



Summary of findings

Revised Draft
Environmental Impact Statement
2025

NSW/Qld Border to Gowrie

**INLAND
RAIL** 



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This is a free service.

Cover image: Aerial view of the fork of Gore Highway and existing line at Yandilla, Queensland.

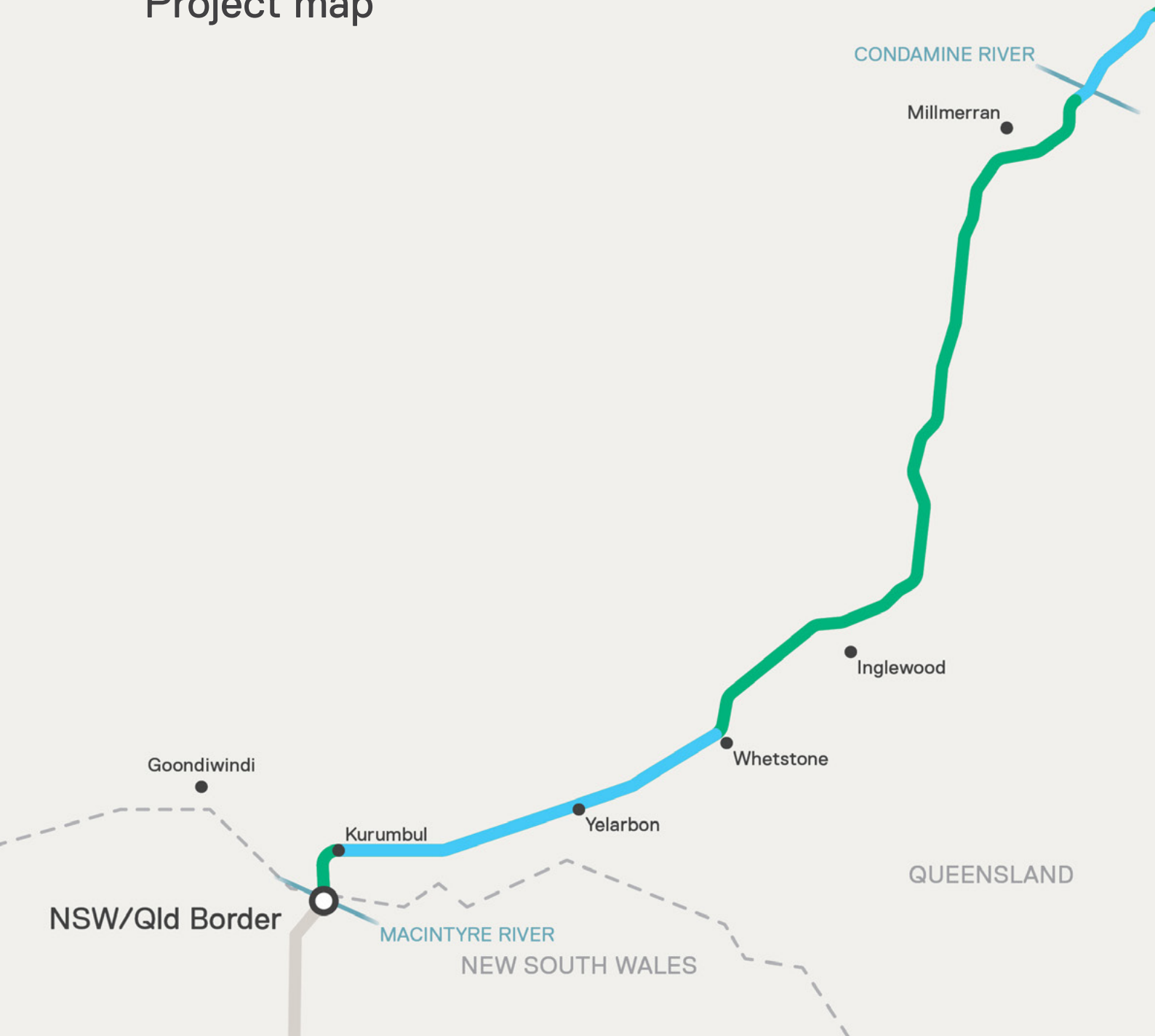
Acknowledgement of Country

An aerial photograph showing a long freight train with various colored containers (red, blue, green, white) stretching across a vast, flat, brownish-yellow landscape. The train is flanked by a line of trees. In the background, there are rolling hills under a clear blue sky. A small, isolated tree stands in the foreground on the left. A horizontal bar with green, yellow, and blue segments is visible in the upper left area of the image.

Inland Rail acknowledges the Traditional Owners and Custodians of the lands and waterways on which we live and work. We also pay our respects to their Elders, past, present and emerging. We value the contribution and rich cultural heritage of Aboriginal and Torres Strait Islander peoples.

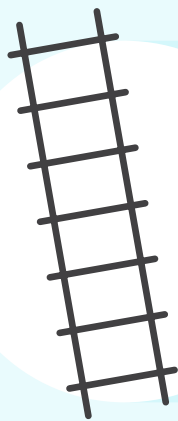
NSW/Qld Border to Gowrie

Project map



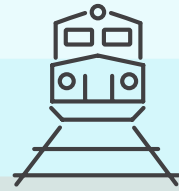


Project fast facts



217km

Total of new or
upgraded track length



149km

Greenfield (new) corridor



37

Bridges total

18



Rail-over-watercourse
bridges



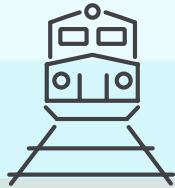
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Crossing
loops



3000+

Culverts

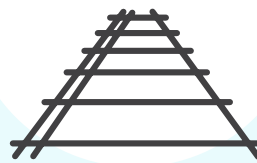


68km

Brownfield
(upgraded existing) corridor

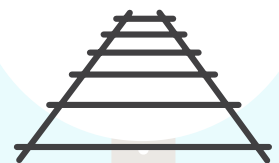
210km

Dual-gauge track



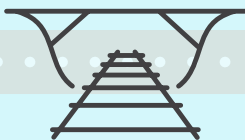
7km

Standard-gauge
track



5

Road-over-rail
bridges



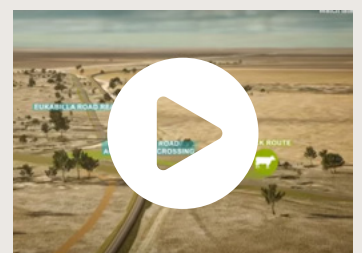
14

Rail-over-road
bridges



Watch online

Get a birds-eye view of the NSW/Qld Border to Gowrie section by watching this fly through video.







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Introduction

Inland Rail

Inland Rail is a 1,600km freight backbone that will connect Melbourne and Brisbane via regional Victoria, New South Wales and Queensland, and progressively transform how goods are moved around Australia.

Comprising 12 sections, Inland Rail involves upgrades or enhancement works to approximately 1,000km of existing track and construction of 600km of new track passing through 29 local government areas.

Inland Rail will enhance our national freight and supply chain capabilities, connecting existing freight routes and supporting Australia's growth.

As each section is completed, Inland Rail will better link businesses, manufacturers and producers to national and global markets and generate opportunities for industries and regions during construction and beyond.

Delivering Inland Rail will help shift more goods onto rail, meaning faster, more resilient freight; safer, less congested roads; and fewer emissions.

About the NSW/Qld Border to Gowrie project

The NSW/Qld Border to Gowrie project (the Project) will connect one of Australia's most productive farming regions to markets across the country.

The Project involves the construction of a 217km freight railway between the NSW/Qld border and Gowrie, in Queensland.

The Project connects to the approved Inland Rail North Star to NSW/Qld Border section at the Macintyre River, approximately 18km south-east of Goondiwindi.

It then runs north-east near the towns of Yelarbon, Inglewood, Millmerran, Pampas, Brookstead, Pittsworth, and Southbrook.

The railway ultimately reaches Gowrie Junction, northwest of Toowoomba, where it will connect to the Gowrie to Helidon section and through to Kagaru.

The Project will use a combination of 68km of existing rail corridor (brownfield) and 149km of new rail corridor (greenfield) and enable existing narrow-gauge track in Queensland to connect with standard-gauge track in New South Wales.

It is estimated that, once operational, the Project will involve an annual average of 14 train services per day during the initial years of operation. This is likely to increase to an average of 20 trains per day after 15 years, and up to 25 trains per day during peak operational periods.

Inland Rail alignment



- 1 Beveridge to Albury (Vic/NSW Border)**
Comprises 262km of existing track. This section will be enhanced to increase height and width clearances to allow for double-stacked trains.
- 2 Albury (Vic/NSW Border) to Illabo**
Comprises 185km of existing track. Inland Rail will benefit from the track upgrades ARTC has already completed to this section. Enhancements or modification works will be undertaken at locations to allow for safe clearance of double-stacked freight trains.
- 3 Illabo to Stockinbingal**
Comprises 37km of new track and 2km of upgraded track. The route bypasses the winding section of track called the Bethungra Spiral.
- 4 Stockinbingal to Parkes**
Comprises 170km of existing track. Inland Rail will benefit from the track upgrades ARTC has already completed to this section. Enhancement works underway will allow double-stacked trains and a new crossing loop to increase capacity on the line.
- 5 Parkes to Narromine**
Comprises 98km of existing track and 5km of new track. It is the first section of Inland Rail to be completed and accommodates double-stacked trains.
- 6 Narromine to Narrabri**
Comprises 306km of new rail corridor and track. This new section will reduce the overall journey time and complete one of the missing rail links between Melbourne, Adelaide, Perth and Brisbane.
- 7 Narrabri to North Star**
Comprises 189km of upgraded track and 2km of new track and is the second section of Inland Rail to enter construction.
- 8 North Star to NSW/Qld Border**
Comprises 5km of new track and 25km of existing track. This section will complete one of the key missing rail links between New South Wales and Queensland, using the non-operational rail corridor and new track to connect to the NSW/Qld Border to Gowrie section and the operating line running to Yelarbon.
- 9 NSW/Qld Border to Gowrie**
Comprises of approximately 217km of new track. The section involves building approximately 149km of new track and upgrading approximately 68km of track from the NSW/Qld border, near Yelarbon, to Gowrie Junction, north-west of Toowoomba.
- 10 Gowrie to Helidon**
Comprises 28km of new dual gauge track. This section will traverse the steep terrain of the Toowoomba Range and will include a 6.2km tunnel.
- 11 Helidon to Calvert**
Comprises 47km of new dual gauge track, approximately half within existing rail corridor. This section will cross the Lockyer Valley floodplain and the Little Liverpool Range with a 850m tunnel.
- 12 Calvert to Kagaru**
Comprises 53km of new dual gauge track within existing rail corridor. This section includes 39km of dual gauge track allowing single-stacked operations between a proposed terminal at Ebenezer and Kagaru. Using 1.1km of tunnelling, this section will connect Inland Rail with the existing Sydney to Brisbane Coastal Line.

Project proponent

The Australian Rail Track Corporation (ARTC) plays a critical role in the transport supply chain and overall economic development of Australia. Its 8,500km freight rail network nationwide facilitates the transit of more than 430 trains every day carrying a range of products and commodities through New South Wales, Queensland, South Australia, Victoria and Western Australia.

ARTC has been tasked with developing a program to deliver Inland Rail on behalf of the Commonwealth Department of Infrastructure, Transport, Regional Development, Communications and the Arts.

ARTC established a wholly owned subsidiary, Inland Rail Pty Ltd (Inland Rail), in May 2024 to deliver Inland Rail. ARTC remains the proponent of Inland Rail and the NSW/Qld Border to Gowrie project.

Purpose of this summary of findings

This summary of findings has been prepared to give communities an outline of the revised draft EIS and to support engagement with stakeholders during the revised draft EIS's public consultation period.

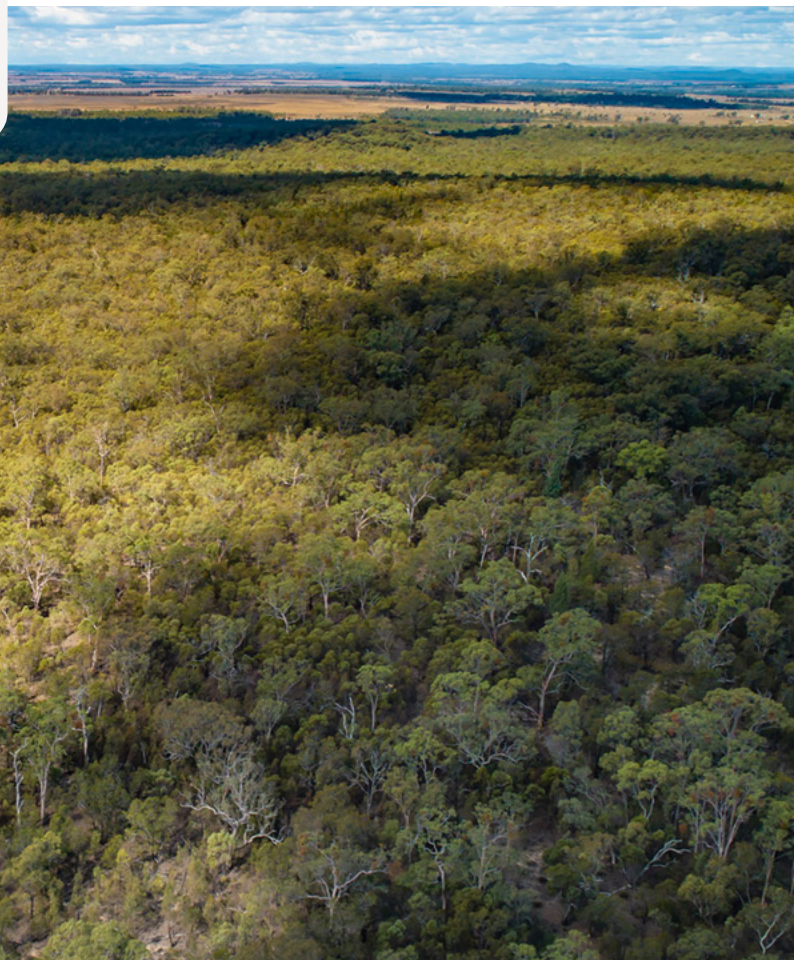
Assessment outcomes, mitigation approaches and conclusions are provided for the relevant environmental, social and economic impacts, as presented in the revised draft EIS.

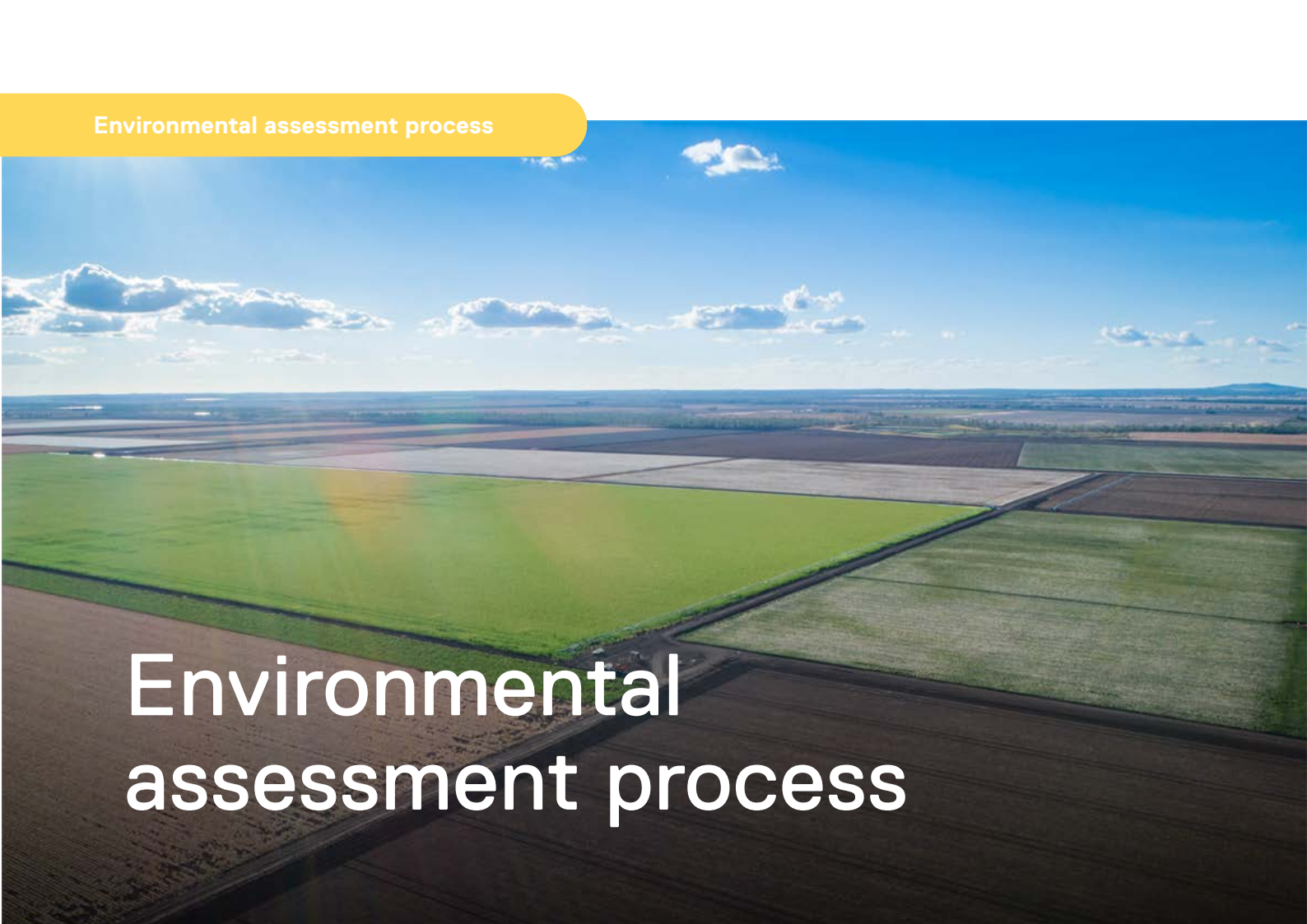
The revised draft EIS and its accompanying technical reports, along with all submissions received during the consultation period, are considered by the Office of the Coordinator-General.



