

**INLAND
RAIL** 



**Annual
Sustainability
Report**

2018-2019



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

We will plan and build this with the support of governments, in partnership with the private sector and hand-in-hand with the community.



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Richard Wankmuller, CEO Inland Rail

Foreword

We are proud to present this inaugural Annual Sustainability Report for Inland Rail. The scale and significance of this program of works provides an opportunity to set new benchmarks and standards in environmental and socio-economic performance.

Our focus on social, environmental and economic sustainability ensures the organisation is continuously striving to deliver the best possible outcomes for communities and the natural environment.

Sustainability at Inland Rail is about:

- ▶ Delivering a world-class infrastructure asset that embraces innovation and value creation, and is cost effective and efficient
- ▶ Ensuring we are a positive and welcome presence in the communities in which we operate and that we leave a positive legacy for the long term
- ▶ Empowering regional and local communities to take advantage of the thousands of jobs and millions of dollars of procurement that will be generated during construction of the Inland Rail alignment
- ▶ Working with stakeholders to protect highly sensitive natural environments, waterways and heritage places within or adjacent to our rail alignment
- ▶ Responding to the challenges of climate change and resource scarcity by ensuring we make efficient use of water, fossil fuels, and materials, and reduce and recycle waste through the supply chain
- ▶ Implementing systems and processes which enable continuous improvement reporting across the design, construction and operational phases.

This early phase of Inland Rail provides a unique opportunity to influence the effectiveness, benefits and outcomes of this once-in-a-generation rail program. We want the world to look to Inland Rail as the model for benefits creation from the design, construction and operation of freight rail infrastructure.

Everyone working on Inland Rail has a role to play in our sustainability evolution and success!

1. About this report

Inland Rail is in its early stages with sections of the alignment under varying phases of development. The purpose of this report is to set the baseline for the Australian Rail Track Corporation (ARTC) Inland Rail sustainability program going forward and commence annual public reporting of environmental and socio-economic benefits realised during the design and construction of the program.

This report complements Inland Rail's participation in the Infrastructure Sustainability (IS) rating scheme administered by the Infrastructure Sustainability Council of Australia (ISCA).

Inland Rail has committed to achieving an 'Excellent' rating for the design and construction of the program and will be independently evaluated on its performance. Each project (or section of the alignment) in Inland Rail contributes to the overall program rating under the scheme.

This report is structured according to the quadruple bottom line values of governance, social, environment, and economic and recognises there are overlapping benefits from sustainability. A statement of intention and highlights are presented under each of the values along with a performance report against relevant objectives and targets.



GOVERNANCE

- ▶ Sustainability Strategy
- ▶ Sustainability culture
- ▶ Independent sustainability certification



SOCIAL

- ▶ Stakeholder and community engagement
- ▶ Managing social impacts
- ▶ Benefits enhancement
- ▶ Indigenous participation



ENVIRONMENT

- ▶ Protecting biodiversity
- ▶ Managing environmental impacts
- ▶ Heritage protection



ECONOMIC

- ▶ Future proofing
- ▶ Climate change resilience
- ▶ Maximising resource efficiency
- ▶ Sustainable supply chain

Figure: Structure of the report



2. About Inland Rail

2.1 Our organisation

ARTC is an unlisted public company limited by shares under the *Corporations Act 2001*. We are wholly owned by the Australian Government represented by two shareholder Ministers – the Minister for Finance and the Public Service, and the Minister for Infrastructure, Transport, Cities and Regional Development.

Our corporate charter is to deliver against five key areas: growth, efficiency, asset management, safety and economic viability. ARTC is proud to be a vital part of the transport supply chain and the economic development of Australia. We are unashamed champions of rail as a cost efficient, reliable, safe and responsible mode of transport.

Our values and behaviours are the foundation of our business. Our culture supports diverse and broad thinking, customer-focussed decision making, accountability and responsibility.

Across five states we manage and maintain an 8,500km rail network. We've invested billions of dollars to build, extend and upgrade our network to get freight off the road and onto rail. That's good for business, motorists, the environment and communities. We work with rail operators to provide access to rail for businesses and producers across Australia, from fresh produce to coal and timber to aggregates. We manage the seamless, safe transit of hundreds of freight and passenger trains across our network every day. We continue to meet the changing needs of our customers and seek to grow our organisation safely and in environmentally responsible ways. We are committed to the health and safety of our people, the environment and the communities in which we operate.

