Response to Submissions Report. The provision of a public telecommunications network within this section of Inland Rail is not within the scope of the proposal.

In accordance with mitigation measure LP24, details of the 'call train control' process will be provided to agricultural landholders prior to the commencement of operations.

7.3.3 Passing loops

7.3.3.1 Design of passing loops

Issue

Submitters raised concerns about the design and location of passing loops. This included concerns about the passing loop and siding proposed south of Leeches Creek Road, whether it would stay in the same location in the detailed design, and how it is known that extra clearing is needed.

Submission numbers

SE-48700711, SE-48700736

Response

As described in section 6.2 of the Preferred Infrastructure/Amendment Report, following further consultation with landowners and other relevant stakeholders, the locations of the crossing loops have been amended to avoid the need to divert public roads (specifically Brooks Road, Nalders Access Road and Cains Crossing Road) and move them further away from residential dwellings. These changes would minimise the potential impacts of constructing and operating the loops, particularly in relation to amenity and access. In addition, many of the proposed new locations are within flatter areas, which would require less earthworks and associated construction traffic movements for construction.

The construction footprint has been established based on the proposed locations for the crossing loops, as described in the Preferred Infrastructure/Amendment Report. During the detailed design, the final location of all crossing loops, including the Balladoran crossing loop (located south of Leeches Creek Road), would be confirmed; however, it is currently envisaged that these locations would not substantially change.

7.3.4 Fencing

7.3.4.1 Design of fencing

Issue

Submitters raised concerns about the fencing that would be provided, including the design and standards. Issues raised included:

- The fencing design and standard must be adequate to protect cattle and calves, horses, sheep and lambs, feral animals, kangaroos, emus, and pigs from trains, and allow for native fauna movement
- Fencing design is vitally important and must be determined through engagement
- How will boundary fences be designed?

- ARTC has misrepresented some fencing on their fact sheet. This needs to be addressed (a four plain wire fence is not a ring-lock plus barb).

Submission numbers

SE-48698995, SE-48739207, SE-48700736

Response

A response to issues raised about fencing design is provided in section 7.2.5 of the EIS Response to Submissions Report.

The error in the fact sheet has been rectified and the fact sheet was reissued in October 2022. The caption under the photograph now states 'Image for reference purposes only. Subject to detailed design.' The fact sheet is available at **inlandrail.wpenginepowered.com/wp-content/uploads/2021/09/program-wide-fencing-factsheet-oct-22-v2.pdf**.

7.3.4.2 Tree clearance and accountabilities

Issue

A submitter noted that landowners would need to clear trees around fences for 30 m because they cannot afford a tree to fall on a fence line and let stock on the corridor, putting people's life at risk to get the stock back.

Submission numbers

SE-48700736

Response

ARTC does not require landowners to clear vegetation on their own land where it adjoins a rail corridor. Any decision to undertake clearing on private land is the responsibility of the landowner.

7.3.4.3 Fencing of trees and paddocks

Issue

A submitter asked if new trees planted to mitigate the visual impact of the rail corridor would be fenced.

Submission numbers

SE-48700736

Response

A response to the issue of mitigating visual impacts is provided in section 9.12.3 of the EIS Response to Submissions Report. As described in section A7.6.2 of the EIS, and in accordance with mitigation measure LV2, an urban design and landscape plan would be prepared by a suitably qualified consultant in consultation with relevant stakeholders. This would identify the requirements for any vegetation screening and fencing.

Issue

A submitter noted that unless the land acquired along Goorianawa Road is fenced the whole paddock would be useless during and after construction. The submitter asks how this would be mitigated.

Submission numbers

SE-48698995

Response

As described in section 1.2.8 of the updated proposal description (see Appendix A of the Preferred Infrastructure/Amendment Report), as the proposal is a new rail corridor, fencing would be constructed along the rail corridor where it adjoins private land. The type of fencing would be discussed with landholders and road managers, and refined during detailed design.

7.3.4.4 Maintenance of fences

Issue

Submitters raised concerns about how fencing would be maintained. Issues raised included:

- Landowners do not want to be responsible for the maintenance of fencing
- Who would maintain boundary fencing between the rail corridor and private land?
- Who will be at fault when a tree falls on the fence and stock get on the track?
- Who would be accountable for damages if ARTC has not cleared a reasonable boundary along the corridor?
- What time frames there would be for repairing fences damaged from either native fauna busting through them or storms blowing trees across them?

Submission numbers

SE-48699459, SE-48700736, SE-48700711, SE-48698519

Response

As described in section 7.2.5 of the EIS Response to Submissions Report, ARTC would be responsible for maintenance of the rail corridor, including fencing. If shared rail corridor fencing is damaged by a landholder, the landholder would be responsible for any repairs. ARTC has comprehensive insurance coverage in relation to any potential public liability in the event of an incident in the rail corridor. ARTC has no requirement for adjoining landowners to hold insurance but encourages interested parties to seek their own advice on insurance, as appropriate.

In accordance with mitigation measure LP11, maintenance agreements would be established for fencing along the rail corridor where it adjoins private properties. The agreements would include protocols for reporting damage and arranging repairs of shared boundary fencing.

Rail corridor fencing would be subject to routine inspection and maintenance in accordance with ARTC's standard operating procedures.

Issue

A submitter asked who would maintain fences and gates on new roads in perpetuity. The submitter identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48700736

Response

In accordance with mitigation measure LP7, where changes to internal property access arrangements are required, ARTC would consult with landowners regarding alternative access arrangements and identify feasible and reasonable measures to minimise impacts on existing operational arrangements/properties.

Where new roads are required, ARTC would install fences and gates along them and landowners would be responsible for the ongoing maintenance of them.

New mitigation measure LP17 (see Appendix B of this report) commits ARTC to preparing a Consultation Protocol to inform landowners and provide clarity of how ARTC will interact with them in relation to the design process, property changes, acquisition steps and processes, with the aim of reaching agreement on these matters.

7.3.5 Operation and maintenance

7.3.5.1 Loading regional goods onto the train

Issue

A submitter noted that there does not appear to be a proper assessment of what goods could be loaded on the train from regional Australia, and the statement that the trains could be loaded at points along the track appears to be untrue. The submitter notes that there appears to be no plan to load trains with regional goods. If such a plan existed, it would include a cost and benefit analysis of whether the train should go via Coonamble to be closer to all the grain produced in that region.

Submission numbers

SE-48695793

Response

A response to the issue of movement of regional goods on Inland Rail is provided in section 10.1 of the EIS Response to Submissions Report.

A response to the issue of economic analysis of a route via Coonamble is provided in section 4.1.1 of the EIS Response to Submissions Report.

As noted in section 6.2.1 of the EIS Response to Submissions Report, developing and facilitating access to existing and new regional intermodal terminals/freight hubs does not form part of the scope of the proposal for which approval is sought. ARTC would continue to engage with key stakeholders and the private sector with regard to the relationship between Inland Rail and regional intermodal terminals. This provides the opportunity for access to the rail network to occur within the regions.

7.3.5.2 Train speeds

Issue

A submitter asked if Inland Rail trains would only be averaging speeds of 80 km/hr.

Submission numbers

SE-48700736

Response

As described in section 1.6.1 of the updated proposal description (see Appendix A of the Preferred Infrastructure/Amendment Report), posted train speeds would vary according to axle loads, and range between 80 and 115 km/hr.

7.3.5.3 Maintenance of the proposal, grids and culverts

Issue

A submitter asked if ARTC maintenance staff would use new private roads to access the Inland Rail corridor. The submitter identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48700736

Response

A response to the issue of using private access roads for maintenance is provided in section 7.5.2 of the EIS Response to Submissions Report. ARTC acknowledges the submitters concern that their issue had not been addressed; however, considers that the previous response is adequate.

Issue

A submitter requested confirmation of responsibilities to clean grid crossings, noting that maintenance of grids is a big job and landowners will not necessarily have the equipment or resources to undertake this task. The submitter also asked how ARTC will close grids when stock jumps over them to access better pasture within the rail corridor.

Submission numbers

SE-48700736

Response

ARTC would maintain stock grids that are located on ARTC land. The maintenance of stock grids on private land will be the responsibility of the landowner.

Issue

Submitters raised concerns about maintenance of culverts, including that culverts should be kept functioning, free of debris and sediment; and that culvert maintenance must be conducting according to transparent guidelines.

Submission numbers

SE-48699724, SE-48699459

Response

A response to the issue of maintaining culverts is provided in section 7.5.2 of the EIS Response to Submissions Report.

7.4 The project – construction

7.4.1 Source of construction materials

7.4.1.1 Borrow pits

Issue

A submitter noted that the EIS identified borrow pits for the supply of soil and gravel for the proposal. The submitter noted that since then, they have had a request by the contractor, via ARTC, to investigate a potential borrow pit on their property. The submitter expressed concern that ARTC is planning to use more borrow pits than were initially identified in the EIS.

Submission numbers

SE-48699724

Response

The proposal, for which approval is being sought, only includes four proposed borrow pits. Construction of the proposal would require a range of materials, as described in section A8.10.2 of the EIS and section 2.10.2 of the updated proposal description (Appendix A of the Preferred Infrastructure/Amendment Report). The volumes of materials estimated are preliminary and would be further refined during detailed design. The final materials supply strategy would be confirmed by the construction contractor(s) during construction planning. Subject to any additional approvals required, this may include commercial quarries or borrow pits not identified in the EIS and Preferred Infrastructure/Amendment Report.

7.4.1.2 Quarries

Issue

A submitter requested that all quarries that supply gravel and ballast to the project, including private landowners' contributions, be included in the planning approval.

Submission numbers

SE-48699724

Response

As described in section A8.10.2 of the EIS, construction of the proposal would require a range of materials. Where fill or other material is sourced from a commercial quarry, the supply of this material would be undertaken in accordance with the approval for that quarry. Similarly, if material is sourced from a private landowner, the necessary approvals would need to be obtained prior to removal of any material.

7.4.1.3 Source of fill material

Issue

A submitter noted that the source of fill material for the proposal had not been confirmed.

Submission numbers

SE-48668962

Response

As described above construction of the proposal would require a range of materials and the final materials supply strategy would be confirmed by the construction contractor(s) during construction planning.

7.4.2 Construction methodology

7.4.2.1 Design of haul roads

Issue

Submitters requested that the proposal be amended to include detailed design of haulage roads. The submitters noted that haul roads would cause damage, change water flows and need top dressing. Haul roads need to be robustly constructed and located within the rail corridor. A submitter identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48700736, SE-48668962

Response

ARTC acknowledges the submitters concern that their issue had not been addressed. While ARTC believes adequate responses were provided to these issues, further consideration is provided below.

Subject to approval of the proposal, the detailed design (including the design of haul roads) would be prepared in accordance with the mitigation measures provided in Appendix B of this report and the conditions of approval. Haul roads would be designed to the appropriate standard and to suit the existing ground conditions (such as soft or loose soils). This would minimise the potential for impacts to surrounding land.

Materials (including fill and water) required for construction of the proposal are described in section 2.10.2 of the updated proposal description (see Appendix A of the Preferred Infrastructure/Amendment Report). The estimated volumes are for the whole proposal, including haul roads.

7.4.2.2 Maintaining roads

Issue

Submitters asked how rural roads would be maintained, noting that extensive construction traffic would continue for some time.

Submission numbers

SE-48698519, SE-48668962

Response

The EIS considers and assesses the potential impacts of construction on the local road network. Mitigation measure TT1 commits ARTC to avoiding or minimising the potential for impacts on the surrounding road and transport network, and property accesses, as far as reasonably practicable.

In accordance with mitigation measure TT11, a dilapidation survey would be undertaken of the made public roads within the proposed haulage routes, prior to and following completion of construction, and provided to the relevant road authority. Pavement condition monitoring would be carried out during works, as required. The dilapidation survey and monitoring would be undertaken by a suitably qualified and experienced person. Rectification measures would be implemented as needed, during and/or following completion of construction, to address any damage caused by construction.

7.5 Project development/route selection

7.5.1 Route selection process

7.5.1.1 Identified issues with the process

Issue

Concerns were raised about the approach of ARTC staff to the route selection process and how they fulfilled their obligations. Issues raised included:

- Concerns about the qualifications of staff to make decisions
- Concerns about the level of interference
- Whether ARTC staff acted with honesty and integrity, and assessed all route options thoroughly

- Concerns about who oversaw the process
- Whether reports can be relied upon
- Concerns about whether the change in staff during the process affected the outcomes.

Submission numbers

SE-48722712

Response

The N2N route selection process was undertaken by ARTC and teams of qualified and experienced professionals between 2016 and 2020. The then Commonwealth Department of Infrastructure, Transport, Regional Development and Communications and Treasury provided oversight of the process. Further information on the route history and option selection process is provided in the Preferred Infrastructure/Amendment Report and supporting Route Selection Summary Report.

7.5.1.2 Identified issues with information used in the route selection process

Issue

Submitters raised concerns about the information used in the route selection process. Issues raised included:

- The information used contradicted the *Melbourne–Brisbane Inland Rail Alignment Study* (ARTC, 2010)
- Some information was unknown at the time the MCA workshops were held
- Lack of detailed studies on all options to inform the selection process
- Inaccuracies and inconsistencies in route selection documents
- The information used was not consistent with other sources of information and published reports
- Feedback from landowners and the community, and later studies undertaken by ARTC and others, has demonstrated some of the information used was incorrect.

Submitters suggested that ARTC should return to the route selection process with more up-to-date information or an independent body should be appointed to undertake a review and identify a preferred route. This process should include the community and ensure all information is publicly available prior to any decisions being made. Some submitters identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48741986, SE-48695774, SE-48741961, SE-48744210, SE-48700736, SE-48722712, SE-48695793, SE-48699459

Response

ARTC acknowledges the submitters concern that their issue had not been addressed. While ARTC believes adequate responses were provided to these issues, further consideration is provided below.

Inland Rail has undergone a progressive route development and selection process since 2006, each stage refining the focus on what is required to deliver the Inland Rail program. The *Melbourne to Brisbane Inland Rail Alignment Study* (ARTC, 2010) effectively established the Inland Rail route, although it has undergone further refinements in the years since.

The process of route selection is detailed in the Route Selection Summary Report (Appendix B of the Preferred Infrastructure/Amendment Report). Section 1.1.1 of the Route Selection Summary Report summarises each of the key phases of Inland Rail development, including the Narromine to Narrabri section. The process was informed by a range of investigations and consultation with the community. Between 2016 and 2020, the key route selection phases for the Narromine to Narrabri section was informed by broad range of field investigations and specialist assessments (see section 4.3 of the Route Selection Summary Report). This meant that the information used was refined throughout the process. Consistent with other infrastructure projects, the assessments were undertaken in a staged manner to provide relevant information for the MCA workshops, generally as follows:

- Phase 1 (2016–2017):
  - Desktop assessments for noise and vibration, air quality, non-Indigenous heritage, utilities, existing road and rail network, land use and property and agriculture

- Targeted site surveys for biodiversity, Indigenous heritage, flooding and hydrology and geotechnical and soils (including testing and laboratory analysis).

- Phase 2 (2018–2020)
  - Desktop assessments for noise and vibration, air quality, non-Indigenous heritage, utilities, existing road and rail network, land use and property and agriculture
  - Further detailed surveys for biodiversity, Indigenous heritage, flooding and hydrology, land use and property and geotechnical and soils (including testing and laboratory analysis).

As described in section 4.2 of the Route Selection Summary Report, consultation with the community and key stakeholders commenced in 2015. This enabled local knowledge to be collected and considered in the options development and route selection processes. ARTC conducted extensive rounds of public consultation for the Narromine to Narrabri section of Inland Rail, particularly in the periods March to May 2017, December 2017 to November 2018, and ongoing from August 2019 through to October 2020. The consultation, which focused significantly on understanding landowner and community concerns about the 2016 concept alignment and route options proposed (see Table 4.4 of the Route Selection Summary Report for further information).

The process was comprehensive and ARTC does not consider that revisiting the route selection process is warranted. The conduct of any form of independent review is a matter for the Australian and NSW governments.

7.5.1.3 Identified issues with route selection summary reports

Issue

Submitters raised concerns about information in the *Inland Rail Route History 2006 – 2021* (ARTC, 2022) (available at: **Route history of Inland Rail 2006-2021 - Inland Rail (artc.com.au)**) and the Route Selection Summary Report (Appendix B of the Preferred Infrastructure/Amendment Report). Issues raised included:

- Reports were only produced after inconsistencies and discrepancies with the consultation process became apparent and were questioned
- Information presented in the reports was misleading as not used in the original MCA processes
- Sources for the information are not provided.

Submission numbers

SE-48741961, SE-48722712, SE-48744210

Response

The reports were prepared to describe the process of route selection undertaken between 2006 and 2021, to assist the community and other key stakeholders understand the process. The technical information used in the reports was sourced from each of the MCA workshop reports. Sources of the technical information, as relevant, are provided in the individual MCA reports. Figures used in the reports were graphical representations of the technical information used in each MCA and the technical information was not amended.

7.5.1.4 Consideration of the Narrabri alternative alignment

Issue

Submitters stated that the Narrabri alternative route has not been assessed in the Preferred Infrastructure/Amendment Report. This was considered to contradict the letter from DPE to ARTC that stated: '*The PIR must also provide appropriate justification and information on the design of the project and alternative rail alignments considered, particularly in proximity to the towns of Narromine and Narrabri, where substantial residual flooding impacts are predicted, and how these alternatives were analysed to inform the selection of the preferred option. Design alternatives must also be provided demonstrating how residual flood impacts can be reduced.*'

Submitters stated that ARTC's claim that option 502 follows the Narrabri alternative route is incorrect. They requested that an independent assessment of the Narrabri alternative alignment compared with the proposed route be undertaken.

Submission numbers

SE-48701472, SE-48702712, SE-48736241, SE-48695740, SE-48656976, SE-48688222

Response

As described in section 3.3.1 of the Preferred Infrastructure/Amendment Report, the Planning Secretary directed ARTC to provide a preferred infrastructure report to include (amongst other matters) justification and information on the design of the project and alternative rail alignments considered, particularly near the towns of Narromine and Narrabri, and how these alternatives were analysed to inform the selection of the preferred route. Further information on the route history and option selection process is provided in section 5 of the Preferred Infrastructure/Amendment Report and supporting Route Selection Summary Report (Appendix B of the Preferred Infrastructure/Amendment Report). This includes the justification for the preferred alignment selected.

Section 3.3 of the Route Selection Summary Report provides a discussion of the Narrabri alternative alignment, and its relationship to options considered (including option 502) as part of the route selection process. A response to the suggestion that the route selection process be revisited is provided in section 7.5.1.2 of this report.

7.5.2 Community engagement during route selection

7.5.2.1 General community engagement

Issue

Concerns were raised that community engagement during the route selection process was insufficient, unclear, and disadvantaged residents who were informed of the change late in the project planning lifecycle. Submitters suggested that ARTC has not listened to the community and should revisit the route selection process.

Submission numbers

SE-48741961, SE-48700736, SE-48722712

Response

A response to issues raised about community engagement during route selection is provided in section 7.7.2 of the EIS Response to Submissions Report.

A response to the suggestion that the route selection process be revisited is provided in section 7.5.1.2 of this report.

Issue

The submitter raised concerns that ARTC has refused to allow questions in Community Consultative Committee (CCC) meetings regarding route alignment changes. ARTC has refused to engage the community on the issue and it remains an ongoing area of conflict.

Submission numbers

SE-48741961

Response

The Narromine to Narrabri CCC was formed in January 2019 for the purpose of the EIS and reference design development process based on the study area and SEARs. The CCC chairperson advised the CCC members that it was not the appropriate forum to raise concerns about historic route selection locational decisions made prior to the formation of the CCC.

7.5.2.2 Engagement about specific route options

Issue

Submitters raised concerns about the consultation with landholders regarding the decision for an eastern alignment at Narromine. Specific concerns included:

- In August 2017 a landowner was told (and shown maps) that the preferred route would be located to the west of Narromine, that landowner agreements were in place, and that the eastern option was not being considered
- A landowner was told that where the proposal crosses Webb siding outflow of the Macquarie River that the entire section would be bridged and this has now been replaced by earth embankments with much shorter lengths of bridges
- Failure to consult with key areas of the community about the change to an eastern alignment at Narromine

- No explanation as to why they expanded the study areas without consultation and informing the Commonwealth
- Why it is appropriate to consult landowners to the west of Narromine prior to the change but only consult landowners to the east after the change
- No consideration of the community's wishes and feedback.

They also identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48741961, SE-48741986, SE-48668962

Response

ARTC acknowledges the submitters concern that their issue had not been addressed. While ARTC believes adequate responses were provided to these issues, further consideration is provided below.

As noted in section 7.7.2 of the EIS Response to Submissions Report, the proposal study area with the route east of Narromine was announced on 30 November 2017 by the (then) Australian Minister for Infrastructure and Transport. Following this announcement, ARTC ran a print and radio campaign and attempted to contact all landowners in the study area via either phone, email or letter. Community information sessions were held in mid-December 2017, which included a session in Narromine where 185 people attended. While all attempts were made, ARTC acknowledges that not all landowners within the study area or the previous concept alignment to the west of Narromine may have been contacted directly before the community information sessions in mid-December 2017. ARTC has since met with, or offered to meet, with all landowners within the study area as part of the route option assessment, with face-to-face meetings occurring between February 2018 and July 2019.

This consultation enabled local knowledge to be collected and considered in the options development and route selection processes. Over this time, the reference design evolved and involved many iterations and refinements, incorporating a range of considerations at each stage. Key environmental issues were examined throughout the design development process. As described in section 7.7.1 of the EIS Response to Submissions Report, the option selection and design process took into account the issues raised during consultation with relevant stakeholders, and the findings of environmental and engineering investigations.

Issue

ARTC told the CCC they had done MCA reports on options 201 to 205 and it would cost too much to refurbish the Coonamble–Gilgandra line to Inland Rail standard. The submitter suggested that this was incorrect information given to the community.

Submission numbers

SE-48700736

Response

As described in section 3.3.1 of the Preferred Infrastructure/Amendment Report, the Planning Secretary directed ARTC to provide a preferred infrastructure report to include (among other matters) justification and information on the design of the project and alternative rail alignments considered, particularly near the towns of Narromine and Narrabri, and how these alternatives were analysed to inform the selection of the preferred route. Further information on the route history and option selection process is provided in section 5 of the Preferred Infrastructure/Amendment Report and supporting Route Selection Summary Report (Appendix B of the Preferred Infrastructure/Amendment Report). This includes the justification for the preferred alignment selected.

Section 2.4.3 of the Route Selection Summary Report provides a discussion of the potential upgrade of the northern section of the Dubbo to Coonamble line, and its relationship to options considered (including options 201 to 205) as part of the route selection process. The report notes that all options to upgrade the existing rail line to meet Inland Rail standards were discounted due to increased travel times and additional cost.

Issue

Concerns were raised about the assessment for the Gilmours Road alternative including:

- The community was not consulted regarding the Gilmours Road alternative (option 109)
- Concerns regarding the Gilmour Road alternative and transparency in the process of developing this option.

Submission numbers

SE-48722712

Response

As described in section 2.4.2 of the Route Selection Summary Report (Appendix B of the Preferred Infrastructure/Amendment Report), the Gilmours Road alternative was developed in early 2017 and was discussed with landowners and the community in March and April 2017. Community feedback was considered in the May 2017 MCA workshop. This option formed the western boundary for the study area. Following further investigations and consultation, variants to the Gilmours Road alternative were also considered in the January 2019 workshop. Further information on consultation undertaken with stakeholders during the route selection process is provided in section 4.2 of the Route Selection Summary Report.

7.5.3 Options considered

7.5.3.1 Narrabri alternative route

Issue

Submitters raised concerns about the proposed route and noted that ARTC has not assessed the Narrabri alternative route, which has been submitted by civil engineers and members of the Narrabri community since March 2018. It was suggested that the alternative route would reduce the capital cost of the proposal while also reducing potential flooding and other environmental impacts. Some submitters quoted a hydrological study commissioned by the Narrabri Inland Rail Concerned Residents Group. Other submitters expressed concerns that the proposed route does not efficiently connect Inland Rail with the proposed Inland Port and the Special Activation Precinct.

Submission numbers

SE-48404215, SE-48558720, SE-48701472, SE-48695766, SE-48558216, SE-48702712, SE-48742458, SE-48738709, SE-48736241, SE-48698494, SE-48695740, SE-48656976, SE-48727707, SE-48701459, SE-48689983, SE-48698709, SE-48688222

Response

A response to this issue is provided in section 4.1.1 of this report.

7.5.3.2 Narromine eastern alignment

Issue

Submitters suggested that the alignment should revert to the originally proposed alignment to the west of Narromine. Issues identified with the decision to locate the route east of Narromine included flooding risks to Narromine and agricultural land, land use impacts to agricultural properties, and the presence of the Mitchell Highway and Dubbo to Narromine Line.

Submission numbers

SE-48668962, SE-48741986, SE-48695774, SE-48741961, SE-48744210

Response

The reasons the alignment to the east of Narromine was selected as the preferred route are provided in sections 2.4.1 and 3.2.1 of the Route Selection Summary Report (Appendix B of the Preferred Infrastructure/Amendment Report).

7.5.3.3 Box Ridge Road option

Issue

A submitter raised concerns that the Box Ridge Road option has not been properly considered. The submitter contends that this route is superior because it uses existing infrastructure and avoids loss of prime agricultural land. The submitter noted that the additional transit time of nine minutes is not significant compared to the loss of prime agricultural land and the social damage to people's lives.

Submission numbers

SE-48695793

Response

The reasons why the Box Ridge Road option (option 206) was not selected as the preferred route are provided in section 2.4.3 of the Route Selection Summary Report (Appendix B of the Preferred Infrastructure/Amendment Report).

7.5.3.4 Pilliga forests

Issue

Submitters raised concerns about the route through the Pilliga forests, including the potential for biodiversity, flooding, soil, erosion, Aboriginal heritage and other impacts. Specific biodiversity concerns included impacts on endangered ecological communities, hollow bearing trees, threatened species, fragmentation, weeds and pests, indirect impacts (e.g. light, noise and dust), animal strike, cumulative impacts due to forestry and the Narrabri gas project, and lack of suitable offsets.

Submission numbers

SE-48743960, SE-48230208, SE-48262961, SE-48665974, SE-48698957, SE-48742741, SE-48742975, SE-49346458

Response

A response to queries about why the proposal traverses the Pilliga forests is provided in section 6.8 of the EIS Response to Submissions Report. As noted in that response, the reasons why the alignment through the Pilliga forests was selected as the preferred route are provided in section 2.4.5 of the Route Selection Summary Report (Appendix B of the Preferred Infrastructure/Amendment Report).

7.5.3.5 Route via Coonamble

Issue

Submitters stated that the alignment should not bypass Coonamble, and the proposal should involve upgrading and refurbishing the existing Dubbo to Coonamble Line. It was considered that this would reduce land use and noise impacts to agricultural properties, minimise erosion and scour risks, and avoid high flood risk areas associated with the Warrumbungles watershed. It was also suggested that it would be cheaper to upgrade the existing line. Submitters raised concerns that no detailed economic or social assessments were undertaken, and assessments should consider the loss of prime agricultural land, impacts to landholders, and freight savings to farmers

A submitter suggested that there had not been an MCA for options 201 to 205. The submitter also suggested that other options to the west of Coonamble, where there are fewer flooding constraints, should have been considered.

Submission numbers

SE-48695793, SE-48698995, SE-48699724, SE-48700736, SE-48739207, SE-48722712, SE-48741986, SE-48698519

Response

The reasons why an alignment via Coonamble was not selected as the preferred route are provided in section 2.4.3 of the Route Selection Summary Report (Appendix B of the Preferred Infrastructure/Amendment Report). As described in the Route Selection Summary Report, options 201 to 205 were subject to an MCA assessment. Options to the west of Coonamble were not considered as they would have further increased travel time.

An economic assessment of using the Coonamble line is provided in Appendix C, D and E of the Route Selection Summary Report. While no specific social assessment on the use of the Coonamble line has been carried out, the social assessments undertaken for the proposal have considered the benefits and impacts to Coonamble in accordance with the relevant guidelines.

7.5.3.6 Using existing rail lines

Issue

Submitters suggested that the proposal should be moved to existing tracks where it would benefit towns (in particular, Gilgandra) and avoid impacts to agricultural lands. Suggestions included using existing lines between Narromine and Dubbo and between Dubbo and Curban (via Gilgandra). A submitter stated that this could bypass Dubbo. It was also suggested that option 101 be adopted as the preferred route. Some submitters identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48668962, SE-48700711, SE-48699459, SE-48428715, SE-48741961, SE-48741986

Response

ARTC acknowledges the submitter's concern that their issue had not been addressed. While ARTC believes adequate responses were provided to these issues, further consideration is provided below.

The reasons that an alignment via Gilgandra was not selected as the preferred route are provided in section 2.4.2 of the Route Selection Summary Report (Appendix B of the Preferred Infrastructure/Amendment Report).

7.6 Project evaluation

7.6.1 Project need and justification

7.6.1.1 Benefits do not outweigh the costs of the proposal

Issue

Some submitters suggested that the proposal should be rejected as the benefits do not outweigh the costs. Issues raised included:

- The proposal does not benefit inland communities in NSW
- The proposal bypasses key regional localities
- Not all of NSW would benefit and prosper from the Inland Rail investment
- The losses outweigh the gains for this greenfield route
- The proposal is not in the public interest and the project should not be approved.

Submission numbers

SE-48700711, SE-48698995, SE-48700736, SE-48732462, SE-48741961, SE-48743960, SE-48668962

Response

The need for, and strategic context to, the development of Inland Rail is described in chapter A5 of the EIS. The Australian Government has a clear commitment to developing Inland Rail, which has been identified as one of 15 major infrastructure projects to be prioritised for approval under a bilateral arrangement between the Australian, state and territory governments.

ARTC is committed to working with local communities to meet their needs and deliver customer benefits. These opportunities will unfold as the proposal moves towards the commencement of construction. Responses to this issue are provided in section 4 of the EIS Response to Submissions Report.

Ernst and Young was engaged by the Commonwealth Department of Infrastructure, Transport, Regional Development and Communications to identify the sustained economic uplift flowing to the regions as a result of the operation of Inland Rail. Regional intelligence reports for each of the four study regions (Queensland, Northern NSW, Southern NSW and Victoria) have been produced as part of this study which are available at **inlandrail.gov.au/understanding-inland-rail/publications-and-reports.**

The approval or otherwise of the proposal is a matter for the NSW Minister for Planning.

7.6.1.2 Justification of the proposal

Issue

A submitter notes that a submission documented in section 7.6 of the EIS Response to Submissions Report stated that 'the rail line should terminate at Newcastle to reduce impacts on regional NSW and south-east Queensland'. ARTC ignored the comment, and the lack of approvals in NSW and Queensland, to plan to proceed to Brisbane regardless of impacts.

Submission numbers

SE-48732462

Response

The comment noted by the submitter was summarised in the EIS Response to Submissions report based on a submission made on the EIS. A response to the need for Inland Rail to connect Melbourne and Brisbane is provided in section 7.6 of the EIS Response to Submissions Report.

Issue

A submitter stated that the proposal could not be justified, as achieving a 24-hour transit time between Melbourne and Brisbane was not possible.

Submission numbers

SE-48699459

Response

As described in the *Inland Rail Programme Business Case* (ARTC, 2015), to meet market needs, a Melbourne to Brisbane transit time of under 24 hours is necessary to compete with road in the time-sensitive express market for inter-capital city freight. This primarily relates to non-bulk freight, comprising manufactured and retail goods largely transported in containers between capital cities and major regional areas, and the most significant demand segment likely to use Inland Rail for its entire length between intermodal terminals in Brisbane, Parkes, Melbourne, Perth and Adelaide.