Further information on each of the topics featured in this summary of findings is available in the revised draft EIS.

To access the revised draft EIS documents, please refer to the Coordinator-General's website at statedevelopment.qld.gov.au/inlandrail-b2g





Environmental assessment process

Assessment requirements

The NSW/Qld Border to Gowrie project (the Project) has been declared a coordinated project by the Queensland Coordinator-General (Coordinator-General) and is being assessed under the *State Development Public Works Organisation Act 1971* (Qld) (SDPWO Act) and the *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth) (EPBC Act).

The Project will be assessed under the Bilateral Agreement between the Commonwealth of Australia (the Department of Climate Change, Energy, the Environment and Water (DCCEEW)) and the State of Queensland.

This allows the EIS to satisfy Queensland and Australian Government's legislative requirements.

Draft EIS preparation

The Coordinator-General finalised and issued the Terms of Reference for the Project in November 2018. The Terms of Reference outline the matters to be addressed in an EIS for the Project under the SDPWO Act. The draft EIS was prepared in response to the finalised Terms of Reference.

Draft EIS consultation

Between 23 January 2021 and 4 May 2021, the draft EIS was available for public comment.

The Coordinator-General requested additional information following the public consultation process and submissions on the Project. Inland Rail has responded to public submissions and provided the additional information in this revised draft EIS.

Revised draft EIS

The revised draft EIS provides a comprehensive revision of the draft EIS. It identifies and assesses relevant environmental, social, cultural and economic impacts of the Project and demonstrates the Project is based on sound environmental principles and practices.

The Project's reference design and the revised draft EIS have been updated in response to:

- submissions received following public notification of the draft EIS
- requests for additional information
- further consultation with agencies, landowners, communities, technical authorities, councils and other key stakeholders

Image: Aerial view of Condamine floodplain farms, Pampas Horrane Road, Queensland.

- additional site surveys and analysis aimed at further reducing environmental and property impacts. This includes extensive flora and fauna surveys which have led to a reduction in ecological impacts, as well as hydraulic modelling and updates to flooding infrastructure (e.g. bridges, culverts and scour protection) to further minimise impacts
- review of design and constructability optimisation opportunities to improve safety, incorporate efficiencies and reduce environmental and community impacts.

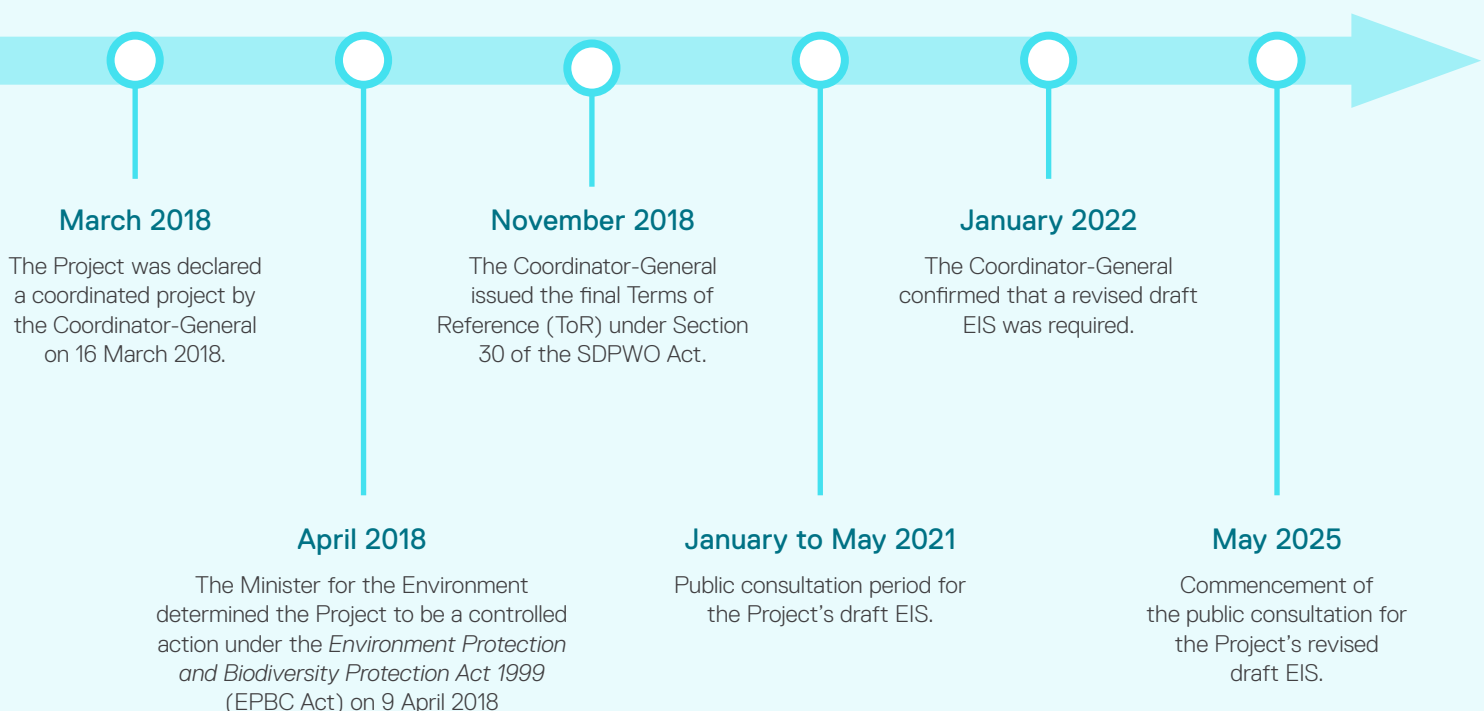
The revised draft EIS comprises three parts:

- chapters describing the EIS process, the Project, identified environmental, social or economic aspects, environmental values, potential impacts and mitigation measures
- appendices supporting the chapters, including the Terms of Reference, strategies, management plans and specialist technical reports on identified environmental, social and economic aspects
- revised reference design alignment drawings and the online flood mapping portal at anz.planengage.com/inlandrail-border-to-gowrie

Remaining steps in the environmental assessment process

- Following public consultation, the Coordinator-General will evaluate the revised draft EIS and may accept it as the final EIS.
- If accepted as final, the Coordinator-General will prepare an evaluation report (i.e. the Coordinator-General's evaluation report) on the final EIS in accordance with the requirements of the SDPWO Act.
- DCCEE will lastly assess matters of national environmental significance under the EPBC Act.

Project approval timeline to date





Have your say on the revised draft EIS

The revised draft EIS is now available for public review and comment.

You can make a submission on any aspect of the revised draft EIS during this period to the Coordinator-General. It's important to note that submissions on the revised draft EIS can only be made to the Coordinator-General directly, and not to Inland Rail.

For information about making a submission on the revised draft EIS to the Coordinator-General, please refer to the [Have your say on a revised draft EIS fact sheet](#) and accompanying submission form, available on the Coordinator-General's website.

Properly made submissions must be accepted by the Coordinator-General and considered in evaluating the revised draft EIS.

In the instance that submissions are received that are not properly made, the Coordinator General may accept or decline those submissions.

You can also view printed copies of the NSW/Qld Border to Gowrie revised draft EIS at our Inland Rail offices:

-  **Inland Rail Toowoomba office**
143–145 Margaret Street, Toowoomba
-  **Inland Rail Goondiwindi office**
28 Marshall Street, Goondiwindi

Have your say

Visit the Coordinator-General's website at statedevelopment.qld.gov.au/inlandrail-b2g to view the revised draft EIS and to find out how to make a submission.

Submissions regarding this revised draft EIS can be made via:

 **Online**
www.statedevelopment.qld.gov.au/inlandrail-b2g

 **Email**
inlandrailb2g@coordinatorgeneral.qld.gov.au

 **Post**
Attention: The Coordinator-General
C/- EIS Project Manager, Inland Rail
- Border to Gowrie project
Office of the Coordinator-General
Box 15517
City East Qld 4002 Australia

Electronic submissions are still required to meet the properly made requirements of the SDPWO Act.

For further enquiries, please contact telephone: **13 QGOV (13 74 68)**.

Want to know more?

See the following revised draft EIS chapters

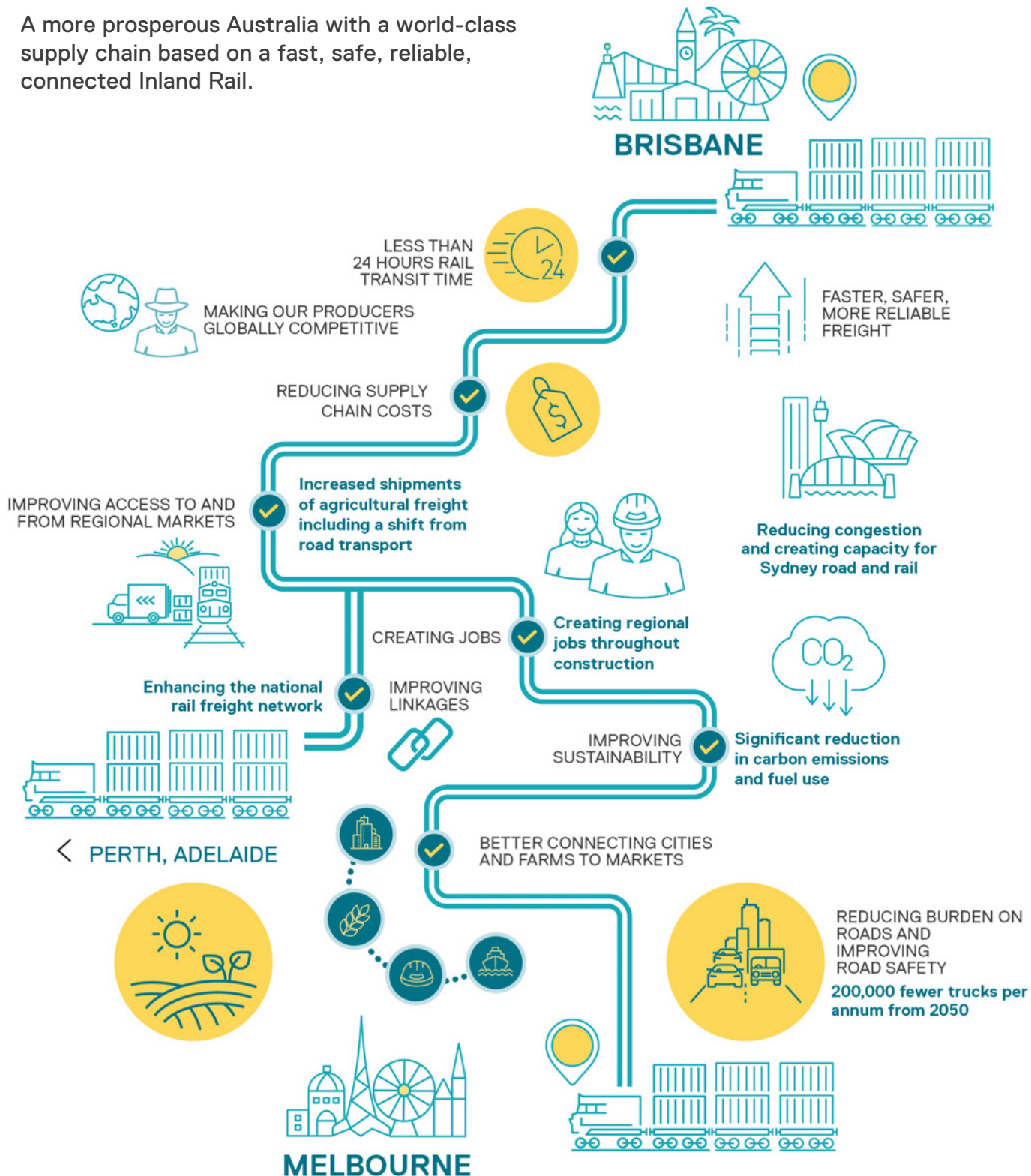
Chapter 1: Introduction

Chapter 2: Project rationale

Chapter 3: Legislation and project approvals process

Chapter 4: Assessment methodology

A more prosperous Australia with a world-class supply chain based on a fast, safe, reliable, connected Inland Rail.



Project rationale

The NSW/Qld Border to Gowrie project (the Project) is a critical link in the Inland Rail Program, providing connectivity between the existing NSW and Queensland freight rail networks.

The Project is key to enhancing Australia's freight network and supply chain capabilities. As part of the broader Inland Rail Program, it connects existing freight routes through rail, roads, and ports, contributing to Australia's economic growth.

This chapter describes the rationale for the Project and the broader Inland Rail Program.

Inland Rail Program

Inland Rail will lead to a modal shift in freight transport from road to rail on the key Melbourne to Brisbane route.

At present, there is no continuous inland rail link between Melbourne and Brisbane. Interstate rail freight travels between Melbourne and Sydney via Albury, and then between Sydney and Brisbane, generally along the coast.

Inland Rail offers a unique opportunity to establish a competitive freight system by providing rail infrastructure that supports a network of intermodal terminals and local sidings for the distribution of commodities at a national, regional and local level. The Project also meets and supports several national and state freight strategies and plans.

Alternative routes for Inland Rail between Melbourne and Brisbane were considered through many studies. The *2015 Melbourne–Brisbane Inland Rail Report* (IRIG, 2015) and the *Inland Rail Programme Business Case* (ARTC, 2015a) culminated in the finalisation of the Inland Rail service offering and approval from the Australian Government to proceed to the concept planning stage for Inland Rail.

The Inland Rail Program provides an alternative mode of transportation for the equivalent of more than 200,000 truck movements annually from 2049–50.

An expected reduction of 750,000 tonnes of carbon and one-third of the fuel can be expected from Inland Rail when compared to road transport. Approximately 1,100km, or 70 per cent, of Inland Rail will use existing rail lines and corridors making the best possible use of previous investments and minimising the impact on the environment and community.

The development of Inland Rail is expected to:

- remove 200,000 long-haul truck movements from roads each year from 2049–50
- reduce congestion and create capacity on existing national road and rail networks
- reduce burden on roads and improve safety
- reduce truck volumes in over 20 regional towns
- relocate mainline freight traffic from existing railways out of some town centres such as Inglewood, Pittsworth and Southbrook, providing for a safer environment with enhanced liveability.

The Project is one of the essential sections of Inland Rail required to enable Australia's existing national rail network to be enhanced for the freight market.

Direct benefits

Anticipated direct benefits of the Project and the broader Inland Rail Program include:

- improved access to and from regional markets
- reduced costs for the market
- improved resilience and certainty of transit time
- increased capacity of the transport network
- improved road safety and reduced congestion
- reduced distances travelled
- improved safety
- improved sustainability
- reduced air pollution and greenhouse gas emissions
- direct and indirect employment opportunities during construction and operations.

Indirect benefits

Anticipated indirect benefits of the Project and the broader Inland Rail Program include:

- improved supply chain efficiency for society
- acting as a catalyst for growth
- creating opportunities for training and skills development
- benefits for regional communities, businesses and industry
- safer, less congested roads.



Inland Rail provides an opportunity to change the fundamentals of the freight logistics supply chain in Australia and deliver long-term economic and social benefits.