ARTC has been appointed by the Australian Government to deliver Inland Rail in partnership with the private sector.

NO HARM

In our world, safety is everything. We care about our people, the environment and communities. It doesn't matter how big or small, doing things safely means doing things right.

ACTIVE ENGAGEMENT

We care about what matters to our employees and customers. We ask questions, listen and respond to needs. We're always on the front foot and actively engaged.

FUTURE THINKING

Future thinking is in our DNA. It's how we innovate, change the game and break through challenges and barriers. We're leaders who think differently; curious and skilful, we challenge the status quo.

RESULTS

We deliver results. We're driven by results because they lead to progress. Determined to make rail the mode of choice for freight, we work together to achieve personal, organisational and industry-wide results.



Inland Rail Alignment map

01 KAGARU TO ACACIA RIDGE AND BROMELTON

Comprises 49km of existing track. This section will be upgraded to increase height clearance to allow for double-stacked trains.

02 CALVERT TO KAGARU

Comprises 53km of new dual gauge track. Using 1.1km of tunnelling, this section will connect Inland Rail with the Sydney to Brisbane coastal lines.

03 HELIDON TO CALVERT

Comprises 47km of new dual gauge track (approximately half within existing rail corridors). This section will cross the Lockyer Valley floodplain and the Little Liverpool Range with a 1.1km tunnel.

04 GOWRIE TO HELIDON

Comprises 26km of new dual gauge track. This section will traverse the steep terrain of the Toowoomba Range and will include a 6.4km tunnel.

05 NSW/QLD BORDER TO GOWRIE

Comprises 124km of new, dual gauge track and 78km of existing rail corridor. This section extends from the NSW/QLD border near Yelarbon, to Gowrie Junction, north-west of Toowoomba.

06 NORTH STAR TO NSW/QLD BORDER

Approximately 39km of new track using 23km of existing rail corridor. This section will complete one of the key missing links of track between New South Wales and Queensland, using the disused rail corridor or new track to connect to the operating line running to Yelarbon

07 NARRABRI TO NORTH STAR

Comprises 188km of upgraded track and 1.6km of new track. This section will be upgraded (with a deviation) to allow Inland Rail traffic to travel at maximum speed.

08 NARROMINE TO NARRABRI

Comprises 300km of new track. This new section will reduce the overall journey time and complete one of the missing links between Melbourne, Adelaide, Perth and Brisbane.

09 PARKES TO NARROMINE

Comprises 98.4km of existing track and 5.3km of new track. This section will be upgraded to improve transit times and take double-stacked trains.

10 STOCKINBINGAL TO PARKES

Comprises 169km of existing track. Inland Rail will benefit from the track upgrades ARTC has already completed to this section. Additional works will be undertaken to allow for double-stacked trains.

11 ILLABO TO STOCKINBINGAL

Comprises 37km of new track. The route bypasses the winding section of track called the Bethungra Spiral.

12 ALBURY (VIC/NSW BORDER) TO ILLABO

Comprises 185km of existing track. This section will be upgraded to increase height clearance to allow for double-stacked trains.

13 TOTTENHAM TO ALBURY (VIC/NSW BORDER)

Comprises 305km of existing track. This track will be upgraded to increase height clearance to allow for double-stacked trains.

2.2 Program overview

Inland Rail will complete the backbone of the national freight network between Melbourne and Brisbane via regional Victoria, New South Wales and Queensland. The Australian Government through the ARTC is delivering this multi-billion-dollar infrastructure in partnership with the private sector.

The 1,700km line comprises 13 projects which are a combination of brownfield developments (upgrading or enhancements to existing rail tracks) and greenfield developments (building of completely new rail tracks where there is currently no corridor or no rail line).

Inland Rail will transform the way we move freight around the country, connect regional Australia to markets more efficiently, drive substantial cost savings for producers and consumers, and deliver significant economic benefits. It will provide greater freight carrying capacity, as it is designed for double-stacked trains up to 1,800m long, each of which will be able to carry the same volume of freight as 110 B-double trucks.

Inland Rail will provide freight customers on the east coast with competitive pricing, 98% reliability by providing a transit time of less than 24 hours for freight trains between Melbourne and Brisbane, flexibility for faster and slower services, and freight that is available when the market wants it. This service offering is central to Inland Rail and reflects the priorities of freight customers for a road competitive service based on reliability, transit time, price and availability. This service offering was developed in close consultation with customers, rail users and other key stakeholders.