7.6.1.3 Business case

Issue

Submitters raised a range of concerns about the *Inland Rail Programme Business Case* (ARTC, 2015), including:

- The report is obsolete
- The report was not subject to an audit
- The report will be eight years old in March 2023 and the information is out of date
- If there are changes to part of Inland Rail, the study would have to be redone
- The assumptions that underpin the business case are no longer correct
- If the proposal does not include the operation of 3,600-m trains, how can it be justified
- Table 17-2 Delivery Program stated the Narromine to Narrabri section would be delivered on 2 May 2022, and it is now likely that the EIS might not be determined until 2023
- Costs to the taxpayer and government have not been fully assessed and included
- The proposal must be placed on hold until a review of the business case can be completed.

Submitters also asked if a new business case would be prepared and if not, why not.

Submission numbers

SE-48700736, SE-48732462, SE-48741961, SE-48722712, SE-48743960

Response

ARTC prepared a business case for Inland Rail in 2015 at the request of the Australian Government (*Inland Rail Programme Business Case* (ARTC, 2015)). 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 a large and complex program of works and the timeframes between development of the business case and detailed design and delivery are typical for major transport infrastructure projects in Australia. Further technical and environmental investigations, community consultation and reference design refinements are required to define the program's final scope, schedule and cost.

Internal and external reviews of Inland Rail's scope, schedule and cost are undertaken on a regular basis. In October 2022, the Australian Government announced an independent review of Inland Rail—a commitment made prior to the latest Federal election. The review will focus on:

- The process for selecting the Inland Rail route, including stakeholder consultation

- An assessment of the Inland Rail scope, schedule and cost
- The options for the new Inland Rail intermodal terminals to be built in Melbourne and Brisbane.

ARTC welcome this review as it provides us with an opportunity to ensure that these, and other factors, are taken into account as part of the process.

In light of the above, ARTC is not proposing to prepare a new business case.

7.6.1.4 Relationship with the Narrabri gas project

Issue

Concerns were raised about potential future use of the proposal by the Santos Leewood Facility, and that the preferred route was selected for the benefit of Santos.

Submission numbers

SE-49346458, SE-48665974

Response

The proposal and the Narrabri Gas Project are independent projects. Neither project relies on the other to justify its need. There are no current plans to transport gas or other materials from the Narrabri Gas Project on Inland Rail.

7.6.2 Costs, funding and economic viability

7.6.2.1 Cost-benefit analysis

Issue

Submitters raised concerns about the costs of the proposal and the impacts on taxpayers, whether these costs are justified and whether the project is viable overall. Some submitters identified that this issue was raised in their original EIS submission but was not addressed. Issues raised included:

- Costs are escalating such that the original evaluation is redundant
- The benefit cost ratio, which was 1.02 in 2015, is now negative
- There are alternative projects that would benefit society
- A low net present value indicates the project is inefficient
- There are many other projects with higher benefit cost ratios and large positive NPVs
- Costs have not been fully assessed
- The return on investment for taxpayers does not align with the original expected benefits
- The economic viability of the proposal is in doubt.

Submission numbers

SE-48741961, SE-48722712, SE-48699459, SE-48699724, SE-48744210, SE-48743960

Response

A response to the issue of financial viability of the proposal is provided in section 10.2 of the EIS Response to Submissions Report. ARTC acknowledges the submitters concern that their issue had not been addressed but consider the previous response to be adequate.

Issue

A submitter states that ARTC has not undertaken a proper cost-benefit analysis for the proposal. The submitter states that ARTC has relied on a multi-criteria analysis (MCA) that has enabled them to ignore costs, important assumptions, and unbiased economic modelling in order to generate skewed results.

Submission numbers

SE-48722712

Response

Responses to the issues of cost-benefit analysis and multi-criteria analysis is provided in section 6.6.5 of the EIS Response to Submissions Report.

7.6.2.2 Budget inclusions

Issue

A submitter queried what is included in the budget regarding bores, including:

- Has the proposal budgeted to replace bores that run dry or collapse from the impacts from vibration?
- How much would the public be entitled to, noting new bores can cost $100,000?

Submission numbers

SE-48700736

Response

A response to the issue about vibration impacts on bores is provided in section 9.8.3 of the EIS Response to Submissions Report. Based on the assessment no bores are predicted to be impacted and as such, no specific allowance has been allowed for in the budget for the proposal.

Issue

Concerns were raised about how grade separation would be funded in particular, given Transport for NSW has clearly stated that grade separations are required. Issues raised included:

- ARTC has falsely claimed cost savings on the basis that it has transferred the grade separation requirements to the federal and state governments
- This cost transfer will compromise the federal/NSW state governments ability to deliver the program and require NSW tax payers to pay for proposal costs.

Submission numbers

SE-48741961, SE-48744210, SE-48668962

Response

A response to Transport for NSW's concerns on the grade separations proposed as part of the proposal is provided in section 5.7.1.3 of this report. ARTC will fund the eight grade separations that form part of the proposal. As noted in the response to Transport for NSW, the federal and state governments have made financial commitments for a grade separation program. Transport for NSW is responsible for determining priorities and delivering this program, and they have indicated that a number of additional road–rail interfaces along the proposal site have been prioritised for grade separation.

Issue

What will the overall costs be to Inland Rail when you include the costs of acquisition and indirect impacts to agricultural properties.

Submission numbers

SE-4872212

Response

The final cost of the proposal would be determined upon completion of detailed design, construction and property acquisition.

7.7 Biodiversity

7.7.1 Adequacy of the assessment

7.7.1.1 Identification of species including *Eucalyptus microcarpa*

Issue

Submitters raised concerns about the identification of species as part of the biodiversity assessment, particularly *Eucalyptus macrocarpa*. Issues raised included:

- The reports failed to address or acknowledge the biodiversity issues raised. The mis-identification of *Eucalyptus microcarpa* as *E. pilligaensis* in the updated biodiversity development assessment report will result in a significant impact on listed EEC populations located along the alignment, borrow pits and other proposal sites
- The construction footprint needs to be surveyed by reputable ecologists for the presence of *E. microcarpa* and an assessment made of adjacent derived grassland regarding the grey box grassy woodland listing advice
- Failure to directly address the issues will result in significant and potentially irreversible harm to the local environment and matters of national environmental significance
- The misidentification of these species will result in the incorrect PCT being selected, and potential failure to recognise the occurrence of endangered ecological communities associated with *E. microcarpa*, i.e. Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-Eastern Australia (endangered), and Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Peneplain, Nandewar and Brigalow Belt South Bioregions (endangered), including derived grassland communities in close proximity to *E. microcarpa* as being derived grassland communities of these EECs.

A submitter identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48743960, SE-48744210

Response

ARTC acknowledges the submitter's concern that their issue had not been addressed. While ARTC believes adequate responses were provided to these issues, further consideration is provided below.

The updated biodiversity development assessment report was prepared by qualified and experienced ecologists who are accredited under the NSW *Biodiversity Assessment Method* 2020 (DPIE, 2020b) (the Biodiversity Assessment Method). DPE (Biodiversity, Conservation and Science Directorate) (BCS) reviewed the updated biodiversity development assessment report and accompanying data in detail.

It is noted that vegetation in the Narromine area is highly variable, with dominant species changing back and forth throughout the area. Survey data documented in the updated biodiversity development assessment report has identified that seven eucalypt species were recorded in the area south of the Macquarie River, comprising Pilliga Box (*Eucalyptus pilligaensis*), Inland Grey Box (*Eucalyptus microcarpa*), Fuzzy Box (*Eucalyptus conica*), Yellow Box (*Eucalyptus melliodora*), Bimble/Poplar Box (*Eucalyptus populnea*), River Red Gum (*Eucalyptus camaldulensis*) and Blakely's Red Gum (*Eucalyptus blakelyi*).

The plant community type classification for the updated biodiversity development assessment report included a variety of tasks, including review of regional mapping, soil mapping, landscape, topography, and species composition of plots. The survey methodology and classification has been developed in consultation with BCS.

Inland Grey Box (*Eucalyptus microcarpa*) occurs predominately south of Narromine and immediately north of the Macquarie River on the edges of the floodplain. Inland Grey Box was recorded in Webbs Siding Reserve, along Webbs Siding Road and Dappo Road where it occurred as the dominant tree species. It also occurred along Tomingley Road outside the construction footprint. North of Narromine, particularly in areas away from the floodplain and creeks, Inland Grey Box was rarely recorded, with Pilliga Box (*E. pilligaensis*) becoming more common within the construction footprint.

The occurrence of Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-Eastern Australia (endangered) and Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Peneplain, Nandewar and Brigalow Belt South Bioregions (endangered) has been identified in the proposal site within Webbs Siding Reserve, along Webbs Siding Road and Dappo Road. The BC Act occurrence of the community occurs near Narromine (see Table 5.3 and Figure 5.1a of the updated biodiversity development assessment report). The community was also identified as occurring north of the Macquarie River in the wider study

area. The EPBC Act occurrence of this community occurs in the same location (see Table 7.1 and Figure 7.1a of the updated biodiversity development assessment report). Changes to the construction footprint following the previous exhibition period resulted in additional areas of this EEC alongside Dappo Road being impacted. These have been included in the updated biodiversity development assessment report.

7.7.1.2 Identification of endangered ecological community populations

Issue

Submitters raised concerns about the use of incorrect plant community types (PCT) and failure to recognise endangered ecological communities (EECs). They contended that the reports failed to identify EEC populations of Fuzzy Box on alluvial soils of the Darling Riverine Plains and Grey Box Grassy Woodlands located within Webbs Siding Reserve, Mitchell Highway, Pinedean Road and the property 'Craigea Lee'. These populations, and any associated derived grasslands, will be highly impacted by the proposal and must be included in the credit requirement calculations.

A submitter identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48743960, SE-48744210

Response

ARTC acknowledges the submitter's concern that their issue had not been addressed. While ARTC believes adequate responses were provided to these issues, further consideration is provided below.

Determination of EECs and associated PCTs has been completed by experienced and qualified ecologists. The classification of vegetation to nominated PCTs and EECs was based on the results of plot surveys completed in accordance with the Biodiversity Assessment Method. At these locations it was determined that Inland Grey box woodland was the more appropriate EEC and offsets have been calculated under that designation. BCS has reviewed all EEC mapping in detail and has not identified any concerns with the updated biodiversity development assessment report findings.

7.7.1.3 Concerns about vegetation mapping

Issue

Submitters raised concerns about vegetation mapping, noted that the Webbs Siding Reserve vegetation mapping is very coarse, labelling most ecosystem as PCT 248 – Mixed box eucalypt woodland on low sandy loam. The local community are aware of a minimum of four distinct woodland communities within the 100-ha reserve, three are EEC communities, including two matters of national environmental significance. The mapping needs to meet BAM 2020 specifications. The mapping does not identify remnant derived grassland and woodland communities, and grasslands have been included in '0- Crop and/or introduced grassland'.

A submitter identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48743960, SE-48744210

Response

ARTC acknowledges the submitter's concern that their issue had not been addressed. While ARTC believes adequate responses were provided to these issues, further consideration is provided below.

Within Webbs Siding Reserve, the proposal occurs on the eastern side of the reserve. Both Grey Box and Fuzzy Box are known to occur from PCT 248 and were recorded in the wider patch as were other more commonly recorded species including Poplar Box. The occurrence of this PCT within the proposal site has been mapped as commensurate with the both the NSW BC Act and EPBC Act listing of Inland Grey Box Woodland and within the proposal site is dominated by Poplar Box and Inland Grey Box (see Table 5.3, Figure 5.1a, Table 7.1 and Figure 7.1a of the updated biodiversity development assessment report (Technical Report 1)).

White Box was also record as scattered trees in Webbs Siding Reserve during targeted field surveys in 2018 to 2010. These occurred on the western side of the reserve, and none occurred within the proposal site where it occurs in Webbs Siding Reserve.

Areas of crop and/or introduced grassland have been assigned where field surveys have confirmed the species diversity or where the land categorisation process could reliably assign land to Category 1 (see Figure 3.1 of

Technical Report 1). This methodology was endorsed by BCS. Where there was any doubt about whether native or introduced grassland occurred, a conservative approach was adopted and it was assigned to a native grassland. Wherever access was available, field surveys were completed according to the Biodiversity Assessment Method. These were not limited to rapid field assessments. Instead, these involved detailed vegetation integrity plots in accordance with the Biodiversity Assessment Method (DPIE, 2020b).

Derived grasslands have been categorised in accordance with the Biodiversity Assessment Method, which requires assignment to the original woodland or forest PCT from which the derived PCT has developed. This process was completed in consultation with BCS. It is noted that a number of derived grassland PCTs that were originally included in EIS biodiversity development assessment report have subsequently been removed from use by BCS. Where these occurred, the native grassland areas have been included as a derived native grassland of the adjacent woodland or forest PCT.

Based on the survey findings of experienced and qualified ecologists, the mapping presented in the updated biodiversity development assessment report is considered to be accurate and the offset obligations have been assessed appropriately.

Further information is provided in the response to BCS's submission in section 5.3.1 of the EIS Response to Submissions Report.

7.7.1.4 Other concerns

Issue

Other concerns raised about the biodiversity assessment included:

- The lack of incorporation of community information on biodiversity sightings, specifically Diamond Firetail Finch and Grey Crown Babblers at the Webbs Siding Reserve
- The ecological assessment is deficient and does not adequately identify the scope of the impacts of the proposal on biodiversity.

The submitter identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48744210

Response

ARTC acknowledges the submitter's concern that their issue had not been addressed. While ARTC believes adequate responses were provided to these issues, further consideration is provided below.

ARTC appreciates the input provided by the submitter into community sessions. The updated biodiversity development assessment report was prepared by accredited biodiversity professionals in accordance with the Biodiversity Assessment Method (DPIE, 2020b). The report included discussion of the Diamond Firetail and the Grey Crowned Babbler (identified during site surveys at multiple locations). Small woodland birds, such as the Diamond Firetail and the Grey Crowned Babbler, are classed as predicted threatened fauna species. In accordance with the Biodiversity Assessment Method, these species are assumed to occur throughout the study area (see Table 6.5 and Appendix C of the updated biodiversity development assessment report).

Impacts to both species are allocated an ecosystem credit type under the Biodiversity Assessment Method. Impacts to these species have been offset through this mechanism.

Based on the survey findings by experienced and qualified ecologists, the mapping presented in the updated biodiversity development assessment report is considered to be accurate and the offset obligations have been assessed appropriately.

ARTC is committed to minimising the potential impacts of the proposal and is investigating opportunities to reduce actual impact areas, where practicable, and undertake additional targeted searches to better confirm the impacts on threatened species, particularly those that are assumed to be present. For example, additional targeted flora surveys were conducted in the Pilliga forests in March 2022, with the results of these surveys incorporated into the updated biodiversity development assessment report (see section 3.1 of this report) and credit calculations.

Although the proposal would impact on biodiversity values, including those noted in submissions, a range of mitigation measures have been proposed to minimise potential impacts as far as practicable. In particular, and in accordance with mitigation measures BD1 and BD2, the potential impacts on biodiversity would continue to be minimised during detailed design and construction planning. In accordance with mitigation measure BD1, vegetation clearing would be limited to the minimum necessary to construct the proposal and allow for its effective operation.

Mitigation measure BD2 provides that where appropriate, facilities within the multi-function compounds and temporary workforce accommodation would be located to further minimise or avoid impacts on native vegetation, where practicable.

7.7.2 Construction impacts

7.7.2.1 Impacts on the Pilliga forests

Issue

Submitters raised concerns that the proposed route will significantly alter the surface hydrology in the Pilliga forests, further endangering the endangered community Pilliga Outwash Ephemeral Wetlands in the Brigalow Belt South Bioregion. This community has a very restricted distribution and impacts on this community have not been addressed in the EIS. The additional work undertaken on addressing flooding impacts has not addressed this issue.

Submission numbers

SE-48230208, SE-48262961, SE-48698957, SE-48738707

Response

The Pilliga Outwash Ephemeral Wetlands in the Brigalow Belt South Bioregion EEC (listed under the BC Act) is located about 5 km downstream (north-west) of the alignment through the Pilliga forests at their closest point. These gilgai wetlands rely on rainfall events for their occasional inundation. The proposal would not prevent rainfall in the wider catchment reaching the wetlands. The Pilliga section of the proposal includes many bridges and culverts to allow ephemeral water to cross under the rail corridor during storm or flood events. An assessment of impacts on aquatic values is provided in sections 9.3.2 and 10.2.7 of the updated biodiversity development assessment report.

Issue

Submitters raised concerns that the endangered Koala, Black-striped Wallaby and the vulnerable Rufous Bettong are very susceptible to strike by vehicles. Disrupting movement patterns in the forest raises the extinction threat for these species. Mitigating actions, bridges, culverts and canopy bridges have not properly addressed these issues.

Submission numbers

SE-48230208, SE-48262961, SE-48738707

Response

Responses to the issue of impacts to fauna species and habitats is provided in section 9.1.2 of the EIS Response to Submissions Report.

7.7.2.2 Impacts of clearing

Issue

A submitter raised concern about impacts on the only known local stand of the threatened Weeping Myall species, noting that this stand has survived and thrived, only due to same family ownership and management, for about 85 years.

Submission numbers

SE-48699459

Response

The updated biodiversity development assessment report identifies that in total, 6.5 ha of Weeping Myall Woodland would be impacted by the proposal, including some at this location. The vegetation to be removed at this location occurs on the eastern and southern edges of a larger patch that extends to the north-west of the proposal site. The proposal would result in new edge effects along the boundary as a consequence of this clearing, but would not result in substantial fragmentation or reduction in patch size at this location. Clearing along the southern boundary of the patch is for a powerline realignment. While it is assumed for the purposes of the assessment that all vegetation would be removed in this area, it is likely that at least the ground and shrub layer would be able to regrow within much of this area.

ARTC is committed to minimising the potential impacts of the proposal and is investigating opportunities to reduce actual impact areas, where practicable. A range of mitigation measures have been proposed to minimise such

impacts as far as practicable. In accordance with mitigation measures BD1 and BD2, the potential impacts on biodiversity would continue to be minimised during detailed design and construction planning. In accordance with mitigation measure BD1, vegetation clearing would be limited to the minimum necessary to construct the proposal and allow for its effective operation.

The proposed approach to identifying and managing offsets to mitigate the impact of vegetation clearing is described in section B1.5.1 of the EIS. Biodiversity offsets would be finalised in accordance with the NSW Biodiversity Offsets Scheme and in consultation with BCS. Further information on the Biodiversity Offset Credit process can be found at: **environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/about-the-biodiversity-offsets-scheme.**

Issue

A submitter suggested that additional clearing would be required for the proposed 30 private level crossings, new private access roads, fencing and drainage structures and questioned why these were not included in the construction footprint. They also suggested that about 300 private level crossings would be required and that meant additional vegetation clearing.

Submission numbers

SE-48700736

Response

Clearing for the 30 private level crossings (including adjacent roads to access the level crossing) and drainage structures have been included in the construction footprint for the proposal. No additional private level crossings are required, or would be permitted to be constructed (refer to section 7.6.5 of the Preferred Infrastructure/ Amendment Report for further information about the approach to private property access). The associated fencing is also included in the construction footprint, and impacts on vegetation and habitats included in the impact and credit calculations. The need for clearing on the private land side of any fences along the rail corridor will vary according to vegetation coverage and respective land use activities on each property. These would be subject to individual landowner decisions and approvals and have not been included in the calculations of vegetation clearing for the proposal.

7.7.2.3 Impacts on wetlands

Issue

A submitter notes that there are considerable biodiversity values in a community and government funded wetland restoration project undertaken at the head of the Backwater Cowal. The submitter raises concerns about potential impacts to this wetland including:

- Weed invasion from tiger pear (*Opuntia aurantiaca*)
- Sedimentation and soil erosion burying plants.

The submitter requests that a detailed study of the wetland area its potential threats be undertaken and that a plan is developed to mitigate adverse impacts.

Submission numbers

SE-48743208

Response

The updated biodiversity development assessment report assessed the potential for impacts on areas adjacent to the proposal through the spread of weeds, including weeds of National Significance such as the Tiger Pear.

As noted in section B12.3.3 of the EIS, the *Biosecurity Act 2015* (NSW) provides a framework for the prevention, elimination and minimisation of biosecurity risks. The General Biosecurity Duty under the Act requires that a person who deals with a biosecurity risk, and ought reasonably to know it, must ensure (as far as reasonably practicable) that the risk is prevented, eliminated or minimised.

Further information on the potential impacts of weeds on biodiversity is provided in section B1.2.2 of the EIS and section 8.4 of the updated biodiversity development assessment report. A land use conflict risk assessment was undertaken in accordance with the *Land Use Conflict Risk Assessment Guide* (DPI, 2011) and was included in Appendix A of the EIS Agriculture and land use assessment (Technical Report 11). This identifies that planning, construction and operation activities may create the possibility of introducing or spreading weeds, pests and

diseases onto a property. In addition, soil disturbance could reduce competition against current weeds and necessitate increased control costs.

In accordance with mitigation measures BD8 and LP18, the biodiversity management plan, which would be implemented during construction as part of the CEMP, would include measures to manage biosecurity risks in accordance with the *Biosecurity Act 2015*.

A framework CEMP was provided as Appendix F of the EIS. This provides the requirements for the required management plans and measures to be implemented during construction, including soil erosion and biosecurity measures.

7.7.3 Operation impacts

7.7.3.1 Fauna connectivity

Issue

Submitters raised concerns about impacts on wildlife movement. Concerns raised included:

- The proposal would be an impassable barrier between the Warrumbungles and the plains on the other side, which would be a problem for animals looking for refuge during droughts or fire conditions
- Fencing will create biodiversity fragmentation
- Landholders will need to clear extra vegetation to keep fences safe, when combined with the noise and vibration from the trains this will block native animal movements
- The proposal would represent a disruption to established wildlife corridors that are locally owned and managed, and provides limited measures to allow for the movement of local wildlife.

Submission numbers

SE-48700736, SE-48699459

Response

An assessment of existing wildlife connectivity is provided in sections 4.4.4 and 8.2 of the updated biodiversity development assessment report and preliminary fauna connectivity strategy (Appendix J of the updated biodiversity development assessment report). These include detailed discussions on local and regional corridors. An assessment of potential impacts on connectivity is provided in section 10.2.2 of the updated biodiversity development assessment report. Bridges and culverts will provide movement opportunities for fauna, and in certain locations additional measures such as canopy bridges are also recommended.

The impacts of operational noise and vibration on wildlife movements has been considered in section 9.4.1 of the updated biodiversity development assessment report.

Responses to the issues of wildlife connectivity and fencing is provided in section 9.1.2 of the EIS Response to Submissions Report.

Clearing of vegetation on private land is the responsibility of landholders.

7.7.4 Mitigation

7.7.4.1 Noxious weeds

Issue

Submitters raised concerns about the controls or prevention that will be provided to stop the spread of noxious weeds from vehicles, materials and landfill along the corridor. In particular, Weeds of National Significance, such as Hudson Pear, as well as Bathurst burr, Noogoora and Galvanised burrs and Boxthorn. A submitter identified that this issue was raised in their original EIS submission but was not addressed.

Information was requested regarding the action plan for the control of weeds both during construction and for the years following construction, and how will this be implemented and reviewed. It was also recommended that Local Land Services and agronomists be consulted.

Submission numbers

SE-48743960, SE-48700736, SE-48739207, SE-48668962; SE-48700711

Response

ARTC acknowledges the submitters concern that their issue had not been addressed. While ARTC believes adequate responses were provided to these issues, further consideration is provided below.

As noted in section B12.3.3 of the EIS, the *Biosecurity Act 2015* (NSW) provides a framework for the prevention, elimination and minimisation of biosecurity risks. The General Biosecurity Duty under the Act requires that a person who deals with a biosecurity risk, and ought reasonably to know it, must ensure (as far as reasonably practicable) that the risk is prevented, eliminated or minimised.

Further information on the potential impacts of weeds on biodiversity is provided in section B1.2.2 of the EIS and section 8.4 of the updated biodiversity development assessment report. A land use conflict risk assessment was undertaken in accordance with the *Land Use Conflict Risk Assessment Guide* (DPI, 2011) and is included in Appendix A of the EIS Agriculture and land use assessment (Technical Report 11). This identifies that planning, construction and operation activities may create the possibility of introducing or spreading weeds, pests and diseases onto a property. In addition, soil disturbance could reduce competition against current weeds and necessitate increased control costs.

In accordance with mitigation measures BD8 and LP18, the biodiversity management plan, which would be implemented during construction as part of the CEMP, would include measures to manage biosecurity risks in accordance with the *Biosecurity Act 2015*.

A framework CEMP was provided as Appendix F of the EIS. This provides the requirements for the required management plans and measures to be implemented during construction, including soil erosion and biosecurity measures.

7.7.4.2 Biosecurity

Issue

A submitter noted that ARTC and the NSW Government have an opportunity to provide a biosecurity line along the Inland Rail corridor. Installation of an exclusion fence along the corridor would be beneficial in the control of feral animals and would be a better design to prevent incidents of straying animals accessing the rail corridor and less likelihood of trains colliding with animals.

Submission numbers

SE-48700711

Response

Fencing requirements have been considered in the fauna connectivity strategy provided in Appendix J of the updated biodiversity development assessment report. The strategy notes that while fencing is useful in minimising mortality of fauna as a result of vehicle strike, it can also increase barrier effects. Consequently, an approach has been proposed which provides fencing in the vicinity of fauna connectivity structures and stock fencing in private properties. The final locations and extents of fencing would be determined during detailed design in consultation with the relevant stakeholders. The creation of an exclusion fence for the control of feral animals along the rail corridor is not part of the proposal.

7.7.4.3 Biodiversity offsets

Issue

A submitter questioned where the offsets are coming from and why was this not planned and reported. They noted that other projects were having difficulty finding suitable offsets and questioned whether ARTC would also be able to offset the impacts of the proposal. The submitter identified additional land (for access roads and clearing along fence lines on the landholder's side, and fire trails in the Pilliga) that would need to be cleared but has not been included in the EIS or Preferred Infrastructure/ Amendment Report. In addition, the costs and offsets for new fire access roads and buffers in the Pilliga forests have not been acknowledged in the EIS or the Preferred Infrastructure/ Amendment Report.

Submission numbers

SE-48700736

Response

Responses to the approach to biodiversity offsets is provided in sections 6.13 and 9.1.3 of the EIS Response to Submissions Report.

ARTC would not undertake clearing of trees on private property to protect fences and as such, would not be responsible for any associated offsets.

Any additional clearing of vegetation within State forests is a matter for consideration by Forestry Corporation of NSW.

Issue

Submitters raised concerns about the significant loss of hollow bearing trees, and that this has not been offset. They also questioned how the number of hollow bearing trees to be lost was calculated. Submitters noted that this is a significant residual impact on hollow bearing species in a forest where hollow numbers are already reduced by historic forestry.

Submission numbers

SE-48230208, SE-48262961, SE-48738707, SE-4870036

Response

It is acknowledged that the proposal would result in the removal of a large number of hollow bearing trees. Table 9.5 of the updated biodiversity development assessment report presents a detailed calculation of the loss of hollow-bearing trees, estimated based on the incidence of hollow-bearing trees in vegetation plots conducted in accordance with the Biodiversity Assessment Method. Table 13.1 of the updated biodiversity development assessment report presents the ecosystem credits (including hollow-bearing tree credits) required to offset this impact.

Issue

A submitter raised concerns that the reference to ecosystem credits (for offsets) means nothing to the community. The submitter wants to see the credits put back into the area and not traded out.

Submission numbers

SE-48700736

Response

ARTC acknowledges the submitter's concerns regarding the impacts of the proposal on local biodiversity and the potential location of biodiversity offsets. Biodiversity offsets would be finalised in accordance with the NSW Biodiversity Offsets Scheme and in consultation with BCS. ARTC is managing the offset strategy for the entire Inland Rail program, and has invited landowners within 100 km of the route in NSW to contact them regarding establishing a Biodiversity Stewardship Site so that ARTC can assist in generating and purchasing the appropriate credits in the local area. Where credits are not available for purchase or cannot be obtained in other ways (such as generation from an ARTC site), ARTC would make a payment into the Biodiversity Conservation Fund.

Biodiversity offsets are not required to exactly replicate the area of impact, which includes the wider vegetation patch in which the impacts occur; however, the offsets are required to take into account the landscape attributes of ecosystem and species credits within each subregion, including connectivity, patch size and areas of retained native vegetation before and after the effects of a proposal. Required ecosystem and species credits take these landscape features into account in the generation of required credits and how they can be sourced in accordance with the legislated offset rules set out in the Biodiversity Conservation Regulation 2017.

The matter of whether any particular area of land is used for agricultural, biodiversity offset or other lawful purposes will be a matter for the relevant landowner.

Further information on the Inland Rail biodiversity offset credit process is provided at: **environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/about-the-biodiversity-offsets-scheme.**

Issue

A submitter queried the number of Biodiversity Stewardship sites that ARTC has acquired in a 100-km radius of the proposal and whether ARTC will be able to achieve the amount required. There are not sufficient offsets of similar quality and extent to mitigate the effects of the proposal.

They also expressed concern that the money from biodiversity offsets from the proposal could end up in a bank with no benefit to the local community. The submitter asks if there will be an accountable independent monitor of offsets.

Submission numbers

SE-48700736

Response

Responses to the approach to biodiversity offsets are provided in sections 6.13 and 9.1.3 of the EIS Response to Submissions Report.

In accordance with the *Biodiversity Assessment Method* (DPIE, 2020b), Biodiversity Conservation Regulation 2017 and EPBC Act, ARTC will seek credits, and establish offsets for, similar vegetation affected by the construction of Inland Rail in NSW and generally within the same areas. This limits where stewardship sites can be located, what vegetation and habitats will be protected, and how the vegetation contributes to local and regional biodiversity values, such as wildlife corridors.

ARTC invited landowners within 100 km of the route in NSW to express interest in establishing a Biodiversity Stewardship Site so that ARTC can purchase the appropriate biodiversity credits. Since 2020, ARTC has assisted 20 landowners to prepare an application for a stewardship site on their property and has completed 11 credit purchases from previously established stewardship sites. ARTC has also completed the purchase of a property to generate credits for the proposal.

Where ARTC is unable to source suitable offsets for the proposal, they may seek to apply the variation rules for retirement of some ecosystem and species credits. Where credits are not available for purchase or cannot be obtained in other ways (such as generation from an ARTC site), another option would be for ARTC to make a payment into the Biodiversity Conservation Fund. The Biodiversity Conservation Trust, which manages the fund, must secure offsets in line with legislated offset rules set out in the Biodiversity Conservation Regulation. The Biodiversity Conservation Trust is required to meet any biodiversity offset credit requirement in a like-for-like manner. This is by retiring like-for-like credits, by funding conservation actions that are listed in the *Ancillary rules: Biodiversity conservation actions* (OEH, 2017) and benefit the threatened entity impacted, or by funding other conservation measures approved by the NSW Minister for Energy and Environment that directly benefit the entity impacted.

Further information on the biodiversity offset credit process for Inland Rail is provided at: **environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/about-the-biodiversity-offsets-scheme.**

7.8 Water resources

7.8.1 Construction impacts

7.8.1.1 Construction water use

Issue

Submitters raised concerns about construction water supply and sources. Issues raised included:

- There is no mention of the enormous amounts of water that would be required during construction
- The Preferred Infrastructure/Amendment Report does not provide a map of where the proposed groundwater bores would be or any details of depth or flow, or how much water would be required from each bore
- There was a length of time given for extraction but not a maximum volume planned to be taken
- Will additional bores be installed to those proposed in the EIS?