The key characteristics of the Inland Rail service offering are:



Reliability

98%, defined as the percentage of goods delivered on time by road freight, or available to be picked up at the rail terminal or port when promised



Price

Cheaper relative to road transportation, as a combined cost of access to the rail network, rail haulage and pick-up and delivery



Transit time

Less than 24 hours from Melbourne to Brisbane



Availability

services available with departure and arrival times that are convenient for freight customers, which depends on cut-off and transit times.

Project alternatives and alignment options

Alternative alignment options for the NSW/Qld Border to Gowrie route were explored through stakeholder engagement, and evaluated in studies, but do not meet the immediate and long-term needs for commodity transport from Melbourne to Southeast Queensland.

The proposed dedicated route is the most direct freight route and will deliver the most competitive alternative to road and the existing coastal rail route.

The overall Inland Rail route was progressively refined between 2006 and 2015. The Corridor Options Report for NSW/Qld Border to Gowrie was prepared on behalf of the Australian Government Department of Infrastructure and Transport in 2017 to consider alternative alignments within the Project.

The base case alignment in the Corridor Options Report was subsequently announced by the Australian Government as the preferred concept alignment. No changes have been made to the alignment.

The draft EIS submission in 2021 proceeded with that preferred alignment and applied a study area around it. The revised draft EIS for the Project presents reference design refinements for the NSW/Qld Border to Gowrie section of Inland Rail.



Want to know more?

See the following revised draft EIS chapters

Chapter 2: Project rationale

Chapter 8: Land use and tenure



Project description

NSW/Qld Border to Gowrie (the Project) is one of 12 sections that make up the Inland Rail Program for the delivery of 1,600km of freight rail line between Melbourne and Brisbane.

The NSW/Qld Border to Gowrie section involves building approximately 217km of single track, open access freight railway between the NSW/Qld border and Gowrie, in Queensland.

The Project comprises approximately 149km of new rail corridor (greenfield) and approximately 68km of existing open access rail corridor (brownfield).

The Project is located within the Goondiwindi Regional Council and Toowoomba Regional Council local government areas.

Project footprint

The Project maximum footprint comprises 3,382 hectares (ha) which includes the land required to accommodate all permanent and temporary components of the Project. Following the completion of the construction stage, this area will reduce to 2,545ha which is the permanent footprint required to accommodate permanent infrastructure associated with the Project including rail, road and other miscellaneous infrastructure.



Want to know more?

See the following revised draft EIS chapters

[Chapter 2: Project rationale](#)

[Chapter 5: Project description](#)

[Chapter 11: Flora and fauna](#)

[Chapter 20: Traffic, transport and access](#)

Image: Kingsthorpe Tilgonda Road, Kingsthorpe, facing south.



Permanent footprint

The permanent footprint refers to the area required to accommodate permanent infrastructure associated with the Project, including rail, road and other miscellaneous infrastructure. Rail infrastructure includes rail tracks, crossing loops, turnouts, earthworks, bridges, drainage, level crossings, grade separations, rail maintenance access roads, signalling and fencing.



Temporary footprint

The temporary footprint refers to the area required to accommodate construction activities and facilities of a temporary duration associated with the construction stage. The temporary footprint is generally wider than the permanent footprint to allow for the safe construction of Project elements and the citing of temporary facilities.

Summary of reference design updates

The Project's revised reference design responds to key environmental and social constraints and has been developed in line with engineering standards to produce a feasible rail design that will achieve the performance specifications for Inland Rail and the Project.

Following notification of the draft EIS, the Project's reference design and the draft EIS have been updated, resulting in this revised draft EIS which responds to:

- submissions received throughout the 2021 public notification period
- additional information requirements from the Coordinator-General
- further consultation with agencies, landowners, communities, technical authorities, councils and other key stakeholders
- additional monitoring, survey, research and analysis aimed at further reducing environmental and property impacts. This includes extensive flora and fauna surveys, which have led to a reduction in ecological impacts, as well as hydraulic modelling and updates to flooding infrastructure (e.g. bridge, culverts and scour protection) to further minimise impacts
- review of design and constructability optimisation opportunities to improve safety, incorporate efficiencies and reduce environmental and community impacts.

The updated assessment and findings contained in this revised draft EIS supersede those of the draft EIS.

Key updates to the reference design and associated disturbance footprint since the notification of the draft EIS include:

Alignment enhancements

- The vertical gradient of the rail alignment has been adjusted to be more responsive to the natural topography of the surrounding landscape for a maximum gradient of 1 in 80. This has resulted in a number of significant enhancements for the community including improved safety outcomes at road-rail interfaces via six additional grade separations, and more efficient bulk earthworks. The extent of bulk earthworks has been significantly reduced requiring less fill and reliance on imported external fill.
- An alignment change at Millmerran to avoid and minimise impacts to an existing intensive livestock operation and local employer.
- Minor modifications to the alignment to further reduce property impacts, including removing short-stacking constraints to reduce severance and total impacted areas, and modifications to the embankment grade and heights for reductions to property impacts.
- Improvements to the location and layout of the Project's construction zones and permanent area requirements including through the Bringalily and Whetstone State Forests. Following further technical reviews and field surveys vegetation clearing has been reduced by approximately 21.5ha.

Flooding and hydrology related updates

- Additional flood modelling further informed drainage design and scour protection, particularly in high-risk areas. This includes areas of known highly erodible soils, flood-sensitive receptors, and the Condamine and Macintyre floodplain crossings.
- Further consultation was undertaken with the Independent International Panel of Experts for Flood Studies, established to provide advice on the flood models and structural designs developed for Inland Rail in Queensland. Inland Rail also sought input from the community, including photographic and video evidence of flood events and local historical knowledge. Community feedback helped to inform the design of the proposed Condamine River floodplain crossing.
- The proposed bridge over the North Branch of the Condamine River was extended by approximately 250m north in response to community feedback and to further increase flood conveyance.
- The Yandilla rail bridge was moved further south and combined with the Grasstree Creek bridge to reduce environmental impacts and further increase flood conveyance.
- The number of proposed culverts near the Yandilla grain silos was increased to ensure the drainage channel to the south of the silos has sufficient capacity to convey flood water.

Road-rail interface updates

We're removing level crossings at the following locations to improve safety:

- McDougalls Road
- Hall Road
- Lindenmayer Road

We're upgrading level crossings to grade separations at:

- Bybera Road
- Heckendorf Road
- Gilgai Lane
- Commodore Peak Road and Scragg Road
- Owens Scrub Road
- Athol School Road

We're upgrading passive (signage only) level crossings to active level crossings (bells and boom gates) at:

- Kooroongarra Road
- Paton Road
- Nicol Creek Road
- Millwood Road
- Harris Road (involves a road redesign within Pampas)
- Mann Silo Road

Stock route interfaces

- Kildonan Road—creation of an adjacent stock level crossing to avoid livestock interaction with road vehicles.
- South Kurumbul Road—realignment of the stock route with an adjacent stock level crossing designed to minimise interaction of livestock with road vehicles.
- Inclusion of suitably sized holding yards at key interfaces.
- New stock route corridors will be a minimum of 60m wide, except for the new realigned Millmerran Inglewood Road stock route, which will be 100m wide.

Non-resident workforce accommodation facilities

Two temporary accommodation facilities at Inglewood and Yelarbon have been included in the temporary footprint to accommodate the Project construction workforce requirements.

Turallin facility

Inclusion of a 20ha site in the temporary footprint to be utilised for a laydown area, a training facility or native plants nursery and traditional land management training facility.

Yelarbon levee

Modification to the existing Yelarbon levee from a category 2 to a category 3 to provide for increased flood immunity.

Whetstone Material Distribution Centre (MDC)

Inclusion of a construction facility in Whetstone on land bounded by the Queensland Rail South Western Line to the north and the Cunningham Highway to the south for improved construction efficiencies and a reduction in construction vehicle movements.

Borrow pits

Inclusion of seven borrow pit locations (at six locations, one location with dual pits) for the supply material earthworks based on a revised earthworks program with improved cut-to-fill efficiencies for a reduced reliance on imported materials.

Project stages



Detailed design

Inland Rail has progressed the design of the Project to a reference design status to enable preparation and assessment of the EIS.

Following certainty of Project approval, detailed design will be undertaken to further improve safety, performance and environmental outcomes.

Environmental and planning approvals

Following approval of the Project under the *State Development Public Works Organisation Act 1971* (Qld) (SDPWO Act) and the *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth), the Project will require various secondary environmental and planning approvals, permits and licences based on detailed design outcomes and confirmed construction works.

Inland Rail will be responsible for integrating requirements from Project approvals into the delivery of the Project including its detailed design and construction. The Outline Environmental Management Plan (Outline EMP) has been developed to provide the environmental management framework to enable environmental and social outcomes to be achieved for the Project. It includes incorporating relevant permit and approval conditions, design refinements, and detailed construction planning to inform the Construction Environmental Management Plan (Construction EMP) and Operations Environmental Management Plan (Operations EMP).

Corridor acquisition

The Project follows existing road corridors and sections of the QR South Western Line and Millmerran Branch Line rail corridors wherever possible to reduce the need for acquiring new properties.

Department of Transport and Main Roads will support Inland Rail during consultation with affected landowners and interested landowners prior to the commencement of the statutory compulsory acquisition process.

Pre-construction activities and early works

Some Project works will be undertaken prior to full mobilisation of construction including:

- site preparation for construction
- establishment of access roads and tracks
- vegetation clearing and other ground disturbance activities that will be required to comply with relevant legislative requirements, approval conditions, guidelines and plans
- additional surveys and geotechnical investigations to inform construction works
- relocation or protection of some Queensland Rail assets
- relocation of some utility/service interfaces
- modification of biosecurity fencing and installation of boundary fencing
- site office and initial laydown area establishment, including the Whetstone Material Distribution Centre
- non-resident workforce accommodation establishment.

These works may be undertaken under a separate contract but will not commence until necessary Project approvals are received, the Outline EMP has been approved, and the relevant early works Construction EMP endorsed by the Environmental Monitor.

Construction works

Major construction will only commence once the relevant components of the Project approvals and corridor acquisition, pre-construction activities and early works stages are complete. The Project's independent Environmental Monitor must also endorse the Construction Environmental Management Plan (Construction EMP) before construction can start.

Inland Rail is aware of the impact construction works have on members of the community living and working near the project, particularly for noise.

Inland Rail is required to follow relevant codes and guidelines to ensure disruption during construction is minimised and communities are kept informed of construction activities.

Timely and accurate information of upcoming construction works will be shared with the community.

The majority of construction works will be undertaken during the day. However, construction hours may be extended, subject to appropriate controls and approval, to shorten the duration of the construction period and to minimise potential community impacts.

Extended hours of construction including night-time activities may be required for safety and construction reasons. When extended construction hours or night works are required, advance notice will be provided to potentially impacted local residents and every effort made to minimise disruption.

All works will be undertaken in compliance with relevant guidelines, approval conditions and management plans.

Workforce

The Project estimates a peak workforce of 900 full-time equivalent employees by around week 80 of construction. The average number of full-time equivalent workforce on site across the construction period is proposed to be approximately 383 people.

Non-resident workforce accommodation

An initial assessment of workforce demand and safe commutable distances has identified a potential need for non-resident workforce accommodation in the vicinity of Yelarbon, Inglewood and Millmerran. Properties within the Project footprint at Yelarbon and Inglewood have been identified as suitable for the establishment of non-resident workforce accommodation.

The location for a Millmerran workforce accommodation has not been included in the revised draft EIS and will be determined during detailed design.

Each facility will have capacity to accommodate a minimum of 300 workers during peak construction weeks.

Laydown and storage areas

Laydown areas are used for a variety of purposes, including site offices, construction material and equipment storage, and to facilitate bridge construction.

Laydown area locations have been chosen to avoid areas that are within the known floodplain areas where possible, and areas of native vegetation.

Each laydown area has been positioned to avoid or minimise potential impacts to existing environments and communities.

Commissioning

Testing and commissioning of the rail line and communication and signalling systems will be done when major construction is complete. This will ensure all systems and infrastructure meet the operational requirements of Queensland Rail and ARTC.

Operations

Operations activities will include:

- using the railway for freight purposes
- signalling
- general track and infrastructure maintenance.

As the railway manager for the Project alignment, ARTC will be responsible for railway operations, managing the railway infrastructure and duty of care for the land. The railway will be operational 24 hours a day, 365 days a year, on a variable schedule.

Once operational, it is estimated approximately 14 train services will run per day on the Project alignment during the initial years of operation. This is estimated to increase to an average of 20 trains per day after 15 years, and up to 25 per day during peak operational periods.

Annual freight tonnages will increase in parallel, from approximately 14.2 million tonnes per year in year one of operations to 21.8 million tonnes per year in peak operations.



Design

The following sections describe the key areas of the revised reference design for the Project.

The Project engineering designs will continue to be further refined following approval of the environmental impact statement and during the detailed design stage.

Basis of design

The key characteristics of the Inland Rail service offering are reliability, price, transit time and availability.

Inland Rail's basis of design is a set of standardised performance specifications to provide consistent design requirements and parameters across the Inland Rail Program. These include:

- catering for train lengths up to 1,800m, speeds to a maximum of 115km/h and axle loads up to 25 tonnes
- supporting the Inland Rail Program to achieve a train transit time capability of less than 24 hours from Melbourne to Brisbane
- rail alignment maximum vertical gradients of 1 in 80 and minimum curve radius of 800m
- track drainage flood immunity of 1% Annual Exceedance Probability (AEP) without overtopping the formation
- regular spacing of crossing loops (2,200m in length) allowing 1,800m long trains operating in both directions on single-line track.

Rail

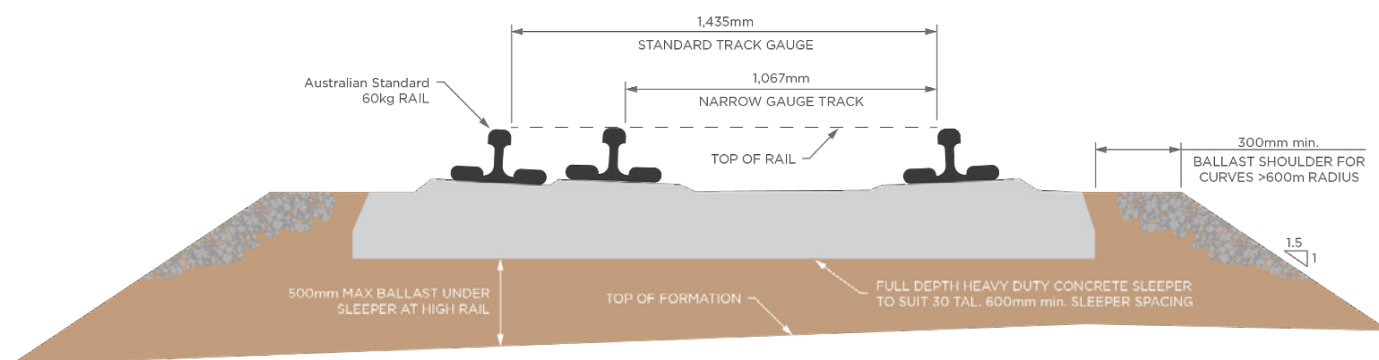
The Project includes building approximately 217km of new single-track railway, consisting of 7km of standard-gauge rail and approximately 210km of dual-gauge rail.

The 7km of standard-gauge rail is a continuation of track from the North Star to NSW/Qld Border project and extends from the NSW/Qld Border to the connection point with the QR South Western Line at Kurumbul.

The remainder of railway for the Project will be dual-gauge to enable interoperability with the existing Queensland Rail network.

The new railway will comprise approximately 149km of new rail corridor and approximately 68km of existing open access rail corridor that forms part of the QR South Western Line and Millmerran Branch Line.

The Project will require connection (turnout) onto and upgraded QR South Western Line and Millmerran Branch Line. Upgrade works will include the removal of existing narrow-gauge track (rail and sleepers) and the construction of new foundation, dual-gauge track, drainage, level crossings and other infrastructure within the existing rail corridor.



Typical dual-gauge ballasted track cross section

Crossing loops

Crossing loops are places on a single-line track where trains travelling in opposite directions can safely pass each other. The Project includes five crossing loops which will be constructed as sections of track roughly parallel to the main track. The crossing loops are 2,200m long to accommodate 1,800m trains.

Proposed crossing loop locations are:

- Yelarbon
- Inglewood
- Kooroongarra
- Yandilla
- Broxburn.



Aerial view of a typical layout of a crossing loop

Turnouts

Turnouts are switches of rail track that allow a train to be guided from one section of track to another.

Anticipated turnout locations are:

- QR South Western Line connection at Kildonan, towards Goondiwindi
- QR South Western Line connection at Whetstone, towards Warwick
- QR Millmerran Branch Line connection at Millmerran
- QR Millmerran Branch Line connection at Yarranlea
- existing QR rail sidings.