Inland Rail will comprehensively address a longstanding national infrastructure priority. By 2030, Australia's domestic freight volume is projected to grow significantly. Existing road and rail networks are unable to meet this increase in freight transport demand.

Approximately 1,100km of existing rail lines and corridors will be used as part of the total 1,700km rail line. This will make best possible use of earlier investments in the national rail freight network and minimise the environmental and community impacts associated with creating new rail corridors. Approximately 600km of new rail track needs to be built.

2.3 Operational benefits

Inland Rail is a strategic opportunity to provide a decisive step change in the capacity and capability of the national freight rail system.

Once operational, Inland Rail will:



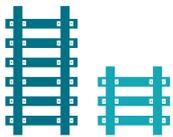
Boost the Australian economy

Inland Rail is expected to boost Australia's GDP by \$16B over the next 50 years.



Create jobs

It's expected to create up to 16,000 new jobs at the peak of construction, with an additional 700 long-term jobs once Inland Rail is operational.



Reduce distances travelled

With Inland Rail, the rail distance between Melbourne and Brisbane is reduced by 200km and the rail distance between Brisbane and Perth, and Brisbane and Adelaide is reduced by 500km.



Improve national freight network connectivity

Inland Rail enhances the National Land Transport Network by creating a rail linkage between Parkes in New South Wales and Brisbane, that connects Queensland and the southern and western States.



Provide an alternative north-south freight link

Inland Rail will provide a second link between Queensland and the southern states, making Australia's national freight rail network less vulnerable to disruptions, for example from inclement weather.



Provide better connectivity for our regional markets

It will make it easier to connect farms, mines, cities and ports to domestic and international markets. Two million tonnes of agricultural freight will switch from road to rail, with a total of 8.9m tonnes of agricultural freight capturing efficiencies through diversion onto Inland Rail.



Reduce costs

The 2015 Inland Rail Business Case forecasts that rail costs for intercapital freight travelling between Melbourne and Brisbane will be reduced by \$10 per tonne with the construction and operation of Inland Rail, with ARTC modelling showing there is potential for additional cost savings above that figure.



Offer better transit times and reliability

Inland Rail offers a less than 24-hour transit time between Melbourne and Brisbane terminals and 98% reliability matching current road levels.



Increase the capacity of the transport network

Inland Rail will increase capacity for freight and services by reducing congestion along the busy coastal route and allow for growth in passenger services. It will particularly free-up capacity on Sydney's rail network for more passenger and local freight services.

Less than 24-hour transit time between Melbourne and Brisbane



Improve road safety

Up to 15 serious crashes, involving fatalities and serious injuries, will be avoided every year.



Improve sustainability and amenity for the community

Carbon emissions will be reduced by 750,000 tonnes per year and truck volumes will be reduced in more than 20 of our regional towns (based on a 2050 estimate). Road congestion on some of Australia's busiest highways, including the Hume, Newell and Warrego, will also be reduced.



Promote complementary supply chain investments

Inland Rail will be a catalyst for complementary private sector investments such as fleet upgrades, new metropolitan and regional terminals, and integrated freight precincts.

Delivering on national priorities

Inland Rail delivers on key national priorities for infrastructure and economic policy. Inland Rail provides a comprehensive and accessible rail transport system that links communities and strengthens industry. Better infrastructure and an effective national freight operation are key to delivering efficient supply chains, improving Australia's global competitiveness and lifting our nation's wealth and prosperity.

The Department of Infrastructure, Transport, Cities and Regional Development (DITCRD) manages the Australian Government's rail investments. The Australian Government is investigating the following infrastructure investments that will support the development of Inland Rail:

- ▶ Intermodal terminals connecting ports, regional networks and capital cities between Melbourne and Brisbane
- ▶ Interface Improvement Program integrating regional lines into the national freight rail network.

2.4 Phases of development

Each of the 13 projects comprising the Inland Rail program will go through six phases of development from concept through to feasibility, assessment, approval, construction and operation. Through each phase, Inland Rail aims to design and construct the program to a standard that meets the transit time and reliability service offering and rail safety requirements, and is cost effective while minimising impacts to the community.