Submission numbers

SE-48698995, SE-48699724, SE-48700711

Response

As described in section A8.10.2 of the EIS, and based on preliminary construction planning, it is estimated that a total of about 4,635 mega litres (ML) of water would be required for construction. This would equate to an estimated average use of about 4.3 ML per day over the length of the proposal site.

As described in section A6.3.5 of the EIS, the viability of several potential construction water sources was investigated during the reference design process with consideration of the existing and possible future drought conditions. Extraction of groundwater from deep aquifers beneath the Great Artesian Basin was determined to be the preferred option, due to the availability of groundwater licences and the limited use of these aquifers by landowners.

As described in section B2.3.1 of the EIS, a total of 12 bore fields are proposed along the proposal site to provide construction water. These would be typically spaced about 25 km apart and indicative locations are shown in the updated Map Book The number of bores within each bore field would range from 4 to 10, with an average of about 7 bores in each bore field. At these bores, groundwater would be extracted from the following groundwater sources below the Great Artesian Basin:

- Lachlan Fold Belt Murray Darling Basin Groundwater Source (part of the NSW Murray Darling Basin Fractured Rock Groundwater Sources 2020 Water Sharing Plan)
- Gunnedah–Oxley Basin Murray Darling Basin Groundwater Source (part of the NSW Murray Darling Basin Porous Rock Groundwater Sources 2020 Water Sharing Plan).

The depth of the bores would range from about 110 to greater than 300 m below ground level.

In accordance with mitigation measure WR15, a bore field extraction plan would be prepared as part of the soil and water management plan. The extraction plan would be provided to DPE Water prior to construction of the proposed bore field bores. The plan would include information regarding the locations, water source, depth and proposed volumes of water take per year and over the life of the construction phase of the proposal for the proposed bore field bores, as well as any measures required to minimise the potential for impacts due to the extraction of groundwater for construction water.

Construction water supply options would continue to be explored during detailed design. As per mitigation measure WR1, any required approvals or agreements would be obtained prior to the use. The need for new groundwater bores would depend on the outcomes of this further investigation. It is likely that a combination of water supply options would be required to achieve the water demand.

7.8.1.2 Gilgandra Shire Council bores

Issue

Submitters raised concerns or had queries regarding the bores drilled in partnership with Gilgandra Council. Concerns and queries raised included:

- There has been a bore drilled less than 3 km from our property, and one in the village of Curban, which were drilled in partnership with Gilgandra Council for use on Inland Rail, that were not mentioned in the EIS
- These two bores are in areas where there are no irrigation bores used by landowners, just the lower volume stock and domestic bores
- Will ARTC only source water from the bores that Gilgandra Shire Council installed?
- Gilgandra Shire Council is now installing bores for the construction of Inland Rail. Why did ARTC not install these bores, and what conditions have been put in place for ARTC to use these bores?
- Gilgandra Shire Council has installed a bore on Box Ride Road and we are concerned this will impact our access to water
- The EIS noted that deep aquifer bores would be drilled for construction water to minimise the drawdown on shallow aquifers; however, the bores drilled by Gilgandra Council are not consistent with this
- We were told that bores would be beneath the Great Artesian Basin and to a depth of 1,000 m. If the depth of the bores is 300 m and pumping at irrigation levels then they will out compete local bores, and there are no reports on this.

Submission numbers

SE-48699724, SE-48700711, SE-48700736, SE-48746213

Response

As noted in the above response, the viability of several potential construction water sources for the proposal was investigated during the reference design process and extraction of groundwater from deep aquifers beneath the Great Artesian Basin was determined to be the preferred option. The depth of the bores would range from about 110 m to greater than 300 m below ground level. No bores are proposed at 1,000 m depth.

An assessment of the impacts to existing groundwater users was undertaken as part of the EIS. As described in section B2.3.4 of the EIS, there would be sufficient water available under a controlled allocation for the extraction of groundwater for construction water within the Lachlan Fold Belt Murray Darling Basin Groundwater Source and the Gunnedah–Oxley Basin Murray Darling Basin Groundwater Source.

In addition to the bores proposed as part of the proposal, Gilgandra Shire Council is currently working to develop a water bore legacy project, which could provide long-term benefits for the community and could also sell water to Inland Rail, from deep aquifers that limit competition with existing stock and domestic bores.

The availability of water for the proposal is a common interest point and an area that Gilgandra Shire Council identified it could play an important role in. Council is in the process of installing four test water bores focused on investigating opportunities. This includes the two bores noted in the submission responses. The relevant approvals have been obtained by Council. The establishment of water bores and extraction of water can only proceed following the relevant approvals being obtained, licences being granted, and viable water flows existing and being proven.

As per information provided by Gilgandra Shire Council in their *Water Bore Legacy Project – Neighboring Landholder Fact Sheet* (Gilgandra Shire Council, 2022) the most viable groundwater source in this area is the Southern Recharge Groundwater Source within the NSW Great Artesian Basin Groundwater Sources 2020 Water Sharing Plan. This is a deep aquifer that has very few existing licensed boreholes that extend to the required depths of between 180 and 260 m deep. Accessing groundwater at this depth range would limit interaction with existing licensed users. This depth range is consistent with that that proposed for the bores that would be installed for the proposal.

Should water extraction be viable, the bores would be commissioned and made available to construction contractors building Inland Rail on a cost recovery/full operational cost basis. Once the construction period is completed, the bores would be community infrastructure to use for community purposes. These uses include but are not limited to:

- Emergency water supply for firefighting
- Water supply for Council to undertake road maintenance
- Supplementary stock and domestic supply during drought or individual property issues such as equipment breakdown
- Community facility improvement such as improved water supply at a hall or recreation area.

Further information is provided on Gilgandra Shire Council's website **gilgandra.nsw.gov.au/Live/Works-Projects/Water-Bore-Legacy-project.**

7.8.1.3 Effects on groundwater supply

Issue

Submitters raised concerns about the effects of construction water use and associated impacts on groundwater supply and drawdown. Issues raised included:

- If the ARTC bores are installed at depths of 300 m they will out compete local bores
- All bore points in the area are sub-artesian and do not have a good supply. If ARTC decides to compete for water in the same aquifers it will restrict supply for stock and domestic use
- Drawdown from the proposed construction groundwater bores will have a detrimental effect on our water supply and there are no other options for permanent water
- Lowering of the water table could result in no water in some places
- ARTC has not adequately answered how the taking of construction water from groundwater sources will impact this resource for groundwater users
- If we lose our bore water supply our business will cease.

A submitter expressed concern that this issue had not been adequately addressed in the EIS Response to Submissions Report.

Submission numbers

SE-48700736, SE-48739207, SE-48699724, SE-48698995

Response

A response to the issue of effects on groundwater supply is provided in section 9.2.1 of the EIS Response to Submissions Report. ARTC acknowledges the submitter's concern that their issue was not adequately answered but believes the response provided in the EIS Response to Submissions Report addresses the issue of potential effects on groundwater supply.

7.8.2 Mitigation

7.8.2.1 Mitigating impacts on local groundwater supply

Issue

A submitter requested that the planning approval include a number of requirements to minimise impacts on groundwater supply. Requirements included:

- Maximum water extraction limits on groundwater for the proposal
- Mandated depth for those bores which are installed by ARTC
- Metering of all bores installed
- Baseline measurements and ongoing monitoring of landowner bores
- Establishment of triggers to stop impacts to local supply.

Submission numbers

SE-48699724

Response

Commitments to minimising the potential for impacts on groundwater (including groundwater supply) are defined by a number of mitigation measures, including WR3, WR4, WR5, WR8, WR9, WR10, WR11, WR13, WR15, WR-CI1, WR-CI3 and WR-CI4. In particular, mitigation measure WR4 commits to the installation of test bores and further investigation by a qualified hydrogeologist to confirm the depth and location of the proposed bore fields, so that impacts from the extraction of groundwater are minimised.

In accordance with mitigation measure WR3, a bore census would be undertaken for existing licensed bores within 1 km of the proposal's bore fields, where landowners permit. The census would collect baseline groundwater level data and information on a given bore's typical usage and characteristics (including bore construction, pump depth, yield, water level during pumping and water level outside of pumping periods).

Mitigation measure WR8 provides that a groundwater monitoring program would be developed in consultation with DPE Water and implemented as part of the soil and water management plan, to monitor potential groundwater impacts. The program would define the following in accordance with chapter 10 of Technical Report 4—Groundwater assessment:

- Monitoring parameters
- Monitoring locations
- Frequency and duration of monitoring.

Monitoring of groundwater levels would continue following the completion of groundwater pumping and extraction until water levels recover to baseline conditions.

Information obtained from the bore census and monitoring program would be used in parallel to determine whether there is an impact to existing groundwater bores.

In accordance with mitigation measure WR10, where groundwater monitoring identifies the potential for groundwater drawdown in existing bores to exceed the *NSW Aquifer Interference Policy* minimal impact considerations, make-good provisions would be triggered for those bores, in consultation with the relevant landholders and DPE Water. The precise arrangements would be determined in consultation with the landholder.

Monitoring would also be undertaken during extraction from the proposed groundwater bores to ensure volumes stipulated by license requirements are not exceeded.

Meters would be installed, and groundwater extraction recorded and reported, in accordance with the requirements of the *NSW Non-Urban Water Metering Policy* (DPIE, 2020f) and clause 21(6) of the Water Management (General) Regulation 2018.

The conditions of approval for the proposal are a matter for the Department of Planning and Environment (DPE) with input from relevant agencies. ARTC will consider in detail any proposed conditions of approval at an appropriate time in the assessment process.

7.8.2.2 Groundwater quality

Issue

A submitter asked if there have been any test bores drilled to a 1,000-m depth and what the water quality is at 1,000 m under the Great Artesian Basin.

Submission numbers

SE-48700736

Response

As per the response provided in section 7.8.1.2 of this report, test bores are in the process of being installed by Gilgandra Shire Council targeting a depth range of between 180 and 260 m.

No test bores have been installed by ARTC for the proposal to date.

In accordance with mitigation measure WR4, test bores would be installed by ARTC during detailed design, and further investigation would be undertaken by a qualified hydrogeologist, to confirm the depth and location of the proposed bore field bores.

As described in sections 7.1.7 and 7.1.8 of the EIS Groundwater assessment (Technical Report 4), the groundwater that would be extracted from the deeper groundwater systems for construction water is currently of unknown quality. In accordance with mitigation measure WR9, the quality of groundwater obtained from the proposed bore field bores would be assessed for the suitability of its intended use.

7.8.2.3 Future use of groundwater bores

Issue

A submitter asked if ARTC would honour the promise to allow the landowners and the broader community to use the bores after construction. The submitter asked if the bores would come with the irrigation licenses that will be needed to operate these bores.

Submission numbers

SE-48700736

Response

As described in section A8.7 of the EIS, where there is benefit to the local community, the potential for retaining facilities and infrastructure installed for the construction of the proposal (including groundwater bores) would be investigated and negotiated in consultation with relevant stakeholders.

ARTC would obtain the relevant approvals and licenses required to use the groundwater bores to construct the proposal. Any approvals, operating costs and maintenance associated with retaining and using this infrastructure would be the responsibility of the party that takes ownership.

7.9 Flooding

7.9.1 Adequacy of the assessment

7.9.1.1 Adequacy of the flooding assessment

Issue

Submitters raised a number of concerns about the adequacy and accuracy of the flooding assessment. Issues raised included:

- Limited use of local knowledge
- Accuracy and detail of inputs including data, which was collected in drought conditions and was not representative of wet conditions or recent extreme weather events
- Flood modelling is based on reference design and isn't detailed enough

- Modelling doesn't address local concerns regarding changes to flows
- There was no assessment of climate change impacts on flooding
- Inconsistent catchment areas and waterway counts.

Submission numbers

SE-48695793, SE-48743960, SE-48698995, SE-48699459, SE-48744210

Response

Responses to issues raised about the adequacy and accuracy of the flooding assessment are provided in section 8.3.3 of the EIS Response to Submissions Report.

7.9.1.2 Compliance with quantitative design limits

Issue

Submitters raised concerns that the proposal does not comply with the quantitative design limits (QDLs) and that they should have been defined in the EIS.

Submission numbers

SE-48701472, SE-48744210

Response

Following exhibition of the EIS there has been ongoing refinement, in consultation with DPE, of the methodology, to quantify the modelled changes in flood behaviour. The QDLs proposed in the updated flooding and hydrology assessment report have been developed based on this consultation and the considerable assessment of hydrology matters across the Inland Rail Program.

The QDLs are more stringent performance criteria than the flood management objectives proposed in the EIS. Consequently, the updated flooding and hydrology assessment report provides more certainty of predicted changes and provide a comprehensive base for the community, local councils and government agencies to assess the acceptability of the anticipated changes in flood behaviour.

Section 4.1.2 of this report provides further information regarding the management of departures from the quantitative design limits.

7.9.1.3 Consistency with Narrabri flood models

Issue

A submitter raised concern that the results of the flood modelling completed by Narrabri Shire Council for the Namoi River and Bohena Creek does not align with the proposal's flood model.

Submission numbers

SE-48701472

Response

A response to the issue of consistency with flood modelling for the Namoi River is provided in section 8.3.3 of the EIS Response to Submissions Report.

Following further consultation with DPE and Narrabri Shire Council, an alternative approach to the flood assessment for Bohena Creek was undertaken and provided in section 7.6 of the updated flooding and hydrology assessment report. ARTC will undertake further consultation with Council, their flooding consultant and local landowners during detailed design, as part of the flood modelling (mitigation measure FH1).

7.9.1.4 Consistency with floodplain management plans

Issue

A submitter raised concerns that the proposal does not consider or comply with the Floodplain Management Plan for the Lower Namoi Valley Floodplain 2020.

Submission numbers

SE-48701472

Response

A response to this issue is provided in section 5.4.5 of the EIS Response to Submissions Report.

7.9.1.5 Consideration of Narromine town levee

Issue

A submitter stated that the Preferred Infrastructure/Amendment Report did not recognise or assess the proposed Narromine town levee as detailed in the Narromine Town Levee Concept Design (SMEC 2019). The submitter identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48744210

Response

The interaction of the proposal with the proposed Narromine town levee is considered in section 7.8.1 of the updated flooding and hydrology assessment report, which supports the Preferred Infrastructure/Amendment Report.

The *Narromine Town Floodplain Risk Management Study and Plan Update* (Lyall & Associates, 2021) proposes construction of a levee along the southern bank of the Macquarie River in combination with the upgrade of the existing railway culverts at Webbs Siding. The flooding assessment undertaken during development of the floodplain risk management study concluded that the proposal would not affect the level of flood protection afforded by the preferred flood mitigation scheme defined in the plan. ARTC is committed to open and ongoing engagement with Narromine Shire Council during detailed design and construction.

7.9.1.6 Castlereagh River flood modelling

Issue

Submitters queried how ARTC can state that their flood modelling for the Castlereagh River can replace the gazetted flood plan. The gazetted flood plan maps a floodplain 4 km wide, whereas ARTC's mapping only shows it as being about 800 m wide. They consider that until ARTC categorically proves their mapping is valid, up to 4 km of bridging should be provided. A submitter identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48743960, SE-48744210

Response

ARTC acknowledges the submitter's concern that their issue had not been addressed. While ARTC believes adequate responses were provided to these issues, further consideration is provided below.

Rankine & Hill Pty Ltd prepared a report entitled *New South Wales Inland Rivers Flood Plain Management Studies, Castlereagh Valley* in March 1983. The report includes mapping of flood-affected land throughout the valley for historic flood events, based on consultation with landowners and stakeholders. It identifies environmental factors and recommends the preparation of a program of works to manage flood risk both for urban and rural areas within the valley. The report recommends legislative changes to ensure that the former Water Resources Commission could have overriding powers in regard to development on the floodplain, which would have adverse effects on flood behaviour. The report also recommends that planning scheme provisions should be used to exclude flood-prone rural subdivision into small holdings.

Historically, the management of rural floodplains in New South Wales relied on localised floodplain management plans under Part 8 of the *Water Act 1912* (NSW). Currently, there are 10 historical floodplain management plans prepared under the *Water Act 1912* remaining in-force in NSW (**industry.nsw.gov.au/water/plans-programs/plans accessed 18 October 2022**). A floodplain management plan for the unregulated Castlereagh River floodplain is not in-force under the *Water Act 1912* or the *Water Management Act 2000* (NSW).

In accordance with the response to this issue provided in section 8.3.3 of the EIS Response to Submissions Report, the updated flooding and hydrology assessment report has been prepared in accordance with the SEARs, *Australian Rainfall and Runoff* (Ball, et al., 2019) and other relevant guidelines and requirements. The flood models were independently reviewed by BMT and were updated to address comments. The updated modelling defines flood behaviour in the Castlereagh River and on the floodplain and are generally consistent with the current flood studies for Gilgandra and Gulargambone.

The proposal has been, and would continue to be, designed to minimise the potential for flooding risks. In accordance with mitigation measure FH1, additional survey, assessment and modelling would be undertaken during detailed design to confirm building floor levels and determine if the proposal could be modified so that flooding characteristics are not worsened or minimised as far as practicable, up to and including the 1% AEP event (as provided by the QDLs). This process would be independently validated through the development of a flood design verification report and through a commitment by ARTC to consult with affected landowners and asset owners during the detailed design development process.

7.9.1.7 Castlereagh River flood structures

Issue

A submitter noted that ARTC stated that the proposal includes two bridges and numerous culverts to provide for the passage of floodwaters at and near the Castlereagh River (including an unnamed watercourse to the south); however, they noted that no culverts are shown in the updated Map Book or listed in the updated flooding and hydrology assessment report (Appendix A – structures and blockage factors). They also questioned when the bridges and culverts would be further designed to manage the flood flows given no change had occurred since the EIS. They identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48744210

Response

ARTC acknowledges the submitter's concern that their issue had not been addressed. While ARTC believes adequate responses were provided to these issues, further consideration is provided below.

The flood modelling undertaken for the proposal indicates that at the Castlereagh River, flood extents for the 1% AEP are constrained to the Castlereagh River channel (see afflux mapping in Appendix I, Figure 1.4.35 of the updated flooding and hydrology assessment report). As shown on this figure, the proposal includes two bridges over the Castlereagh River and two culverts for the unnamed watercourse to the south. These culverts are included in the flood models but were accidentally omitted from the updated Map Book and the updated flooding and hydrology assessment report (Appendix A – structures and blockage factors); however, they were included in the flood models.

In accordance with mitigation measure FH1, the design would continue to be refined, where practicable, to not worsen existing flooding characteristics for flood events up to and including the 1% AEP event. All bridges and culverts would be refined based on further detailed modelling during this process.

7.9.1.8 Catchments and watercourses

Issue

A submitter raised concerns that the updated flooding and hydrology assessment report does not list all catchments and watercourses crossed by the proposal, and that there are inconsistencies within the exhibited reports.

In addition, the submitter suggested that the Wallaby Creek catchment was undersized, and this may have been due to an unnamed watercourse at kilometrage 553.2.

Submission numbers

SE-48744210

Response

A response to this issue is provided in section 8.3.3 of the EIS Response to Submissions Report. In relation to the suggestion that the proposal does not consider an unnamed watercourse at kilometrage 553.2 km, culvert banks are included between kilometrage 552 km and 555 km for the upstream catchment area of Wallaby Creek and associated tributaries. Details of catchments are provided in Table 5.1 and Appendix C of the updated flooding and hydrology assessment report.

7.9.1.9 Overtopping assessment

Issue

A submitter stated that assumptions in the overtopping assessment are not appropriate for the Narromine area and, as a result of potential embankment failures, pose serious risk to property and life.

Submission numbers

SE-48744210

Response

Flood modelling for the proposal has been carried out in accordance with *Australian Rainfall and Runoff* (Ball et al., 2019) and have been independently reviewed. Bridges have been provided at major waterway crossings, and culverts have been included at minor watercourses and within floodplains. The rail embankment has been designed to minimise overtopping in floods up to and including the 1% AEP event.

An assessment of overtopping for a range of events is provided in section 7.12 of the updated flooding and hydrology assessment report. The assumptions used in the assessment are considered to be appropriate. The potential failure of the proposed rail embankment for these flood events has been identified to have low incremental risk to life and property.

Narromine is the only major residential area located downstream of the proposal. The design includes a bridge (approximately 1,170 m long) over the Macquarie River and its floodplain upstream of Narromine. The Backwater Cowal is located between the proposal and Narromine. Any overtopping of the proposed rail embankment in events greater than the 1% AEP would not be expected to increase flooding in Narromine above existing conditions. A potential failure of the embankment at Webbs Siding was also modelled and the results predict no adverse impact to Narromine, over and above existing conditions.

For the remainder of the proposal site, there are isolated buildings downstream of the proposal but no high-density residential areas. In the event of a failure of the railway embankment, the risk to life and property resulting from additional flooding is therefore predicted to be low.

Locations where there is an incremental risk to life and property due to a potential failure of the rail embankment will be reviewed as part of detailed design. Consideration will be given to providing sacrificial low points and additional erosion protection measures to mitigate risk of embankment failure.

7.9.1.10 Scale and accuracy of flood mapping

Issue

A submitter noted that ARTC has not provided fine-scale flood mapping despite this issue being raised in EIS submissions and by the Narromine Community Consultative Committee (CCC) on a number of occasions. In addition, in some cases, there are no flood maps. This raises concerns regarding the accuracy of the hydrological modelling and positioning of flood mitigation structures.

The submitter noted that ARTC had not used local knowledge on the Parkes to Narromine section of Inland Rail where some culverts were incorrectly positioned around Peak Hill and Narromine.

Submission numbers

SE-48744210

Response

A response to this issue is provided in section 8.3.3 of the EIS Response to Submissions Report. In addition, mapping for the entire proposal site and surrounds is provided in the updated flooding and hydrology assessment report.

As part of the recent Preferred Infrastructure/Amendment Report public exhibition, ARTC provided online flood modelling maps to assist stakeholders and the community in understanding potential flooding impacts at specific locations along the entire alignment. In addition, ARTC held community information sessions along the alignment, where the proposal team were available to take people through the online flood modelling maps on screen.

ARTC is committed to engaging with landowners during the detailed design process to inform drainage outcomes and the impacts of alterations to drainage on flooding and property operations. New mitigation measure LP17 (see Appendix B of this report) commits ARTC to preparing a consultation protocol to inform landowners and provide clarity on how ARTC will interact with them in relation to the design process, property changes, acquisition steps and processes, with the aim of mitigating impacts and reaching agreement on these matters.

7.9.1.11 Rainfall infiltration coefficients

Issue

A submitter noted that there is no guidance on the rainfall infiltration coefficients. The flood model predictions for Backwater Cowal floods continue to be underestimated in all AEP models.

Submission numbers

SE-48744210

Response

A response to this issue is provided in section 8.3.3 of the EIS Response to Submissions Report.

7.9.1.12 Data collection

Issue

A submitter suggested that ARTC noted at a Gilgandra CCC meeting in 2019 that there was no data available on the Baronne Creek. No monitoring devices have since been installed on the creek. The submitter has offered for the hydrologists to contact them directly but no contact has been made. The submitter questions the accuracy of the flood models if that has happened at multiple sites.

Submission numbers

SE-48699724

Response

The updated flooding and hydrology assessment report (Technical Report 3) was undertaken, and prepared, by a team of qualified and experienced hydrologists in qualified and experienced hydrologists in accordance with the SEARs and relevant guidelines and requirements. In particular, the assessment was undertaken in accordance with *Australian Rainfall and Runoff* (Ball et al., 2019). The methodology used in the assessment is described in section 3 of the updated flooding and hydrology assessment report, including where required consultation with landowners and other stakeholders. The flood models were independently reviewed by BMT and were updated to address comments. Table 3.3 of the updated flooding and hydrology assessment report details that flow gauging station no. 420011, located on Baronne Creek near Gulargambone, was reviewed and used in the development of the flood modelling. For ungauged catchments crossed by the proposal, RORB hydrology models were developed using the methods described in *Australian Rainfall and Runoff*.

The proposal has been, and would continue to be, designed to minimise the potential for flooding risks. In accordance with mitigation measure FH1, additional survey, assessment and modelling would be undertaken during detailed design to confirm building floor levels and determine if the proposal could be modified so that flooding characteristics are not worsened or minimised as far as practicable, up to and including the 1% AEP event (as provided by the QDLs). This process would be independently validated through the development of a flood design verification report and through a commitment by ARTC to consult with affected landowners and asset owners during the detailed design development process.

Issue

A submitter noted that ARTC has not provided the community with the opportunity to provide landscape rainfall and runoff measurements for use in the flood modelling, despite the entire alignment having only a handful of meteorological and depth flow gauging stations. ARTC guidelines require the use of local data if insufficient meteorological gauges are unavailable. These observations should be welcomed as they provide valuable insights into risks.

Submission numbers

SE-48741961

Response

A response to the issue of modelling methodology is provided in section 8.3.3 of the EIS Response to Submissions Report.

7.9.1.13 Consideration of climate change

Issue

A submitter raised concerns that due to climate change the flooding risks, such as inundation and erosion to Narromine and other areas along the proposal site, had not been considered.

Submission numbers

SE-48743960, SE-48695774

Response

A response to this issue is provided in section 8.3.3 of the EIS Response to Submissions Report.

7.9.2 Operation impacts

7.9.2.1 Increased flood risk during operation

Issue

Concerns were raised that the proposal would disrupt water drainage and overland flows, and cause increased flooding, particularly at Narrabri, in the Backwater Cowal and Narromine area, and downstream of the Warrumbungle Mountains.

Submission numbers

SE-48668962; SE-48698709, SE-48695774, SE-48700736; SE-48698995; SE-48736241

Response

A response to the issue of increased flood risk is provided in section 9.3.2 of the EIS Response to Submissions Report.

In accordance with mitigation measure FH1, the flood modelling would be further refined during the detailed design process. The additional flood modelling, and any mitigation identified as an outcome of modelling, would be undertaken in consultation with impacted landowners.

7.9.2.2 Location-specific flooding impacts

Issue

A submitter suggested that the proposed route alignment is not suitable because it crosses Caleriwi Creek and another unnamed waterway on the submitter's property.

Submission numbers

SE-48698995

Response

As described above, the updated flooding and hydrology assessment report has been prepared in accordance with the SEARs and relevant guidelines and requirements. The proposal has been designed to minimise flooding impacts by including bridges and culverts in the railway embankment.

Predicted changes to existing flood regimes are assessed against quantitative design limits. In relation to Caleriwi Creek, minimal changes for events up to the one per cent AEP are predicted (see afflux mapping in Appendix I, Figure 1.4.51 of the updated flooding and hydrology assessment report).

In accordance with mitigation measure FH1, the flood modelling would be further refined during the detailed design process. The additional flood modelling, and any mitigation identified as an outcome of modelling, would be undertaken in consultation with impacted landowners.

Issue

A submitter raised concerns about erosion, water logging of crops and flooding damage to infrastructure with significant rain events.

Submission numbers

SE-48746213

Response

As described above, the updated flooding and hydrology assessment report has been prepared in accordance with the SEARs and relevant guidelines and requirements. The proposal has been designed to minimise flooding impacts by including bridges and culverts in the railway embankment.

Predicted changes to existing flood regimes are assessed against quantitative design limits. In relation to this property and surrounding areas near National Park Road and Weenya Road, minimal changes for events up to the one per cent AEP are predicted (see afflux mapping in Appendix I, Figure 1.4.47 of the updated flooding and hydrology assessment report).

In accordance with mitigation measure FH1, the flood modelling would be further refined during the detailed design process. The additional flood modelling, and any mitigation identified as an outcome of modelling, would be undertaken in consultation with impacted landowners.

Issue

A submitter raised concern about the proposed bridge over Milpulling Creek. The submitter noted that Milpulling Creek carries a lot of water near their house and sheds. They state that there is potential for their buildings to flood where debris builds up.

Submission numbers

SE-48698519

Response

As described above, the updated flooding and hydrology assessment report has been prepared in accordance with the SEARs and relevant guidelines and requirements. The proposal has been designed to minimise flooding impacts by including bridges and culverts in the railway embankment.

Predicted changes to existing flood regimes are assessed against quantitative design limits. In relation to this property and Milpulling Creek, only localised changes are predicted near the bridge and do not extend to the buildings upstream for events up to the 1% AEP are predicted (see afflux mapping in Appendix I, Figure 1.4.23 of the updated flooding and hydrology assessment report).

As described in section 3.7.4 of the updated flooding and hydrology assessment report, a blockage factor has been taken into account and allows for some accumulation of debris in accordance with Australian Rainfall and Runoff (Ball et al., 2019).

In accordance with mitigation measure FH1, the flood modelling would be further refined during the detailed design process. The additional flood modelling, and any mitigation identified as an outcome of modelling, would be undertaken in consultation with impacted landowners.

Issue

A submitter noted that ARTC has not recognised that their home and sheds are in danger of flooding from Quanda Quanda Creek if the water level rises by even a few millimetres. The submitter noted that they had requested more detailed information regarding flooding at their property, and that the updated flooding and hydrology assessment was difficult to understand. They identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48700736

Response

ARTC acknowledges the submitters concern that their issue had not been addressed. While ARTC believes adequate responses were provided to these issues, further consideration is provided below.

As described above the updated flooding and hydrology assessment report has been prepared in accordance with the SEARs and relevant guidelines and requirements. The proposal has been designed to minimise flooding impacts by including bridges and culverts in the railway embankment.

Predicted changes to existing flood regimes are assessed against quantitative design limits. In relation to this property and Quanda Quanda Creek, only localised changes are predicted and would generally be limited to the rail corridor for events up to the 1% AEP are predicted (see afflux mapping in Appendix I, Figure 1.4.52 of the updated flooding and hydrology assessment report).

The proposal has been, and would continue to be, designed to minimise the potential for flooding risks. In accordance with mitigation measure FH1, additional survey, assessment and modelling would be undertaken during detailed design to confirm building floor levels and determine if the proposal could be modified so that flooding characteristics are not worsened or minimised as far as practicable, up to and including the 1% AEP event (as provided by the QDLs). This process would be independently validated through the development of a flood design verification report and through a commitment by ARTC to consult with affected landowners during the detailed design development process.

7.9.2.3 Drainage control areas

Issue

Submitters raised concerns that the late inclusion of drainage control areas means that potential water flows had been underestimated and the proposal will cause erosion and flooding. Submitters suggested that the design be amended now to remove these risks (e.g. the use of more bridges and culverts), rather than allowing ARTC to use land outside the rail corridor.

Submission numbers

SE-48699724, SE-48695793, SE-48700736

Response

Modelled flood-flow rates have not increased in the updated flooding and hydrology assessment report. The drainage control areas have been proposed to assist with compliance with the quantitative design limits, and have been developed following exhibition of the EIS.

As described in sections 3.4.5 and 6.7.2 of the Preferred Infrastructure/Amendment Report, the proposed drainage control areas were developed in consultation with DPE. The drainage control areas, as currently proposed, represent a conservative scenario in terms of additional land requirements. During detailed design, these areas would be refined when further flood modelling is undertaken and the extent of works within each drainage control area is confirmed. The land required for each drainage control area would be finalised during detailed design in consultation with landowners, as part of the property acquisition process.

7.9.3 Mitigation

Issue

A submitter requested that landowners be given a say in placement, type, and use of culverts to mitigate impacts of flooding.