Earthworks

Cutting

A cutting is an excavation where the final design level is lower than the surrounding land or existing ground profile.

Embankment

Earthworks constructed by placing soil to the side of rail tracks.

Bridges

Bridge structures may either be rail-over-watercourse or road, or road-over-rail, depending on local topography and existing rail or road alignment requirements.

The Project proposes constructing 37 new bridge structures, while no existing bridge structures will be reconstructed or reinstated.

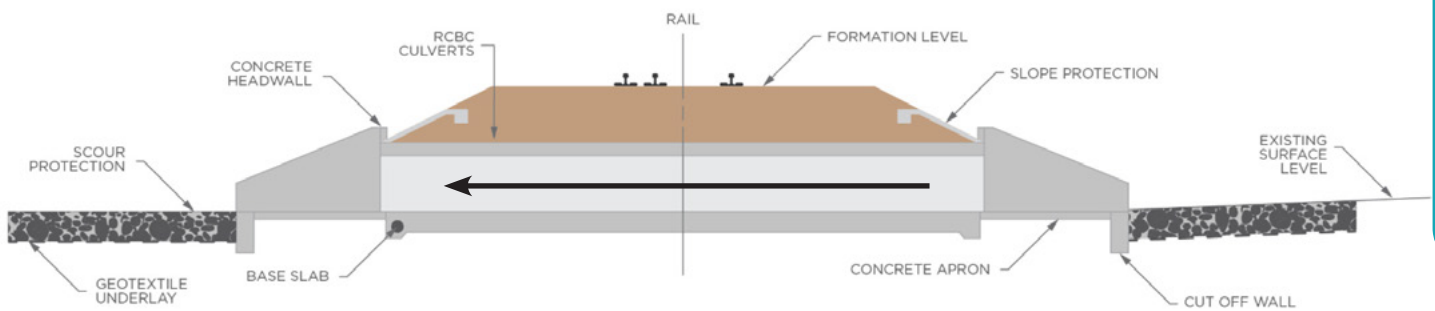
Drainage infrastructure

Drainage structures are provided to maintain safe water flows across the Project alignment, while ensuring the Project's flooding and hydraulic design criteria are met.

Cross-drainage – bridges and culverts

Cross-drainage structures are included in the revised reference design where the Project alignment crosses watercourses, overland flow paths and other drainage features. Cross-drainage structures enable the Project to manage the passage of water through the railway corridor and to manage floodwater flow.

The type of cross-drainage structures included depends on topography, rail track levels, direction of water flows and soil types.



Typical section of a cross-drainage culvert

Bridges are proposed at all major waterway crossings. In some instances, bridges are provided in locations that may also have multiple drainage features passing under the rail corridor, such as across the Condamine River floodplain.

Culverts are proposed to be a mix of reinforced concrete pipe culverts and reinforced concrete box culverts. The proposed locations of these drainage structures will be refined, if required, during detailed design to reflect any new technical study information.

Scour protection or energy dissipation measures are now included around culvert entrances and exits, on disturbed stream banks and on land bound by a watercourse.

Scour protection for culverts includes:

- concrete apron
- concrete wingwalls
- rock mattress scour protection, with geotextile underlay.

Longitudinal drainage

Longitudinal or track drainage removes water that has filtered through the track ballast, diverting surface runoff to the nearest bridge or culvert location before it reaches the subgrade.

Embankment and catch drains will be constructed along the rail corridor where they are included in embankments and cuts.

Embankment drains run parallel to the railway and are located at the foot of the railway embankment within the permanent rail corridor.

Catch drains run parallel to the railway and are located on the up-slope side of cuttings within the permanent rail corridor.

Road–rail interfaces

Road–rail interfaces are points where the rail alignment crosses a public road.

Public road-rail interface treatments include:

- **grade separated crossings** – where road and rail cross each other at different heights so that traffic flow is not affected. Grade separations are either road-over-rail, or rail-over-road.
- **level crossings** – where road and rail cross each other at the same level. Level crossings have either passive or active controls to guide road users:
 - **passive** – crossings featuring static warning signs (e.g. stop and give way signs) that are visible on approach. This signage is unchanging with no mechanical aspects or light devices.
 - **active** – crossings featuring flashing lights with or without boom barriers for motorists, and automated gates for pedestrians. These devices are activated before and during a train passing through a level crossing.
- **crossing consolidation, relocation, diversion or realignment** – as part of the reference design, some existing road–rail interfaces may be closed, consolidated into fewer crossing points, relocated or diverted.

Roads will only be closed where the impact of traffic diversions or consolidation is considered acceptable by the relevant road manager, or where the existing location is not considered safe and cannot reasonably be made safe. Approval for closures, where required, will be progressed according to the requirements of the relevant legislation.

Private level crossings

An occupational or private crossing provides access between lot(s) owned by the same landowner that will be divided by the rail corridor. The Project will intersect private access roads or tracks within the bounds of private lots that may require an occupational crossing.

The final number of occupational crossings on private property will be determined during the detailed design stage. Each property solution will be designed on a case-by-case basis through ongoing consultation with directly impacted landowners and further design refinement.

Stock route interfaces

The Project interfaces with the State stock route network, which consists of stock routes and reserves in 11 locations. These networks are primarily used by the pastoral industry as:

- an alternative to transporting stock by rail or road
- pasture for emergency agistment
- long-term grazing.

The Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development (formally Department of Resources) is responsible for providing policy and legislative advice and managing asset maintenance for the State stock route network.

Local government is responsible for the day-to-day administration, management and maintenance of the State stock route network.

The revised reference design includes updated stock route interface designs that address the following consultation with relevant regulatory departments and local councils.

The designs include features to facilitate a safe crossing passage for cattle and drovers:

- holding yards
- barriers
- fencing and gates
- controlled movements.

During construction, communication will occur between the relevant local council and Inland Rail regarding cattle movement permits, and traffic management will be in place to prevent conflicts between stock and construction activities.

Road network changes

Changes to the local road network are required to safely accommodate the railway and maintain local and regional connectivity. Road network changes proposed in the revised reference design have been developed in consultation with the Department of Transport and Main Roads (DTMR) and local councils and will be undertaken in accordance with relevant DTMR and council design standards.

Fencing

A mix of temporary and permanent fencing will be installed along the rail corridor to prevent public access. Fencing will act to protect adjoining land from trespass and to prevent livestock and wildlife from gaining access to the railway.

Fencing will extend between the corridor and private lots or property adjoining the railway. Fencing specifications will be discussed with relevant landowners as part of the detailed design process in accordance with Project approval requirements.

Fauna connectivity structures

Maintaining effective and safe fauna movement across the rail corridor is an important design consideration for the Project.

A fauna connectivity strategy has been prepared for the Project, which provides an overview of connectivity impacts for target species and describes design elements and other mitigation measures to facilitate movement for these species.



Want to know more?

See the following revised draft EIS chapters

[Chapter 2: Project rationale](#)

[Chapter 5: Project description](#)

[Chapter 11: Flora and fauna](#)

[Chapter 20: Traffic, transport and access](#)

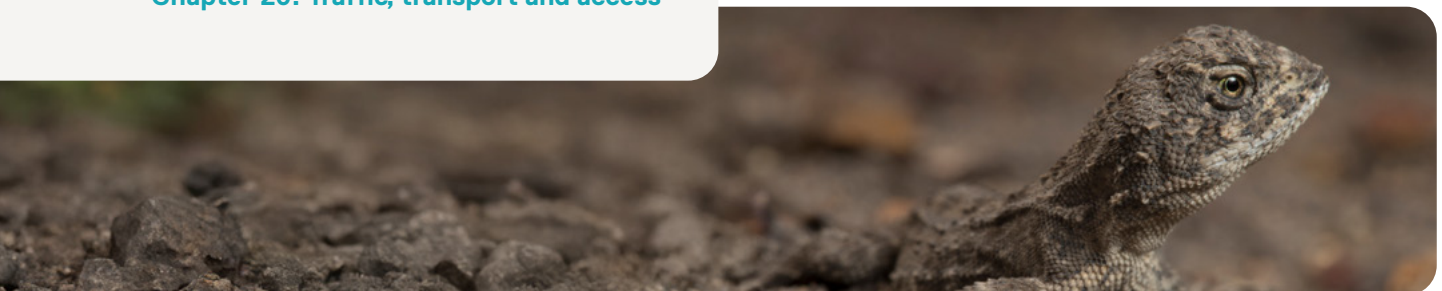


Image: Condamine earless dragon

Stakeholder engagement

What is this chapter about?

This chapter provides a detailed history of engagement with stakeholders from the NSW/Qld Border to Gowrie project's (the Project) early stages through to December 2023.

Stakeholders identified for the Project include the Australian Government, Queensland Government and local government representatives, potentially affected landowners (both directly and indirectly), local businesses, industry bodies, environmental groups, community groups, neighbouring communities, impacted road users, emergency services, Traditional Owners, tourism operators, education and training providers and asset owners.



Want to know more?

See the following revised draft EIS chapters

Chapter 5: Project description

Chapter 6: Stakeholder engagement

What we've done

Since the announcement of the NSW/Qld Border to Gowrie study area in late 2017, extensive engagement has been carried out to inform landowners and the broader community of each stage of the Project's development. This has included letters, one-on-one meetings, community newsletters, community events, briefings, workshops, emails, phone calls, website updates, social media, print advertising and general media coverage. During COVID, the Project adopted online and digital tools to maintain engagement with stakeholders.

Two community consultative committees – the Inner Darling Downs and Southern Darling Downs – were established in 2019 and committee members have met regularly.

A range of engagement activities with landowners, state agencies and councils supported the 2021 draft EIS public consultation period.

During 2022 and 2023, the Project expanded its face-to-face engagement with directly impacted landowners, including facilitating 55 pop-up stalls in towns along the alignment and staffing information displays at major community events.

What we've heard

Inland Rail has consulted with multiple stakeholders on a variety of topics. Our extensive consultation and engagement identified the following key areas of interest and concern. This feedback has assisted the Project in revising the reference design and further environmental assessments.

Key areas of interest and concern for stakeholders

	Alignment selection	• route selection • farm productivity and management • cultural values, landscape and visual amenity • use and amenity of properties following property severance.
	Flooding, hydrology and soils	• flood modelling accuracy • flood mitigation measures • floodplain crossing and cross-corridor drainage designs • erosion and sedimentation • black soil constraints.
	Water impacts	• impact of construction on private groundwater bores • groundwater access for farms and businesses • sources of construction water.
	Noise and vibration	• amenity and community wellbeing • impact to sensitive receptors (including schools) along the alignment.
	Traffic and transport	• road–rail interfaces and safety of the local road network • connectivity within and between properties • emergency access.
	Land use and tenure	• land acquisition • land access • property values • State forest revocation • Native Title.
	Ecology and biodiversity	• fauna connectivity • koala management • vegetation clearing and protection of habitat • biodiversity offsets.
	Social and economic impact	• Project-related stress and the need for support for affected residents • community wellbeing • access to employment and training for local community • impact to business operations.

Key assessment and investigation areas included:

- Condamine River floodplain crossing
- Macintyre River flood model development
- alignment development, with directly impacted landowners
- Water Impact Assessment, groundwater and construction water
- traffic and transport, road-rail interface design, level crossings, and emergency access
- soil and geotechnical assessment
- Whetstone and Bringalily State Forest revocation
- utilities and engineering infrastructure
- noise and vibration impacts
- Aboriginal cultural heritage
- ecology and biodiversity, including Offset Strategy and Koala Management Plan
- waste management
- Social Impact Assessment (SIA), including non-resident workforce accommodation, tourism, skills and training
- local business impact and participation
- economic impacts on local businesses.

What we're doing

Following engagement with individuals, businesses, agencies and communities along the alignment, Inland Rail has made key improvements to the Project's reference design.

Consultation outcomes have informed technical assessments and allowed the Project to assess impacts and identify appropriate mitigation measures.

These have now been incorporated into the relevant sections of the revised draft EIS and the revised reference design.

We're committed to engaging with our community and key stakeholders through the project stages.



Sustainability

What is this chapter about?

This chapter provides a summary of the sustainability considerations including policies, guidelines, plans and initiatives supporting the proposed approach for the design, construction, and operation of the NSW/Qld Border to Gowrie project (the Project).



Want to know more?

See the following revised draft EIS chapter

Chapter 7: Sustainability

Image: Kingsthorpe Tilgonda Road, Kingsthorpe, facing south.

What we've done

The Inland Rail Environment and Sustainability Policy outlines Inland Rail's sustainability commitments and guides the Program-wide approach to sustainability.

The Inland Rail Sustainability Strategy includes targets for Inland Rail sections to meet the sustainability commitments.

The Sustainability Strategy ensures consistent application of sustainability initiatives across Inland Rail and informs the Sustainability Management Plan to be prepared by the Project's construction contractor.

The Sustainability Management Plan will guide the design development and environmental approval process for the Project to provide sustainability outcomes that support the Inland Rail Environment and Sustainability Policy.

Climate adaptation measures are addressed in the revised reference design, along with opportunities for sustainability initiatives including travel distance, selection of building materials and renewable energy opportunities.

During the development of the revised reference design, frameworks were used to guide the design development to identify sustainability initiatives.

Climate modelling, carbon reduction and climate variability opportunities are also incorporated to reduce risks to the Project, adjacent local land, infrastructure and assets associated with future climate scenarios.

What does this mean?

The Project is committed to:

- a no harm goal on ARTC's network or because of Inland Rail's activities
- early and meaningful engagement with stakeholders including First Nations organisations, communities, industry and government
- promotion of long-term economic benefits within regional communities
- protection of the environment by minimising the environmental footprint and future-proofing Inland Rail to be efficient and resilient in the long term.

What we're doing

There are three main aspects of sustainability for the Project: consideration of the economic, environmental and social impacts and opportunities.

Our sustainability initiatives fall under the themes of advancing local, regional and national economies, environmental protection, respect for people, communities and valued places.

Some examples include:

- ensuring that supply opportunities are available to local businesses
- developing local material sourcing strategies
- measures to maintain connectivity for fauna, including using fencing and dedicated crossings along biodiversity corridors, and
- road and rail interfaces for public roads are optimised to minimise safety risks.

The Project has embraced three key sustainability themes

- advancing local, regional and national economies
- environmental protection
- respect for people, communities and valued places.



Land use and tenure

What is this chapter about?

This chapter identifies existing land use and tenure within the Inland Rail study area for the NSW/Qld Border to Gowrie project (the Project). It includes an assessment of potential temporary and permanent land use and tenure impacts in the region and appropriate mitigations.



Want to know more?

See the following revised draft EIS chapter

Chapter 8: Land use and tenure

The Project primarily passes through rural areas used for cropping and livestock production, and near to several feedlots, poultry farms and piggeries. It skirts several towns and smaller communities as well as the Toowoomba Wellcamp Airport and Toowoomba Enterprise Hub at the north-eastern end.

The Project footprint encompasses approximately 140ha where native title exists, within the Bigambul Native Title Determined Area (QCD2016/012) and elsewhere.

The Project also interfaces with the State stock route network in multiple locations.

The tenure of land within the permanent footprint is mostly freehold, where new (greenfield) rail corridor is required for the Project, and leasehold, where the existing Queensland Rail (QR) South Western Line and Millmerran Branch Line rail corridors will be used.

Main image: Athol School Road, Queensland.

What we've done

We have completed comprehensive studies to understand the existing land uses and tenures within the study area (1km either side of the proposed Project rail alignment), possible future activities and assessed potential impacts.

The assessment has considered a wide range of factors including geographic area within the proposed Project footprint, stages of the Project, regulatory conditions, native title, future development proposals and local government boundaries.

What we've found

The Project will result in a change from rural land uses to a rail corridor and have the following impacts:

- acquisition of land
- change in tenure including potential impacts to native title
- partial revocation of Whetstone State Forest and Bringalily State Forest.

The establishment of the new rail corridor affects agricultural uses and activities. This occurs through a reduction of agricultural land, land fragmentation, disruption to infrastructure, alterations to stock routes, alterations to biosecurity fences, along with other indirect impacts on agricultural land and opportunities to support the agricultural industry. Additionally, the changes alter property access arrangements and the configuration of the road network.

Potential further impacts relate to:

- mineral resources
- incompatible freight rail activities with adjoining development activity
- disruption or relocation of services and utilities.

What we're doing

The proposed Project rail alignment uses the existing QR South Western Line and Millmerran Branch Line rail corridors, where possible, minimising the extent of new properties to be acquired.