PHASE 1 – CONCEPT

- ▶ Identification of preliminary environmental risks and issues
- ▶ Route selection and concept design
- ▶ Identification of applicable primary approval pathway for each project.

PHASE 6 – OPERATION

- ▶ Operate in accordance with conditions of approval and applicable licences.

PHASE 5 – CONSTRUCTION

- ▶ Construct and commission projects or project elements in accordance with the conditions of approval
- ▶ Close out construction activities in accordance with conditions of approval.
- ▶ IS rating as built assessments and verification where applicable.

PHASE 2 – FEASIBILITY

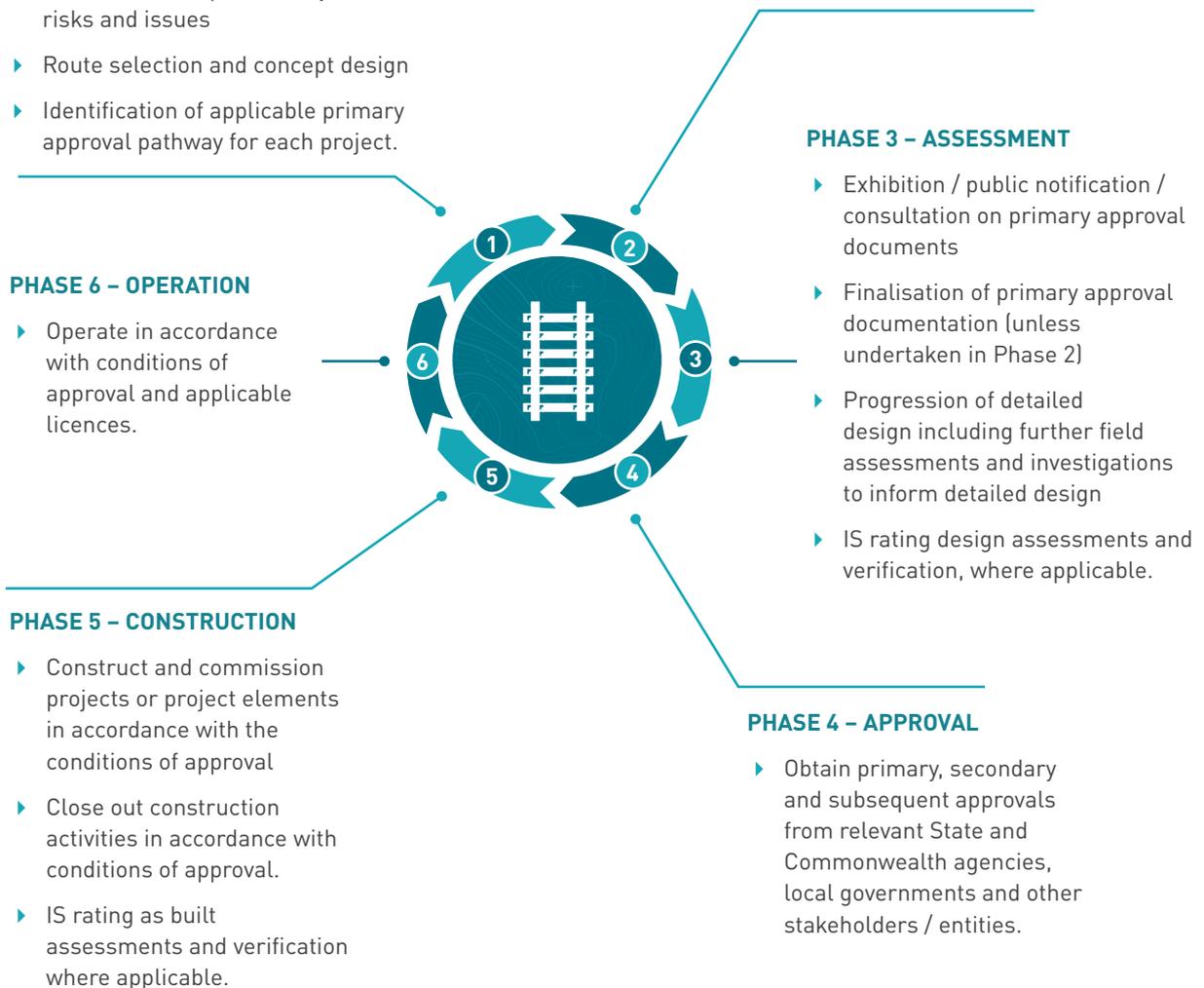
- ▶ Preparation of primary approval documents and reference design
- ▶ Field assessments and investigations
- ▶ Consultation with stakeholders and community
- ▶ Initial Infrastructure Sustainability (IS) rating assessments.