Submission numbers

SE-48699724

Response

In accordance with mitigation measure FH2, further modelling and site-specific assessments would be undertaken during detailed design to confirm the locations downstream of culverts and within drainage control areas that require erosion protection, and to confirm the extent and type of protection required. This would include consultation with landowners/landholders. New mitigation measure LP17 (see Appendix B of this report) commits ARTC to preparing a Consultation Protocol to inform landholders and provide clarity about how ARTC will interact with them in relation to the detailed design process, property changes, acquisition steps and processes with the aim of mitigating impacts and reaching agreement on hydrology matters. The protocol would establish the opportunity for facilitated discussions with landowners, the ability to mediate outcomes, and to seek independent expert hydrology advice on the design and outcomes.

7.10 Soils and contamination

7.10.1 Soils assessment

Issue

A submitter questioned why geotechnical sampling data and the associated collection methodologies have not been provided by ARTC and that visual inspections in those areas that could not be sampled are not valid geotechnical data.

Submission numbers

SE-48744210

Response

Geotechnical investigations were undertaken to inform the route selection process and proposal design. These included 90 boreholes and 250 test pits. While the geotechnical investigation helped inform the soils and contamination assessment undertaken for the EIS the SEARs and relevant guidelines considered as part of the assessment do not require detailed sampling data and collection methodologies to be provided as part of the EIS.

Geotechnical investigations were undertaken by suitably qualified geotechnical engineers and samples were collected and subjected to laboratory analysis at laboratories which were accredited by the National Association of Testing Authorities Australia. Further geotechnical investigations would be undertaken to inform detailed design and construction of the proposal, including in areas that could not be accessed during initial investigations.

Issue

A submitter raised concerns that no studies had been carried out on the soils in this area.

Submission numbers

SE-48698995

Response

A response to this issue is provided in section 8.3.10 of the EIS Response to Submissions Report. Further consideration of the erosion potential of soils has been undertaken in the erosion potential and fluvial geomorphology assessment (Appendix O of the updated flooding and hydrology assessment report).

7.10.2 Construction impacts

7.10.2.1 Erosion impacts

Issue

Submitters raised concerns about the viability of constructing the railway on erodible soils in the Quanda area. A submitter noted this was not addressed and should be addressed during detailed design. Concerns were also raised about potential erosion impacts. A submitter identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48698995, SE-48700736

Response

ARTC acknowledges the submitter's concern that their issue had not been addressed. While ARTC believes adequate responses were provided to these issues, further consideration is provided below.

Existing ground conditions in the proposal site have been considered during design development and preparation of the EIS. The characteristics of different soil types, including those around the Quanda area, would be further considered as part of the detailed design to inform the rail embankment design, and erosion and sediment control requirements. This would involve further soil testing and site investigations as required.

Potential erosion impacts during construction would be managed by implementing best-practice soil erosion management measures detailed in the soil and water management plan (mitigation measure WR7), which would be prepared in accordance with *Managing Urban Stormwater: Soils and construction—Volume 1* (Landcom, 2004), *Volume 2C Unsealed roads* (DECC, 2008b) and *Volume 2D, Main Road Construction* (DECC, 2008c) (collectively referred to as the Blue Book).

7.10.3 Mitigation

7.10.3.1 Mitigation of erosion

Issue

A submitter questioned how erosion mitigation would be addressed, including how it would be contained within the railway corridor and what the erosion management plan is. It was suggested that the design should be amended now to remove these risks rather than allowing ARTC to use land outside the rail corridor.

A submitter also noted that a report on the soil conditions recommended that erosion threshold velocities be reviewed by a geotechnical engineer and soil/erosion specialist (geomorphologist) as part of the detailed design.

A submitter identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48700736, SE-48698995

Response

ARTC acknowledges the submitter's concern that their issue had not been addressed. While ARTC believes adequate responses were provided to these issues, further consideration is provided below.

An assessment of potential erosion impacts was undertaken in section 7.2 of the updated flooding and hydrology assessment report, and further information was provided in the updated flooding and hydrology assessment report. The assessment identified that due to the soil types, existing conditions of watercourses, and changes to flows and velocities as a result of the proposal, there is a risk of erosion and scour occurring. As described in sections 3.4.5 and 6.7.2 of the Preferred Infrastructure/Amendment Report, the proposed drainage control areas were developed in consultation with DPE. The drainage control areas, as currently proposed, represent a conservative scenario in terms of additional land requirements. During detailed design, these areas would be refined when further flood modelling is undertaken and the extent of works within each drainage control area is confirmed. The land required for each drainage control area would be finalised during detailed design in consultation with landowners as part of the property acquisition process.

In accordance with mitigation measure FH2, further modelling and site-specific assessments would be undertaken during detailed design to confirm the locations downstream of culverts and within drainage control areas that require erosion protection and to confirm the extent and type of protection required so that the potential for impacts beyond the proposal site are limited. This further assessment would be undertaken by suitably experienced professionals, including either a geotechnical engineer or soil/erosion specialist, as relevant.

Additionally, as noted in the above response, a soil and water management plan would be prepared which would detail best-practice soil erosion management measures to be implemented to minimise the potential for erosion impacts during construction. This would include the requirements of an erosion management plan and would be prepared post-approval of the proposal.

7.11 Aboriginal heritage

7.11.1 Adequacy of the assessment

Issue

A submitter raised concern that the cultural significance of the Pilliga forest to the local Gomeroi people has not been adequately addressed. Individual significant sites have been mentioned but this does not take into account that the whole area and its thriving ecological systems are important to the Gomeroi people. The value of the forest lies to a great part in its integrity and needs to be viewed holistically.

Submission numbers

SE-48698957

Response

A response to the issue of assessing Aboriginal heritage on the basis of individual sites and not addressing overall significance is provided in section 6.2.2 of the EIS Response to Submissions Report.

The response noted that although the study area for the Aboriginal cultural heritage assessment included the proposal site and the immediate vicinity of the proposal site (for any indirect impacts that could occur as a result of the proposal), a review of a much wider area was considered. This information was used to inform the assessment.

In addition, mitigation measure SE3 provides for the preparation and implementation of a detailed Aboriginal community and stakeholder engagement strategy and action plan. The strategy and action plan would require that:

- Information about the proposal is shared with Aboriginal stakeholders and communities in a timely manner
- Strong relationships between ARTC and Aboriginal stakeholders and communities are built and maintained
- Local Aboriginal cultural and community values are identified and understood
- Opportunities to reflect Aboriginal community and cultural values in infrastructure or other outcomes of the proposal are identified and implemented.

7.12 Non-Aboriginal heritage

7.12.1 Impacts

Issue

A submitter noted that the Warrumbungle area is an ancient area, and there will be fossils unearthed that need to be investigated and protected. The submitter identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48700736

Response

A response to the issue of protecting fossils in Warrumbungle National Park area is provided in section 9.6.2 of the EIS Response to Submissions Report. It is noted that the proposal does not involve any work within the Warrumbungle National Park.

The heritage management plan (prepared in accordance with mitigation measure NAH7) would include measures to manage non-Aboriginal heritage and minimise the potential for impacts during construction. The plan would include an unexpected finds procedure (mitigation measure NAH8) that would provide a consistent method for managing any unexpected heritage or archaeological items.

7.13 Noise and vibration

7.13.1 Adequacy of the assessment

Issue

Submitters raised concerns about the adequacy of the noise assessment. Issues raised included:

- Noise monitoring was inaccurate as it was conducted during summer and is not representative of quieter winter conditions
- No consideration of the existing low levels of noise that are experienced in the predominant rural environment of the proposal.

A submitter identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48404215, SE-48700736

Response

ARTC acknowledges the submitter's concern that their issue had not been addressed. While ARTC believes adequate responses were provided to these issues, further consideration is provided below.

The updated noise and vibration assessment—construction and other operations was undertaken in accordance with the *Interim Construction Noise Guideline* (DECC, 2009), which recommends the criteria for sensitive receivers during recommended standard hours as the rating background noise level plus 10 dB, and for outside standard hours, the rating background level plus 5 dB.

While the *NSW Industrial Noise Policy* (NSW EPA, 2000) has been superseded by the *Noise Policy for Industry* (NSW EPA, 2017), the *Interim Construction Noise Guideline* still refers to the *NSW Industrial Noise Policy* for the setting of rating background levels (background or ambient noise). The *Noise Policy for Industry* (NSW EPA, 2017) states that where the measured noise levels are less than 35 dB(A) for daytime and less than 30 dB(A) for evening or night-time, then the rating background level for the assessment is set at 35 dB(A) for daytime and 30 dB(A) for evening and night-time.

As described in section 4 of the updated noise and vibration assessment—construction and other operations, noise monitoring was undertaken at 21 locations and in accordance with relevant guidelines, including the *Industrial Noise Policy* (NSW EPA, 2001) and *Noise Policy for Industry* (NSW EPA, 2017). The monitoring locations were selected to provide a good representation of the existing noise environment and were identified with reference to topography, distance from the proposal site, and contribution from other noise activities, such as industry, road or rail noise. As a result, the monitoring data is considered to be valid and representative of the existing noise levels within the study area.

7.13.2 Operation impacts

7.13.2.1 Impacts on business

Issue

A submitter suggested that noise testing needs to be completed prior to construction so that the potential impact to farm camping and tourism can be understood. They stated that noise impacts on native birds and their breeding corridor were not considered.

Submission numbers

SE-48404215

Response

A response to the issue of potential impacts to this business is provided in section 9.8.4 of the EIS Response to Submissions Report. As described above, the noise monitoring has been undertaken in accordance with the relevant guidelines and it is not proposed to undertake any further noise monitoring prior to construction.

7.13.2.2 Effects of operational noise on residents and amenity

Issue

Concerns were raised about operational noise levels; in particular, in rural environments. Submitters expressed concern that noise and vibration from trains would affect their amenity.

A submitter identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48700736, SE-48668962

Response

A response to this issue is provided in section 9.8.1 of the EIS Response to Submissions Report. ARTC acknowledges the submitters concern that their issue had not been addressed but consider that the previous response is adequate.

7.13.2.3 Effects of operational noise on livestock

Issue

Submitters raised concerns about impacts of the proposal on livestock, including:

- A train running through the property would be detrimental to their lambing ewes, causing disturbance that could have substantial business impacts
- Trains sounding horns as a warning when they approach will be a major disturbance to grazing stock and will also cause mothering ewes to abandon their lambs.

Submission numbers

SE-48700711, SE-48698519

Response

A response to the issue of the effects of operational noise on livestock is provided in section 9.8.4 of the EIS Response to Submissions Report.

7.13.2.4 Vibration impacts

Issue

A submitter asks if vibration from the proposal would shake older bore linings and cause them to collapse. The submitter identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48700736

Response

A response to the issue about vibration impacts on bores is provided in section 9.8.3 of the EIS Response to Submissions Report. ARTC acknowledges the submitter's concern that their issue had not been addressed; however, consider that the previous response is adequate.

Issue

A submitter raised concern that thumping could occur in the Pilliga because it is sand. The submitter suggested that when there is clay underneath and the sand is wet, the train vibration and the thumping can cause the sand to turn to quicksand, and asks if this has been investigated and how it would be mitigated. The submitter identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48700736

Response

A response to the issue of quicksand caused by train vibration is provided in section 9.4.2 of the EIS Response to Submissions Report. ARTC acknowledges the submitter's concern that their issue had not been addressed; however, consider that the previous response is adequate.

7.13.3 Noise and vibration mitigation measures

Issue

A submitter noted that double glazing their windows would mean their evaporative air conditioner would have to be changed to a split system. They state that this would increase the air conditioner's running cost by about four times.

Submission numbers

SE-48404215

Response

A response to the issue of the effect of mitigation measures is provided in section 9.8.5 of the EIS Response to Submissions Report.

Issue

Submitters requested details on operational noise mitigation, including what measures would be implemented, and what would be done if the measures are not effective. Another submitter stated that noise barriers aren't an applicable noise mitigation measure for elevated railways. It was suggested that specific details of the proposed measures for individual properties needed to be provided now.

Submission numbers

SE-48700736, SE-48699724, SE-48404215

Response

A response to the issue of details on proposed noise mitigation is provided in section 9.8.5 of the EIS Response to Submissions Report.

Issue

A submitter requested clarification of how operational noise impacts at their residence, located about 900 m from the proposal, would be mitigated.

Submission numbers

SE-48699724

Response

Predicted noise levels for all receivers within the study area are provided in Appendices D and E of the updated noise and vibration assessment—operational rail report. The residence on this property is identified as receiver ID 244118 in the report. The predicted operational noise levels do not exceed the *Rail Infrastructure Noise Guideline* (NSW EPA, 2013) and, as such, based on the assessment, this residence does not qualify for consideration for noise mitigation.

7.14 Air quality

7.14.1 Mitigation

Issue

A submitter asked what will be done to mitigate impacts from dust during construction, particularly where dust impacts may impact wool quality.

Submission numbers

SE-48698519

Response

A response to the issue of the impacts of dust generated by construction, including impacts on property and agriculture, is provided in section 9.9.1 of the EIS Response to Submissions Report.

7.15 Traffic and transport

7.15.1 Construction impacts

Issue

A submitter raised concerns about the potential for disruption and hazards as a result of construction traffic, particularly due to the import of materials such as water and ballast from kilometres away, and asked how the associated impacts would be mitigated.

Submission numbers

SE-48698995

Response

A response to the issue of construction traffic disruption, which includes consideration of the import of materials, is provided in section 9.10.1 of the EIS Response to Submissions Report.

Issue

Concerns were raised about construction traffic impacts in Narrabri. Issues raised included:

- The EIS noted that there would be 336 heavy vehicle movements per day, which equates to a heavy vehicle movement every 2 minutes and 50 seconds, which would have a major impact on streets in Narrabri.
- A number of sensitive receivers, including the Narrabri Hospital, two aged care facilities, Nurraby Childcare Centre, Narrabri Golf Club and ninety-four residences are located along Gibbons Street, Elizabeth Street and Brailoc Estate and would be affected by these traffic movements and the associated safety and amenity impacts.
- The turning traffic into Gibbons Street would disrupt the traffic flow along the Newell Highway.

Submission numbers

SE-48701472, SE-48738709, SE-48701459

Response

A response to this issue is provided in section 5.7.1.4 of this report.

7.15.2 Operation impacts

Issue

A submitter asked a number of questions regarding traffic at level crossings during operation, including:

- Why have other shires disputed the waiting time at boom gates, is this information inaccurate?
- Will Inland Rail trains only be averaging speeds of 80 km/hr?
- Are the wait times calculations provided in the EIS for the first vehicle or last vehicle in the queue?
- What are the added time delays as vehicles go from 0 kms to 110 kms on highways of interrupted traffic?
- Will there be passing lanes either side to allow the traffic flow to reorganize safely and will the number of accidents increase due to vehicles overtaking?

Submission numbers

SE-48700736

Response

Wagga Wagga City Council has undertaken additional analysis about wait times at level crossings, which we assume the submitter is referring to when noting that councils have disputed the waiting times at boom gates. The proposed Narromine to Narrabri section of Inland Rail is a new greenfield section rather than an existing brownfield section of track that travels through Wagga Wagga where specific network control arrangements are in place. Therefore, the situations are not comparable.

An assessment of potential delays to road traffic at level crossings was undertaken as described in section 6.2.1 of the EIS Traffic and transport assessment (Technical Report 10). The assessment identified the potential for delays at the worst-case active level crossing, which was considered to be the level crossing proposed at Castlereagh Highway, as this is the busiest location at which a level crossing is proposed. As noted in section 4.6.3 of the Preferred Infrastructure/Amendment Report, the assessment of potential delays to road traffic at level crossings contained within the EIS Traffic and transport assessment (Technical Report 10) has been updated having regard to expected conditions in the proposal area, as opposed to Wagga Wagga. The updated assessment assumes trains travel between 80 and 115 km/hr depending on axle loads.

The updated assessment was based on additional traffic counts undertaken in November 2020 during a harvest period that produced higher than average yield. During this period, higher traffic volumes were experienced along some of the roads in the study area, particularly from heavy vehicles. The updated assessment found there would still be a maximum delay of 96 seconds in the opening year of 2026 and a maximum delay of 121 seconds in 2040 (based on 115 km/hr train speed) for the last vehicle in the queue. The maximum queue length in the opening year and 2040 would be 66 m and 74 m, respectively, rather than the 39 m and 46 m described in the EIS. The calculations do not consider time delays associated with vehicles going from 0 to 110 kms as this would depend on the type of vehicle. Delays at all other proposed level crossings would be much less than those reported for the Castlereagh Highway as traffic volumes on other roads are considerably less.

No passing lanes are proposed at the locations of level crossings; however, in accordance with mitigation measure TT13, the operation of all level crossings constructed on classified roads as part of the proposal would be reviewed, after Inland Rail commences operation, to confirm that the level of protection is appropriate and that the proposed infrastructure is appropriate for the traffic conditions.

7.16 Land use and property

7.16.1 Acquisition

7.16.1.1 Additional land required

Issue

A submitter noted that ARTC now needs extra land from landowners for drainage purposes, and asked why this was not factored into the proposal initially.

Submission numbers

SE-48698519

Response

As described in section 3.4.5 of the Preferred Infrastructure/Amendment Report, changes to the construction and operation footprints have been proposed, based on consultation with affected landowners and other relevant stakeholders. These have been proposed to respond to the amendments described in the Preferred Infrastructure/Amendment Report, and aim to minimise potential impacts on land use and properties where possible.

These amendments include drainage control areas to provide additional space outside the rail corridor in which to manage exceedances of the flooding quantitative design limits. The drainage control areas were developed in consultation with DPE following exhibition of the EIS.

A justification for the proposed drainage control areas is provided in section 6.7.2 of the Preferred Infrastructure/Amendment Report. The drainage control areas, as currently proposed, represent a conservative scenario in terms of additional land requirements to accommodate project infrastructure or works. During detailed design, these areas would be refined when further flood modelling is undertaken and the extent of works at each drainage location is confirmed. The land required for each drainage control area would be finalised during detailed design in consultation with landowners as part of the property acquisition process.

7.16.1.2 Acquisition process and information

Issue

Submitters raised concerns about the process of progressing negotiations and valuations for property acquisition. Issues raised included:

- Concerns about communication, instructions and provision of requested information
- Landowners are being asked to engage valuers to undertake valuations for acquisition and compulsory leases, despite not having the details of the proposal required to make accurate assessments
- DPE should make ARTC accountable for the issues that have been raised by impacted landowners.

Submission numbers

SE-48699724, SE-48700711

Response

A response to issues raised about the adequacy of the acquisition process is provided in section 9.11.1 of the EIS Response to Submissions Report.

ARTC acknowledges that ongoing design changes have resulted in the acquisition process being unclear for some landowners. The level of detail available on the proposal will continue to increase as the design is developed during detailed design. New mitigation measure LP17 (see Appendix B of this report) commits ARTC to preparing a consultation protocol to inform landowners and provide clarity about how ARTC will interact with them in relation to the detailed design process, property changes, acquisition steps and processes with the aim of mitigating impacts and reaching agreement on these matters.

Appropriate management measures would be developed, documented and agreed as part of the property acquisition consultation process, as far as practicable. Typically, the acquisition process with each individual landowner (including compensation assessment) will not be finalised until detailed design has been confirmed for that location.

In accordance with mitigation measure LP3, all property acquisitions would be undertaken in consultation with landowners and in accordance with the requirements of the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW).

Issue

A submitter raised concern that details about the proposed construction use of their property were not included in the maps provided in the formal acquisition documents from Transport for NSW in February 2022.

Submission numbers

SE-48699724

Response

All temporary and permanent land requirements are identified within the proposed acquisition notices sent by Transport for NSW. Details of construction are not included within the letters, just an explanation of the land requirements.

7.16.2 Property values

7.16.2.1 Impact on property values

Issue

A submitter raised concern that the depreciation of farms will destroy their equity in the farming business, possibly leading to bankruptcy. The submitter identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48700736

Response

ARTC acknowledges the submitter's concern regarding property values.

Potential impacts associated with the proposal have been considered and assessed by the EIS in accordance with the SEARs, relevant legislation and guidelines. The proposal would incorporate environmental management and design features to ensure that potential impacts are managed and mitigated, as far as practicable, as described in chapters A7, A8 and D5 of the EIS. ARTC would be responsible for mitigating impacts in accordance with relevant guidelines and the conditions of approval.

New mitigation measure LP17 (see Appendix B of this report) commits ARTC to preparing a consultation protocol to inform landowners and provide clarity of how ARTC will interact with them in relation to the design process, property changes, acquisition steps and processes with the aim of reaching agreement on these matters.

The principles of the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW) would apply to any acquisition of land (or interest in land) for the purposes of the proposal. ARTC is committed to ensuring that compensation is fair and equitable for the acquisition of land. Compensation will be assessed pursuant to the *Land Acquisition (Just Terms Compensation) Act 1991,* having regard to the following heads of compensation:

- The market value of the land on the date of its acquisition
- Any special value of the land to the person on the date of its acquisition
- Any loss attributable to severance
- Any loss attributable to disturbance
- The disadvantage resulting from relocation
- Any increase or decrease in the value of any other land of the person at the date of acquisition, which adjoins or is severed from the acquired land by reason of the carrying out of, or the proposal to carry out, the public purpose for which the land was acquired.

7.16.2.2 Property valuation

Issue

A submitter noted that the Valuer General had not responded to their objection to their rates valuation. The submitter provided Inland Rail with a valuation stating a 40 per cent drop in property value, and expressed concern that their property would not appreciate like other properties.

Submission numbers

SE-48404215

Response

It is outside the scope of this report to provide a response to the issue about a Notice of Valuation by the Valuer General.

All property acquisitions would be undertaken in consultation with landowners and in accordance with the requirements of the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW).

A response to the issue of the impact on property values is provided in section 7.16.2.1 of this report.

7.16.3 Compensation

7.16.3.1 Compensation payable

Issue

Submitters raised concerns about the compensation that would be payable, including as a result of acquisition, and how it would be determined. Issues raised included:

- Compensation cannot be negotiated without a detailed design showing impacts in most cases
- Concerns that compensation is being negotiated on the basis of a reference design
- The statutory obligations under the *Land Compensation (Just Terms Compensation) Act 1991* (NSW) must be adhered to
- Whether compensation talks would need to reopen if the final design changes from the reference design
- Concerns that not enough money is being offered to relocate from their property.

Submission numbers

SE-48689983, SE-48699724, SE-48700736, SE-48727707

Response

As described in section 9.11.8 of the EIS Response to Submissions report, all property acquisitions would be undertaken in consultation with landowners and in accordance with the requirements of the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW) (refer to mitigation measure LP3).

ARTC commenced initial property acquisition meetings with landowners in April 2021 to seek their participation around negotiation on compensation. Landowners affected by acquisition are encouraged to engage their own independent valuation advice, with reasonable costs reimbursed by ARTC. Compensation relating to the loss of property is subject to ongoing discussions and negotiations with affected landowners and will be resolved through the property adjustment plan.

ARTC is committed to ensuring that compensation is fair and equitable for the acquisition of land. Compensation will be assessed pursuant to the *Land Acquisition (Just Terms Compensation) Act 1991*, having regard to the following heads of compensation:

- The market value of the land on the date of its acquisition
- Any special value of the land to the person on the date of its acquisition
- Any loss attributable to severance
- Any loss attributable to disturbance
- The disadvantage resulting from relocation

- Any increase or decrease in the value of any other land of the person at the date of acquisition, which adjoins or is severed from the acquired land by reason of the carrying out of, or the proposal to carry out, the public purpose for which the land was acquired.

As described in section 7.16.1 of this report, ARTC acknowledges that ongoing design changes have resulted in the acquisition process being unclear for some landowners. The level of detail available on the proposal will continue to increase as the design is developed during detailed design. New mitigation measure LP17 (see Appendix B of this report) commits ARTC to preparing a consultation protocol to inform landowners and provide clarity about how ARTC will interact with them in relation to the detailed design process, property changes, acquisition steps and processes with the aim of reaching agreement on these matters.

Appropriate management measures would be developed, documented and agreed as part of the property acquisition consultation process, where practicable. Typically, the acquisition process with each individual landowner (including compensation assessment) will not be finalised until detailed design has been confirmed for that location.

7.16.3.2 Compensation as a result of other impacts

Submitters suggested that compensation should be provided to address the other impacts of the proposal, including:

- Impacts on property values as a result of the proximity to the proposal
- Compensation for loss of income for not being able to carry out normal farming procedures, including where stock could no longer use paddocks or access bores or watering points due to noise from trains and level crossings
- Compensation for the negative impacts of the proposal and its presence if these exceed the valuation in accordance with the Just Terms Act
- Compensation should include all impacts such as loss of amenity, efficiency to farm businesses, safety, quietness of nature
- An enduring compensation legacy to handle matters that will be attended to after detailed design
- Future expenses that may be incurred due to unforeseeable damage to the change of landscape and farming operations
- Will ARTC replace bores and water points for stock if rendered unusable?
- Whether businesses along the route will be covered for any damages or losses caused by the proposal. There should be an indemnity and a simple and quick mechanism to claim and be paid for any current and/or future losses (whenever they arise).

Submission numbers

SE-48689983, SE-48699459, SE-48699724, SE-48700711, SE-48700736, SE-48695793

Response

ARTC commits to working with landowners to develop measures to minimise the impacts of constructing and operating the proposal on agricultural properties, landowners and their operations. In accordance with mitigation measure LP1, the design and construction planning would continue to be refined to minimise potential impacts on land uses and properties as far as reasonably practicable. Consultation with landowners would be ongoing during detailed design, to identify feasible and reasonable measures to minimise impacts on their operations/properties.

All property acquisitions would be undertaken in consultation with landowners and in accordance with the requirements of the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW). Appropriate management measures would be developed, documented and agreed as part of the property acquisition consultation process, where practicable. New mitigation measure LP17 (see Appendix B of this report) commits ARTC to preparing a consultation protocol to inform landholders and provide clarity of how ARTC will interact with them in relation to the design process, property changes, acquisition steps and processes with the aim of reaching agreement on these matters.

In accordance with mitigation measure LP3, during the property acquisition process, ARTC would seek to secure agreement with affected landowners, to guide property-level design requirements and the management of construction on, or immediately adjacent to, private properties. Each impacted property owner would be consulted to identify and understand the operational needs of their property and the activities conducted upon it, with tailored agreements prepared to document the agreed outcomes. The agreements may include:

- Measures to minimise property impacts, including on agricultural operations
- Specific requirements to ensure that operations, including the movement of livestock and farm machinery, are able to be maintained as efficiently as possible
- Measures to manage severance impacts as they relate to each property, where practicable, including appropriate movement arrangements (such as new or adjusted accesses to the public road network or internal access networks), divestment or amalgamation opportunities
- Required adjustments to, and/or replacement of affected structures such as livestock handling yards, fencing, silos, holding pens, barns, etc
- Assistance to reconfigure farming operations to accommodate the alteration in land use.

Once the proposal becomes operational, additional compensation and land acquisition processes would only be introduced if there are variations to the proposal that require additional environmental approvals.

7.16.3.3 Other compensation matters

Issue

A submitter noted that safe scheduling of movement of stock and machinery (i.e. the 'call train control' process) must be supplied before compensation is finalised because the cost to landholders will be enduring and expensive.

Submission numbers

SE-48700736

Response

The property acquisition process will be finalised during detailed design; however, the 'call train control' process (mitigation measure LP24) will be provided prior to the commencement of operations (after completion of the acquisition process).

Appropriate management measures would be developed, documented and agreed as part of the property acquisition consultation process, where practicable. In accordance with mitigation measure LP3, during the property acquisition process, ARTC would seek to secure agreement with affected landowners to guide property-level design requirements and the management of construction on, or immediately adjacent to, private properties. Each impacted property owner would be consulted to identify and understand the operational needs of their property and the activities conducted upon it, with tailored agreements prepared to document the agreed outcomes.

7.16.4 Costs, liability and insurance

Issue

A submitter suggested that there should be an immediate mechanism for people to be paid for their time dealing with the proposal, including writing submissions.

Submission numbers

SE-48695793

Response

There is no compensation payable for people's time taken to engage with ARTC on proposal-related matters.

The NSW Government and DPE are responsible for establishing and overseeing the policies and processes relating to environmental approvals and public exhibition. The requirements of the EP&A Act have been adhered to for this planning process.

Issue

Submitters raised concerns about liability and insurance. Issues raised included:

- Who is liable if a person enters the corridor, then illegally enters a landowner's property and injures themselves? The submitter identified that this issue was raised in their original EIS submission but was not addressed.
- The public liability cost to landowners has not been addressed. What level of cover will be required and what will it cost?

Submission numbers

SE-48700711, SE-48700736

Response

The rail corridor will be owned by Transport for NSW and leased to ARTC. As such, access to the rail corridor is subject to strict permitting requirements. Access to the rail corridor or private land without permission is unlawful and the trespasser would be liable should any injury result.

Ongoing property insurance is a matter for each individual landowner.

Issue

A submitter asked who will pay for the cost of time delays for grain trains using the Dubbo to Coonamble Line where they need to cross the proposal.

Submission numbers

SE-48700736

Response

There is no compensation payable for the time taken by grain trains to traverse the N2N rail line using the at-grade connection with the Dubbo to Coonamble Line.

Issue

A submitter noted that rerouting access roads through neighbouring properties presents potential problems. The submitter asked if ARTC will use these roads and who pays for them if they're damaged? If ARTC staff leave gates open and stock gets into neighbours' properties and cause damage, who is liable? The submitter identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48700736

Response

Any alteration of internal property private access roads would be undertaken in consultation with the relevant landowners as part of the property adjustment process. It is not proposed to provide private access across another landowner's property Any use of private access roads by ARTC staff to access the rail corridor would only be undertaken under an access agreement with the landowner. Use of the roads, including any responsibility for damage, would be managed under the agreement.

7.16.5 Property access

7.16.5.1 Access between properties

Issue

Some submitters raised concerns about impacts on access between properties. Issues raised included:

- The alignment would interrupt access to their properties located either side of Milpulling Road
- The alignment near Gilmours Road is located in an area where landowners use roads to access their network of properties continuously. The safety aspects alone are a very serious concern.
- The closure of Dappo Road will impact the movement of stock and plant.

Submission numbers

SE-48698519, SE-48722712, SE-48668962

Response

Access between properties along the proposal site, including those mentioned in the submissions, will be available via the public road network. Depending on the location, this would be provided by public level crossings or an alternative public road route. A response to road safety issues is provided in section 9.15.2 of the EIS Response to Submissions Report.

7.16.5.2 Access to and within properties

Issue

A submitter expressed concern that the proposed route would sever their private all-weather access to Box Bridge Road. Mapping indicates a level crossing would be provided on their access road but it is not clear how this will be maintained during construction. The submitter is concerned that during construction they will need to access Box Bridge Road for work and emergency purposes. The secondary access to the farm is via the National Park Road, which is frequently cut off even during small flows of water from Baronne Creek. Planning approval must ensure that 24-hour continual access in and out of properties be maintained during construction.

Submission numbers

SE-48699724

Response

A response to this issue is provided in section 9.11.5 of the EIS Response to Submissions Report. In accordance with mitigation measure TT7, a traffic, transport and access management plan would be prepared and implemented during construction as part of the CEMP. The plan would include property access arrangements, developed in consultation with landowners.

Issue

Submitters raised concerns about access to and within properties. Issues raised included:

- Access both into and within properties for stock, equipment and vehicles must be clearly communicated with landowners
- When would changes to access arrangement be confirmed?
- Would property owners have to travel through a neighbour's property to access their own paddocks on the other side of the rail line?
- Would new roads be subject to acquisition?
- More than 300 private crossings would need to be constructed to match existing property arrangements and paddocks
- Would stock be allowed to cross the rail line and can stock continue to be moved across properties severed by the rail line?