Management and mitigation measures include:

- individual property treatments developed in consultation with landowners, for the management of construction on, or immediately adjacent to, private properties. Any changes will be documented in individual property agreements
- consultation with mineral, coal and petroleum resource interest holders
- where native title has not been extinguished within the permanent footprint, prior to construction, Inland Rail will explore options under the *Native Title Act* that enable the grant of the interests required to construct the Project
- where 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 will be provided to an equivalent standard, where feasible and practicable
- ongoing consultation with the Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development, Goondiwindi Regional Council and Toowoomba Regional Council through the detailed design stage to maintain the utility of existing public stock routes
- where agricultural land is required to be used temporarily during construction, disturbed areas will be rehabilitated in accordance with the Rehabilitation and Landscaping Management Plan and landowner agreements.



Benefits

The Project will support agricultural land uses by improving rail access to regional markets and port facilities, as well as supporting future industrial development.



Land resources

What is this chapter about?

This chapter summarises potential impacts to existing land resources within the NSW/Qld Border to Gowrie project (the Project) footprint and presents appropriate mitigation measures to address identified impacts.

The land resources impact assessment has identified and assessed existing conditions in relation to geology and topography, soils, contaminated land and agricultural land. Multiple soil conservation plans exist for properties in the vicinity of the Project footprint. Additionally, there are 23 lots recorded on the Environmental Management Register.

Most soils encountered within the Project footprint are sodic to strongly sodic (dispersive sodic clay soils have been identified as having the highest erodibility rating and are generally associated with texture contrast soils, specifically sodosols).



Want to know more?

See the following revised draft EIS chapter

Chapter 9: Land resources

What we've done

We completed soil and geotechnical assessments as part of the land resources assessment to inform the revised reference design and revised draft EIS for the Project.

We took a staged approach to soil and geotechnical site investigations with preliminary investigations in 2018 and 2019 and further detailed soil investigations in 2021.

Considering the existing conditions in the assessment area, anticipated changes with the potential to adversely impact land resources include:

- permanent alteration to landform and topography in some locations
- the loss of soil resources on some agricultural and other economically valuable land
- the potential for accelerated loss of topsoil through erosion
- exacerbation of some areas of existing soil salinity and sodicity
- contribution to the creation of new areas of salinity.

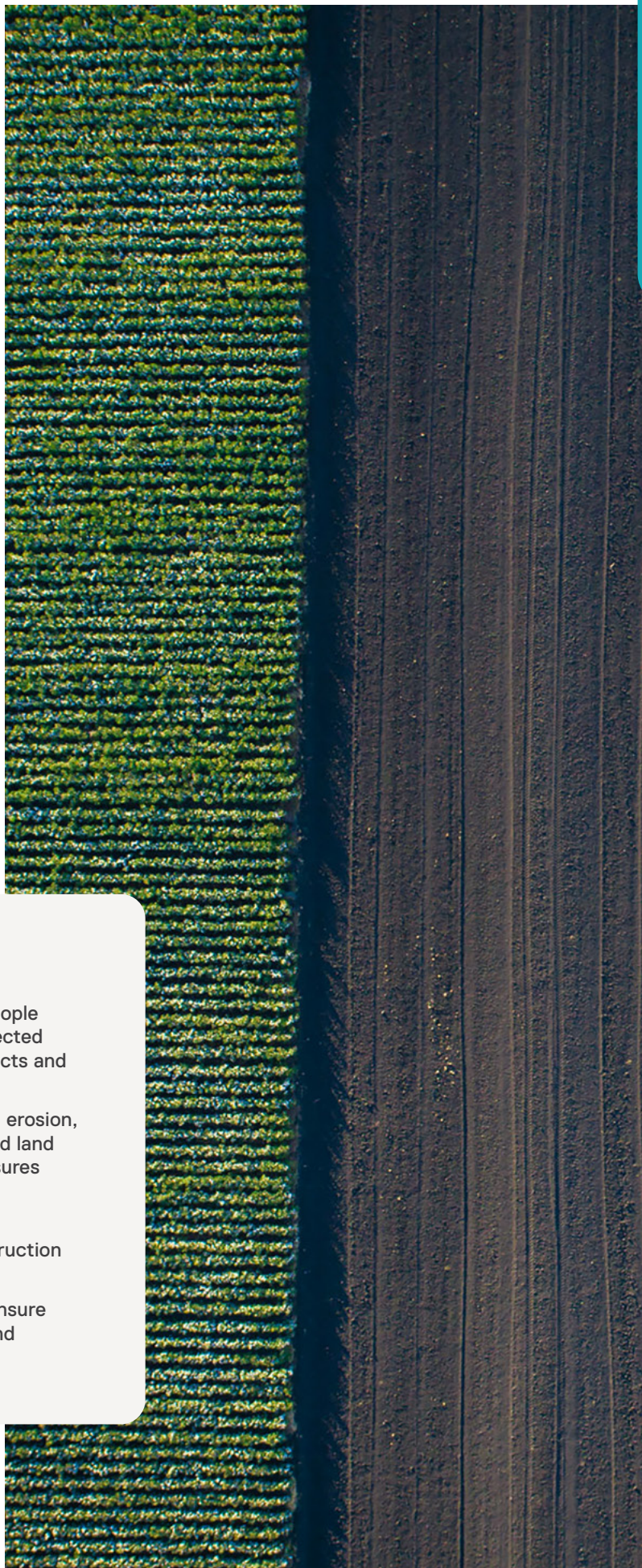
What we're doing

The Project has been designed to minimise risks to people and the environment, with consultations involving affected landowners and stakeholders regarding potential impacts and construction plans.

Potential impacts to land resources - such as soil loss, erosion, geomorphic changes, and disturbance of contaminated land - can be effectively managed through mitigation measures implemented during detailed design and construction.

These measures include adherence to the Flood and Geomorphic Impact Mitigation Framework, the Construction EMP, and related supporting plans.

Additional project control plans will be developed to ensure ongoing effective management during construction and operation the Project.



Landscape and visual impact assessment

What is this chapter about?

The purpose of the landscape and visual impact assessment (LVIA) chapter is to assess the impact of the NSW/Qld Border to Gowrie project (the Project) on landscape, visual and lighting values, including potential impacts on landscape character and views.

The primary landscape and visual impacts of the Project involve the introduction of rail infrastructure, such as new rail lines, viaducts, embankments, cuttings, fencing, noise barriers, level crossings and bridges, into rural and natural environments, along with vegetation removal and earthworks. Inland Rail is dedicated to mitigating direct and indirect impacts on the landscape and visual appeal of the Project area during construction and operation.



Want to know more?

See the following revised draft EIS chapter

Chapter 10: Landscape and visual impact assessment

Main image: Yarranlea Silos, Yarranlea.

What we've done

Inland Rail has analysed the existing landscape and visual characteristics of the region to devise effective and sustainable treatments and strategies for both temporary and permanent impact zones.

The proposed treatments and strategies are designed to be practical, achievable, cost-effective and environmentally sustainable. To align with community expectations regarding visual appeal, strategies may involve visual screening, landscaping, landform contouring, and habitat restoration.

What we've found

During construction, temporary impacts to the landscape and visual amenity may arise from material stockpiles, site offices, workforce accommodations, lighting, signage, and construction equipment movement.

Specific areas with high scenic amenity value, such as vegetated watercourses like the Condamine River and elevated hills near Pittsworth, are particularly vulnerable to impacts. Numerous visual receptors exist in population centres near the alignment and rural living areas, as well as along major roads and tourist drives.

Additionally, lighting impacts of a low level are anticipated during construction and operation, with adjustments made to existing road lighting as needed for safety. If noise barriers are included in the detailed design stage, six of the identified viewpoints may experience increased impacts during operation, necessitating ongoing stakeholder engagement to manage potential concerns.

What we're doing

The Project includes a range of landscape mitigation measures in its revised reference design including:

- further refinement during the detailed design stage to minimise clearing, limit impacts on waterways, avoid significant Aboriginal, historic, and natural heritage sites, and incorporate lighting requirements
- continued consultation with relevant stakeholders to identify site-specific screening and visual impact mitigation measures, as necessary. For example, with Traditional Owners to ensure mitigation of impacts to culturally significant landscapes
- implementation of a Rehabilitation and Landscaping Management Plan that aims to minimise and mitigate visual impacts during and after construction by managing stockpiles, implementing erosion and sediment controls, managing fuel storage, waste, and implementing rehabilitation measures.

These measures and opportunities have the potential to enhance the Project's legacy and reduce residual impacts on landscapes and views, particularly in rural settlements.



Flora and fauna

What is this chapter about?

This chapter presents a wholesale revision of the NSW/Qld Border to Gowrie project's (the Project) draft EIS's assessment of flora and fauna matters. It describes the flora and fauna elements for the Project and assesses the potential impacts to these values from its construction and operation. The chapter sets out an integrated set of mitigation measures that will be implemented and an associated series of proposed environmental offsets.



Want to know more?

See the following revised draft EIS chapter

Chapter 11: Flora and fauna

Flora and fauna terms at a glance

Matter of National Environmental Significance (MNES) are environmental values protected under the Commonwealth Government's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). For the Project, these include nationally listed flora and fauna species and Threatened Ecological Communities (TECs).

Matter of State Environmental Significance (MSES) are protected through Queensland legislation such as the *Nature Conservation Act 1992* (NC Act), and include protected species and their habitats, ecosystems, wetlands and national parks.

Threatened Ecological Communities (TEC) are listed under the EPBC Act. They comprise at risk habitat groups of native plants, animals and other organisms.

Regional Ecosystems (RE) are vegetation communities in a bioregion consistently associated with a particular combination of geology, landform and soil.

Offset An offset compensates for unavoidable impacts on significant environmental matters by securing land and values on another site and managing that land over time to replace values which were lost.

Main image: Canning Creek wetland.
Right image: Australian Painted Snipe.

What we've done

The assessment includes data from many investigations undertaken for the Project between 2016 to 2023.

The draft EIS released in 2021 used a predictive methodology including a precautionary approach of assuming presence to identify threatened flora and fauna species and habitats that potentially occur in and surrounding the Project footprint. As this approach adopted conservative conclusions and residual impact determinations that have now been revised, the statistics and findings of the draft EIS are now outdated and superseded by this chapter.

Revised draft EIS methodology

Key updates to methods for the flora and fauna assessments have been developed in consultation with species experts. These approaches have established revised findings, impacts and mitigation measures.

The revisions include new approaches for defining habitats and habitat quality, establishing consistent approaches for evaluating the likelihood of species presence, and refining impact assessment techniques. In turn this resulted in a more resilient and robust basis for consideration of habitat quality, species presence, habitat function, connectivity, the quantification of impacts and efficacy of proposed mitigation measures.

A field survey program was implemented between 2021 and 2024 within the Project footprint and adjacent areas to assess and validate the ecological values. Field survey locations considered the revised reference design, and locations of previous survey sites, including areas not previously accessed.

This approach ensured inclusion of:

- representative examples of each distinct vegetation community (RE), including where appropriate, remnant regrowth and non-remnant areas
- landscape features that were considered likely to support threatened species based on known habitat preferences
- areas known or predicted to support threatened species or other ecological values
- field surveys which were undertaken during appropriate seasonal periods as advised by species experts.



What we've found

The completed fieldwork and assessments have identified the Project's potential impacts, including:

	 Floral species	 Fauna species	TECs (MNES only)	Regional ecosystems (Endangered or Of Concern)
Matter of National Environmental Significance (MNES)	12	19	3	N/A
Matter of State Environmental Significance (MSES)	12	18	N/A	12

In this table, the MSES row summarises species that are not MNES listed, including several that were not initially MNES listed .

The Project runs through bioregional corridors that provide ecological connectivity areas, areas of essential habitat, mapped wetland, are within a defined distance of a watercourse, and through habitats associated with other species listed as migratory species under the EPBC Act or as special least concern mammals under the NC Act.



Image: *Westringia parvifolia*.



Potential impacts to ecological values

- habitat loss and degradation
- fauna species injury or mortality
- introduction and spread of weed, pathogen and animal pest species
- habitat fragmentation, leading to a reduction in connectivity, barrier and edge effects
- alterations to hydrology (e.g. surface water and groundwater) and flood distribution dynamics
- changes to groundwater resources affecting groundwater dependant ecosystems.



What we're doing

Approaches to reduce the impacts on the flora and fauna identified in the Project footprint and the effects listed above are included in the revised reference design and the revised draft EIS. Further refinement of the revised reference design and Project footprint will occur during detailed design to reduce ecological impacts where practicable. An integrated suite of management plans, mitigation and compensation measures have been prepared to guide the future phases of the Project presented in the revised draft EIS as the draft Outline Environmental Management Plan (see page 71).

Air quality

What is this chapter about?

This chapter provides an overview of the existing environmental conditions and potential impacts associated with the NSW/Qld Border to Gowrie project's (the Project) construction activities in relation to air quality.



Want to know more?

See the following revised draft EIS chapter
[Chapter 12: Air quality](#)

What we've done

A detailed air quality assessment, aligned to the *Environmental Protection (Air) Policy 2019* (Qld) has been completed and included:

- monitoring air quality station data at set locations
- qualitative air quality risk assessments
- consultation with stakeholders regarding potential dust emissions and mitigation measures
- reviewing the Project's proposed earthworks requirements, materials haulage tracks (where dust and dirt is tracked off site from vehicles and machinery) and other construction activities which may potentially generate dust.

The Project used data estimates from other air quality monitoring stations at adjacent locations operated by the Queensland Department of Environment, Tourism, Science and Innovation to monitor background pollutant concentrations.

The Project has assessed air quality during the construction and operations stages of the Project.

What we've found

- The assessment concluded that construction stage earthworks, haulage tracks (where dust and dirt is tracked off site from vehicles and machinery) and other construction activities have the greatest potential for dust emission.
- Sensitive receptors located near construction areas are expected to have a medium sensitivity to dust emissions and a low sensitivity to human health impacts.
- Qualitative air quality risk assessments found that unmitigated air emissions from the construction of the Project poses a 'low' risk of human health impacts but a 'medium' risk of dust generation.
- Assessments show that the operation of the Project is not expected to significantly adversely impact environmental values of the air environment.

What we're doing

The following actions and mitigation measures are proposed to reduce impacts to air quality, including:

- conducting a quantitative assessment of locations where dust may be generated during construction and before any works start
- confirming construction material haulage routes and access roads based on safety criteria to minimise vehicle emissions and dust generation
- collecting baseline dust samples near Commodore Mine before construction to establish reference points for assessing changes in air quality
- assessing potential air quality and odour impacts to Aboriginal heritage sites before construction to incorporate cultural and environmental considerations
- developing an Air Quality and Dust Management Plan before pre-construction activities and early works to outline strategies for managing dust emissions.



Surface water

What is this chapter about?

This chapter summarises the surface water quality impact assessment for the NSW/Qld Border to Gowrie project (the Project), including short-term and long-term impacts on local and regional surface waterways during the Project's construction works and operations stages.

The Project is located across two catchment (surface water) areas, the Condamine River basin and the Border Rivers basin.

The revised reference design includes full-width crossings of 19 major waterways and 81 minor waterways. There are 18 defined watercourses within the impact assessment area as defined under Section 5 of the *Water Act 2000* (Qld) (Water Act).

The results of the impact assessment and recommended mitigation measures have been outlined along with potential cumulative impacts.



Want to know more?

See the following revised draft EIS chapter

Chapter 13: Surface water

What we've done

We've assessed surface water to provide sufficient information to determine:

- existing receiving surface water conditions
- potential impacts to surface water quality and resources that may arise as a result of the Project
- cumulative impacts to surface waters, as a result of Project activities occurring in parallel to activities of other projects in the region
- appropriate mitigation measures and controls to be incorporated into the design or otherwise implemented during construction stages to avoid or minimise the potential impacts to surface water quality and downstream environments.

What we've found

The assessment of potential impacts to surface water quality and resources was undertaken using a significance-based impact assessment framework. This approach is appropriate for matters where impacts cannot be quantified, including for surface water.

The potential impacts to surface water due to construction of the Project include:

- altered water quality, principally from increased water turbidity and sedimentation
- altered water chemistry, including an increase in salinity
- increased debris load in waterways, thereby reducing the aesthetic quality of downstream waterway systems. Debris may also impact on the health of aquatic and terrestrial fauna, particularly if ingested.

The potential impacts to surface water due to operation of the Project include introduction of contaminants from a variety of sources during operation and maintenance including accidental spills, as well as:

- structural failure of new bridges or culvert drains within waterways
- maintenance of the rail line or machinery near waterways
- an increase in rates of erosion and resultant sedimentation of waterways, where soils are exposed as a result of unsuccessful site rehabilitation.

The assessment considered residual impacts once design considerations and mitigation and management measures were in place. It found that these approaches would mitigate most potential impacts, such that the residual significance would be low.