PHASE 3 – ASSESSMENT

- ▶ Exhibition / public notification / consultation on primary approval documents
- ▶ Finalisation of primary approval documentation (unless undertaken in Phase 2)
- ▶ Progression of detailed design including further field assessments and investigations to inform detailed design
- ▶ IS rating design assessments and verification, where applicable.

PHASE 4 – APPROVAL

- ▶ Obtain primary, secondary and subsequent approvals from relevant State and Commonwealth agencies, local governments and other stakeholders / entities.



PROJECTS	PROJECT STAGES					
	CONCEPT ASSESSMENT	PROJECT FEASIBILITY	PROJECT ASSESSMENT	PROJECT APPROVAL	CONSTRUCTION	OPERATION
VICTORIA						
Tottenham to Albury		●				
NEW SOUTH WALES						
Albury to Illabo		●				
Illabo to Stockinbingal		●				
Stockinbingal to Parkes		●				
Parkes to Narromine					●	
Narromine to Narrabri		●				
Narrabri to North Star			●			
North Star to NSW/QLD Border		●				
QUEENSLAND						
NSW/QLD Border to Gowrie		●				
Gowrie to Helidon		●	Public Private Partnership (PPP) Three Queensland projects will be amalgamated and constructed under a PPP			
Helidon to Calvert		●				
Calvert to Kagaru		●				
Kagaru to Acacia Ridge and Bromelton		●				

3. How to get involved

Inland Rail invites landowners and communities to get involved and learn about the program and the opportunities it will bring to their region.

How to get involved

- ▶ Register online to receive regular project updates
- ▶ Follow us on social media – Facebook, Instagram, YouTube, Twitter and LinkedIn
- ▶ Follow the events page on our website to find out where we will be present
- ▶ Have your say via interactive maps which enable the community to provide direct project feedback
- ▶ Participate in project-specific online Community Feedback Panels in Victoria
- ▶ Provide input via the Community Consultative Committees for your area, where available.

Opportunities for business with Inland Rail

Businesses can participate and benefit from Inland Rail through:

- ▶ Direct supply/service to ARTC Inland Rail e.g. primary contractors, service providers
- ▶ Direct supply/service to primary contractors and service providers e.g. subcontractors, materials for construction, accommodation providers
- ▶ Indirect business arising from the project e.g. local bakery/coffee shop, retail, fuel and supplies
- ▶ Utilisation of Inland Rail once constructed and operational e.g. transportation of goods to market.



Lockyer Valley CCC Meeting – March 2018



PPP Roadshow – December 2018

Community Feedback Panels (Victoria)

The online Community Feedback Panel facilitates collaboration and discussion involving diverse stakeholders across wide distances in a central location along the 305km Tottenham to Albury alignment. In addition to face-to-face meetings, events and information sharing, the Panel is another platform allowing community members to have their say on issues that matter most to them, provide feedback and inform design development.

To get involved and have your say, follow the prompts to sign up on our website and register to receive updates and alerts about ways you can participate.

Community Feedback Panels include:

- ▶ Melbourne (Sunshine to Craigieburn)
- ▶ Mitchell (Wadong to Seymour)
- ▶ North East Victoria (Euroa to Wodonga/ Barnawartha).



Community Consultative Committees (CCC) Queensland and New south wales

Inland Rail is committed to working closely with landowners and local communities. CCCs are a valuable opportunity to keep local stakeholders informed about the Inland Rail program and ensure their views are heard and addressed as we progress projects through the formal planning processes. These committees complement many other community engagement activities. We also aim to identify opportunities to inject economic stimulus into regional communities by encouraging teams to buy locally wherever possible. Inland Rail has currently established the following CCCs:

- ▶ Southern Darling Downs, Qld
- ▶ Inner Darling Downs, Qld
- ▶ Lockyer Valley, Qld
- ▶ Scenic Rim, Qld
- ▶ Kagaru to Acacia Ridge and Bromelton, Qld
- ▶ Narromine to Narrabri, NSW
- ▶ Narromine, NSW
- ▶ Gilgandra, NSW
- ▶ Narrabri, NSW
- ▶ North Star to NSW/Qld Border, NSW
- ▶ Illabo to Stockinbingal, NSW.