A submitter identified that this issue was raised in their original EIS submission but was not addressed.

Submission numbers

SE-48700736, SE-48699724

Response

A response to the issue of severance and fragmentation is provided in section 9.11.3 of the EIS Response to Submissions Report. ARTC acknowledges the submitter's concern that their issue had not been addressed. While ARTC believes adequate responses were provided to these issues in the EIS Response to Submissions Report, further consideration is provided below.

The Preferred Infrastructure/Amendment Report does not set out detailed and specific provisions in terms of rail corridor crossings (including stock crossings) within private properties, as these need to be determined in consultation with individual affected property owners/operators. Further assessment of potential property impacts, including property severance, was undertaken and is provided in section 7.6.5 of the Preferred Infrastructure/ Amendment Report. The assessment considered the following scenarios regarding impacts on private land:

- Change in public road access
- Change in internal access arrangements
- Severance, potential isolation of a portion of a landholding
- Severance of a landholding
- Acquisition on the external boundary of a landholding.

Each of these scenarios was discussed in detail, with additional information on how the property negotiation process would facilitate the management and mitigation of potential impacts in a manner that is sensitive to the

needs of each individual landowner. It is not proposed to provide private access across another landowner's property. Any new private access roads would not be subject to acquisition. No additional private level crossings are required or would be permitted to be constructed.

ARTC commits to working with landowners to develop measures to minimise the impacts of the new rail corridor on internal property access arrangements, as far as practicable. In accordance with mitigation measure LP7, where the proposal affects internal property access arrangements, input would be sought from relevant landholders prior to finalising the detailed design. Where changes to internal property access arrangements are required, ARTC would consult with relevant property owners/occupants regarding alternative access arrangements, and identify feasible and reasonable measures to minimise impacts on existing operational arrangements/properties.

ARTC has already undertaken extensive consultation with landowners and, where feasible, considered access requirements for agricultural machinery, upgraded access, or provided new access and alternative routes, noting that in some instances access has not been provided in the landowner's preferred location for reasons that include safety and design requirements. This consultation is ongoing as part of the property acquisition process and would continue during detailed design and construction planning.

Access for livestock across the proposal would be provided for by means of level crossings or stock underpasses at bridges and culverts (where topography and sizing permits). The movement of agricultural machinery across the proposal at level crossings would need to comply with NSW road rules.

Issue

A submitter noted that their largest piece of plant equipment that would need to cross the line is approximately 8 m wide by 7 m high. The submitter asked if the crossing will be large enough to accommodate this and recommended that a crossing or underpass of 10 m wide and 8 m high is needed.

Submission numbers

SE-48746213

Response

The provision and design of private level crossings would be determined in accordance with relevant design requirements, including ARTC and Australian Standards, the Rail Safety National Law, and in consultation with landowners. As part of the detailed design, ARTC would develop a number of typical layouts for private level crossings. The safe movement of stock and farm machinery across the rail line at private crossings would be considered when developing these typical level crossing layouts. Stakeholder engagement and discussions with landowners have included review of stock and plant movements. Additional information regarding potential locations and design considerations for private level crossings is provided in section 6.4 of the Preferred Infrastructure/Amendment Report.

Issue

A submitter noted that they are awaiting opportunity to comment on a detailed design for their private access road.

Submission numbers

SE-48689983

Response

The level of detail available on the project will continue to increase as the design is developed during detailed design. New mitigation measure LP17 (see Appendix B of this report) commits ARTC to preparing a consultation protocol to inform landowners and provide clarity of how ARTC will interact with them in relation to the design process, property changes, acquisition steps and processes with the aim of reaching agreement on these matters.

7.16.6 Construction impacts

7.16.6.1 Impacts of construction compounds and ancillary sites

Issue

Submitters raised concerns about the proposed locations of construction compounds and facilities, particularly in terms of how it would affect their properties. Issues raised included:

- Proposed construction infrastructure/facilities on their properties (compounds, topsoil storage and concrete batching plant) would cause risks to their business and long-term impacts to the soil and land

- Landowners must be given the right to refuse placement of construction infrastructure on their land
- The proposed location of construction compounds has not been discussed with the landowner. They request information on the location, size and why they are required. The submitter would prefer they be placed at either end of their property to reduce impacts on farming activities.
- Updated footprint plans are required to show the construction laydown area for their property. The submitter requested a lease to guarantee the restoration of the laydown areas. Testing should be carried out prior to use so a standard for rehabilitation can be met.

Submission numbers

SE-48699724, SE-48699459, SE-48700711, SE-48698995

Response

The construction footprint (as shown in the updated Map Book) includes proposed locations for construction compounds and ancillary facilities. ARTC and its construction contractor(s) would undertake further consultation with the landowner during detailed design and construction planning to confirm and agree the location of, and arrangements for, the construction infrastructure. This would consider potential impacts on agricultural operations.

As described in section B12.3.1 of the EIS, land required during construction only would be via a lease with the relevant landowner. Landowners would be consulted during the process. Lease values would be determined in accordance with established guidelines and statutory requirements.

As construction is completed, land required for construction only would be rehabilitated and returned as close as practicable to the pre-construction condition, or as agreed with landowners.

As described in section A8.7 of the EIS, at the end of construction all disturbed areas not required for ongoing operation would be rehabilitated in accordance with the rehabilitation strategy (mitigation measures BD12 and SC9). The strategy would be prepared to guide rehabilitation planning, implementation, monitoring and maintenance of disturbed areas. It would be prepared by a suitably qualified consultant, in consultation with relevant stakeholders (including councils and the community) and with consideration of:

- ARTC's Inland Rail Landscape and Rehabilitation Strategy and ARTC's Inland Rail Landscape and Rehabilitation Framework
- The borrow pit rehabilitation strategy (provided in Appendix K of the EIS)
- Rehabilitation requirements described in the updated biodiversity development assessment report
- The conditions of approval for the proposal.

This would include consideration of pre-existing land use and matters such as soil compaction and rehabilitation.

In accordance with mitigation measure LP21, rehabilitation of disturbed areas would be undertaken progressively, consistent with the rehabilitation strategy and property-level design requirements (where relevant).

Issue

A submitter stated that all construction equipment must stay within ARTC's corridor to prevent compaction and other issues to agricultural land.

Submission numbers

SE-48739207

Response

As stated in sections A8.1.1 and A8.11 of the EIS, to minimise impacts on road infrastructure, land use and properties, construction areas would be accessed by existing roads together with the proposal haul roads within the proposal site. As described above, land required for construction only would be rehabilitated and returned as close as practicable to the pre-construction condition, or as agreed with landowners.

7.16.6.2 Impacts on farming during construction

Issue

A submitter noted that construction traffic would continue for a significant period of time and would include multiple bus, work vehicle and truck movements. The dust created by construction of the proposal would penetrate their sheep's wool making it less valuable. They ask what would be done to alleviate this issue.

Submission numbers

SE-48698519

Response

A response regarding construction air quality impacts is provided in section 9.9.1 of the EIS Response to Submissions Report.

Potential dust impacts on property and agriculture and are described in section 7.9 of the EIS Agriculture and land use assessment (Technical Report 11) and summarised in section B12.3.3 of the EIS. The assessment noted that during construction there is potential for dust to settle on crops and pastures, dust impacts would vary substantially from day to day depending on the level of activity, duration, soil type and topography, and the wind speed and direction. However, the assessment also noted that dust suppression protocols, which would be developed as part of the air quality management plan, would reduce the occurrence. As a result, the impacts on production are expected to be insignificant.

Issue

A submitter noted that the alignment will run along the eastern boundary of their property. During construction, these paddocks will be substantially impacted with no way of containing stock during the construction phase.

Submission numbers

SE-48700711

Response

In accordance with mitigation measure LP5 (see Appendix B of this report), where construction is located on, or immediately adjacent to, private properties and has the potential to affect farm operational arrangements/properties, property-specific measures would be identified and implemented, in consultation with landowners, to address identified issues where feasible and reasonable. The measures would include, as appropriate, arrangements in terms of works timing and practices; any required adjustments to fencing, access and farm infrastructure; and relocation or compensation for any impacted structures or improvements.

7.16.7 Operation impacts

7.16.7.1 Impacts to livestock

Issue

Submitters raised concerns about impacts of the proposal on livestock, including:

- A train running through the property would be detrimental to their lambing ewes, causing disturbance which could have substantial business impacts
- Trains sounding horns as a warning when they approach will be a major disturbance to grazing stock and will also cause mothering ewes to abandon their lambs.

Submission numbers

SE-48700711, SE-48698519

Response

A response to this issue is provided in section 7.13.2.3 of this report.

Issue

A submitter raised concerns about the proposed rail alignment through travelling stock route (TSR) R27999, including stock welfare, safety and damage to fencing.

Submission numbers

SE-48689983

Response

A response to this issue is provided in section 5.5.1.3 of this report.

7.16.7.2 Impacts to agricultural activities/property

Issue

A submitter raised concern about the impact of the proposal on chemical application to crops. The submitter noted that spraying can only be undertaken during a south-east breeze, which occurs for a limited time. The plane operator would not be able to spray while the train is in the vicinity of the property.

Submission numbers

SE-48689983

Response

As described in section 9.11.11 of the EIS Response to Submissions Report, weed and chemical spraying with planes can continue in accordance with existing requirements and statutory obligations for aerially applying pesticides.

Issue

Submitters raised concerns about water management issues for farming operations, including the loss of productive area from erosion, concentration of water, water logging of crops, flooding, and damage to infrastructure in times of significant rain events.

Submission numbers

SE-48699724, SE-48699459

Response

The updated flooding and hydrology assessment report considers the potential flooding impact on agriculture (see section 7.10 of the updated flooding and hydrology assessment report). The assessment found that the average duration of flooding would be generally less than 24 hours in duration and should avoid the medium and extended duration impacts on pasture species. The duration of flooding on agricultural land would be largely unaffected by the proposal. The analysis also found that there would be no significant change in the extent of flooding on grazing and cropping lands. The assessment concluded that the proposal would have a minor impact on flooding to cropping and grazing lands.

7.16.7.3 Property severance

Issue

Submitters raised concerns about severance and fragmentation of their properties and collective farming enterprises. They suggested that the Preferred Infrastructure/Amendment Report has not addressed how these impacts could be avoided. Issues raised included:

- Needing to move stock and plant on public roads
- Increased labour requirements and costs
- Removal of shade trees
- Severed access to water safety
- Animal welfare issues.

Submission numbers

SE-48699459, SE-48746213, SE-48722712, SE-48668961, SE-48668962

Response

A response to the issue of severance and fragmentation is provided in section 9.11.3 of the EIS Response to Submissions Report. The EIS and EIS Agriculture and land use assessment (Technical Report 11) acknowledge that the impact of severance on farming operations is highly dependent on the circumstances of each farming business. As property negotiations continue with individual landowners, the interrelationships between holdings under different names will be confirmed.

As described above, further assessment of potential property impacts, including property severance, was undertaken and provided in section 7.6.5 of the Preferred Infrastructure/Amendment Report. The assessment considered the following scenarios regarding impacts on private land:

- Change in public road access
- Change in internal access arrangements
- Severance, potential isolation of a portion of a landholding
- Severance of a landholding
- Acquisition on the external boundary of a landholding.

Each of these scenarios was discussed in detail, with additional information on how the property negotiation process would facilitate the management and mitigation of potential impacts in a manner that is sensitive to the needs of each individual landowner.

ARTC commits to working with landowners to develop measures to minimise the impacts of the new rail corridor on internal property access arrangements, as far as practicable. In accordance with mitigation measure LP1, the design and construction planning would continue to be refined to minimise potential impacts on land uses and properties, as far as reasonably practicable. Consultation with landowners would be ongoing during detailed design, to identify feasible and reasonable measures to minimise impacts on their operations/properties.

In accordance with mitigation measure LP7, where the proposal affects internal property access arrangements, input would be sought from relevant landowners prior to finalising the detailed design. Where changes to internal property access arrangements are required, ARTC would consult with relevant property owners/occupants regarding alternative access arrangements, and identify feasible and reasonable measures to minimise impacts on existing operational arrangements/properties.

ARTC has already undertaken extensive consultation with landowners and, where feasible, considered access requirements for agricultural machinery, upgraded access, or provided new access and alternative routes, noting that in some instances access has not been provided in the landowner's preferred location, for reasons that include safety and design requirements. This consultation is ongoing as part of the property acquisition process and would continue during detailed design and construction planning.

Issue

A submitter expressed concern that, due to property severance, the landowners would need to invest in additional farm infrastructure on their property on the other side of the railway for shearing, lamb marking and general stock work.

Submission numbers

SE-48746213

Response

Appropriate property-specific management measures would be developed, documented and agreed as part of the property acquisition consultation process, where practicable. In accordance with mitigation measure LP3, during the property-acquisition process, ARTC would seek to secure agreement with affected landholders to guide property-level design requirements and the management of construction on, or immediately adjacent to, private properties. Each impacted property owner would be consulted to identify and understand the operational needs of their property and the activities conducted upon it, with tailored agreements prepared to document the agreed outcomes. Agreements may include (for example):

- Measures to minimise property impacts, including impacts on agricultural operations
- Specific requirements to ensure that operations, including the movement of livestock and farm machinery are able to be maintained as efficiently as possible
- Measures to manage severance impacts as they relate to each property, where practicable, including appropriate movement arrangements (such as new or adjusted accesses to the public road network or internal access networks), divestment or amalgamation opportunities
- Required adjustments to, and/or replacement of, affected structures, such as livestock handling yards, fencing, silos, holding pens, barns, etc
- Assistance to reconfigure farming operations to accommodate the alteration in land use.

As part of the negotiation process, each property subject to acquisition would be assessed on an individual basis, as the potential impacts of the proposal and specific design elements localised to that property would ultimately influence how compensation is determined and would need to account for other ancillary impacts specific to each property.

Initial consultation with all directly affected landowners commenced in mid 2020, and ARTC formally commenced the acquisition process in 2021. Any agreements for the acquisition of all or parts of properties would occur during this process.

7.16.8 Other

7.16.8.1 Reserve access

Issue

A submitter asked if the general public has access to Webbs Siding Reserve and the Macquarie River during and after construction. They also asked if ARTC would have the budget to improve access within Webbs Siding Reserve following the completion of construction.

Submission numbers

SE-48668962

Response

Webbs Siding Reserve is located within a travelling stock reserve. In accordance with mitigation measure LP12, ARTC would continue to consult with North West Local Land Services during detailed design to confirm how impacts on travelling stock reserves would be minimised during construction and operation. This would include consideration of access arrangements during construction and operation.

7.17 Visual amenity

7.17.1 Operation impacts

Issue

Submitters raised concerns about the potential visual impacts of the proposal, including impacts on their properties. Issues raised included:

- There would be a detrimental change to the landscape
- The proposal cannot be designed or rehabilitated to resolve the visual impact to an acceptable level—the proposal would replace a scenic mountain view with an elevated rail line, complete with train and double-deck shipping containers
- The visual beauty of the Warrumbungles would be degraded
- Property would lose their 360-degree view. Hills would have line of sight to the corridor to different degrees and views will have a rail corridor with double stacked container trains, which turns the area industrial.

Submission numbers

SE-48699459, SE-48700736, SE-48404215

Response

As described in section 9.12.2 of the EIS Response to Submissions report, the EIS and Technical Report 12 acknowledge the potential for visual impacts as a result of the presence of the proposal's operational infrastructure. As described in section B13.4 of the EIS, the proposal would introduce new infrastructure in what is currently mainly a rural area. This would result in a change in the character of properties that are directly impacted by the proposal and a change in views for those properties that have views to the proposal site. General visual impacts would occur as a result of vegetation loss, introduction of a new rail corridor, changes to existing roads, and associated infrastructure in a typically rural landscape setting.

The EIS provides a range of measures to mitigate the potential visual impacts of the proposal. These are described in section B13.5 of the EIS and section 9.12.3 of the EIS Response to Submissions report.

7.17.2 Mitigating visual impacts

Issue

A submitter raised concerns about how the visual impacts of the proposal would be mitigated. Issues raised included:

- Whether planting of trees to hide the proposal would be on private land such that more acquisition or leasing of land will be needed, when this would occur and if property-specific assessments would be done.
- Is it correct that no mitigation is proposed to address the impacts on views in this precious part of NSW.

Submission numbers

SE-48700736

Response

In accordance with the SEARs and assessment guidelines, the assessment considers impacts on representative sensitive viewpoints and provides a general assessment on sensitive receivers. Notwithstanding, a range of mitigation and management measures would be implemented to minimise the potential visual impacts associated with the proposal.

These are described in section B13.5 of the EIS and section 9.12.3 of the EIS Response to Submissions report.

In accordance with mitigation measure LV2, an urban design and landscape plan would be prepared by a suitably qualified consultant in consultation with relevant stakeholders. The urban design and landscape plan would guide the appropriate urban design responses for key infrastructure and landscaping approaches. The plan would be context-specific and include a vision and place-specific objectives and principles to ensure the design is well integrated into its surrounding environment. The plan would be prepared in accordance with the urban design and landscaping objectives identified for the proposal and relevant guidelines, policies and strategies (as listed in section A7.6.2 of the EIS). These include ARTC's *Inland Rail Landscape and Rehabilitation Strategy* and the *Inland Rail Landscape and Rehabilitation Framework*, which have been developed to establish governing landscape objectives and principles, as well as outline landscape and rehabilitation treatment solutions for various phases of the overall Inland Rail program.

In accordance with mitigation measure LV2, the urban design and landscape plan would include vegetation screening in strategic locations to visually mitigate impacts from new structures and rail operations, including around bridges and locations where the proposal would be visible from sensitive receivers—where the presence of screening does not impact safe rail operations.

Detailed landscape designs would be prepared during the detailed design in consultation with landowners as relevant.

7.18 Socio-economic

7.18.1 Operation impacts

Issue

A submitter states that the rail line would impact their views, amenity and future plans for a tourism business.

Submission numbers

SE-48700736

Response

ARTC recognises its responsibility to deliver and operate Inland Rail while minimising social impacts, as far as reasonably practicable, and enhancing the benefits Inland Rail will deliver at a local, regional and national scale. ARTC has established procedures to guide the development and implementation of measures to minimise potential socio-economic impacts and maximise potential local and regional benefits of Inland Rail.

As described in section B14.5.1 of the EIS, and in accordance with mitigation measure SE4, a detailed social impact management plan (SIMP) would be prepared to manage the implementation of the proposed mitigation measures, and to detail the specific management actions and targets that would be developed in response to these measures.

7.18.2 Health and mental health

7.18.2.1 Capacity of health services

Issue

A submitter noted that Gilgandra Shire Council had identified health provider groups they believe were not consulted. Submitters identified that currently Gilgandra has a shortage of health, dental and medical services, with

many people in the community having to travel to Dubbo. They asked how ARTC intend to manage the impact of a large workforce affecting the availability of these services for the local community.

Submission numbers

SE-48698519, SE-48700711

Response

ARTC is committed to working with all councils and relevant stakeholders to manage impacts of the temporary workforce. Further information is also provided in response to Council's submission in section 4.2.8 and 4.2.9 of this report.

Temporary workforce accommodation facilities typically include some recreational amenities for construction workers to access between shifts (such as gymnasiums). It is expected that each temporary accommodation facility would also have a dedicated health space that could be used for onsite occupational health and safety requirements. The layout, staffing and amenities provided would be defined by the temporary workforce accommodation plan, which would be prepared in accordance with mitigation measure SE-CI2. The plan would be developed in accordance with ARTC's Inland Rail Program Accommodation Principles, relevant council development codes and guidelines, and in consultation with relevant key stakeholders, including local councils.

As a result of these factors, along with the frequent turnover and short-term, temporary nature of construction roles noted above, which would reduce the likelihood that many construction workers would relocate to the region with their families, the social assessment found that there could be demand on local social infrastructure services. If this did occur, however, it would be small scale and minimal.

Mitigation measure SE5 provides that, prior to construction, ARTC would confirm workforce requirements and the associated requirements for, and availability of, support services (including health, wellbeing and emergency services) to meet the needs of the non-resident construction workforce. ARTC would develop strategies and measures to meet these needs, as far as practicable, with minimal potential impacts on the local community. The measures would be developed in consultation with local councils and service providers (including health and emergency service providers), where relevant, and would be detailed in the workforce management plan.

In accordance with mitigation measure SE11, the workforce management plan would include measures for managing increased demand on health and emergency services resulting from the non-resident construction workforce. The plan would include appropriate processes and measures to ensure local health and emergency service providers are made aware of the potential demands on their services and given support and assistance to plan their resources appropriately. The plan would include a monitoring and reporting framework, consistent with the overall monitoring and reporting framework that would be implemented via the social impact management plan (mitigation measure SE4).

7.19 Climate change and sustainability

7.19.1 Climate change

7.19.1.1 Climate change risk to the proposal

Issue

A submitter raised concerns about climate risks to the proposal, including:

- Flooding from the water shed from the mountains
- Fire from the forest and gas fields
- Heat on extra hot days buckling lines.

The submitter noted that previous answers on this issue have been inadequate and they request a detailed response in relation to the issues raised.

Submission numbers

SE-48700736

Response

The potential for impacts due to climate change were considered in chapter D4 of the EIS. Additional information on the methodology is provided in Appendix H of the EIS. The assessment included consideration of impacts due to

the increased intensity of extreme rainfall events, increased fire risks and temperature increases. As described in chapter D4, the assessment included identifying potential adaption measures and/or design strategies to mitigate the potential for climate change impacts. In accordance with mitigation measures CC1, CC2 and CC3, the adaption measures identified for the proposal would be reviewed, and final measures would be incorporated into the design, construction and operation of the proposal, as far as practicable.

7.20 Hazards and risks

7.20.1 Construction impacts

7.20.1.1 Security during construction

Issue

Submitters raised concerns about security during construction of the proposal, including:

- ARTC seemed to have neglected to clarify if contractors and workers have had appropriate police checks
- Will there be some form of security for the prevention of theft and destruction of ARTC and contractors' equipment, so the landowner is not liable?

Submission numbers

SE-48700711, SE-48699459

Response

A response to safety concerns associated with construction areas is provided in section 9.15.1 of the EIS Response to Submissions Report. As noted in this response, in terms of police checks, ARTC conducts background checks on its employees; however, the workforce employed by the contractor is managed independently of ARTC. As such, it is the responsibility of the relevant contractor to manage and monitor the performance, and behaviour of its workforce.

7.20.2 Operations impact

7.20.2.1 Inadequate consideration of fire risk

Issue

A submitter raised concerns that fire risk has not been considered adequately. They asked why they should pay an increased fire insurance premium because the government puts a railway through their property.

Another submitter suggested that sufficient property access must be in place to access the rail corridor for fire control. They stated that a Fire Hazard Reduction Plan must be drawn up in conjunction with the Rural Fire Service (RFS) and presented to all fire brigades on the route.

Submission numbers

SE-48695793, SE-48739207

Response

Ongoing property insurance is a matter for each individual landowner.

In relation to management of fire risk, in accordance with mitigation measure LP23, the flood and emergency response plan (mitigation measure FH4) would include measures to minimise the potential for bushfire risks from construction activities. Measures to be included in the plan would include that all works involving potential ignition sources would be subject to a risk assessment or ban on total fire ban days. During operation, any maintenance activities that represent a bushfire risk would be undertaken in accordance with ARTC's standard operating procedures.

During detailed design ARTC would undertake further consultation with FCNSW, emergency service providers (including the RFS) and other relevant stakeholders to ensure the plan provides adequate measures.

In the event of a bushfire, the rail line would be closed temporarily to prevent trains entering the bushfire zone. In rare circumstances where trains have already entered or are approaching a bushfire zone, the train/s would be:

- Moved away, where practicable, to where it can be safely managed

- Driven in a safe manner at a reduced speed using headlight illumination and whistles
- Relocated clear of level crossings.

Potential impacts on access, including for emergency services, were assessed in the EIS Traffic and transport assessment (Technical Report 10) and summarised in chapter B11 of the EIS. Mitigation measures have been developed to address the potential impacts identified.

In accordance with mitigation measure TT7, a traffic, transport and access management plan would be prepared and implemented as part of the CEMP. The plan would include measures, processes and responsibilities to minimise the potential for impacts on the community and on the operation of the surrounding road and transport environment during construction. As part of this, mitigation measure LP19 provides that access to individual residences, services and businesses, and for livestock, plant and machinery across the rail corridor, would be maintained during construction.

In addition, in accordance with mitigation measure TT10, emergency vehicle access routes that may be impacted by the proposal would be identified, and appropriate control measures would be implemented, in consultation with the relevant emergency services providers.

Emergency services (such as the RFS) would be able to access individual properties via the access to that property. Emergency service vehicles would be able to cross the rail corridor via the crossings that would be provided as part of the proposal.

7.20.2.2 Road safety

Issue

A submitter notes that a Transport for NSW submission (18th February 2021) states: *"The [Milpulling Road] crossing is located on a slight curve in the road and a slight curve in the rail, a combination of these factors has the potential to reduce the ability of a driver to observe an approaching train. A passive control crossing may not provide an adequate level of safety".*

The submitter notes that safety on Milpulling Road is a concern for them as they would need to drive across the rail line daily to access their other farm. The submitter asks what has ARTC has done to resolve this safety issue.

Submission numbers

SE-48698519

Response

As described in section 6.3 of the Preferred Infrastructure/Amendment Report, a number of changes are proposed to the number and type of new public level crossings originally described in the EIS, taking into account further design development and consultation with affected landowners and other relevant stakeholders; however, no changes are proposed to the new public level crossing at Milpulling Road, which would still have passive controls.

As described in sections A6.3.3 and A7.3.7 of the EIS, the proposed road and rail interactions have been assessed and designed in accordance with relevant Australian, Transport for NSW and ARTC design standards.

Where it has been determined that a level crossing is the preferred solution, a consistent methodology that aligns with ONRSR's policies and guidelines has been used to determine proposed level crossing treatments (active or passive). The approach to this involves applying the Australian Level Crossing Assessment Model (ALCAM) to determine the 'risk score' for each level crossing, and then undertaking cost-benefit analysis to assess whether higher levels of protection are justified. In June 2020, ONRSR finalised an audit of the *Inland Rail Road–Rail Crossing Strategy*, the focus of which was on ensuring level crossing safety risks are eliminated or minimised, as far as reasonably practicable. There were no findings or recommendations identified by the audit requiring action by ARTC.

Mitigation measure TT4 provides that level crossings would be designed in accordance with relevant guidelines and standards, including *AS 1742.7:2016 Manual of uniform traffic control devices, Part 7: Railway crossings* (Standards Australia, 2016), *Guide to Road Design Part 4: Intersections and Crossings* (Austroads, 2021a), *Guideline: Lighting for railway crossings* (Roads and Maritime Services, 2013b) and ARTC standards, including provision of warning signage, line marking and other relevant controls. This would ensure that crossings are safe for long-term use. ARTC would continue consultation with relevant road managers during detailed design to finalise preferred treatments at each location. In accordance with new mitigation measure TT5, a public level crossing treatment report would be prepared to document the level crossing process design and assessment process that has been undertaken. 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). Justification would be provided where no works are proposed on existing level crossings.

In accordance with mitigation measure TT13, the operation of all level crossings on classified roads, constructed as part of the proposal, would be reviewed to confirm that the:

- Level of protection is appropriate
- Proposed infrastructure is appropriate for the traffic conditions.

Issue

A submitter raised concerns about safety on roads given the speeds of the trains at 115 km/hr are much higher than vehicles (about 80 km/hr) and tractors (23 km/hr). They highlighted that they are unsure of how to safely drive over a public level crossing or take a planter (15–20 m in length) across a private level crossing at about 5 km/hr. Would there be electronic signs to safely manage crossings? They also asked if more trees would be cleared to provide open views.

Submission numbers

SE-48700736

Response

As noted in the above response, in accordance with mitigation measure TT4, public level crossings would be designed in accordance with relevant guidelines and standards. This would ensure that crossings are safe for long-term use. Appropriate allowance, including the consideration of existing vegetation where required, has been made within the rail corridor to account for sight triangles, where practicable and would be maintained by ARTC. Typically, ARTC maintains a 5-m wide strip either side of the rail track to retain sight lines.

With regards to public and private level crossing safety, in accordance with mitigation measure SE15, a rail safety awareness program would be developed and implemented prior to the operation of Inland Rail to educate the community regarding safety around trains. This would include landowners with properties that are intersected by the proposal.

Additionally, as stated in mitigation measure LP24, ARTC will develop a 'call train control' process to enable landowners to use level crossings as stock and machinery crossings. Details of the 'call train control' process will be provided to agricultural landowners prior to the commencement of operations. Landowners/landholders and ARTC would sign an agreement that allows them to call train control and get a time window to safely cross the track. It is important to note that stock would not get priority over train operations.

The movement of agricultural machinery and farming vehicles across the proposal at level crossings would need to comply with NSW road rules.

Issue

A submitter asked how many accidents there have been related to overtaking vehicles catching up on time and being stuck behind slow vehicles because traffic flow rate was interrupted with a boom gate.

Submission numbers

SE-48700736

Response

A response to the issue of changes in vehicle accident rates is provided in section 9.15.2 of the EIS Response to Submissions Report.

7.20.2.3 Hazards from culverts

Issue

A submitter noted that box culverts, and the subsequent water divergence, would pose a severe hazard if not placed correctly.

Submission numbers

SE-48739207

Response

The proposal would be constructed in accordance with the relevant guidelines and standards, noting that one of the QDL criteria relates to changes in hazard. In accordance with mitigation measure FH2, further modelling and site-specific assessments would be undertaken during detailed design to confirm the locations downstream of culverts and within drainage control areas that require erosion protection, and to confirm the extent and type of protection required. ARTC reiterates government policy that drivers should not drive through floodwaters.

7.21 Other issues/outside scope

7.21.1 Other Inland Rail projects

7.21.1.1 Queensland approvals

Issue

A submitter raised concerns about other Inland Rail projects and approvals. This included concerns that the Queensland Government has not approved any Inland Rail projects. The EIS Response to Submissions Report does not reference the lack of approvals to construct anything in Queensland.

Submission numbers

SE-48732462

Response

The proposal, for which approval is being sought in NSW, does not rely on any approvals in Queensland or Victoria. ARTC is seeking separate approvals for other sections of Inland Rail in accordance with the requirements of the Victorian and Queensland Governments to ensure the overall benefits are realised. Sequential approval and construction will unlock regional benefits as the Inland Rail program is progressively completed.

7.21.1.2 Air quality impacts in the Brisbane airshed

Issue

A submitter raised concerns that allowing Inland Rail into the Brisbane airshed east of Toowoomba would result in a significant violation of current Queensland air quality legislation.

Submission numbers

SE-48732462

Response

These issues are not within the scope of this proposal and it is outside the scope of this report to provide responses to these matters.

7.21.1.3 Consultation

Issue

A submitter raised concerns about how they were treated at a Brisbane Community Consultative Committee (CCC) meeting in 2020, specifically with regards to air quality. Concerns included that ARTC has not responded or attempted to contact them to discuss issues relating to Inland Rail.

Submission numbers

SE-48732462

Response

These issues are not within the scope of this proposal and it outside the scope of this report to provide responses to these matters.

7.21.2 Other issues

7.21.2.1 Conflicts of interest

Issue

A submitter raised concerns about whether there is an inherent conflict of interest in ARTC both advising on, and constructing and operating the proposal. The submitter requested that an independent review of the works of ARTC be conducted due to this conflict of interest.

The submitter also asserts that it is unacceptable that ARTC is not a Commonwealth government department and thus is not subject to all the duties and obligations of the government. They state that outsourcing roles of the government is unacceptable and that the ARTC should be subject to the same duties, obligations, and review as if it was part of the government.