What we're doing

Mitigation measures and controls that have been factored into the design, or will be implemented during the construction to minimise the risk and or severity of potential impacts to surface water quality and resources, are as follows:

- interim water quality objectives (WQOs) will be supplemented by additional water quality sampling before commencement of construction to allow for full calculation of WQOs.
- further development of detailed design to provide consideration of:
 - minimising potential for diversion of watercourses and waterways
 - minimising disturbance to riparian vegetation, waterway bed and banks, in-stream flora and habitats and environmental flows with respect to waterway crossings.
- development of the Project Construction Environmental Management Plan (Construction EMP) with specific plans to mitigate surface water impacts during and after construction, including:
 - Surface Water Management Plan
 - Erosion and Sediment Control Plan
 - Rehabilitation and Landscaping Management Plan.
- construction water requirements (e.g. volumes, quality, demand curves, approvals requirements and timing) will be confirmed through the construction approach refinement process and will be documented in a Construction Water Plan.
- where the dewatering of excavations (e.g. trenches and bridge pylon holes) is required, discharge water to receiving surface water systems will need to meet criteria for receiving waterways before being released/ discharged into local waterways.
- where applicable, consultation will occur with downstream landowners assessed as at risk from the Project (e.g. where the Project may impact on instream or overland flow).





Flooding and geomorphology

What is this chapter about?

This chapter includes a description of the existing flooding and geomorphological conditions, the assessments and the potential impacts of the NSW/Qld Border to Gowrie project (the Project).

The Project is located across the river basins of the Condamine River and the Border Rivers. There are 18 defined watercourses in the study area, including four major watercourses: Macintyre River, Macintyre Brook, Condamine River (multiple branches) and Canning Creek. Other significant watercourses include Bringalily Creek, Back Creek and Gowrie Creek. The revised reference design includes crossings of 19 major and 81 minor waterways.

Thirteen separate flood models have been prepared for the Project area. This modelling simulates the behaviour of floods and predicts their impacts on the environment and communities. It considers factors such as rainfall, river flow, topography, land use and soil types. The models allow analysis of:

- water movement (hydrology)
- water behaviour in specific areas (hydraulics)
- how waterflow shapes the watercourse, through sediment movement and deposits (geomorphology).



Want to know more?

See the following revised draft EIS chapter
Chapter 14: Flooding and geomorphology

Image: Condamine River main branch

What we've done

Our flood modelling has been developed progressively since 2016. At each stage it has been informed by data from councils and government agencies and supported by evidence from landowners including photographs of previous flood events.

Since the draft EIS, our flood models have undergone further peer review and updates to incorporate community feedback and the recommendations of the Independent International Panel of Experts for Flood Studies (the Expert Flood Panel).

Flood modelling

The flood modelling considers two scenarios:

- **The Existing Case** is the baseline scenario, modelling existing flooding and geomorphology conditions before the Project is built.
- **The Developed Case**, which includes the design of rail embankments, drainage structures and associated works into the models to simulate the potential impacts of the Project once it is built.

A comparison was made between the Existing and Developed Case scenarios to understand differences in flood behaviour for each of the Flood Impact Objectives (FIOs).

Flood behaviours and potential changes are shown for a range of flood events, known as Annual Exceedance Probabilities (AEP). These include extreme events, climate change scenarios and potential blockage situations.

Flood mapping has been prepared to show the scenarios and flood events, which can be viewed on our interactive maps available at



anz.planengage.com/inlandrail-border-to-gowrie



Flood Impact Objectives

The Flood Impact Objectives were developed for the Project in consultation with the Expert Flood Panel. These objectives are designed to set clear and measurable targets to identify if the Project might change flooding characteristics and potentially cause adverse impacts.

The FIO categories adopted for the Project are:

Changes in peak water levels (afflux)

– varying targets have been set for a range of land uses and at flood sensitive receptors.

Changes in time of inundation

– understanding the impact of any changes to inundation timeframes on land and infrastructure.

Changes of flood flow distribution

– to minimise changes in natural flow patterns in drainage paths and across floodplain areas.

Changes in flow velocity

– maintaining existing velocities where practical and understanding any changes in the speed of water at culverts and bridges. Management of velocity providing appropriate mitigation measures, considering soil conditions.

Changes in flood hazard

– limiting any changes in flood hazard, considering the combined effect of flooding depth and the speed of water flow.

Extreme event

– consideration to the impacts for extreme flood events.

Sensitivity

– understand possible impacts associated with the Project in climate change and blockage scenarios.



The Independent International Panel of Experts for Flood Studies (the Expert Flood Panel), was jointly established by the Australian and Queensland Governments in 2020 to review flood modelling and designs for Inland Rail in Queensland.

The Expert Flood Panel's report released in 2022 provides assurance to the public that the flood models and reference designs developed by Inland Rail meet national guidelines and industry best practice. The Expert Flood Panel's acceptance of Inland Rail's approach shows that the Project's modelling is fit for purpose to assess impacts and consider compliance with the FIOs.

The outcomes of the Expert Flood Panel's review of Inland Rail's flood models and reference design is presented in the Final Report, available on the Department of Transport and Main Roads website:

tmr.qld.gov.au/projects/inland-rail.



Key project actions and design enhancements since the draft EIS include:

- Completion of the Expert Flood Panel review, and following its acceptance by the Queensland and Australian Governments, adoption of each recommendation.
- Strengthened modelling and adoption of revised Flood Impact Objectives in line with the recommendations of the Expert Flood Panel.
- Further consultation undertaken with potentially impacted flood sensitive receptors and landowners in October 2022 where property specific impacts were identified such as access, observations and constraints.
- A climate change assessment was undertaken for the 1% AEP design event to determine sensitivity to the potential increase in rainfall intensity.
- Site specific soil and geomorphology assessments completed in response to concerns on the dispersive nature of soils, particularly in floodplains.

Project design and revisions

The Project's current design seeks a 1% AEP flood immunity, while seeking to minimise impacts in an effort to achieve the Project's adopted FIOs



A series of bridge and viaduct structures spanning 11km across various watercourses and floodplains.



Four significant bridge structures across the Condamine River floodplain, extending over more than 6km.



Over 3000 culverts at 222 locations.



An additional 25 per cent flow capacity in culverts, and appropriately sized bridges over major debris transportation paths addresses the concern for potential blockage of structures from debris.



Inclusion of additional scour and erosion protection in response to the Developed Case velocity outputs and enhanced soil and geomorphology studies.

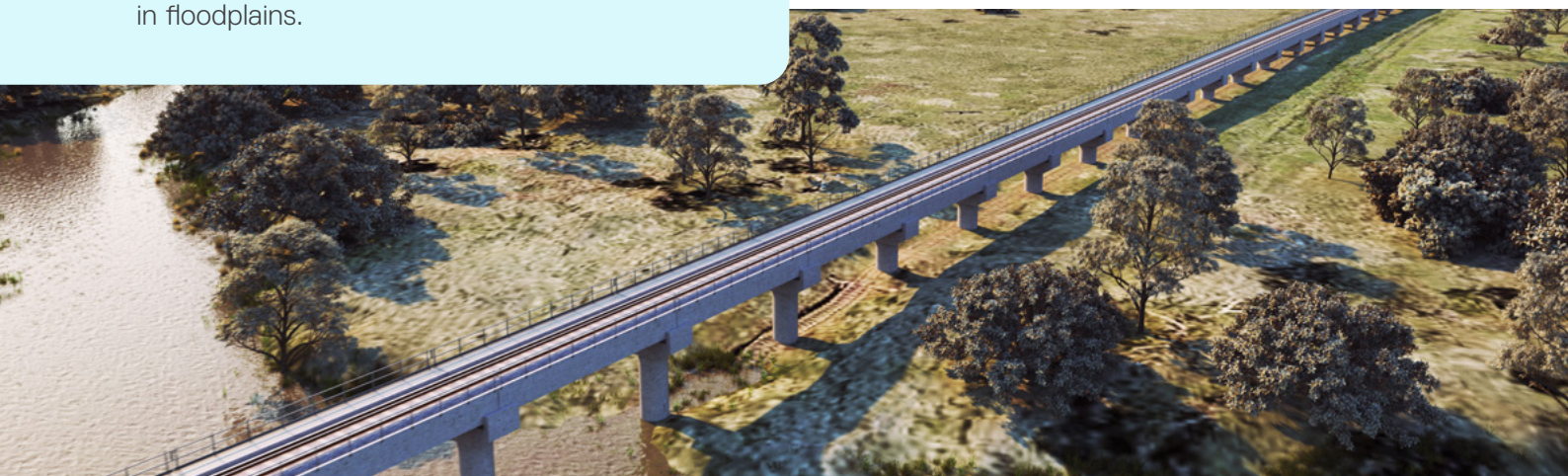


Image: Proposed Condamine River floodplain crossing. For illustration purposes only.

What we've found

The assessments have identified the changes in flooding from the revised reference design on properties, infrastructure and flood sensitive receptors and considered these impacts against the FIOs.

In summary, the assessments have found that:

- culverts and bridges have been positioned to maintain existing flood conveyance and spread of floodwaters, with only minor alterations
- the time of inundation is the main exceedance of the FIOs
- water discharge from culverts may cause scour and erosion
- flood hazards vary due to changes in depth and velocity of flood water movement
- the design generally meets the FIOs for changes in peak water levels, although there are a number of locations where limits are exceeded. These are primarily on agricultural land, with some exceedances on houses and roads.

While the FIOs are exceeded in some instances, this does not necessarily mean there is an impact to property or infrastructure such as roads, as in many cases the exceedance is a change in existing flooding behaviours.

Geomorphic changes to watercourses that have been identified relate to increased potential for erosion due to vegetation clearing, disturbance to soil surfaces and blockage of drainage pathways.

Changes in drainage patterns can also alter erosion risks and sediment transport. Other geomorphic changes may relate to changes in watercourse channels, though these risks were determined to be generally low.

What we're doing

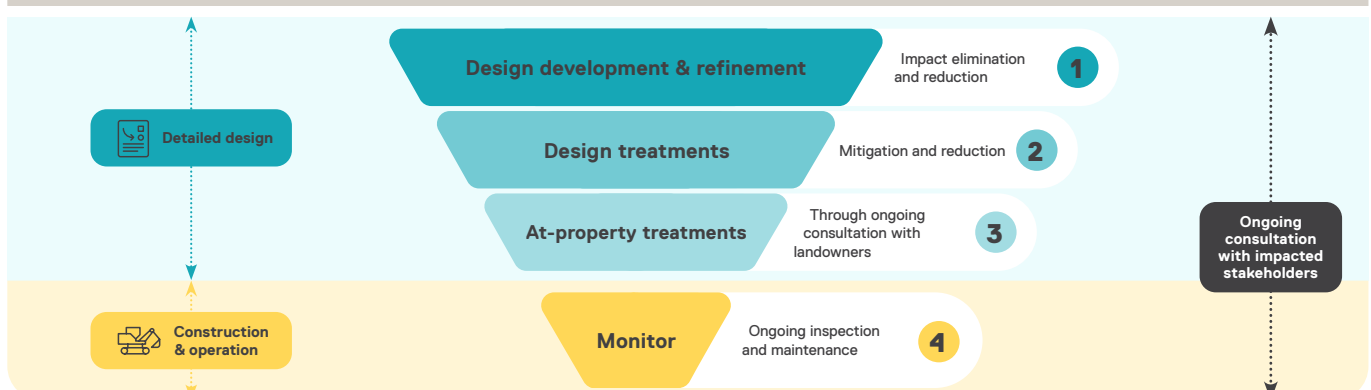
The Project is being designed to maintain existing flow paths and minimise the impact to people, property, infrastructure and the environment. The Expert Flood Panel's recommendations will inform future stages of design and construction.

Where it is not practicable or feasible to achieve the FIOs at flood sensitive receptors and/or the nominated land uses, acceptable impacts and/or appropriate mitigation measures will be determined on a case-by-case basis, including thorough consultation with stakeholders and landowners.

Where potential flood impacts have been identified through the FIO assessment, a Flood and Geomorphic Mitigation Framework has been established to outline the process for mitigating these within the next stages of design and construction. The steps involved will be design development and refinement, design treatments, at-property treatments and monitoring.

Mitigation measures used within detailed design will be selected on a case-by-case basis and chosen with consideration for their ability to reduce flood impacts as well as their respective social, environmental, economic, engineering and landowner constraints. This process will include collaborative consultation with landowners.

How we manage project flood and geomorphic impacts and minimise risks to people, property, infrastructure and the environment



Groundwater

What is this chapter about?

This chapter identifies and assesses potential impacts on groundwater resources from the construction and operation of the NSW/Qld Border to Gowrie project (the Project).

The key objectives of the groundwater impact assessment identified:

- the existing groundwater resources, users, values, and conditions within the groundwater impact assessment area
- potential impacts on groundwater environmental values
- mitigation measures to be factored into the Project design and implemented during the future stages of the Project.



Want to know more?

See the following revised draft EIS chapter

Chapter 15: Groundwater

Image: Condamine River.

What we've done

The existing groundwater conditions of the impact assessment area have been identified in accordance with industry standard methodology and relevant legislation. Through an assessment of existing conditions, Project activities with the potential to impact on groundwater resources have been identified.

The assessment included a desktop study, a search of groundwater bores, site-based groundwater investigative works and seasonal monitoring, hydrogeological modelling and analysis. A groundwater bore survey was undertaken to identify groundwater users potentially impacted by the Project inclusive of any unregistered bores.

The site-based groundwater investigative works included:

- drilling and installation of monitoring bores
- aquifer permeability tests
- groundwater level monitoring
- seasonal groundwater quality monitoring and analysis comprising a network of 48 bores.

What we've found

Potential impacts related to groundwater for the Project are considered minor and temporary in nature, associated with the construction works stage. All potential impacts on groundwater resources are localised, not expected to extend outside the Project footprint and are manageable with the implementation of mitigation measures.

In the few deep excavation locations where construction activities have the potential to intersect with groundwater, modelling has predicted impacts to be localised within the Project footprint.

Analysis of water entitlements within the groundwater impact assessment area indicates that irrigation is the primary groundwater entitlement licence type, followed by any, stock, town water and industrial.

What we're doing

Best practice engineered controls will be used at deep excavation locations where groundwater is intercepted to minimise the extent and duration of disturbance to groundwater resources, ensuring structurally sound construction sites. As a conservative approach, the predictive modelling will be updated prior to the start of construction based on confirmed design at potential groundwater interception locations, both up and down gradient, to confirm the inflows and drawdown. Additionally, monitoring and management plans will be reviewed and updated accordingly..

The Project will implement a groundwater make good or mitigation framework for impacts to landowners with bores both directly and indirectly affected by the Project (e.g. decommissioning of bores due to land acquisition or loss of access). Where impacts to groundwater infrastructure cannot be avoided, such as where registered or unregistered bores are potentially impacted by the Project, make good measures will be agreed in consultation with the affected landowners.

A Groundwater Management and Monitoring Program (GMMP) will be implemented for the groundwater monitoring network. It uses adaptive management principles to confirm that specific potential impacts have been identified for each stage of the Project. The GMMP will include water quality sampling and monitoring to inform management responses which will provide for the ongoing assessment of potential impacts and adaptation of mitigation measures.



Noise and vibration

What is this chapter about?

This chapter provides a summary of the potential noise and vibration impacts of the NSW/Qld Border to Gowrie project (the Project) during construction and operation.

Sources of noise and vibration from the Project come from the construction stage activities, local road traffic, and the operation of the railway.

Noise and vibration assessments identify how noise and vibration from the construction and operation of the Project may impact the surrounding environment.

In response to the impacts, measures are proposed to reduce and control noise and vibration levels and provide mitigation of potential impacts where applicable.



Want to know more?

See the following revised draft EIS chapter

Chapter 16: Noise and vibration



How sound is measured

The level of sound is measured and quantified using decibels (dB).

- A change in sound level of less than 3dB is typically perceived as no change in loudness.
- A change of 3dB to 5dB can be a noticeable change in loudness.
- A change of 10dB is an approximate doubling or halving of loudness.