Further details for each Committee are available on our website.

4. Communities in the spotlight

Inland Rail travels 1,700km through regional Victoria, New South Wales and Queensland through some of the most iconic, economically significant and enduring places in regional and rural Australia. Each of these townships has their own aspirations and priorities, and Inland Rail aims to support these aspirations, have minimum impact, and share the socio-economic benefits of the program.

Below is a snapshot of some of the unique and defining features of places along the alignment. In future annual sustainability reports we will showcase the regions by putting communities in the spotlight and focusing on how Inland Rail has benefited regional towns.



Seymour-Avenel Road, Seymour, Victoria

Victoria

The Victorian section of the Inland Rail alignment is 305km from inner-city Melbourne to rural north east Victoria.

The alignment travels alongside the Hume Highway for much of this distance and traverses regional councils such as Wodonga, Wangaratta, Benalla, Strathbogie and Mitchell, and urban councils such as Hume, Moreland, Moonee Valley and Brimbank. The land is traditional country of the Wurundjeri, Taungurung and Yorta Yorta peoples.

The regional landscape falls within the Victorian volcanic plain bioregion, Central Victorian Uplands, Victorian Riverina and Northern Inland Slope bioregions. There are remnant patches of native vegetation adjacent to the rail corridor including threatened ecological communities of grassy woodlands and native grasslands. These habitats are listed under Commonwealth and State environmental legislation. The woodlands provide potential habitat for Brush-tailed Phascogales and Squirrel Gliders.

Regional areas are home to rich agricultural and wine country, and key industries are agriculture and forestry, services and manufacturing. The alignment passes through heritage towns such as Euroa and Glenrowan – the latter being the scene of the infamous Kelly Gang's last stand.

Inland Rail travels 1,700km through regional Victoria, New South Wales and Queensland through some of the most iconic, economically significant and enduring places in regional and rural Australia.



NEW SOUTH WALES

Town of Narromine, New South Wales

New South Wales

The New South Wales section of the Inland Rail alignment is 1046km long.

Townships along the alignment include the major river cities of Albury and Wagga Wagga, and the larger centres of Forbes, Parkes, Narrabri and Moree. This section of the alignment includes Aboriginal land councils of Narrabri, Toomelah-Boggabilla and Peak Hill, and small agricultural communities such as Illabo, North Star and Stockinbingal. The land is traditional country of the Wiradjuri, Wongaibon, Ngemba Ngiyampaa, Wangaaypuwan, Wailwan, Kamilaroi and Gomeroi peoples.

The landscape is primarily rural with several developed urban environments, and highly modified and remnant areas. The section traverses major river systems and catchments such as the Murrumbidgee, Lachlan, Murray-Darling, Namoi, Gwydir and Macintyre. The land contains river red gum, woodland, elevated tablelands, low ridges, floodplains and semi-arid plains and is home to diverse and endangered wildlife such as Regent Honeyeaters and Swift Parrots.

Regional New South Wales is agriculturally rich producing staple crops such as wheat, cereal, barley and cotton as well as cattle and sheep farming for wool and beef. Many landowners have owned farming properties for generations. Mining is another major industry.

Rich in culture, the New South Wales section is home to iconic heritage such as the historic rail townships of Junee and Gwabegar.

Queensland

The Queensland section of the Inland Rail alignment is 377km from the border of New South Wales and Queensland near Goondiwindi to the metropolis of Brisbane.

Cities along the alignment include Logan and Toowoomba and larger centres such as Goondiwindi, Millmerran and Gatton. There are also smaller rural and farming settlements such as Pittsworth, Laidley and Grandchester. The land is traditional country of Bigambul, Western Wakka Wakka, Yugara Ugarapul and Dangan Balun peoples.



QUEENSLAND

Gatton farming lands, Queensland

The landscape can be described as rural and peri-urban with larger urban development. The environment has been disturbed and modified. However, there are areas which retain the original habitat and are home to native species such as koalas, kangaroos, emus and wombats. The alignment traverses the floodplains of the Condamine along the foothills of the Great Dividing Range and continues through the Lockyer Valley and Scenic Rim via already protected transport corridors before joining the existing north-south freight line at Kagaru.