They assert that the planning for Inland Rail should be undertaken by an independent government department (not a corporation who has a long-term financial interest in the proposal—an inherent conflict of interest).

Submission numbers

SE-48695793

Response

A response to the issue of conflict of interest is provided in section 10.3.3 of the EIS Response to Submissions Report.

The appointment of an independent reviewer for Inland Rail is a matter for the NSW and/or Commonwealth Governments.

Issue

A submitter raised concerns that the project's construction cost escalations, combined with ARTC's potential pecuniary motivation to reduce biodiversity offset obligations and their failure to acknowledge and address submission issues, requires official investigation.

Submission numbers

SE-48744210

Response

Internal and external reviews of Inland Rail's scope, schedule and cost are undertaken on a regular basis. In October 2022, the Australian Government announced an independent review of Inland Rail—a commitment made prior to the latest Federal election. The review will focus on:

- The process for selecting the Inland Rail route, including stakeholder consultation
- An assessment of the Inland Rail scope, schedule and cost
- The options for the new Inland Rail intermodal terminals to be built in Melbourne and Brisbane.

ARTC welcomes this review as it provides an opportunity to ensure that these, and other factors, are taken into account as part of the process.

7.21.3 Support for the proposal

Issue

A submitter noted that they support the proposal, including that it will bring advantages to Narrabri. The submitter noted that Moree has already seen benefits from Inland Rail—the route was chosen by experts, and would bring benefits to small and big businesses.

Submission numbers

SE-48565714

Response

ARTC acknowledges the support expressed for Inland Rail.

8. Evaluation and conclusion

8.1 Summary and justification

The Inland Rail Narromine to Narrabri proposal is critical State significant infrastructure (SSI) and is subject to assessment and approval in accordance with Part 5, Division 5.2 of the EP&A Act. An EIS was prepared to address the requirements of Division 5.2, the SEARs and Schedule 2 of the EP&A Regulation. The EIS was placed on public exhibition between 8 December 2020 and 7 February 2021.

A Response to Submissions Report (the 'EIS Response to Submissions Report') was prepared to respond to the issues raised in submissions made on the EIS. A Preferred Infrastructure/Amendment Report was also prepared to describe the proposed changes to the proposal to minimise its environmental impact and to reflect design development since the public exhibition of the EIS. The Preferred Infrastructure/Amendment Report were placed on public exhibition for a period of 24 days commencing on 31 August 2022 and concluding on 23 September 2022.

During the exhibition period, interested stakeholders and members of the community were able to make a written submission to DPE for consideration in its assessment of the proposal (as amended).

8.1.1 Justification of the proposal

The SEARs for the proposal require the EIS to be prepared in accordance with Part 3 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000 (the EP&A Regulation). The SEARs and clause 7(1)(f) of Schedule 2 of the EP&A Regulation require an EIS to provide '*the reasons justifying the carrying out of the development, activity or infrastructure in the manner proposed, having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development set out in subclause (4)*'.

8.1.1.1 Biophysical considerations

Detailed environmental investigations have been carried out as described in the EIS, Preferred Infrastructure/Amendment Report and EIS Response to Submissions Report to:

- Understand the existing environment of the proposal site and surrounds
- Inform route selection and option development
- Inform development of the reference design and preliminary construction planning
- Undertake the environmental impact assessment and prepare the EIS and Preferred Infrastructure/Amendment Report
- Respond to issues raised in submissions
- Further progress the design and assessment process in accordance with the commitments made in the EIS, and in response to issues raised during community consultation
- Assess the potential impacts of the amended proposal.

To provide a high level of certainty in understanding the environment and identifying potential impacts, all investigations were undertaken by technical specialists experienced in impact assessment, using best-practice methodologies in accordance with relevant statutory requirements and guidelines.

Investigations undertaken for the EIS were informed by the impact scoping exercise and environmental risk assessment, as described in chapter A9 of the EIS, and were undertaken in accordance with the SEARs. Further assessments were undertaken as part of the Preferred Infrastructure/Amendment Report, to assess the potential biophysical impacts of the proposed amendments and to respond to submissions. The results of environmental investigations and consideration of the environmental risk assessment were used to ensure that potential impacts are avoided as far as possible. The key potential biophysical impacts of the proposal, based on the design and construction methodology described in the updated proposal description (see Appendix A of the Preferred Infrastructure/Amendment Report), are summarised in chapter D5 of the EIS and section 7 of the Preferred Infrastructure/Amendment Report.

The approach to managing the identified impacts is also described in chapter D5 of the EIS. Ways to further reduce and minimise unavoidable potential impacts on the environment have also been considered. Mitigation and management measures (as amended) to minimise any outstanding impacts are identified in this report (see Appendix B). These include changes to respond to issues raised in submissions, as described in this report.

8.1.1.2 Economic and social considerations

Inland Rail is essential to meet the forecast growth of interstate rail freight demand. It is estimated that Inland Rail will shift the share of freight moved by rail between Melbourne and Brisbane from 26 to 62 per cent, so that by 2050 about 7.9 million tonnes of inter-capital freight will be moved by rail between the two cities (ARTC, 2015). Inter-capital freight includes products such as hardware, steel, groceries and other consumer goods. It travels between major ports and capital cities before being distributed to retailers.

Inland Rail will also travel through some of Australia's richest farming regions and mining regions. It is expected to draw significant volumes of grain, cotton, chilled beef, coal and other commodities onto rail to directly serve domestic and export markets. During construction, Inland Rail is expected to be a major economic enabler in the regions, as ARTC will aim to utilise local procurement and employment as far as possible.

In summary, as described in chapter A5 of the EIS, Inland Rail is needed to respond to the growth in demand for freight transport, and address existing freight capacity and infrastructure issues. The analysis of demands undertaken by ARTC indicated that there would be sufficient demand for Inland Rail.

The proposal is a critical component of Inland Rail and is required to enable Inland Rail to operate. The benefits of Inland Rail are described in chapter D6 of the EIS.

The potential for social and economic impacts has been assessed by the EIS and Preferred Infrastructure/Amendment Report. The key potential socio-economic and community impacts of the proposal are summarised in chapter D5 of the EIS and section 7 of the Preferred Infrastructure/Amendment Report. The approach to managing the identified impacts is also described in chapter D5 of the EIS.

The amendments described in the Preferred Infrastructure/Amendment Report have been developed taking into account consultation with the community and key stakeholders and submissions made. The proposed amendments would address some of the potential socio-economic impacts of the proposal (as exhibited). The potential socio-economic impacts of the amendments have been assessed. Additional and amended mitigation measures are proposed to respond to the changes in potential socio-economic impacts and issues raised in submissions (as described in this report). These changes (see Appendix B) would further minimise the potential socio-economic impacts of the proposal.

8.1.1.3 Ecologically sustainable development

The EP&A Act adopts the definition of ecologically sustainable development contained in the *Protection of the Environment Administration Act 1991* (NSW). The following sections provide reasons justifying the proposal having regard to the principles of ecologically sustainable development defined by clause 7(4) of Schedule 2 of the EP&A Regulation.

Precautionary principle

The precautionary principle is defined as '*…if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation*'.

A range of environmental investigations have been undertaken during the development of the proposal and the environmental assessment process, to ensure that potential impacts are understood with a high degree of certainty. The assessment of the potential impacts of the proposal is considered to be consistent with the precautionary principle. The assessments undertaken are consistent with accepted scientific and assessment methodologies and have taken into account relevant statutory and agency requirements. The assessments have applied a conservative approach with regard to construction and operational arrangements, and the modelling used.

The proposal alignment and design has evolved to avoid impacts, where possible, and to reflect the findings of the studies undertaken. Mitigation and management measures have been proposed to minimise potential impacts, and these management measures would be implemented during detailed design, construction and operation.

Lack of full scientific certainty has not been used as a reason to postpone or avoid identification and adoption of design or management measures to avoid or minimise potential environmental degradation. Where potential suitable habitat for species credit species is present and the location has not been surveyed due to access or seasonal constraints, the species are assumed present and appropriate offsets have been calculated. No threat of serious or irreversible damage to the environment arising from the proposal has been identified.

Principle of inter-generational equity

The principle of inter-generational equity is defined as '…*the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations*.'

Construction of a long, linear infrastructure project such as the proposal has the potential for some degree of environmental and social disturbance. These disturbances include the clearing of vegetation; some disturbance to private properties during construction; potential disturbance of some heritage sites; and localised impacts; however, the potential for environmental and social disturbance as a result of construction has to be balanced against the long-term benefits of the Inland Rail overall.

Should the proposal not proceed, the principle of intergenerational equity may be compromised, as future generations would experience the increased environmental and safety impacts associated with the transport of large volumes of freight via road. The strategic planning studies summarised in chapter A5 of the EIS have identified a strong need and justification for Inland Rail. The proposal would, as part of Inland Rail, benefit future generations by providing a safer, more efficient means of freight transport.

Conservation of biological diversity and ecological integrity

The principle of conservation of biological diversity and ecological integrity is defined as '*…conservation of biological diversity and ecological integrity should be a fundamental consideration*.'

Ecological studies have been undertaken to identify potential adverse impacts on biodiversity. Where potential impacts cannot be avoided, mitigation measures would be implemented to reduce the impact as far as possible.

The proposal would result in the clearing of vegetation to establish the new rail corridor. The route has been refined to minimise this impact as far as possible, while endeavouring to balance the potential for land-use impacts. A biodiversity assessment was undertaken in accordance with the *Biodiversity Assessment Method 2020* (DPIE, 2020b) to identify potential adverse impacts on biodiversity. Mitigation measures are proposed to minimise and manage the significance of the impact on native vegetation and flora and fauna. Biodiversity offsets would be implemented to address the impacts that cannot be avoided.

Improved valuation and pricing of environmental resources

The principle of improved valuation and pricing of environmental resources is defined as *'…that environmental factors should be included in the valuation of assets and services*.'

The assessment has identified the environmental and other consequences of the proposal, and identified mitigation measures where appropriate to manage potential impacts. If approved, the construction and operation of the proposal would be in accordance with relevant legislation, the conditions of approval, and the construction and operation environmental management plans. These requirements would result in an economic cost to the proponent. The implementation of mitigation measures would increase both the capital and operating costs of the proposal. This signifies that environmental resources have been given appropriate valuation.

The value of environmental resources is also inherently considered in the development of a design that avoids and minimises impacts.

The reference design for the proposal (as amended) has been developed with an objective of minimising potential impacts on the surrounding environment. The extra cost of alignments, designs, proposal elements, management measures and impact offset or mitigation packages, are selected to avoid and minimise environmental and/or social impacts, are included in the total estimated proposal cost. Examples include the provision of numerous bridges to minimise potential impacts on the flood plains and the proposed biodiversity offset package.

8.2 Concluding statement

The proposal is needed to support the development of Inland Rail. 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.

Freight benefits, including freight time travel savings, operating cost savings and improved reliability and availability represent about 94 per cent of the proposal's total economic benefits, with improved availability of freight representing the largest share of total economic benefits. Operating costs savings, as freight shifts from road to rail, would mainly be associated with lower transit times, and higher capacity freight trains and freight time savings would mainly be associated with efficiency improvements and the shift from road freight trips to rail.

Construction activities, requirements and the needs of the workforce would have the potential to result in increased trade for local businesses. There is potential for some local Aboriginal land councils or other organisations to assist individuals who wish to establish a business or provide support to increase the readiness and capacity of local Indigenous businesses to participate in procurement.

Concurrent with public exhibition of the EIS, ARTC has undertaken further investigations and proposed a number of design refinements/amendments to the proposal as described in the Preferred Infrastructure/Amendment Report.

The aim of these amendments is to minimise the potential impacts of the proposal where practicable, particularly in respect of land use and property, flooding and hydrology impacts, and traffic and access, and to take into account further design development.

The amendments have been developed taking into account consultation with the community and key stakeholders and submissions made (see the EIS Response to Submissions Report); however, a proposal of this scale would inevitably have some impacts on the local environment and community, particularly during construction and as a result of establishing a significant new section of freight rail corridor.

The proposal (as amended) would continue to incorporate environmental management and design features to ensure that potential impacts are managed and mitigated as far as practicable. The majority of the potential construction-related impacts would be effectively mitigated by the implementation of industry standard construction management, including the implementation of the environmental management approaches described in section D5.2 of the EIS and the revised mitigation measures provided in this report (see Appendix B).

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

To manage the potential impacts identified by the EIS and Preferred Infrastructure/Amendment Report, and in some cases remove them completely, the assessment chapters outline a range of mitigation measures that would be implemented during construction and operation of the proposal. Appendix B of this report provides the mitigation measures that would be implemented. As described in chapter D5 of the EIS, the environmental performance of the proposal would be managed by implementing the CEMP and OEMP. These plans would also ensure compliance with relevant legislation and any conditions of approval.

With the implementation of the proposed mitigation measures, and the approach to management described in the EIS, it is concluded that the potential environmental impacts of the proposal (as amended) would be adequately managed.

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Appendix A Submissions register

A.1 Submissions register

Table A.1 provides a list of the government agency and other key stakeholder submissions (by submitter organisation name) and identifies where responses to the issues raised can be found in sections 4 to 6 of the report.

Table A.2 provides a list of the community submissions (by submission identification (ID) number) and identifies where responses to the issues raised can be found in section 7 of the report. The submission and submitter ID numbers were provided to submitters upon providing their submission to DPE.

The section references in the tables below are hyperlinked – click on them to go directly to the section of interest.

TABLE A-1: GOVERNMENT AGENCIES AND OTHER KEY STAKEHOLDER SUBMISSIONS

Group	Name	Section where issues raised in submission are addressed
Councils	Narrabri Shire Council	4.1
	Gilgandra Shire Council	4.2
	Narromine Shire Council	4.3
	Warrumbungle Shire Council	4.4
Public authorities	Biodiversity Conservation and Science Directorate	5.1
	Department of Planning and Environment Water	5.2
	Department of Primary Industries Fisheries	5.3
	NSW Environmental Protection Authority	5.4
	North West Local Land Services	5.5
	Heritage NSW – Aboriginal	5.6
	Transport for NSW	5.7
	Heritage NSW – Non-Aboriginal	5.8
	Water NSW	5.9
	Department of Primary Industries Agriculture	5.10
	Central West Emergency Management Region	5.11
Stakeholder groups	Auscott Properties Limited	6.1
	North West Protection Advocacy	6.2
	Wando Conservation and Cultural Centre Inc	6.3
	APA Group	6.4
	National Parks Association of NSW	6.5
	Narrabri Inland Rail Concerned Residents Group	6.6
	NSW Farmers	6.7
	Australian Plants Society NSW Limited	6.8
	Koala Action Inc. and Queensland Koala Crusaders Inc.	6.9

TABLE A-2: COMMUNITY SUBMISSIONS

Group	Submission ID	Submitter ID	Section where issues raised in submission are addressed in report
Individuals	SE-48230208	S-48230207	7.5.3.4, 7.7.2.1, 7.7.4.3
	SE-48262961	S-48262960	7.5.3.4, 7.7.2.1, 7.7.4.3
	SE-48404215	S-48404214	7.1.3.1, 7.5.3.1, 7.13.1, 7.13.2.1, 7.13.3, 7.16.2.2, 7.17.1
	SE-48428715	S-48428714	7.5.3.6
	SE-48558216	S-48558215	7.5.3.1

Group	Submission ID	Submitter ID	Section where issues raised in submission are addressed in report
	SE-48558720	S-48558719	7.5.3.1
	SE-48565714	S-48565713	7.21.3
	SE-48656976	S-48656975	7.5.1.4, 7.5.3.1
	SE-48665974	S-48665973	7.5.3.4, 7.6.1.4
	SE-48668962	S-48668961	7.2.1.1, 7.4.1.3, 7.4.2.1, 7.4.2.2, 7.5.2.2, 7.5.3.2, 7.5.3.6, 7.6.1.1, 7.6.2.2, 7.7.4.1, 7.9.2.1, 7.13.2.2, 7.16.5.1, 7.16.7.3, 7.16.8.1
	SE-48688222	S-48688221	7.5.1.4, 7.5.3.1
	SE-48689983	S-48689982	7.2.1.1, 7.5.3.1, 7.16.3.1, 7.16.3.2, 7.16.5.2, 7.16.7.1, 7.16.7.2
	SE-48695740	S-48695739	7.5.1.4, 7.5.3.1
	SE-48695766	S-48695765	7.5.3.1
	SE-48695774	S-48695773	7.5.1.2, 7.5.3.2, 7.9.1.13, 7.9.2.1
	SE-48695793	S-48695792	7.1.1.1, 7.3.2.1, 7.3.5.1, 7.5.1.2, 7.5.3.3, 7.5.3.5, 7.9.1.1, 7.9.2.3, 7.16.3.2, 7.16.4, 7.20.2.1, 7.21.2.1
	SE-48698494	S-48698493	7.5.3.1
	SE-48698519	S-48698518	7.1.2.1, 7.1.2.3, 7.2.1.1, 7.2.2.1, 7.3.2.2, 7.3.4.4, 7.4.2.2, 7.5.3.5, 7.9.2.2, 7.13.2.3, 7.14.1, 7.16.1.1, 7.16.5.1, 7.16.6.2, 7.16.7.1, 7.18.2.1, 7.20.2.2
	SE-48698709	S-48698708	7.5.3.1, 7.9.2.1
	SE-48698957	S-48698956	7.5.3.4, 7.7.2.1, 7.11.1
	SE-48698995	S-48698994	7.1.3.1, 7.3.4.1, 7.3.4.3, 7.5.3.5, 7.6.1.1, 7.8.1.1, 7.8.1.3, 7.9.1.1, 7.9.2.1, 7.9.2.2, 7.10.1, 7.10.2.1, 7.10.3.1, 7.15.1, 7.16.6.1
	SE-48699459	S-48699458	7.2.2.1, 7.3.4.4, 7.3.5.3, 7.5.1.2, 7.5.3.6, 7.6.1.2, 7.6.2.1, 7.7.2.2, 7.7.3.1, 7.9.1.1, 7.16.3.2, 7.16.6.1, 7.16.7.2, 7.16.7.3, 7.17.1, 7.20.1.1
	SE-48699724	S-48699723	7.2.1.1, 7.2.2.1, 7.3.5.3, 7.4.1.1, 7.4.1.2, 7.5.3.5, 7.6.2.1, 7.8.1.1, 7.8.1.2, 7.8.1.3, 7.8.2.1, 7.9.1.12, 7.9.2.3, 7.9.3, 7.13.3, 7.16.1.2, 7.16.3.1, 7.16.3.2, 7.16.5.2, 7.16.6.1, 7.16.7.2
	SE-48700711	S-48700710	7.1.2.3, 7.1.3.1, 7.2.1.1, 7.3.2.2, 7.3.3.1, 7.3.4.4, 7.5.3.6, 7.6.1.1, 7.7.4.1, 7.7.4.2, 7.8.1.1, 7.8.1.2, 7.13.2.3, 7.16.1.2, 7.16.3.2, 7.16.4, 7.16.6.1, 7.16.6.2, 7.16.7.1, 7.18.2.1, 7.20.1.1
	SE-48700736	S-48700735	7.1.1.3, 7.1.2.2, 7.1.2.3, 7.1.3.1, 7.2.1.1, 7.2.2.2, 7.2.2.3, 7.3.1.1, 7.3.1.2, 7.3.2.2, 7.3.3.1, 7.3.4.1, 7.3.4.2, 7.3.4.3, 7.3.4.4, 7.3.5.2, 7.3.5.3, 7.4.2.1, 7.5.1.2, 7.5.2.1, 7.5.2.2, 7.5.3.5, 7.6.1.1, 7.6.1.3, 7.6.2.2, 7.7.2.2, 7.7.3.1, 7.7.4.1, 7.7.4.3, 7.8.1.2, 7.8.1.3, ,7.8.2.2, 7.8.2.3 7.9.2.1, 7.9.2.2, 7.9.2.3, 7.10.2.1, 7.10.3.1, 7.12.1, 7.13.1, 7.13.2.2, 7.13.2.4, 7.13.3, 7.15.2, 7.16.2.1, 7.16.3.1, 7.16.3.2, 7.16.3.37.16.4, 7.16.5.2, 7.17.1, 7.17.2, 7.18.1,7.20.2.2
	SE-48701459	S-48701458	7.5.3.1, 7.15.1
	SE-48701472	S-48701471	7.2.1.1, 7.5.1.4, 7.5.3.1, 7.9.1.27.9.1.37.9.1.47.15.1
	SE-48702712	S-48702711	7.5.1.4, 7.5.3.1
	SE-48722712	S-48722711	7.1.1.1, 7.1.1.2, 7.1.3.1, 7.2.1.1, 7.2.2.4, 7.2.3.1, 7.5.1.1, 7.5.1.2, 7.5.1.3, 7.5.2.1, 7.5.2.2, 7.5.3.5, 7.6.1.3, 7.6.2.1, 7.16.5.1, 7.16.7.3
	SE-48727707	S-48727706	7.5.3.1, 7.16.3.1
	SE-48732462	S-48732461	7.1.3.1, 7.1.3.2, 7.2.2.3, 7.6.1.1, 7.6.1.2, 7.6.1.2, 7.6.1.3, 7.21.1.1, 7.21.1.2, 7.21.1.3
	SE-48736215	S-48656975	7.2.1.1
	SE-48736241	S-48736240	7.5.1.4, 7.5.3.1, 7.9.2.1
	SE-48738707	S-48738706	7.7.2.1, 7.7.4.3,
	SE-48738709	S-48738708	7.5.3.1, 7.15.1
	SE-48739207	S-48698994	7.1.2.4, 7.2.2.1, 7.3.4.1, 7.5.3.5, 7.7.4.1, 7.8.1.3, 7.16.6.1, 7.20.2.1, 7.20.2.3
	SE-48741961	S-48741960	7.1.2.3, 7.1.3.1, 7.2.1.1, 7.2.2.1, 7.2.3.1, 7.5.1.2, 7.5.1.3, 7.5.2.1, 7.5.2.2, 7.5.3.2, 7.5.3.6, 7.6.1.1, 7.6.1.3, 7.6.2.1, 7.6.2.2, 7.9.1.12

Group	Submission ID	Submitter ID	Section where issues raised in submission are addressed in report
	SE-48741986	S-48741985	7.2.1.1, 7.2.3.1, 7.5.1.2, 7.5.2.2, 7.5.3.2, 7.5.3.5, 7.5.3.6
	SE-48742458	S-48742457	7.5.3.1
	SE-48742741	S-48742740	7.5.3.4
	SE-48742975	S-48742974	7.5.3.4
	SE-48743208	S-48695773	7.7.2.3
	SE-48743960	S-48743959	7.5.3.4, 7.6.1.1, 7.6.1.3, 7.6.2.1, 7.7.1.1, 7.7.1.2, 7.7.1.3, 7.7.4.1, 7.9.1.1, 7.9.1.6, 7.9.1.13
	SE-48744210	S-48744209	7.1.2.2, 7.1.3.1, 7.1.3.2, 7.2.1.1, 7.2.2.3, 7.2.3.1, 7.5.1.2, 7.5.1.3, 7.5.3.2, 7.6.2.1, 7.6.2.2, 7.7.1.1, 7.7.1.2, 7.7.1.3, 7.7.1.4, 7.9.1.1, 7.9.1.2, 7.9.1.5, 7.9.1.6, 7.9.1.7, 7.9.1.8, 7.9.1.9, 7.9.1.10, 7.9.1.11, 7.10.1, 7.21.2.1
	SE-48746213	S-48746212	7.8.1.2, 7.9.2.2, 7.16.5.2, 7.16.7.3
	SE-49346458	S-49346457	7.5.3.4, 7.6.1.4

Appendix B Updated mitigation measures

B.1 Overview

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 project. These measures were described in chapter D5 of the EIS.

After consideration of the issues raised in the EIS submissions, additional work undertaken since exhibition of the EIS and amendments to the proposal, the mitigation measures were updated and described in section 8.2 of the Preferred Infrastructure/Amendment Report and section 11.2 of the EIS Response to Submissions Report.

After consideration of the issues raised in the submissions following exhibition of the Preferred Infrastructure/Amendment Report, the mitigation measures have been updated to:

- Make additional commitments to respond to issues raised in the submissions
- Modify the wording in some instances so that the intent of the measure is clearer.

Some new measures have been added, and the wording of some measures has been revised.

The full set of updated mitigation measures is provided in Table B-1 to Table B-3. These tables supersede the mitigation measures originally presented in the EIS and Preferred Infrastructure / Amendment Report.

Table B-1 to Table B-3 shows how the mitigation measures have changed compared to those presented in the Preferred Infrastructure / Amendment Report. The new mitigation measures and additions to the mitigation measures included in the Preferred Infrastructure / Amendment Report are shown in **red bold** text, and where a measure or text has been deleted, it appears as strikethrough text.

B.2 Updated mitigation measures for detailed design/pre-construction

Table B-1 provides the measures that would be implemented during the design phase and prior to construction. It includes measures to guide how the proposal would be designed and construction would be planned to minimise the construction and operational impacts of the proposal. This table supersedes the mitigation measures originally presented in the EIS and Preferred Infrastructure / Amendment Report.

TABLE B-1: UPDATED MITIGATION MEASURES FOR DETAILED DESIGN/PRE-CONSTRUCTION

Ref	Issue/impact	Mitigation measures—detailed design/pre-construction
Biodiversity		
BD1	*Impacts on biodiversity*	Vegetation clearing would be limited to the minimum necessary to construct the proposal and allow for its effective operation.
BD2	Impacts on biodiversity	Where appropriate, facilities within the multi-function compounds and temporary workforce accommodation would be located to further minimise or avoid impacts on native vegetation, where practicable.
BD3	*Impacts on threatened species*	Additional threatened flora surveys would be undertaken (where suitable climatic conditions occur) prior to clearing for the threatened species likely to be impacted by the proposal, including: ▸ *Diuris tricolor* in the Pilliga forests ▸ *Pterostylis cobariensis* in the Pilliga forests ▸ *Tylophora linearis* in the Pilliga forests. Surveys would include seed collection where possible. The need for translocation options would be discussed with the Department of Planning and Environment (Biodiversity, Conservation and Science Directorate), should these be required.
BD4	*Offsetting impacts on native vegetation and threatened species*	Biodiversity offsets would be finalised in accordance with the NSW Biodiversity Offsets Scheme and in consultation with the NSW Department of Planning and Environment (DPE) (Biodiversity, Conservation and Science Directorate). This would include retirement of like-for-like offsets for impacts on matters of national environmental significance (MNES).
BD5	*Impacts on fish passage*	Watercourse crossing structures would meet Inland Rail design standards and be designed in accordance with *Why do fish need to cross the road? Fish passage requirements for waterway crossings* (Fairfull, S. and Witheridge, G., 2003).

Ref	Issue/impact	Mitigation measures—detailed design/pre-construction
BD6	*Impacts on fauna connectivity*	A detailed fauna connectivity strategy would be prepared to guide detailed design based on the preliminary fauna connectivity framework provided in Appendix J of the updated biodiversity development assessment report. It would include investigation and design of: ▸ Locations for fauna crossing structures in the Pilliga forests, including bridges and dedicated underpasses for threatened fauna (such as the koala and Pilliga mouse in areas of preferred habitat), canopy bridges at regular intervals, and wooden barrier poles at selected bridges ▸ The provision of localised fencing to direct fauna to crossing structures ▸ Fauna furniture to be included in the design of bridges and dedicated underpasses, where appropriate, to encourage crossings by koalas and other native fauna ▸ Landscaping of the rail corridor to encourage movement of fauna across the gap. The detailed connectivity strategy would include threatened species management plans for key threatened species or groups identified in the preliminary fauna connectivity strategy, in addition to monitoring and reporting requirements in relation to the operational performance of the final measures.
BD7	*Impacts on fauna connectivity*	The fauna connectivity structures listed in the register of proposed connectivity structures in Appendix J of the updated biodiversity development assessment report would be further developed in detailed design and constructed as proposed. If any changes occur to the proposed number, type or location of connectivity structures, an appropriate level of assessment would be conducted, in consultation with BCS, to confirm any changes to credit liabilities for the proposal.
Water resources		
WR1	*Construction and potable water supply*	Construction water supply options would continue to be explored during detailed design and could include reuse of excess water from the Narrabri Gas Project or other suitable facilities in the area, or lease and/or purchase of existing water access licences (WALs) from surrounding landholders. Potable water supply options would continue to be explored during detailed design. Water quality testing would be undertaken to confirm that the water sourced is suitable for its intended use. Any required approvals/agreements would be obtained prior to use.
WR2	*Impacts on existing bores*	Where existing licensed bores are located within the proposal site, they would be decommissioned in accordance with the *Minimum Construction Requirements for Water Bores in Australia* (National Uniform Drillers Licensing Committee, 2020). Where bores are decommissioned, compensation would be provided, or alternative water supply arrangements made, as agreed with the landowner/landholder.
WR3	Impacts on existing bores	A bore census would be undertaken for existing licensed bores within 1 km of the proposal's bore fields, where landholders permit. The census would collect baseline groundwater level data and information on a given bore's typical usage and characteristics (including bore construction, pump depth, yield, water level during pumping and water level outside of pumping periods).
WR4	*Impacts of extracting groundwater*	Test bores would be installed during detailed design, and further investigation would be undertaken by a qualified hydrogeologist, to confirm the depth and location of the proposed bore field bores. The test bores and bore fields would consider the design considerations detailed in section 11.1 of Technical Report 4—Groundwater assessment, as well as the potential for unidentified faults and other geological structures to connect shallow and deep-water tables.
WR5	*Impacts of extracting groundwater*	Water volumes required to be extracted from groundwater bores for construction water and potable water (for the Narromine North and Baradine temporary workforce accommodation facilities) would be confirmed, and the appropriate approvals would be obtained, prior to extraction. Monitoring would be undertaken during extraction to ensure volumes stipulated by licence requirements are not exceeded. Meters would be installed, and groundwater extraction recorded and reported, in accordance with the relevant requirements of the *Non-Urban Metering Policy* (DPIE, 2020f) and clause 21(6) of the Water Management (General) Regulation 2018.
WR6	***Impacts on existing bores***	**Where existing government monitoring bores are located within the proposal site, they would be decommissioned in accordance with the *Minimum Construction Requirements for Water Bores in Australia* (National Uniform Drillers Licensing Committee, 2020).** **These bores will be replaced within 18 months of decommissioning. ARTC will consult with DPE Water to agree bore location and bore design criteria.**

Ref	Issue/impact	Mitigation measures—detailed design/pre-construction
WR-CI1	*Groundwater drawdown impacts*	Further investigation would be undertaken to determine the potential for the bores associated with the Narromine North and Baradine temporary workforce accommodation facilities to cause groundwater drawdown impacts. This would include ensuring any impacts to existing bores are below the *NSW Aquifer Interference Policy* (DPI, 2012b) minimal impact considerations.
WR-CI2	*Suitability of groundwater*	The quality of groundwater from the proposed bores at the Narromine North and Baradine facilities would be assessed for the suitability of its intended use. Where required, treatment systems would be designed, and a monitoring program established, to ensure water quality complies with relevant drinking water criteria from the *National Water Quality Management Strategy Australian Drinking Water Guidelines 6* 2011 (National Health and Medical Research Council, 2017).
Flooding		
FH1	*Flooding impacts*	The design would continue to be refined, where practicable, to not worsen existing flooding characteristics for flood events up to and including the 1% AEP event. Detailed flood modelling would assess potential impacts to: ▸ Building and property inundation (including flood level surveys and consideration of existing inundation levels) ▸ Existing rail line, at rail connections ▸ Road flood levels and extent of flooding along roads ▸ Flood evacuation routes ▸ Overland flow paths and storage effects of construction and operational infrastructure. Flood modelling would have regard to the guidelines listed in section B3.1.1 of the EIS, and the revised quantitative design limits provided in the updated flooding and hydrology assessment report. Flood modelling, and any mitigation identified as an outcome of modelling, would consider floodplain risk management plans, and would be undertaken in consultation with the relevant local council and local emergency management committees, DPE, the NSW State Emergency Service and potentially impacted landholders.
FH2	*Downstream watercourse stability*	Further modelling and site-specific assessments **(including geomorphological assessments as required)** would be undertaken during detailed design to confirm the locations downstream of culverts and within drainage control areas that require erosion protection, and to confirm the extent and type of protection required.
Soils and contamination		
SC1	*Structural integrity*	Foundation and batter design would include engineering measures to minimise operational risks from shrink swell, dispersive and/or low strength soils.
SC2	Structural integrity	Soil salinity would be considered in the design of subsurface structures.
SC3	*Acid sulfate soils*	Prior to ground disturbance in high-probability acid sulfate areas, testing would be carried out to determine the presence of acid sulfate soils (ASS). If ASS are encountered, they would be managed in accordance with the *Acid Sulfate Soils Assessment Guidelines* (ASSMAC, 1998), and the *Waste Classification Guidelines — Part 4: Acid Sulfate Soils* (NSW EPA, 2014).
SC4	*Contamination*	Hazardous materials surveys would be undertaken during detailed design for all proposed demolition activities.
SC5	*Contamination*	An appropriately licensed asbestos removal contractor would be engaged to remove all asbestos identified at the illegal waste dump at which sample CS-21 was collected (easting 737305, northing 6617403) prior to works commencing. Asbestos would be removed in accordance with the requirements of applicable work health and safety legislation, and codes of practice.