What we've done

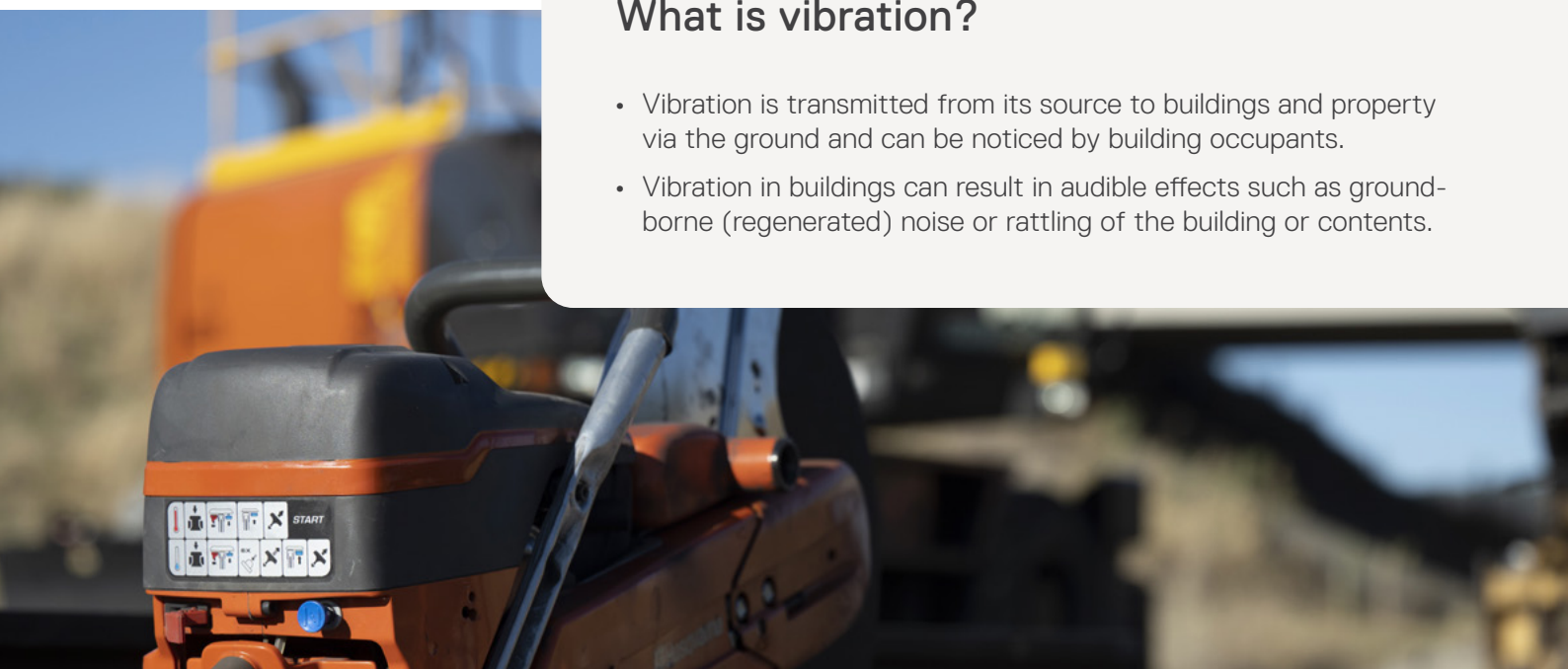
A noise and vibration impact assessment has been prepared to determine potential noise and vibration impacts to sensitive land uses and receptors (or properties) from the construction and operation of the Project. Reasonable and practicable measures to reduce and control noise and vibration emissions and mitigate associated impacts have been considered.

The noise and vibration impact assessments have:

- identified land-uses and receptors that are potentially sensitive to noise and vibration emissions from the construction and operation of the Project
- included noise and vibration baseline surveys during 2018, 2022 and 2023 to quantify and characterise the existing acoustic environment at sensitive receptor locations throughout the study area
- used relevant State Government transport noise management codes, policies, standards, guidelines, and legislation to set noise and vibration criteria and limits for the Project
- prepared a detailed assessment of the potential noise and vibration impacts from construction works and operation of the Project, including for possible sleep disturbance
- assessed the potential noise and vibration levels against the adopted criteria to quantify noise and vibration levels at sensitive receptors
- identified reasonable and practicable mitigation measures proposed for the Project and assess their effectiveness at reducing potential noise and vibration impacts.

What is vibration?

- Vibration is transmitted from its source to buildings and property via the ground and can be noticed by building occupants.
- Vibration in buildings can result in audible effects such as ground-borne (regenerated) noise or rattling of the building or contents.



What we've found

The construction stage and the operational road and railway stage assessments took conservative approaches to considering noise and vibration.

This approach ensured that scenarios were assessed that involved noise and vibration generation which would exceed conceivable real world occurrences.

The vibration assessment found that there are sensitive residential areas within the safe distance for vibration during the Project's construction. Vibration-intensive work will be avoided within the minimum safe distances for sensitive receptors to reduce the risk of potential vibration impacts.



Construction

Without appropriate mitigation and management controls, construction activities have the potential to generate noise impacts that exceed applicable limits at sensitive receptors during various construction stages.

The assessment of construction noise determined:

- Based on the predicted noise levels at the most affected residential sensitive receptors, along with some non-residential sensitive receptors, Inland Rail will need to implement reasonable and practicable measures for many of the construction activities.
- Earthworks are predicted to be the worst-case noise during construction, from use of mulchers, dozers, scrapers and trucks. Importantly, the extent of earthworks required in any area of the Project will vary and work areas requiring the most intensive work (e.g. deep excavation and fill areas) would be completed during standard hours where practicable.
- Construction noise levels comparable to the earthworks stages have been predicted during rail and road works which will likely occur in proximity to sensitive receptors. However, these stages of construction, such as installing sleepers and new rail and compacting of rail ballast, are expected to be significantly shorter in duration as work sites will progressively move along the rail alignment.
- Due to the remote nature of a large proportion of the Project, there are substantial regions where construction works are at a sufficient distance from sensitive land uses and receptors to minimise the potential for noise impacts.

Railway operations

Railway operations have the potential to create airborne noise, ground-borne noise and ground-borne vibration in surrounding areas. However, these impacts will be infrequent and will only occur when trains pass through the immediate local area.

The railway operations assessment found that noise mitigation will be needed to reduce railway noise levels where sensitive receptors are located near to the alignment.

Where unmitigated predicted noise levels are above state government guideline criteria, the Project will implement reasonable and practicable mitigation measures to reduce and control noise and vibration emissions.



What we're doing

We're committed to best practice and innovation, where practicable, in addressing noise and vibration impacts. Development of the revised reference design for the Project has progressed along with the impact assessment process.

Design solutions for avoiding, minimising, or mitigating impacts have been incorporated into the revised reference design as appropriate and where possible.

Inland Rail will implement mitigation measures to manage both temporary (construction) and permanent (operational) noise and vibration emissions generated by the Project. Construction noise and vibration will be reduced and controlled in accordance with the Construction Noise and Vibration Management Plan and mitigate impacts with regard to operational criteria and guidelines.

Noise and vibration levels will continue to be assessed, and the mitigation requirements verified, during the detailed design and construction of the Project to reduce noise and vibration impacts.



Social

What is this chapter about?

This chapter explores the social benefits, opportunities, and potential impacts on local and regional communities.



Want to know more?

See the following revised draft EIS chapter
Chapter 17: Social

What we've done

A Social Impact Assessment (SIA) was completed to identify how the Project may affect local and regional communities and inform how Inland Rail will work with stakeholders to manage and mitigate the identified social impacts while enhancing Project benefits.

SIA engagement activities were integrated with the Project's overall engagement process for the revised draft EIS, including participation in community information sessions throughout affected communities including the Goondiwindi and Toowoomba council areas.

The revised SIA included an engagement process designed to ensure the involvement of a broad range of stakeholders. Feedback informing this chapter has been received from community and stakeholders via SIA information sessions, participation in various committees, surveys, workshops, meetings, and interviews.

The SIA includes a Social Impact Management Plan (SIMP) with measures to monitor and mitigate negative impacts and identify community benefit opportunities of the Project.

What we've heard

The SIA has identified that the Project would result in social benefits, primarily in relation to employment, training and business supply opportunities for residents in the SIA impact assessment area.

Without appropriate mitigation strategies, however, the Project has potential to result in social impacts, including:

Construction impacts:

- relocation of households due to land acquisition or temporary relocation
- potential for impacts on rental housing availability in local towns if workforce accommodation facility demands are not managed
- effects on cultural heritage places, sites and values
- stress and anxiety related to property acquisition and/or fears about Project impacts on property use and amenity, environmental qualities, or potential for changes to flooding
- community cohesion may be reduced through displacement of residents, severance of properties, disruption to the road network and potentially, community conflict
- potential shortages in specific trades and labour, including farm labourers and tradespeople.

Construction benefits:

- employment for up to a peak of 900 personnel during construction, including local people and groups disadvantaged in the labour market
- opportunities for Traditional Owners to work on Country
- opportunities for local and regional businesses to participate in the Project's construction supply chain
- increased opportunities for First Nations business with regards to capacity building and supply to the Project
- opportunities for businesses (particularly in Yelarbon, Inglewood and Millmerran) to benefit from increased trade from workers and non-resident workforce accommodation service providers
- financial benefits for landowners who lease or sell land to the Project for use during construction
- training and career pathway development for young people, First Nations people and unemployed people
- council access to the Living in Place survey results, a shared and independent community planning resource that will monitor change in community values and priorities, to support councils to plan for and prioritise liveability and wellbeing.

Operations impacts:

- level crossings will result in periodic disruptions to traffic, including potential to delay emergency vehicles
- possible increase in risk of road/rail accidents and rail fatalities, resulting in social impacts for individuals, families, communities and rail staff
- potential to impact the rural and township amenity, learning environments of some schools, the amenity of community facilities, traffic and landowner movements across the rail corridor.

Operations benefits:

- improvements to the safety of road–rail interfaces on the existing brownfield rail corridor
- facilitation of faster grain shipments from the region
- catalysing further development of industrial precincts in Toowoomba, and potential for development of rail-associated industry in Goondiwindi
- facilitating the development of intermodal and logistics facilities
- direct permanent employment for approximately 10 to 15 people, with employment growth also catalysed by Project-related business development.

What we're doing

A SIMP has been developed to address potential impacts and enhance Project benefits. It includes five sub-plans focusing on community and stakeholder engagement, workforce management, housing and accommodation, health and community wellbeing, and support for local businesses.

An Australian Industry Participation Plan will involve local and First Nations businesses in the Project's supply chain. A monitoring strategy will be implemented to ensure the effectiveness of these measures.

Economics

What is this chapter about?

This chapter explores the economic impacts and benefits of the NSW/Qld Border to Gowrie project (the Project) on the region during construction and operation including, direct and indirect business and employment opportunities available to local, regional and First Nations businesses.



Want to know more?

See the following revised draft EIS chapters

[Chapter 17: Social](#)

[Chapter 18: Economics](#)

What we've done

An Economic Impact Assessment (EIA) analysed the economic effects of the Project. It is consistent with recognised industry methods, represents a whole-of-life approach, and was informed by extensive consultation with the community, business and industry groups.

The EIA has been updated to evaluate current economic conditions at the time of preparation of the revised draft EIS and identifies benefits and impacts of the Project and Inland Rail Program at local, regional and national levels. It also recognises potential effects on residents, businesses, and industries in the area and neighbouring regions and outlines mitigation strategies where appropriate. The EIA also considers the cumulative impacts from related projects (including other Inland Rail sections).

Project delivery arrangements during construction include measures to capture economic benefits for the local and regional communities, ahead of the operational benefits from the Program.

Image: Toowoomba.

Cultural heritage

What is this chapter about?

This chapter identifies and assesses Indigenous and non-Indigenous cultural heritage values which may be impacted by the Project and provides potential mitigation measures.

Cultural heritage values are objects or areas which have historical significance to Indigenous or non-Indigenous societies, such as artefacts, monuments or sites. Cultural heritage values may be impacted either directly or indirectly. The assessment of non-Indigenous heritage values identified 41 areas of interest, of which 21 are of local heritage significance. The assessment of impacts found that, with appropriate mitigation measures, Project impacts would be moderate for one heritage place, the Green Hills Hotel Complex and neutral (i.e. no impact) or slight for remaining areas.

What we've done

Inland Rail has three approved and registered Cultural Heritage Management Plans with the Bigambul People, Endorsed Party s35(7) and Western Wakka Wakka People under the *Aboriginal Cultural Heritage Act 2003* (Qld). The relevant approved Cultural Heritage Management Plan developed with the relevant Aboriginal Party covers the construction of new rail infrastructure and associated structures for the Inland Rail Program. The Cultural Heritage Management Plans will not extend to activities performed by Queensland Rail.

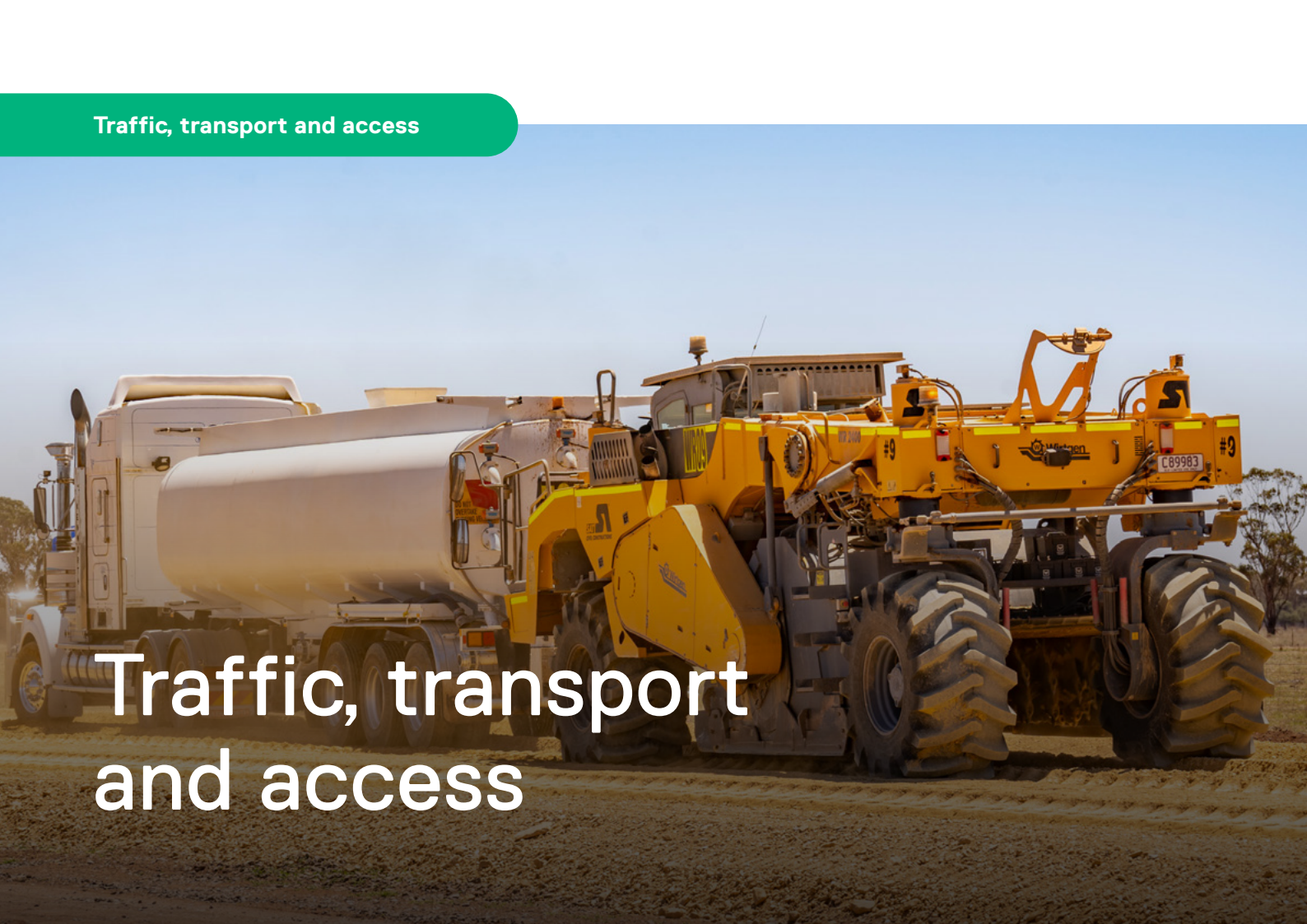
Ongoing consultation with Indigenous or non-Indigenous stakeholders will ensure appropriate management of potential cultural heritage impacts.

Ongoing First Nations heritage awareness training will be provided for staff and comprehensive monitoring and surveys of significant heritage places will be undertaken to minimise potential indirect impacts where possible.



Want to know more?

See the following revised draft EIS chapter
Chapter 19: Cultural heritage



Traffic, transport and access

What is this chapter about?

The traffic, transport, and access assessment evaluates the construction and operational impacts of the NSW/Qld Border to Gowrie project (the Project) on surrounding transport infrastructure, based on the revised reference design. It addresses construction traffic, material movement, and workforce impacts on local and state-controlled roads, as well as broader transport systems.