Main industries include the agriculturally rich regions of the Condamine and Lockyer Valley which provide cotton, grains and vegetables to domestic and export markets. Also included are mining, manufacturing, wholesale trade and professional services industries.

5. Employee health and safety

We are committed to protecting the health, safety and wellbeing of our employees, contractors and visitors to our workplaces. Our safety vision aligns with the ARTC No Harm – Pathway to Zero Strategy, a winner of the Rail Industry Safety Award 2018.

We take care + We look out for each other + We find safe ways

We follow and implement the ARTC corporate safety management system and processes and are building robust processes to support our people on the Inland Rail program. Work continues in the areas of establishing;

- ▶ Safe systems of work
- ▶ A risk-based approach to achieve a safe workplace and encouragement of safe behaviours
- ▶ A workforce that is risk aware and competent in managing risk
- ▶ A work environment that promotes a positive safety culture
- ▶ Measurable and achievable objectives and targets
- ▶ Innovation through technological solutions
- ▶ Collaboration with our industry partners.

5.1 Employee safety highlights

Inland Rail participates in Rail R U OK? days

On 11 April 2019, Inland Rail teams came together for Rail R U OK? Day morning teas. Rail R U OK? Day is a collaboration between TrackSAFE Foundation and R U OK? the suicide prevention charity that aims to encourage people to start life-changing conversations with anyone who may be struggling. This annual industry-wide event inspires rail staff across Australia and New Zealand to look out for one another by asking “Are you OK?” and actively listening to the response.



For Rail R U OK? Day Inland Rail staff gathered to discuss how to best strike up a conversation, the need to consider the wellbeing of our employees and contractors who work away from home and the importance of leading by example.

This commitment to mental health awareness among our people followed on from an R U OK? Day event held on the 12 September 2018 where R U OK? Ambassador Scott Tipping shared his story about the impacts that a former work colleague’s suicide had on his work environment and the wider community.

Candace Carnahan visits Inland Rail for National Safety Work Month, October 2018



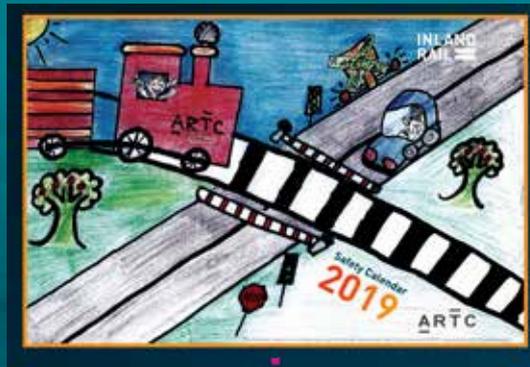
Candace Carnahan

Inland Rail hosted initiatives across the program focused on different elements of safety, mental health and wellbeing. Each week, themed activities were conducted in the Brisbane, Sydney and Melbourne offices. Attendance was high with enthusiastic staff participation in all initiatives.

Motivational safety presenter, Candace Carnahan, shared her story of losing a leg in a workplace accident. She instilled in workers the messages of having the 'courage to care' and 'if you see something say something'. The purpose of her presentation was to reinforce a positive safety culture on the Inland Rail program where all workers feel empowered to speak up if they see an unsafe act.

Inland Rail 2019 safety calendar

To raise safety awareness among our family and friends and promote intergenerational safety conversations at home, Inland Rail hosted a Kids' Safety Calendar Drawing Competition. Children were asked to draw 'what safety means to me' and covered issues such as pool safety and road safety. Thirteen entries were chosen to form a 2019 wall calendar.



2019 Safety Calendar

Joint Safety Initiative Forum

On the Parkes to Narromine project we have established a joint safety initiative forum with the construction contractor, INLink. Initiatives emerging from this forum include In Case of Emergency (ICE) boot tags as part of the site Personal Protective Equipment (PPE) requirements. Monthly safety shares with contractors and consultants provide further safety education to the wider industry; for example, the phonetic alphabet / effective communication and safety in design.





6. Governance

Sustainability governance is the processes, systems and resources which support long-term sustainability outcomes across the program. Inland Rail measures performance in relation to sustainability governance through two key objectives and associated targets:

- ▶ Leadership and awareness
- ▶ Governance systems.