Ref	Issue/impact	Mitigation measures—detailed design/pre-construction
SC6	*Contamination*	Site investigations would be undertaken by a suitably qualified and experienced consultant, as defined in Schedule B9 of the *National Environment Protection (Assessment of Site Contamination) Measure 1999* (NEPC, 2013) to assess exposure risks to site workers and other receptors as a result of disturbances to the following areas considered to be at a higher risk of being contaminated: ▸ Narromine West connection ▸ Parkes to Narromine connection ▸ Dubbo to Coonamble Line connection ▸ Narrabri to Walgett Line connection ▸ Narrabri to North Star connection ▸ Where the proposal site borders the Santos Narrabri Operations Centre (directly west of the Narrabri West multi-function compound). The results of the site investigations would be assessed against the criteria contained within the *National Environment Protection (Assessment of Site Contamination) Measure 1999* to determine the need for any remediation.
SC-CI1	*Soils and water quality*	The final approach to reusing wastewater from the Narromine North and Baradine temporary workforce accommodation facilities would be confirmed during detailed design.
SC-CI2	*Soils and water quality*	Any irrigation areas would be designed and operated in accordance with the risk framework and management principles contained in the *National Guidelines on Water Recycling* (Environment Protection and Heritage Council, 2006) and the *Environmental guidelines: Use of effluent by irrigation* (Department of Environment and Conservation (DEC), 2004). This would include the following design requirements: ▸ Irrigation area/s would be delineated based on the expected rate of irrigation and the drainage characteristics of the receiving soil ▸ The quality of treated water would be determined to prevent accumulation of contaminants, with reference to the relevant guidelines ▸ Irrigation area/s would be designed to include capacity to store treated water for the duration of typical wet weather events ▸ The rate of irrigation would be optimised to avoid waterlogging or ponding of reclaimed water ▸ Soil and groundwater conditions would be monitored to identify and correct trends in soil salinity or other potential effects of irrigation.
Water quality		
WQ1	*Water quality*	The design features listed in section B5.1.4 would continue to be refined and implemented to minimise the potential impacts on water quality.
Aboriginal heritage		
AH1	*Avoiding and minimising impacts on Aboriginal heritage*	Detailed design and construction planning would avoid direct impacts on identified items/sites of Aboriginal heritage significance, as far as reasonably practicable. Construction compounds and associated access routes would not be located in areas of medium or high archaeological potential.
AH2	*Management of salvaged items*	A detailed salvage methodology would be prepared by a suitably qualified archaeologist in consultation with relevant registered Aboriginal parties. The methodology would be included in the Aboriginal cultural heritage management plan (mitigation measure AH10) to ensure any artefacts salvaged are managed in accordance with the requirements of the *National Parks and Wildlife Act 1974* (NSW). The methodology would include the process for consultation with Heritage NSW and Registered Aboriginal Parties (RAPs) in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010b) the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010c), and the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH, 2011). It would also include requirements in relation to the management of, and care and control plans for, salvaged objects. RAPs would be engaged to assist in the salvage, which would be managed by an appropriately qualified archaeologist engaged to support the process. Detailed analysis and reporting of cultural material collected would be provided to DPE.

Ref	Issue/impact	Mitigation measures—detailed design/pre-construction
AH3	*Management of salvaged items*	Prior to construction, a targeted archaeological survey would be undertaken for areas identified as culturally sensitive, requiring further investigation, including: ▸ Wallaby Creek ▸ Ewenmar Creek ▸ Marthaguy Creek ▸ Castlereagh River ▸ Gulargambone Creek ▸ Tenandra Creek ▸ Baradine Creek ▸ Namoi River ▸ Mungery Creek ▸ Caleriwi Creek. In addition, a targeted archaeological survey would be undertaken at the location of the Narromine North temporary workforce accommodation. The targeted survey would be undertaken with registered Aboriginal parties in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*. Additional mitigation and management measures would be developed, in consultation with the RAPs, for areas or items of Aboriginal cultural heritage significance identified during the targeted survey. The additional measures would be included in the Aboriginal cultural heritage management plan (mitigation measure AH10). If additional sites or items are identified that cannot be avoided, salvage of artefacts would be undertaken prior to construction, in accordance with the salvage methodology (mitigation measure AH2).
AH4	*Management of salvaged items*	A pre-construction survey would be undertaken to confirm the locations of the previously listed AHIMS sites that could not be located during the site survey. Surveys would be undertaken with RAPs in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*. If the sites are located, impacts would be avoided, as far as practicable, and protection measures put in place in accordance with the Aboriginal cultural heritage management plan (mitigation measure AH10). Any sites with the potential to be impacted would be managed in accordance with the salvage methodology (mitigation measure AH2).
AH5	*Impacts on Potential Archaeological Deposits (PADs)*	Detailed archaeological investigations would be undertaken at the following six PADs that may be directly impacted by the proposal: ▸ Ewenmar Creek 27-6-0036 ▸ Castlereagh River 28-4-0280 (and associated artefact scatter) ▸ Gulargambone Creek 28-1-0060 and 28-1-0090 (and associated artefact scatter) ▸ Calga and Looking Glass creeks 28-1-0059 (and associated artefact scatter) ▸ Baradine Creek 19-5-0230. Sub-surface archaeological test excavations would be undertaken to confirm the nature (and extent, if verified) of any archaeological deposits. The test excavations would be carried out in accordance with the approved methodology prepared for the proposal. If test excavation confirms that the PAD has heritage significance and has the potential to be impacted by the proposal, the site would be managed in consultation with Heritage NSW and RAPs. If salvage is required it would be managed in accordance with the agreed salvage methodology (mitigation measure AH2).

Ref	Issue/impact	Mitigation measures—detailed design/pre-construction
AH6	*Impacts on modified trees*	Field validation of the following modified trees would be undertaken prior to construction, in accordance with *Aboriginal scarred trees in New South Wales: A field manual* (DEC, 2005): ▸ Backwater Cowal 35-3-0175 ▸ Ewenmar Creek 27-6-0035 ▸ Boothaguy Creek 27-6-0042 ▸ Baronne Creek 28-1-0062, 28-1-0063 and 28-1-0064 ▸ Mungery Creek 28-1-0083, 28-1-0084, 28-1-0086 and 28-1-0087. Impacts on those trees confirmed to be scarred trees would be avoided, as far as practicable. If impacts are unavoidable, the tree would be photographed and catalogued prior to removal, in consultation with the RAPs **and Heritage NSW**, by an appropriately qualified archaeologist, **with consideration given to the use of digital 3D scanning if appropriate**. The salvaged artefacts would be managed in accordance with the salvage methodology **(AH2) and long-term care and control plans**.
AH7	*Impacts on modified trees*	The following modified trees would be protected insitu: ▸ BCST6 (35-3-0270) ▸ Berida Road ST1 (28-4-0283). During detailed design, ARTC would identify opportunities to reduce or remove the need for drainage protection works in the vicinity of these trees.
AH8	*Impacts on artefact scatters*	Surface collection (salvage) of the following artefact scatters would occur prior to construction, in accordance with the approved salvage methodology: ▸ Macquarie River 35-3-0276 ▸ Castlereagh River 28-4-0280 ▸ Gulargambone Creek 28-1-0090 and 28-1-0060 ▸ Calga and Looking Glass Creek 28-1-0059 and 28-1-0095 ▸ Noonbar Creek 28-1-0096 ▸ Baradine Creek 19-5-0226 ▸ Bohena Creek 19-6-0180. Artefacts located outside the proposal site would not be salvaged and would remain in situ.
AH9	*Aboriginal heritage survey of biodiversity offset sites*	Once biodiversity offset sites are secured (in accordance with mitigation measure BD4) an Aboriginal heritage survey of representative locations within the offset sites would be undertaken. The survey would record any evidence of Aboriginal land use occupation and identify appropriate management strategies. The approach to the survey, including selection of representative survey locations and reporting, would be determined in consultation with the RAPs.
Non-Aboriginal heritage		
NAH1	*Impacts on non-Aboriginal heritage*	Detailed design and construction planning would avoid direct impacts on identified items/sites of non-Aboriginal heritage significance, as far as reasonably practicable. This would include small sections of the following listed items that overlap with the proposal site: ▸ Curban Inn site ▸ Convict Road, Baradine. The location of construction compounds and associated access routes would be reviewed to ensure, as far as practicable, they are not located in areas of medium or high archaeological potential.
NAH2	*Impacts on non-Aboriginal heritage*	The location of the graves at the Woodvale Park Private Cemetery listed item would be confirmed by an appropriately qualified archaeologist. Once confirmed, the location would be marked on plans, fenced onsite and avoided during construction.
NAH3	*Impacts on non-Aboriginal heritage*	In the event that the following items are unable to be avoided, an archaeological assessment, research design and methodology would be prepared. Test excavation would be undertaken by an appropriately qualified Excavation Director, in accordance with the NSW Heritage Council's Excavation Director criteria: ▸ Curban Inn site ▸ Convict Road, Baradine. The archaeological assessment would be prepared in consultation with relevant stakeholders, including the local council and Heritage NSW.

Ref	Issue/impact	Mitigation measures—detailed design/pre-construction
NAH4	*Heritage interpretation*	A Heritage Interpretation Strategy for non-Aboriginal heritage would be prepared in consultation with the relevant local council and key stakeholders. This would provide a framework for interpreting the heritage items (listed and potential) impacted by the proposal, set out the key interpretative themes and identify communication strategies. The strategy would include interpretation requirements for specific parts of the proposal; particularly, where heritage items are proposed to be removed or archaeological sites are proposed to be excavated. These may include approaches such as interpretive signage at heritage items that have been removed or excavated, historical/artefact displays at local museums or visitor centres, and online media about heritage items and history in the vicinity of the proposal. The strategy would be prepared with regard to *Interpreting Heritage Places and Items: Guidelines* (NSW Heritage Office, 2005), and the NSW Heritage Council's Heritage Interpretation Policy.
NAH5	*Archival recording*	Archival photographic recording of buildings to be removed would be carried out prior to removal, in accordance with *Photographic Recording of Heritage Items Using Film or Digital Capture* (Heritage Council of NSW, 2006) and *How to prepare archival records of heritage items* (NSW Heritage Office, 1998a) at the following sites: ▸ Drinane Public School (former) ▸ Corrugated iron hut with chimney ▸ Two-storey barn/shed.
NAH6	*Visual impacts at heritage items*	The urban design and landscape plan would include vegetation screening, where practicable, to minimise visual impacts on homesteads identified as potential heritage items—'Kickabil' homestead and woolshed, 'Allandale' homestead and 'Digilah' homestead.
Noise and vibration		
CNV1	*Construction noise and vibration impacts*	Location and activity specific construction noise and vibration impact statements would be prepared based on a more detailed understanding of the construction methods, including the size and type of construction equipment, duration and timing of works, and detailed reviews of local receivers, as required. The statements would confirm predicted impacts at relevant receivers to assist with the selection of feasible and reasonable management measures (such as shielding plant and equipment, temporary noise barriers or provision of temporary alternative accommodation). The statements would also confirm noise and vibration auditing and monitoring requirements.
CNV2	*Construction vibration (structural) impacts*	Where vibration levels are predicted to exceed the screening criteria, a more detailed assessment of the structure and vibration monitoring would be carried out in accordance with the Inland Rail NSW Construction Noise and Vibration Management Framework, to ensure vibration levels remain below appropriate limits for that structure.
ONV1	*Operation noise and vibration impacts*	An operational noise and vibration review would be undertaken during detailed 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.
ONV2	*Operation noise and vibration impacts*	Feasible and reasonable mitigation measures would be identified where exceedances of operational noise and vibration criteria are confirmed. Measures would be identified in accordance with the outcome of the operational noise and vibration review and the Inland Rail Noise and Vibration Strategy. Where at-property noise treatments are identified as the preferred mitigation option, these would be developed and implemented in consultation with individual property owners.
ONV3	*Operation structural vibration impacts*	If the operational noise and vibration review indicates that vibration levels are predicted to exceed the screening criteria at sensitive receivers, a more detailed assessment of the structure would be carried out. For any heritage items with the potential to be affected, the detailed assessment would determine any specific sensitivities, in consultation with a heritage specialist, to ensure risks are adequately managed. If a heritage structure is found to be structurally unsound following inspection, a more conservative cosmetic damage objective (e.g. 2.5 mm/s peak component particle velocity for long-term vibration) would be considered.
Traffic and transport		
TT1	*Impacts on existing infrastructure transport and access*	Detailed design and construction planning would avoid or minimise the potential for impacts on the surrounding road and transport network, and property accesses, as far as reasonably practicable.

Ref	Issue/impact	Mitigation measures—detailed design/pre-construction
TT2	*Impacts on existing infrastructure transport and access*	Input would be sought from relevant stakeholders (including local councils and TfNSW) 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. This would include confirming ongoing operation and maintenance arrangements for those assets under the control of other stakeholders.
TT3	*Road user safety at changes to the road network*	Road safety audits would be undertaken where changes to the road network are required, in accordance with relevant Austroads guidelines, to ensure the safety of all road users is considered in the design process.
TT4	*Road user safety at level crossings*	Level crossings would be designed in accordance with relevant guidelines and standards, including *AS 1742.7:2016 Manual of uniform traffic control devices, Part 7: Railway crossings* (Standards Australia, 2016), *Guide to Road Design Part 4: Intersections and Crossings* (Austroads, 2021a), *Guideline: Lighting for railway crossings* (Roads and Maritime Services, 2013b) and ARTC standards, including provision of warning signage, line marking and other relevant controls. Public level crossings with active controls would include boom gates and flashing lights. Where level crossings would provide access for travelling stock routes (TSRs), consultation would be undertaken with Crown lands and Local Land Services (LLS) to determine appropriate controls.
TT5	*Road user safety at level crossings*	A level crossing treatment report would be prepared to document the level crossing design and assessment process that has been undertaken. The report would be developed in consultation with TfNSW 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). Justification would be provided where no works are proposed on existing level crossings.
TT6	***Impacts on maritime navigation***	**A navigational impact assessment would be undertaken during detailed design to minimise disruptions to watercraft and any safety and hazard issued are appropriately mitigated. Input would be sought from relevant stakeholders (including local councils and Transport for NSW) prior to finalising the detailed design of bridges over navigable waters.**
Land use and property		
LP1	*Land use and property impacts, including severance and other impacts on operations*	The design and construction planning would continue to be refined, to minimise potential impacts on land uses and properties, as far as reasonably practicable. Consultation with landholders would be ongoing, to identify feasible and reasonable measures to minimise impacts on their operations/properties.
LP2	*Acquisition and property impacts*	All property acquisitions would be undertaken in consultation with landowners/landholders and in accordance with the requirements of the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW). In line with *the Land Acquisition Act (Just Terms Compensation) Act*, ARTC's preference is for acquisition by agreement, where practicable.

Ref	Issue/impact	Mitigation measures—detailed design/pre-construction
LP3	*Acquisition and property impacts*	During the property acquisition process, ARTC would seek to secure agreement with affected landholders, to guide property-level design requirements and the management of construction on, or immediately adjacent to, private properties. Each impacted property owner would be consulted to identify and understand the operational needs of their property and the activities conducted upon it, with tailored agreements prepared to document the agreed outcomes. The agreements may include: ▸ Measures to minimise property impacts, including impacts on agricultural operations (mitigation measure LP5) ▸ Specific requirements to ensure that operations, including the movement of livestock and farm machinery, are able to be maintained as efficiently as possible (mitigation measure LP7) ▸ Measures to manage severance impacts as they relate to each property, where practicable, including appropriate movement arrangements (mitigation measure LP6) such as new or adjusted accesses to the public road network or internal access networks, divestment or amalgamation opportunities ▸ Required adjustments to and/or replacement of affected structures, such as livestock handling yards, fencing, silos, holding pens, barns, etc ▸ Assistance to reconfigure farming operations to accommodate the alteration in land use. Where land is acquired, compensation would be assessed in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW) and the NSW Property Acquisition Process https://www.nsw.gov.au/housing-and-construction/property-acquisition. Depending on the individual circumstances of each land/business owner and the proposed impacts on the land and to operations, compensation may take the form of money or land/works—as agreed by the parties.
LP4	*Acquisition and property impacts*	Property owners and occupants would be consulted in accordance with the communication management plan (mitigation measure SE1), to ensure that owners/occupants are informed about: ▸ The timing and scope of activities in their area ▸ Any potential property impacts/changes, particularly in relation to potential impacts on access, services or farm operational arrangements ▸ Activities that have the potential to impact on livestock.
LP5	*Impacts of construction on private properties*	Where construction is located on, or immediately adjacent to, private properties and has the potential to affect farm operational arrangements/properties, property-specific measures would be identified and implemented, in consultation with landholders, to address identified issues where feasible and reasonable. The measures would include, as appropriate, arrangements in terms of works timing and practices; any required adjustments to fencing, access, and farm infrastructure; and relocation or compensation for any impacted structures or improvements.
LP6	*Maintaining permanent access to properties*	Where the proposal affects access to and from a public road, input would be sought from relevant landholders regarding alternative access arrangements prior to finalising the detailed design. Where any legal access to a property is permanently affected and a property has no other legal means of access, alternative access to and from a public road would be provided to an equivalent standard, where feasible and reasonable. Where an alternative access is not feasible or reasonable, and a property or part of a property is left with no access to a public road, consideration would be given to acquisition of the property or part of the property in accordance with the provisions of the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW). In accordance with the Land Acquisition Act, ARTC's preference is for acquisition by agreement, where practicable.
LP7	*Internal access arrangements*	Where the proposal affects internal property access arrangements, input would be sought from relevant landholders prior to finalising the detailed design. Where changes to internal property access arrangements are required, ARTC would consult with relevant property owners/occupants regarding alternative access arrangements and identify feasible and reasonable measures to minimise impacts on existing operational arrangements/properties. Impacts and any proposed mitigations would be taken into account at the time compensation is assessed in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW).
LP8	*Impacts on Crown land*	The acquisition of Crown land would be undertaken in consultation with DPE, and in accordance with the requirements of the *Crown Lands Management Act 2016* (NSW) and the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW).

Ref	Issue/impact	Mitigation measures—detailed design/pre-construction
LP9	*Impacts on livestock*	The need for additional stock management infrastructure on either side of level crossings, such as forcing yards and holding pens, would be identified in consultation with the relevant landholders.
LP10	*Impacts on livestock*	Livestock fencing would be provided in agricultural areas (as required) to minimise the risk of livestock–train collisions. The preferred fencing arrangements would be confirmed in consultation with landholders.
LP11	*Maintenance of fencing*	Maintenance agreements would be established for fencing along the rail corridor where it adjoins private properties. The agreements would include protocols for reporting damage and arranging repairs of shared boundary fencing.
LP12	*Minimising impacts on travelling stock reserves*	LLS would continue to be consulted during detailed design to confirm how impacts on TSRs would be minimised during construction and operation. Alternative access arrangements would be made, as required, subject to maintaining rail safety.
LP13	*Impacts on services and utilities*	The location of all utilities, services and other infrastructure, and requirements for access to, diversion, protection and/or support, would be confirmed prior to construction. This would include (as required), undertaking utilities investigations, including intrusive investigations, and consultation and agreement with service providers, in accordance with the utilities management framework provided in Appendix J of the EIS.
LP14	*Impacts on, and construction within, State forests*	The Forestry Corporation of NSW would continue to be consulted in relation to: ▸ Those aspects of construction planning, programming, and work methodologies with the potential to affect forestry management practices ▸ Measures to minimise the potential impacts on forestry management practices, including the need for exclusion zones in specific areas, where required ▸ Opportunities for beneficial reuse of forest products that would be removed during construction.
LP15	*Impacts on, and construction within, State forests*	Appropriate management measures and communication requirements for users of state forests in the vicinity of the proposal site would be defined in consultation with the Forestry Corporation of NSW and forest users.
LP16	***Minimising impacts on travelling stock reserves***	**A stock barrier would be installed between the Narrabri North TSR and rail corridor, with associated alterations of fencing in the TSR. Input would be sought from North West Local Land Services and an independent expert on animal behaviour prior to finalising the detailed design of the stock infrastructure.**
LP17	***Acquisition and property impacts***	**A Consultation Protocol would be prepared to provide information to landholders about how ARTC will interact with them in relation to the detailed design process, property changes, acquisition steps and processes with the aim of reaching agreement on these matters.**
Visual amenity		
LV1	*Minimising the potential for visual and landscape impacts*	Detailed design and construction planning would seek to minimise the construction and operation footprints, and avoid impacts on mature native vegetation, as far as reasonably practicable.
LV2	*Minimising the potential for visual and landscape impacts*	An urban design and landscape plan would be prepared to provide a consistent approach to design and landscaping. The urban design and landscape plan would include: ▸ Vegetation screening in strategic locations to visually mitigate impacts from new structures and rail operations, including around bridges and locations where the proposal would be visible from sensitive receivers, where the presence of screening does not impact safe rail operations ▸ Appropriate species that respond to the existing landscape character setting and environmental conditions ▸ Design guidelines to minimise the visual impacts of bridges, with consideration of the existing landscape and visual context and with regard to *Bridge aesthetics: design guidelines to improve the appearance of bridges in NSW* (Roads and Maritime Services, 2019). Detailed design would be undertaken in accordance with the urban design objectives developed for the design, and the urban design and landscape plan.
LV3	*Batter slopes in contrast with the existing landform*	Batter slopes would be integrated into the surrounding landscape, as far as practicable. Appropriate slope stabilisation would be integrated into batter design to ensure successful rehabilitation and stabilisation.

Ref	Issue/impact	Mitigation measures—detailed design/pre-construction
LV4	*Minimising light spill*	Temporary and any permanent lighting would be designed and sited in accordance with *AS/NZS 4282 2019 Control of the Obtrusive Effects of Outdoor Lighting* and *Dark Sky Planning Guideline: Protecting the observing conditions at Siding Spring* (DPE), 2016), and in consultation with the Siding Spring Observatory Dark Sky Planning Committee.
Socio-economic impacts		
SE1	*Social impacts, communication and engagement*	ARTC would continue to manage and deliver program-wide community and stakeholder engagement for Inland Rail in accordance with the Inland Rail Communications and Engagement Strategy. A proposal-specific communication management plan would be developed, in accordance with the Inland Rail Communications and Engagement Strategy, and implemented prior to and during construction, to ensure that: ▸ The community and key stakeholders are provided opportunities for input to the design and construction planning, where appropriate ▸ Landowners/landholders and community members with the potential to be affected by construction activities are notified in a timely manner about the timing of activities and potential for impacts, and the measures (developed in accordance with mitigation measure LP5) that would be implemented to minimise the potential for impacts on individual properties ▸ Enquiries and complaints are managed, and a timely response is provided for concerns raised ▸ Accurate and accessible information is made available ▸ Feedback from the community is encouraged. The communication management plan would define the requirements for the complaints management system to be implemented during construction.
SE2	*Social impacts, communication and engagement*	The communication management plan would include measures to ensure ongoing consultation with local emergency services providers, to inform providers about the locations of level crossings, and changes to access routes and road conditions.
SE3	*Social impacts, communication and engagement*	A detailed Aboriginal community and stakeholder engagement strategy and action plan would be prepared and implemented at the commencement of the detailed design phase, to require that: ▸ Information about the proposal is shared with Aboriginal stakeholders and communities in a timely manner ▸ Strong relationships between ARTC and Aboriginal stakeholders and communities are built and maintained ▸ Local Aboriginal cultural and community values are identified and understood ▸ Opportunities to reflect Aboriginal community and cultural values in infrastructure or other outcomes of the proposal are identified and implemented.
SE4	*Socio-economic impacts*	A social impact management plan (SIMP) would 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 SIMP would define specific actions, roles and responsibilities, and a monitoring, reporting and adaptive management framework for construction.
SE5	*Socio-economic impacts*	Prior to construction, ARTC would confirm workforce requirements and the associated requirements for, and availability of, support services (including health, wellbeing and emergency services) to meet the needs of the non-resident construction workforce. ARTC would develop strategies and measures to meet these needs, as far as practicable, with minimal potential impacts on the local community. The measures would be developed in consultation with local councils and service providers (including health and emergency service providers), where relevant, and would be detailed in the workforce management plan.
SE6	*Economic benefits and impacts on regional industries and businesses*	ARTC would continue to support local employment in accordance with the *Australian Jobs Act 2013* (Cth) and Australian Industry Participation National Framework, and through the Inland Rail Academy; to leverage training programs, upskill local residents and young people, and connect businesses with Inland Rail opportunities and key regional industries.

Ref	Issue/impact	Mitigation measures—detailed design/pre-construction
SE7	*Economic benefits and impacts on regional industries and businesses*	A proposal-specific industry participation plan would be developed and implemented to manage the potential employment and regional economic benefits of the proposal. The plan would address the requirements of the *Australian Jobs Act 2013* (Cth), the Australian Industry Participation National Framework, and the *Inland Rail Indigenous Participation Plan* (ARTC, 2020c). The industry participation plan would identify appropriate measures to achieve the objectives of the *Australian Jobs Act 2013* (Cth) and the Inland Rail Indigenous Participation Plan, including an achievable list of goods and services that could be subcontracted, as well as targets for local and Indigenous business participation.
SE8	*Impacts on the Narrabri Dirt Bike Club*	ARTC would continue to consult with the Narrabri Dirt Bike Club, Narrabri Council and the DPE (Crown Lands) in relation to: ▸ The temporary and permanent land requirements at the club site ▸ The potential impacts on the club's facilities ▸ Measures to address the identified impacts.
SE-CI1	*Impacts on the Baradine Showground*	ARTC would continue to consult with the Baradine Showground Trust to manage access and temporary land requirements at the showground.
SE-CI2	*Temporary workforce accommodation*	A temporary workforce accommodation plan would be prepared to guide the design and provision of temporary accommodation. The plan would be developed in accordance with ARTC's Inland Rail Program Accommodation Principles, relevant council development codes and guidelines, and the following overarching principles: ▸ Temporary workforce accommodation is designed to be integrated into, and minimise the impacts on, the existing communities ▸ Temporary workforce accommodation adequately provides for occupants and has a high level of onsite amenity. The plan would define: ▸ The arrangement and layout of facilities to minimise amenity impacts on surrounding sensitive receivers (including noise, visual amenity, lighting and privacy) ▸ Proposed built-form heights to ensure heights are appropriate within their surrounding context ▸ Opportunities for retention of screening vegetation (where present) and provision of additional landscaping as required ▸ How services (such as water, waste, stormwater, wastewater) would be provided and managed to ensure consistency with relevant codes and guidelines, and minimise potential impacts on local infrastructure networks and the environment ▸ Location, design, service and amenity requirements for mobile accommodation facilities, including amenities for workers ▸ Provision of adequate parking onsite ▸ How sites would be decommissioned and rehabilitated consistent with the rehabilitation strategy for the proposal. The plan would be developed in consultation with relevant key stakeholders, including the relevant local council.
WM1	*Excess waste generation*	Detailed design would include measures to minimise spoil generation. This would include a focus on optimising the design to minimise spoil volumes and the reuse of material onsite.
WM2	*Management of spoil*	A spoil management strategy would be developed to define the preferred approach to managing spoil, including the use of spoil to rehabilitate borrow pits. The strategy would include: ▸ Confirming spoil quantities ▸ Undertaking appropriate investigations and surveys, including geotechnical investigations ▸ Consideration of the approvals and land application of waste exemptions required, associated lead time, and any associated sampling and reporting obligations ▸ Consultation with landholders on where borrow pits are located ▸ Defining the preferred option for reusing and/or disposing of any spoil not able to be reused at borrow pits. The outcomes of the strategy would inform the construction waste management plan.

Ref	Issue/impact	Mitigation measures—detailed design/pre-construction
Sustainability		
SU1	*Achieving the target sustainability rating*	A sustainability management plan would be developed to guide the proposal to achieve an 'excellent' design rating according to ISCA's Infrastructure Sustainability rating scheme. The sustainability management plan would incorporate sustainability objectives and targets consistent with the Inland Rail program sustainability objectives and targets, roles and responsibilities, strategies for achieving the 'excellent' design rating, and review and reporting requirements.
SU2	*Sustainable procurement*	Procurement would be undertaken in accordance with the *Inland Rail Sustainable Procurement Policy* (ARTC, 2020d).
SU3	*Reporting*	Monthly sustainability reporting (and corrective action, where required) would be undertaken during detailed design in accordance with the sustainability management plan.
Climate change		
CC1	*Climate change risk management*	The climate change risk assessment would continue to be refined as the design of the proposal progresses. The adaptation measures identified for the proposal would be reviewed and final measures would be incorporated into the design, where practicable.

B.3 Updated mitigation measures for construction

Table B-2 provides the measures relevant to the management of construction activities and the works proposed. This table supersedes the mitigation measures originally presented in the EIS and Preferred Infrastructure / Amendment Report.

TABLE B-2: UPDATED MITIGATION MEASURES FOR CONSTRUCTION

Ref	Issue/impact	Mitigation measures—construction
Biodiversity		
BD8	*Biodiversity impacts*	A biodiversity management plan would be prepared prior to construction and implemented as part of the CEMP. The plan would include measures to protect biodiversity and minimise the potential for impacts during construction. The plan would be prepared in accordance with relevant legislation, guidelines and standards. The plan would include but not be limited to: ▸ Locations and requirements for pre-clearing surveys ▸ Establishing protocols for the staged clearing of vegetation, and safe tree felling and log removal, to reduce the risk of fauna mortality ▸ Measures to avoid and minimise clearing of hollow-bearing trees, where practicable ▸ Measures relating to the provision and management of nest boxes, including reuse of hollows and monitoring protocols ▸ An unexpected finds protocol ▸ Measures to manage biosecurity risks in accordance with the Biosecurity Act 2016 (NSW) ▸ Measures to reduce the risk of aquatic fauna mortality/injury.
BD9	*Biodiversity impacts*	Pre-clearing surveys would be undertaken, prior to construction, by a suitably qualified ecologist in accordance with the biodiversity management plan. Specific surveys would include: ▸ Surveys for roosting microbats and birds in structures and habitats that are proposed to be removed, including telegraph poles, buildings, hollow trees and bark fissures ▸ Searches for nest trees ▸ Identification of hollow-bearing trees and logs requiring fauna rescue, relocation or other management during removal ▸ Surveys for koalas, which may include trained detection dogs or other appropriate survey techniques ▸ Aquatic fauna salvage in watercourses or residual pools within 50 metres of the construction footprint, and in areas that would be enclosed by silt curtains (e.g. piling locations).