What we've done

We have completed detailed assessments of the traffic, transport and access impacts of the Project on surrounding transport infrastructure. This includes studies to develop a baseline of existing traffic, transport and access impacts to compare these results with potential construction and operation traffic impacts.

The assessment of background and Project-induced conditions includes impacts on road safety for state and local government-controlled roads in Queensland and New South Wales, access and frontage, intersections, road links, pavement and road-rail interfaces, school bus routes and stock routes.



Want to know more?

See the following revised draft EIS chapters

[Chapter 5: Project description](#)

[Chapter 20: Traffic, transport and access](#)

What we've found

The Project's alignment crosses seven state-controlled roads at 10 locations and 55 roads managed by Goondiwindi Regional Council or Toowoomba Regional Council. It is expected that 18 state-controlled roads and 77 local government roads will experience construction traffic that exceeds existing background traffic levels by approximately 5 per cent, although the impacts are largely due to low existing traffic volumes, with no immediate need for road upgrades identified.

Intersection analyses highlight the need for additional right and left-turn treatments at specific locations, while broader operational safety upgrades are required independently of construction activities.

Pavement assessments indicate several roads exceed the 5 per cent axle repetitions threshold. Several road segments exceed this threshold by a significant margin, requiring further analysis to determine potential contributions for maintenance. Public transport, school bus routes, and cycle paths will experience minimal operational disruptions with mitigation measures to be implemented where necessary, particularly for school zones and high-pedestrian areas.

The Project interfaces the stock route network in 12 locations. Stock route access will be maintained through crossings or alternative provisions, and rail operational traffic is not expected to affect surrounding roads.

Wait times for road traffic will increase at newly established level crossings. Some traffic detours will be required during construction near busy local roads and may cause some temporary traffic congestion and reduced speed limits. There will be temporary increases in large construction vehicle numbers which has the potential to cause temporary traffic congestion and impact journey times on school bus routes.



What we're doing

Design solutions for avoiding, minimising or mitigating impacts have been incorporated into the revised reference design where possible. This has included co-locating the Project with existing rail and road infrastructure, where possible, to minimise the number of new road network intersections, incorporating grade separated crossings, and incorporating of mixed gauge turnouts at interfaces with existing rail networks to enable Queensland Rail rollingstock to join and exit the Inland Rail network safely.

The Project has been developed to ensure there is enough distance between the alignment and any intersection to accommodate the required design vehicle. This removes short stacking, which occurs when a long vehicle does not have enough space to completely clear a rail crossing and stops while part of the vehicle is still within the rail corridor. Where the revised reference design intersects stock routes, the Project has sought to continue stock movements along existing stock routes. A localised realignment has been necessary in some instances, such as Yelarbon (stock route ID: 811GWND) and the southern end of Millmerran-Inglewood Road (stock route ID: 820GWD).

Where mitigation measures could not be incorporated into the revised reference design, mitigation measures will be adopted. A detailed Traffic Management Plan and Road Use Management Plan will be developed in consultation with Department of Transport and Main Roads (DTMR), local councils, emergency services and other relevant bodies. This will ensure compliance with required guidelines to address safety, route suitability, and stakeholder coordination to minimise impacts for the safe operation of transport systems throughout the construction period. This may include traffic controls on some roads or the use of temporary side roads in particular locations. Road safety audits will be undertaken pre and post construction at roads and intersections modified for the Project, and at the level crossings.

Property-specific management agreements will be developed in consultation with landowners to ensure suitable private property access is maintained during construction and into operation. Pavement condition assessments will be conducted prior to, during, and post construction. Assessment intervals during construction will be agreed with local councils before any construction starts. For unsealed local government roads, a visual condition assessment will be conducted prior to and post construction activities.

Railway safety community awareness campaigns will be executed through public advertising, newsletters and community engagement activities.



Hazard and risk

What is this chapter about?

The chapter identifies and describes hazards and risks relevant to the NSW/ Qld Border to Gowrie project (the Project), and assesses the potential for impacts to people, property, and the environment.

What we've done and found

Hazards and risks associated with the Project throughout the design, construction and operation stages have been considered in a preliminary risk assessment. This includes natural hazards, along with health and safety matters during construction and operation. The implementation of risk management policies and procedures is anticipated to effectively reduce risk levels.

What we're doing

These risk management techniques will be implemented during design, construction and operation. Opportunities to further reduce the level of risk will be investigated in the future delivery stages of the Project, including the potential to design out risks.

A Hazardous Materials Management Plan will be prepared and implemented as a component of the Project Construction Environment Management Plan (Construction EMP). The Operations EMP will be incorporated into ARTC's existing risk management framework, which is aligned with industry best practice.



Want to know more?

See the following revised draft EIS chapter

Chapter 21: Hazard and risk



Waste and resource management

What is this chapter about?

This chapter addresses existing waste management arrangements in the NSW/Qld Border to Gowrie project (the Project) area, the Project's waste management requirements, potential impacts, and suitable mitigation measures. The regulatory framework for waste management is complex and adopts a hierarchy that seeks to promote avoidance of waste generation over disposal.

What we've done

The Project design has been developed to prioritise the efficient use of resources, including excavation and fill materials, and to minimise the generation of waste. Nonetheless, construction and operational maintenance activities for the Project are expected to generate various types of waste. The types and volumes of waste have been identified and assessed against waste management principles in state legislation and the capacity and waste acceptance criteria of waste management facilities accessible to the Project.



Want to know more?

See the following revised draft EIS chapter

Chapter 22: Waste resource management

What we've found

Waste and resource recovery activities associated with the Project are not anticipated to pose a significant risk to the environment or public health with the implementation of effective control measures. Feedback from consultation with Toowoomba Regional Council and Goondiwindi Regional Council has indicated that the existing facilities are expected to have sufficient combined capacity to accommodate the requirements of the Project.

What we're doing

During the detailed design stage, further attention will be placed on establishing solutions for avoiding, minimising, and mitigating waste generation during construction. Waste management plans will be adopted through the Construction EMP and Operational EMP to guide activities and meet regulatory obligations.



Cumulative impacts

The cumulative impact assessment considers the cumulative impacts that could occur as a result of the NSW/Qld Border to Gowrie project's (the Project) development along with other identified existing or proposed projects where there is a spatial or temporal (timing) overlap in construction schedules.



Want to know more?

See the following revised draft EIS chapter

Chapter 23: Cumulative impacts

What we've found

The cumulative impact assessment identified that there is potential for some cumulative impacts to occur, largely on a locational basis. Flora and fauna, traffic and transport, flooding and geomorphology and surface water are typically the areas where there is the highest potential for cumulative impacts.

What we're doing

Where the potential for cumulative impacts with other projects has been identified, mitigations that are within the control of Inland Rail have been proposed. This includes ensuring communication between Inland Rail sections and other project proponents is maintained, so that mitigation measures can be monitored, reviewed and adapted to avoid exacerbation of potential impacts from a single project.



Draft outline environmental management plan

What is this chapter about?

This chapter presents the draft Outline Environmental Management Plan (Outline EMP):

The Outline EMP has been developed to:

- provide an environmental management framework that identifies environmental outcomes which can be achieved, through the detailed design, pre-construction activities and early works, construction works and operations stages of the Project
- establish the process for the preparation and implementation of the Construction Environmental Management Plan (Construction EMP) and the Operations Environmental Management Plan (Operations EMP)
- support the development, refinement and implementation of the Social Impact Management Plan and a range of further management plans required for the delivery and operation of the Project.



Want to know more?

See the following revised draft EIS chapter

Chapter 24: Draft outline environmental management plan

What we've done

The draft Outline EMP:

- describes the environmental management framework for the Project
- describes monitoring, reporting, auditing, review and documentation requirements
- includes requirements for training and awareness, community and stakeholder engagement
- includes frameworks for each of the EIS technical disciplines.

This draft Outline EMP also provides direction for the Construction EMP and Operations EMP, including environmental outcomes, performance criteria, mitigation measures, monitoring requirements, corrective actions and reporting requirements.

The draft Outline EMP is supported by a number of commitments which apply across the life of the Project and assist in providing guidance on achieving the outcomes sought by the draft Outline EMP.

What are we doing?

The draft Outline EMP will be updated following completion of the EIS process, incorporating relevant permit and approval conditions, design refinements, and detailed construction planning. The Outline EMP provides the framework for an integrated suite of management plans, mitigation and compensation measures to guide the future phases of the Project, including the Construction EMP and Operations EMP.

The Construction EMP provides a structured approach to the management of environmental issues during construction. It will be endorsed by the Environmental Monitor as being consistent with the final Outline EMP prior to the commencement of any relevant Project works.

The Construction EMP will be developed in advance of relevant Project works and will be reviewed and updated as construction proceeds. The CEMP will be supported by a number of associated management plans during the construction stage.

The Operations EMP will form part of an overarching management approach by ARTC to the operation and maintenance of the Project. It will be further developed by ARTC to ensure the final Outline EMP is aligned with ARTC's operating arrangements.

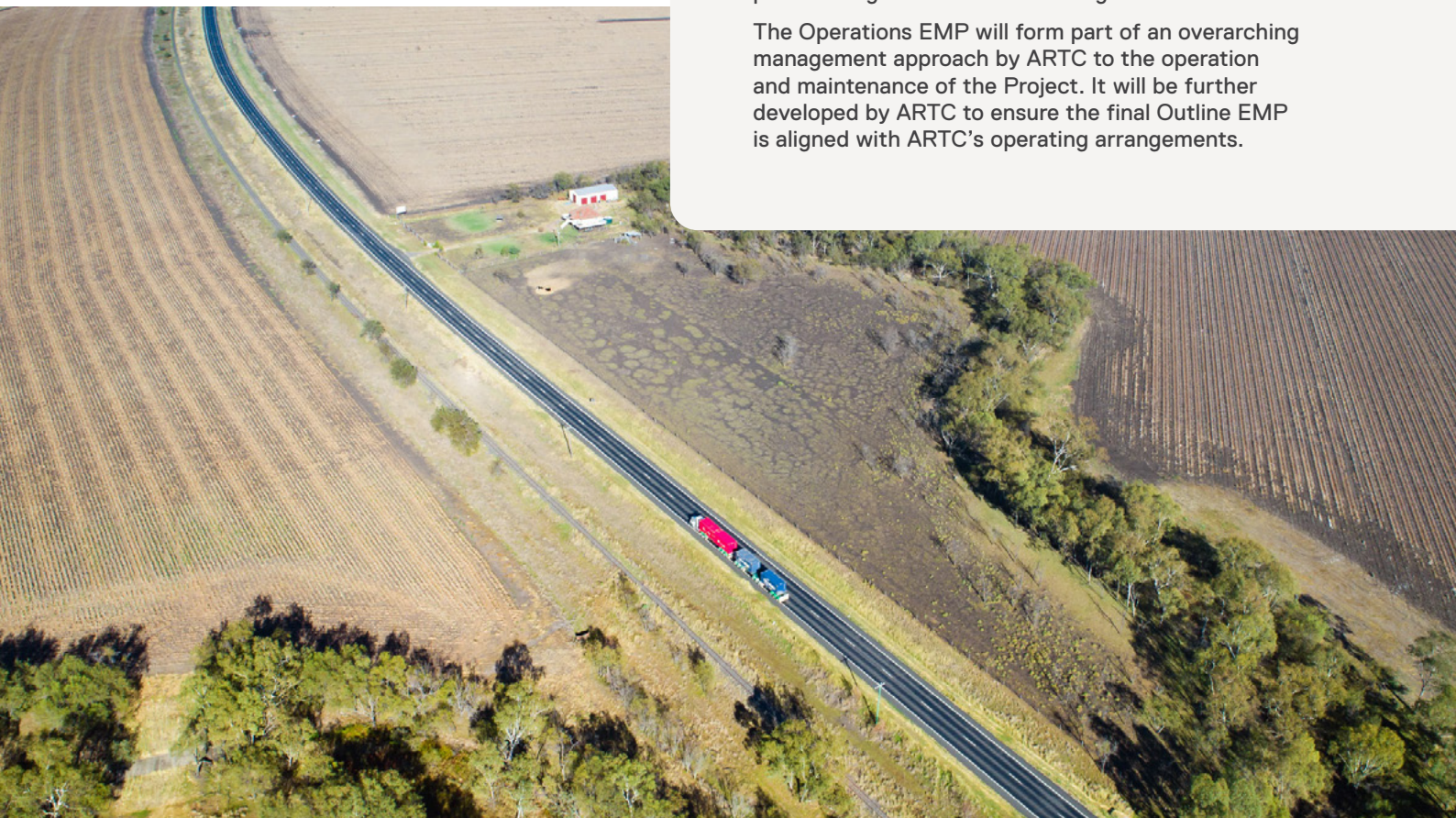


Image: Aerial view of Condamine River North branch bridge, Gore Highway, Pampas, Queensland.

Construction stage

Operations stage

Outline Environmental Management Plan

Construction Environmental Management Plan

Air Quality | Biodiversity | Biosecurity
Contaminated Land | Erosion and Sediment Control Plan
Flood Risk | Groundwater | Hazardous Materials
Heritage | Noise and Vibration
Rehabilitation and Landscaping
Soil | Surface Water | Traffic | Waste

Operational Environmental Management Plan

Biodiversity | Biosecurity | Groundwater
Noise and Vibration

Fauna Management Plan

Koala Management Plan

Wildlife Lighting Management Plan

Wildlife Connectivity Plan

Wildlife Lighting Management Plan

Construction Management Plans

Borrow Pit Management | Construction Water
Flood Emergency Response | Incident Management
Work Health and Safety

Flood Emergency Management Plan

Flood Response Plan

Offset Area Management Plans

Social Impact Management Plan

Cultural Heritage Management Plan (Indigenous)

Sustainability Management Plan

Conclusions

The NSW/Qld Border to Gowrie project (the Project) is a critical link required to unlock the full potential of the Inland Rail network. While the full benefits of Inland Rail will only be realised once all projects are complete, the Project will play a key role in enhancing Australia's freight capacity, improving connectivity national road safety, and supporting economic growth through a modal shift from road to rail.

The Project will incorporate environmental management and design features that aim to minimise and mitigate potential impacts as far as practicable. The impacts associated with the Project works will be effectively mitigated through the implementation of best-practice management, where practicable, including implementation of the management approaches described in the draft Outline Environmental Management Plan and Social Impact Management Plan.

This revised draft EIS addresses the Coordinator-General's Terms of Reference, the submissions received during notification of the draft EIS in 2021, and the additional information requirements from the Coordinator-General following the public notification of the draft EIS. The revised reference design and additional assessments undertaken for this revised draft EIS mean that potential impacts have been avoided or reduced where possible. For those areas where the potential impacts cannot be avoided, mitigation measures will be implemented to minimise and manage those impacts.

The Project will contribute to a more reliable, efficient, and sustainable freight network, reducing congestion on roads, improving road safety, reducing carbon emissions, and driving job creation in regional communities.

By providing better access to domestic and global markets, the Project will help future-proof Australia's freight infrastructure, ensuring that it can meet the growing demand for freight services. Ultimately, the Project is a vital building block in a national freight solution that will deliver long-term benefits for Australia's economy, environment, and communities.

Have your say!

Have your say on the revised draft EIS

The revised draft EIS is now available for public review and comment.

You can make a submission on any aspect of the revised draft EIS during this period to the Coordinator-General. It's important to note that submissions on the revised draft EIS can only be made to the Coordinator-General directly, and not to Inland Rail.

For information about making a submission on the revised draft EIS to the Coordinator-General, please refer to the [Have your say on a revised draft EIS fact sheet](#) and accompanying submission form, available on the Coordinator-General's website.

Properly made submissions must be accepted by the Coordinator-General and considered in evaluating the revised draft EIS.

In the instance that submissions are received that are not properly made, the Coordinator General may accept or decline those submissions.

Submissions regarding this revised draft EIS can be made via:



Online

www.statedevelopment.qld.gov.au/inlandrail-b2g



Email

inlandrailb2g@coordinatorgeneral.qld.gov.au



Post

Attention: The Coordinator-General
C/- EIS Project Manager, Inland Rail
- Border to Gowrie project
Office of the Coordinator-General
Box 15517
City East Qld 4002 Australia

You can also view printed copies of the NSW/Qld Border to Gowrie revised draft EIS at our Inland Rail offices:



Inland Rail Toowoomba office

143–145 Margaret Street, Toowoomba



Inland Rail Goondiwindi office

28 Marshall Street, Goondiwindi

Have your say

Visit the Coordinator-General's website at statedevelopment.qld.gov.au/inlandrail-b2g to view the revised draft EIS and to find out how to make a submission.

Electronic submissions are still required to meet the properly made requirements of the SDPWO Act.

For further enquiries, please contact telephone: **13 QGOV** (13 74 68).



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