Ref	Issue/impact	Mitigation measures—construction
BD10	*Biodiversity impacts*	Compounds and stockpile sites would be located an appropriate distance from riparian habitat to avoid indirect impacts on aquatic habitat. This includes, where practicable, a minimum of 100 metres (m) for Type 1, Class 1 watercourses, 50 m for Type 2, Class 2 and 3 watercourses, and 10 to 50 m for Type 3, Class 2 to 4 watercourses. Direct impacts on in-stream vegetation and native vegetation on the banks of watercourses would be avoided, as far as practicable.
BD11	*Biodiversity impacts*	Exclusion areas would be established and maintained around native vegetation to be retained; particularly areas of high biodiversity value adjoining the proposal site (e.g. threatened ecological communities, known threatened plant populations etc) that are located in close proximity to work areas.
BD12	*Rehabilitation of vegetation subject to temporary disturbance*	A rehabilitation strategy would be prepared to guide rehabilitation planning, implementation, monitoring and maintenance of disturbed areas within the construction footprint that are not required as part of the operational footprint (such as compounds and temporary workforce accommodation). The strategy would include clear objectives for rehabilitation of native vegetation in temporary disturbances areas.
BD13	*Habitat linkages*	To improve fauna connectivity across the rail corridor, habitat linkages would be included in the rail corridor where practicable and consistent with the safe operation and maintenance of Inland Rail. Linkages would involve retaining or rehabilitating groundcovers and low shrubs, with a focus on those areas of the rail corridor within the Pilliga forests and other areas of connected vegetation. Rehabilitation or revegetation is to occur as soon as possible to minimise the lag between impact and mitigation. As part of construction planning, opportunities to minimise construction clearing within the rail corridor would be investigated for high value connectivity areas.
Water resources		
WR7 ~~WR6~~	*Sedimentation and erosion management*	A soil and water management plan would be prepared and implemented as part of the CEMP. The plan would include measures, processes and responsibilities to minimise the potential for soil and water impacts, including impacts to groundwater, during construction.
WR8 ~~WR7~~	*Monitoring groundwater drawdown and quality*	A groundwater monitoring program would be developed in consultation with DPE Water and implemented, as part of the soil and water management plan, to monitor potential groundwater impacts. The program would define the following in accordance with chapter 10 of Technical Report 4—Groundwater assessment: ▸ Monitoring parameters ▸ Monitoring locations ▸ Frequency and duration of monitoring. The monitoring program would include baseline monitoring to determine the water quality of groundwater from the proposed bore field bores. Monitoring of groundwater levels would continue following the completion of groundwater pumping and extraction until water levels recover to baseline conditions. A review would be undertaken six months and one year after the completion of groundwater pumping to assess the recovery rates and determine if further mitigation is required.
WR9 ~~WR8~~	*Bore field groundwater quality*	The quality of groundwater obtained from the proposed bore field bores would be assessed for the suitability of its intended use. Where required, treatment systems would be designed to ensure water quality is consistent with the relevant water quality criteria from the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZG, 2018).
WR10 ~~WR9~~	*Impacts on existing bores*	Where groundwater monitoring identifies the potential for groundwater drawdown in existing bores to exceed the NSW Aquifer Interference Policy minimal impact considerations, make-good provisions would be triggered for those bores, in consultation with the relevant landholders and DPE Water.
WR11 ~~WR10~~	*Proposal bore construction*	All bores required for the proposal would be constructed by appropriately licensed drillers in accordance with the *Minimum Construction Requirements for Water Bores in Australia* (National Uniform Drillers Licensing Committee, 2020) and the relevant requirements of each Water Sharing Plan.
WR12 ~~WR11~~	*Works within watercourses*	Works within or near watercourses would be undertaken with consideration of the *Guidelines for watercourse crossings on waterfront land* (DPI, 2012a) and *Guidelines for controlled activities on waterfront land – Riparian corridors* (NRAR, 2018).

Ref	Issue/impact	Mitigation measures—construction
WR13 ~~WR12~~	*Unforeseen water table penetration by bulk earthworks*	If bulk excavations unexpectedly intersect the water table, works would be halted while the potential impacts are assessed by a hydrogeologist and adaptive mitigation measures implemented, as required.
WR14 ~~WR13~~	*Proposal bore fields*	Where there is benefit to the local community, the potential for retaining bores post-construction would be considered in consultation with relevant stakeholders (e.g. local councils). Any approvals, operating costs and maintenance associated with retaining and using these bores would be the responsibility of the party that takes ownership.
WR15 ~~WR14~~	*Proposal bore construction*	A bore field extraction plan would be prepared as part of the soil and water management plan and provided to DPE Water prior to construction of the proposed bore field bores. The plan would include information about the locations, water source, depth and proposed volumes of water take per year for the proposed bore field bores, as well as any measures proposed to minimise the potential for impacts of extracting groundwater for use as construction water. The plan would also provide confirmation that any applicable water sharing plan rules have been met.
WR-CI3	*Unforeseen water table penetration by borrow pits*	If excavations at borrow pits B, C and/or borrow pit D intersect the water table, works would be halted while the potential impacts are assessed by a hydrogeologist and additional management measures implemented as required.
WR-CI4	*Groundwater inflow rate (borrow pits)*	If the groundwater inflow rate at borrow pit A is higher than one mega litre per year, the inflow rate and implications would be assessed by a hydrogeologist and additional management measures implemented, as required. If the groundwater inflow rate at borrow pit A has the potential to exceed 3 mega litres per year, sufficient entitlement would be obtained prior to any extraction or interception.
Flooding		
FH3	*Flooding impacts*	Construction planning and the layout of construction work sites and compounds would be undertaken with consideration of overland flow paths and flood risk, avoiding flood liable land and flood events where practicable.
FH4	*Flooding impacts*	A flood and emergency response plan would be prepared and implemented as part of the CEMP. The plan would include measures, process and responsibilities to minimise the potential impacts of construction activities on flood behaviour, as far as practicable. It would also include measures to manage flood risks during construction and address flood recovery during construction. The plan would be developed in consultation with Transport for NSW, local councils, emergency services and key affected landholders/managers (including Forestry Corporation of NSW).
FH5	*Downstream watercourse stability*	A geomorphology monitoring program would be implemented in accordance with the soil and water management plan (mitigation measure **WR7** ~~WR6~~). The monitoring would observe changes in the geomorphological stability of watercourses that may be attributable to the proposal, and inform appropriate management responses. **Site-specific geomorphic assessments of watercourse crossings would be undertaken to inform the design process. The final design would minimise adverse impacts to geomorphic stability and functioning. Appropriate rehabilitation measures would be proposed in accordance with *A Rehabilitation Manual of Australian Streams* (Rutherfurd et al. 2000). 'Soft' engineering measures, such as use of vegetation would be preferred, to avoid 'hard' instream engineering structures, with consideration of the limited extent of direct impact.** The monitoring program would be developed in consultation with the Department of Planning and Environment and with reference to the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZG, 2018).
FH-CI1	*Flooding impacts (temporary accommodation facilities)*	The Narromine South and Narrabri West temporary workforce accommodation facilities would incorporate appropriate flood protection measures, such as elevating buildings on stilts and storing hazardous materials above the flood levels that inundate these sites.
Soils and contamination		
SC7	*General soil and erosion management*	The soil and water management plan (mitigation measure **WR7** ~~WR6~~) would include erosion and sediment controls appropriate for dispersive soils.

Ref	Issue/impact	Mitigation measures—construction
SC8	*Contamination*	A contamination and hazardous materials plan would be prepared and implemented as part of the CEMP. It would include measures, processes and responsibilities to minimise the potential for contamination impacts on the local community, workers and environment, and procedures for incident management and managing unexpected contamination finds (an unexpected finds protocol).
SC9	*Rehabilitation*	Disturbed areas would be rehabilitated following construction, in accordance with the rehabilitation strategy (mitigation measure BD12).
Water quality		
WQ2	*Discharge to surface water*	Discharge to surface water would be undertaken in accordance with the environment protection licence for construction of the proposal and would consider the hydrological attributes of the receiving waterbody.
WQ3	*Surface water monitoring*	A surface water monitoring framework would be developed and implemented as part of the soil and water management plan in the CEMP. It would identify: ▸ Monitoring locations at discharge points and selected watercourses where works are being undertaken ▸ Monitoring parameters ▸ Frequency and duration of monitoring. The monitoring framework would include the relevant water quality objectives, parameters and criteria from Technical Report 5. It would be developed in consultation with the Department of Planning and Environment, and the NSW EPA.
WQ4	*Dewatering of farm dams that require relocation and/or decommissioning*	A dam dewatering protocol would be developed as part of the soil and water management plan. It would consider: ▸ Options for reuse of water in the dam ▸ Licensing and approval requirements, where relevant ▸ The quality and quantity of the water to be released and the location of potential discharge points of the water into watercourses, where relevant ▸ Strategies to minimise impacts on native, threatened or protected species ▸ Strategies to minimise spread of pest flora and fauna species.
Aboriginal heritage		
AH10	*Protecting Aboriginal heritage and minimising impacts during construction*	An Aboriginal cultural heritage management plan would be prepared prior to construction and implemented as part of the CEMP. The plan would include measures to minimise the potential for impacts and manage Aboriginal heritage, including: ▸ Details of methodology and approach to additional survey (AH3, AH4, AH5, AH6, AH8 and AH9) ▸ A salvage methodology (mitigation measure AH2) ▸ An unexpected finds procedure (mitigation measure AH12) ▸ Plans and installation procedures for fencing and protective coverings ▸ Induction package for construction workers and supervisors (mitigation measure AH11) ▸ Measures to protect sites close to the proposal site from inadvertent impacts ▸ Outcomes of further investigations (mitigation measures AH3 and AH4) ▸ Erosion and sediment controls in accordance with *Managing Urban Stormwater: Soils and construction – Volume 1* (Landcom, 2004) to minimise the potential for erosion impacts to Aboriginal sites located close to watercourses/drainage lines ▸ Measures to manage the potential for impacts to potential Aboriginal heritage items (including burial sites) located in sensitive landscapes (such as alluvium landscapes) ▸ Measures to minimise and mitigate potential impacts to plant species that hold medicinal and food value (guided by a cultural plant survey). The plan would be prepared in consultation with registered Aboriginal parties and Heritage NSW.
AH11	*Protecting Aboriginal heritage and minimising impacts during construction*	A requirement for cultural and historic heritage awareness training would be included in the Aboriginal cultural heritage management plan. Cultural heritage awareness training would be provided by an Aboriginal representative at the commencement of substantial works for the proposal.

Ref	Issue/impact	Mitigation measures—construction
AH12	*Unexpected finds*	An unexpected finds procedure would be developed and included in the Aboriginal cultural heritage management plan (mitigation measure AH10) to provide a consistent method for managing any unexpected Aboriginal heritage items discovered during construction, including potential heritage items or objects, and human skeletal remains. The procedure would define the requirements for managing any human skeletal remains discovered during construction in accordance with mitigation measure NAH8.
AH13	*Impacts on Aboriginal cultural values at Etoo Creek 19-5-0239*	Prior to construction commencing, and once rehabilitation is complete, a smoking ceremony would be undertaken at the location of Etoo Creek 19-5-0239. Prior to construction commencing, the age of the culturally modified (scarred) tree would be verified by an arborist.
Non-Aboriginal heritage		
NAH7	*Protecting non-Aboriginal heritage and minimising impacts during construction*	A heritage management plan would be prepared and implemented as part of the CEMP. It would include measures to manage non-Aboriginal heritage and minimise the potential for impacts during construction. The plan would be prepared in consultation with the relevant heritage agencies (local councils) and take into account the outcomes of further investigations and surveys during detailed design. The heritage management plan would define a requirement for non-Aboriginal historical heritage awareness training for site workers prior to commencement of construction works. The awareness training would promote an understanding of heritage items that may be impacted during the works and the requirements of the unexpected finds procedure.
NAH8	*Unexpected finds including human skeletal remains*	An unexpected finds procedure would be developed and included in the heritage management plan to provide a consistent method for managing any unexpected heritage or archaeological items and unexpected human skeletal remains. The procedure would define the requirements for managing any human skeletal remains discovered during construction, in accordance with relevant legislation and guidelines, including the Public Health Regulation 2012 (NSW), *Heritage Act 1977* (NSW), *National Parks and Wildlife Act 1974* (NSW), *Work Health and Safety Act 2011* (NSW), *Coroners Act 2009* (NSW), *NSW Health Procedures Exhumation of human remains* (NSW Health, 2013), and *Skeletal Remains – Guidelines for the Management of Human Skeletal Remains under the Heritage Act 1977* (NSW Heritage Office, 1998b). Any human skeletal remains discovered during construction would be managed in accordance with the *Policy Directive – Exhumation of Human Remains* (NSW Health, 2013) and *Skeletal Remains – Guidelines for the Management of Human Skeletal Remains under the Heritage Act 1977* (NSW Heritage Office, 1998b).
NAH9	*Avoiding impacts on heritage items*	The following heritage items would be fenced and marked on site plans within the CEMP as areas to be avoided during construction: ▸ Graves within the Woodvale Park Private Cemetery ▸ Curban Inn site ▸ 'Kickabil' homestead and woolshed ▸ 'Allandale' homestead ▸ 'Digilah' homestead ▸ Convict road, Baradine ▸ Rocky Creek Mill site ▸ Graves within 'The Aloes' homestead ▸ Graves of the Dingwell children.
Noise and vibration		
CNV3	*Noise and vibration impacts*	A construction noise and vibration management plan would be prepared and implemented as part of the CEMP, in accordance with the Inland Rail NSW Construction Noise and Vibration Management Framework. The plan would include measures, processes and responsibilities to manage and monitor noise and vibration, and minimise the potential for impacts during construction.

Ref	Issue/impact	Mitigation measures—construction
CNV4	*Noise and vibration impacts*	The Inland Rail NSW Construction Noise and Vibration Management Framework would be implemented, and the proposal would be constructed, with the aim of achieving the construction noise management levels and vibration criteria identified by the noise and vibration assessment. All feasible and reasonable noise and vibration measures would be implemented. Any activities that could exceed the construction noise management levels and vibration criteria would be identified and managed in accordance with the framework, the noise and vibration management plan, and the construction noise and vibration impact statements. Notification of impacts would be undertaken in accordance with the communication management plan for the proposal.
CNV5	*Impacts of out-of-hours work*	An out-of-hours work protocol would be developed to define the process for considering, approving and managing out-of-hours work, including implementation of feasible and reasonable measures and communication requirements. Measures would be aimed at proactive communication and engagement with potentially affected receivers, provision of respite periods and/or alternative accommodation for defined exceedance levels. All work outside the primary proposal construction hours would be undertaken in accordance with the Inland Rail NSW Construction Noise and Vibration Management Framework and in accordance with the out-of-hours work protocol. The protocol would provide guidance for the preparation of out-of-hours work plans for each construction work location and for key works. Out-of-hours work plans would be prepared in consultation with key stakeholders, including the NSW EPA and the community with the potential to be impacted, and incorporated into the construction noise and vibration management plan.
CNV6	*Construction vibration (structural) impacts*	If vibration-generating activities are conducted within 18 m of a residence, attended vibration measurements would be undertaken at the commencement of vibration-generating activities to confirm that structural vibration limits are within the acceptable range. For piling, this distance is increased to 100 m. Where vibration levels are found to be unacceptable, alternative work methods would be implemented so the vibration impacts are reduced to acceptable levels.
CNV7	*Construction vibration (structural) impacts*	Building condition surveys would be completed before and after construction works where buildings or structures are within the minimum vibration working distances for cosmetic damage.
CNV8	*Construction vibration (structural) impacts on heritage items*	Prior to the commencement of vibration-intensive works within the minimum working distances for cosmetic damage for heritage items, the potential for damage to the item would be assessed. Where there is potential for damage, alternative methods that generate less vibration would be investigated and substituted, where practicable. Where residual cosmetic damage risks remain, condition surveys would be carried out and vibration monitoring with real-time notification of exceedance would occur during the activity. Site activities would be modified, where practicable, to avoid exceeding the cosmetic damage criteria. Any identified vibration-related damage to the items would be rectified.
CNV-CI1	*Impacts of blasting at borrow pits*	A blast management strategy would be prepared in accordance with relevant guidelines and in consultation with the NSW EPA. The strategy would form part of the construction noise and vibration management plan and would include: ▸ Sequencing and review of trial blasting to inform blasting ▸ Regularity of blasting ▸ Intensity of blasting ▸ Periods of relief ▸ Blasting program.
CNV-CI2	*Impacts of blasting at borrow pits*	Blasting would be undertaken during the recommended standard hours for blasting. Management measures defined by the blasting management strategy would be implemented.
Air quality		
AQ1	*General air quality impacts*	An air quality management plan would be prepared and implemented as part of the CEMP. The plan would include measures, processes and responsibilities to minimise the potential for air quality impacts on the local community and environment during construction.

Ref	Issue/impact	Mitigation measures—construction
AQ2	*Construction activities and earthworks that may cause dust impacts*	Where sensitive receivers are located within the separation distances determined for each key activity, or visible dust is generated from vehicles using unsealed access roads, road watering and/or other stabilising approaches would be implemented.
AQ-CI1	*Impacts of blasting at borrow pits*	Blasting would be avoided when winds in excess of 5 metres per second could carry dust towards a sensitive receiver.
Traffic and transport		
TT7 ~~TT6~~	*General impacts of construction on traffic, transport, access, pedestrians and cyclists.*	A traffic, transport and access management plan would be prepared and implemented as part of the CEMP. The plan would include measures, processes and responsibilities to minimise the potential for impacts on the community and the operation of the surrounding road and transport environment during construction. The plan would be developed in consultation with relevant stakeholders, including local councils, Transport for NSW, Forestry Corporation of NSW, emergency services and public transport/bus operators. The plan would include, as appropriate, additional reasonable and feasible measures identified as an outcome of consultation (in accordance with mitigation measure TT7).
TT8 ~~TT7~~		Consultation with relevant stakeholders would be undertaken regularly to facilitate the efficient delivery of the proposal and to minimise impacts on road users and landholders. Stakeholders would include the relevant local council/s, bus operators, Transport for NSW, emergency services, the Forestry Corporation of NSW (in relation to access within State forests), Crown Land, Local Land Services and other affected property owners/occupants. Additional measures identified as an outcome of consultation would be implemented during construction, where reasonable and feasible. This would include modifying work areas, activities and construction access arrangements to address traffic flow and access issues identified by key stakeholders, where practicable.
TT9 ~~TT8~~	*Access impacts*	The community would be notified in advance of any proposed road and pedestrian network changes through signage, the local media, and other appropriate forms of communication.
TT10 ~~TT9~~	*Emergency vehicle access*	Emergency vehicle access routes that may be impacted by the proposal would be identified, and appropriate control measures would be implemented, in consultation with the relevant emergency services providers.
TT11 ~~TT10~~	*Heavy vehicles damaging local roads*	A dilapidation survey would be undertaken of the made public roads within the proposed haulage routes, prior to and following completion of construction, and provided to the relevant road authority. Pavement condition monitoring would be carried out during works, as required. Rectification measures would be implemented as needed, during and/or following completion of construction, to address any damage caused by construction.
TT12	***Impacts on maritime navigation***	**A maritime traffic management plan (informed by the navigational impact assessment (mitigation measure TT6)) would be prepared and implemented as part of the CEMP. The plan would include measures, processes and responsibilities to minimise the potential for impacts on navigable waters during construction. The plan would be prepared in accordance with the *Marine Safety Act 1998* (NSW), the *Ports and Maritime Administration Act 1995* (NSW) and other related legislation.** **The plan would be developed in consultation with relevant stakeholders, including local councils and Transport for NSW.**
TT-CI1	*Construction traffic impacts (temporary workforce accommodation)*	The traffic, transport and access management plan would include measures to manage potential traffic impacts at and near temporary workforce accommodation facilities. The plan would include approved access routes and any restrictions on the use of residential streets.
Land use and property		
LP18 ~~LP16~~	*Biosecurity*	The biodiversity management plan included in the CEMP (mitigation measure BD8) would include measures to minimise the potential for biosecurity risks during construction in accordance with the *Biosecurity Act 2015* (NSW).

Ref	Issue/impact	Mitigation measures—construction
LP19 ~~LP17~~	*Access to properties*	Access to individual residences, services and businesses, and for livestock, pedestrians and machinery across the rail corridor, would be maintained during construction. The traffic, transport and access plan included in the CEMP (mitigation measure TT7 ~~TT6~~) would include measures to ensure that access to properties would be maintained at all times during construction. Where alternative access arrangements need to be made, these would be developed in consultation with affected property owners/occupants, and Local Land Services for travelling stock reserves.
LP20 ~~LP18~~	*Access within State forests*	The traffic, transport and access plan included in the CEMP (mitigation measure TT7 ~~TT6~~) would include measures to ensure that access within State forests is retained to enable forestry operations to continue during construction.
LP21 ~~LP19~~	*Rehabilitation*	The rehabilitation strategy (mitigation measure BD12) would include measures to restore disturbed sites that do not form part of the operational footprint (such as compounds, temporary workforce accommodation) as close as practicable to the pre-construction condition or as agreed with the landholder. Rehabilitation of disturbed areas would be undertaken progressively, consistent with the rehabilitation strategy and property-level design requirements (where relevant).
LP22 ~~LP20~~	*Water supplies for farm operations*	Farm water pipelines, dams and drainage channels would be replaced or reinstated in consultation with landowners/landholders to ensure continuity of stock and domestic water supplies prior to removal of existing impacted infrastructure.
LP23 ~~LP21~~	*Bushfire risk in forest areas*	The flood and emergency response plan (mitigation measure FH4) would include measures to minimise the potential for bushfire risks.
Visual amenity		
LV5	*Visual impacts of construction compounds*	Construction compounds would be located, as far as practicable, within cleared areas and away from sensitive receivers. Compounds would be designed and orientated to minimise visual impacts. This would include locating areas of low visual amenity away from sensitive receivers, and erecting boundary screening around compounds, where appropriate.
LV6	*Protection of trees*	Trees to be retained would be protected, prior to the commencement of construction, in accordance with *AS4970-2009 Protection of trees on development sites* (Standards Australia, 2009).
LV7	*Landscape character and visual impacts*	Rehabilitation of disturbed areas would be undertaken progressively in accordance with the rehabilitation strategy (mitigation measure BD12) and individual property agreements (mitigation measure LP3) (where relevant).
LV8	*Minimising light spill*	Lighting of work areas, compounds, and work sites would be designed and sited in accordance with mitigation measure LV4, and oriented to minimise glare and light spill impact on adjacent receivers.
LV-CI1	*Landscape character and visual impacts associated with (borrow pits)*	The borrow pits would be rehabilitated in accordance with the borrow pit rehabilitation strategy provided in Appendix K of the EIS.
LV-CI2	*Visual impact from construction activities (temporary accommodation facilities)*	The temporary workforce accommodation plan (mitigation measure SE-CI2) would include requirements for the design and visual screening of facilities, to minimise the potential for visual impacts, particularly where facilities are visible from sensitive receivers.
Socio-economic impacts		
SE9	*Social impacts, communication and engagement*	Key stakeholders (including local councils, emergency service providers, public transport providers, the general community and surrounding landowners/occupants) would continue to be consulted in accordance with the communication management plan. Local residents, landholders, landowners, businesses, affected social and recreation facilities and other relevant stakeholders would be notified before work starts, in accordance with the communication management plan, and be regularly informed of construction activities.
SE10	*Social impacts, communication and engagement*	Complaints during construction would be managed in accordance with the complaints management system defined by the communication management plan. The complaints management system would be maintained throughout the construction period and for a minimum of 12 months after construction finishes.

Ref	Issue/impact	Mitigation measures—construction
SE11	*Workforce management*	A workforce management plan would be developed and implemented during construction to manage: ▸ Potential impacts of the non-resident construction workforce ▸ Local business and employment opportunities ▸ Health and wellbeing services needs of the temporary construction workforce, including medical, allied health and wellbeing services. The plan would be developed in consultation with local councils and service providers, including local and regional health and emergency services providers.
SE12	*Local employment and training opportunities*	The workforce management plan would include measures to manage local employment and procurement requirements, including but not limited to: ▸ Recruitment, skills and training measures, including identification of skills and qualifications required, and training targets ▸ How the contractor would work with regional stakeholders to upskill local residents.
SE13	*Impacts of non-resident workforce on local communities*	The workforce management plan would include measures to manage potential impacts of the non-resident construction workforce on local and regional communities, including: ▸ A code of conduct for workers, including a zero-tolerance policy relating to anti-social behaviour ▸ Strategies to promote wellbeing of the workforce ▸ A monitoring mechanism for use of local tourist accommodation and rental housing by workers ▸ Processes for managing potential increased demands due to the non-resident workforce.
SE14	*Temporary land requirements at the Narrabri Dirt Bike Club*	The area of land within the Narrabri Dirt Bike Club site, which is required during construction only, would be restored and returned to (as a minimum) the pre-existing condition.
Waste management		
WM3	*Construction waste management*	A construction waste management plan would be prepared and implemented as part of the CEMP. The plan would adopt the waste hierarchy principles contained in the *Waste Avoidance and Resource Recovery Act 2001* (NSW), and detail processes, responsibilities and measures to manage waste and minimise the potential for impacts during construction.
WM4	*Construction waste and spoil management*	All waste generated would be classified in accordance with the *Waste Classification Guidelines* (NSW EPA, 2014) and disposed of in accordance with the relevant requirements of the Protection of the Environment Operations (Waste) Regulation 2014.
Sustainability		
SU4	*Achieving the target sustainability rating*	A sustainability management plan would be developed to define the measures required to be implemented achieve an 'excellent' as built rating according to the ISCA's Infrastructure Sustainability scheme. The sustainability management plan would incorporate Inland Rail program-aligned sustainability objectives and targets, roles and responsibilities, strategies for achieving the 'excellent' as built rating, and review and reporting requirements.
SU5	*Reporting*	Monthly sustainability reporting (and corrective action where required) would be undertaken during construction, in accordance with the sustainability management plan.
Climate change		
CC2	*Climate change risk management*	The adaptation measures identified for the proposal would be reviewed, and final measures would be implemented during construction, as far as practicable.

B.4 Updated mitigation measures for operation

Table B-3 provides the measures relevant to operation that would be implemented during the operational stage to guide how the proposal is operated and maintained in the long-term. This table supersedes the mitigation measures originally presented in the EIS and Preferred Infrastructure / Amendment Report.

TABLE B-3: UPDATED MITIGATION MEASURES FOR OPERATION

Ref	Issue/impact	Mitigation measures—operation
Biodiversity		
BD14	*Weed management*	Weed inspections would be undertaken and weed management would occur, in accordance with ARTC's standard operating procedures, to meet its obligations under the *Biosecurity Act 2015* (NSW).
BD15	*Fauna connectivity*	The operational performance of fauna connectivity measures, including impacts on fauna as a result of train operations and maintenance activities, would be monitored in accordance with the fauna connectivity strategy. This would include recording of wildlife collisions with trains. ARTC would also monitor the use of crossing structures by target species (including the Pilliga mouse, squirrel glider, koala, rufous bettong and eastern pygmy-possum) and feral predators. The threatened species management plans (BD6) would include appropriate adaptive management measures to address situations where fauna connectivity and population impact thresholds are exceeded.
BD16	*Aquatic ecology*	Culverts that provide for the flow of watercourses would be inspected and maintained, in accordance with ARTC's standard operating procedures, to address any issues that may contribute to the blockage of fish passage.
Flooding		
FH6	***Downstream watercourse stability***	**A geomorphology monitoring program would be implemented following completion of construction. The program would include monitoring of watercourses for four inundation events. The monitoring program would be developed in consultation with the Department of Planning and Environment.**
Soils and contamination		
SC10	*Soil erosion and sedimentation*	During any maintenance work where soils are exposed, sediment and erosion control devices would be installed in accordance with *Managing Urban Stormwater: Soils and Construction*, Volume 1 (Landcom, 2004).
SC11	*Contamination*	ARTC's existing spill response procedures would be reviewed to determine applicability and suitability during operation. The adopted procedure would include measures to minimise the potential for impacts on the local community and the environment as a result of any leaks and spills.
Water quality		
WQ5	*General water quality management*	The proposal would be managed in accordance with the water quality management requirements specified in the environment protection licence.
Noise and vibration		
ONV4	*Operational noise and vibration*	The proposal would be operated with the aim of achieving the operational noise and vibration criteria identified by the operational noise and vibration review, the requirements of the conditions of approval, and the environment protection licence for Inland Rail.
ONV5	*Operational noise and vibration*	Operational noise and vibration compliance monitoring would 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 would be defined by the operational noise and vibration review. The results of monitoring would be included in an operational noise and vibration compliance report, prepared in accordance with the conditions of approval. The need for any additional feasible and reasonable mitigation measures would be identified as an outcome of the monitoring.
Air quality		
AQ3	*Locomotive emissions*	Locomotive emissions would be managed in accordance with the air quality management requirements specified in the rollingstock operator's environment protection licence.
AQ4	*Impacts during track maintenance*	Maintenance service vehicles and equipment would be maintained and operated in accordance with the manufacturer's specifications.

Ref	Issue/impact	Mitigation measures—operation
Traffic and transport		
TT13 ~~TT11~~	*Road user safety at level crossings*	The operation of all level crossings constructed on classified roads as part of the proposal would be reviewed after Inland Rail commences operation to confirm that the: ▸ Level of protection is appropriate ▸ Proposed infrastructure is appropriate for the traffic conditions.
TT14 ~~TT12~~	*Road user safety at level crossings*	In accordance with National and State Rail Safety Law requirements, public road crossings would be subject to an Interface Agreement with the relevant road manager to ensure that safety risks are identified and minimised, as far as practicable, during operations.
Land use and property		
LP24 ~~**LP22**~~	*Safe scheduling*	ARTC would develop a 'call train control' process to enable landowners to use levels crossings as stock crossings. Details of the 'call train control' process will be provided to agricultural landholders prior to the commencement of operations.
Visual amenity		
LV9	*Landscape character and visual impacts*	Vegetation provided in accordance with the rehabilitation strategy (mitigation measure BD12), and urban design and landscape plan (mitigation measure LV2) would be subject to ongoing monitoring and maintenance in accordance with ARTC's standard operating procedures.
Socio-economic impacts		
SE15	*Increased safety risks due to new level crossings*	A rail safety awareness program would be developed and implemented prior to the operation of Inland Rail to educate the community regarding safety around trains. This would include landholders with properties that are intersected by the proposal.
Waste management		
WM5	*Operational waste management*	Operational waste, including general litter clean up, would be managed in accordance with ARTC's existing operational maintenance requirements and the waste hierarchy principles in the *Waste Avoidance and Resource Recovery Act 2001* (NSW).
Sustainability		
SU6	*Sustainability*	Prior to operation commencing, a sustainability handover plan would be prepared, and relevant initiatives would be maintained and implemented, through operational management and maintenance procedures.
Climate change		
CC3	*Climate change risk management*	Operational management and maintenance procedures would address potential climate change risks and adaptation measures.