PROGRAM TARGET	MEASUREMENT	STATUS	RESULTS FY18/19
LEADERSHIP AND AWARENESS			
Achieve an Infrastructure Sustainability (IS) rating of 'Excellent' for Inland Rail	Number of projects rated by ISCA	Evidence is currently being collected for Parkes to Narromine. As-built and Narrabri to North Star design ratings	Zero projects submitted to ISCA for verification
Deliver appropriate training/education to all Inland Rail team members	Sustainability training sessions held every quarter	Nine sustainability training sessions held in Brisbane, Melbourne and Sydney	30% of staff trained
Regularly reporting on objectives	Quarterly reporting to Inland Rail Leadership Team (IRLT) on sustainability objectives/targets	Quarterly reporting commenced Q4 of FY19/20	One quarterly report has been issued to IRLT
Deliver an annual sustainability report	Publish annual report for each financial year by October	First annual sustainability report published on time	One annual report prepared for publication
GOVERNANCE SYSTEMS			
Ensure reporting on sustainability objectives is built into standard reporting processes across Inland Rail	Sustainability integrated into gateway reviews and project schedules	Currently integrated into project gateway reviews and program schedule	Sustainability integrated into two main processes
Share sustainability lessons learnt across projects and at a program level	Two annual knowledge sharing sessions held across program	Knowledge sharing sessions will commence FY19/20	Zero knowledge sharing sessions to date
Continually seek to improve systems and processes based on lessons learnt	Hold a Lessons Learnt workshop at the end of each Phase for each project	Only Parkes to Narromine has transitioned between phases in the last 12 months	Two lessons learnt workshops for Parkes to Narromine
Objectives and targets will be subject to review and update throughout the Inland Rail program	Annual review of objectives and targets with the IRLT.	First 12-monthly review planned for April 2020	Not required until 2020

6.1 Sustainability strategy

Inland Rail is aiming to establish a new sustainability benchmark for environmental and socio-economic performance for ARTC operations and the rail industry more widely. The goal is to ensure that Inland Rail is embracing sustainability innovation, providing lasting benefit to communities along the alignment, and creating positive improvements across the entire rail supply chain.

The Inland Rail Sustainability Strategy has been developed with consideration of best practice methodologies and reporting frameworks such as the United Nations Sustainable Development Goals, Global Reporting Initiative and the Infrastructure Sustainability Council of Australia (ISCA) Rating Scheme.

The Sustainability Strategy describes how sustainability will be achieved across the program and covers:

- ▶ Public commitments in our Environment and Sustainability Policy and Sustainable Procurement Policy
- ▶ Seven objectives and 24 associated targets relating to governance, environmental, social and economic performance
- ▶ Assignment of objectives and targets to Inland Rail Leadership Team members who have most influence over the improvement of outcomes
- ▶ Systems, processes and tools such as third-party sustainability certification through the IS Rating System
- ▶ Requirement that each of the program's 13 projects develops and implements a Sustainability Management Plan detailing how it will achieve the stated objectives and targets
- ▶ Resourcing of sustainability through a team of dedicated professionals working collaboratively both at program-wide and project level.

SUSTAINABILITY STRATEGY



6.2 Sustainability culture

Inland Rail aims to create and foster a culture of sustainability awareness and action. To achieve our vision we need to be innovative, agile and global in our thinking. Sustainability provides a framework to drive and support this culture.

An Inland Rail Internal Sustainability Plan has been developed with input from staff during sustainability training sessions and is overseen by a cross-functional Sustainability Working Group. The plan recognises that while the Sustainability Team can facilitate systems and processes to create a sustainability culture, the action and real change needs to come from all teams and individuals across the organisation.

A sustainability culture empowers team members to make good decisions and highlights the positive impact that these decisions can have on communities, the environment, the wider supply chain and industry.

By embedding a sustainability culture, Inland Rail will:

- ▶ 'Walk the talk' and embed visible and impactful sustainability practices in our offices
- ▶ Internally communicate and recognise sustainable solutions and innovations identified and implemented by teams and individuals across the program
- ▶ Build organisational capacity to achieve the objectives and targets of the Sustainability Strategy
- ▶ Build organisational capacity to achieve an 'Excellent' Infrastructure Sustainability rating at program and project level.

Key priorities of the Internal Sustainability Plan

- ▶ Health and wellbeing initiatives
- ▶ Sustainability training and induction
- ▶ Sustainability actions register
- ▶ Community-building initiatives e.g car pooling, volunteering
- ▶ Internal communications and knowledge sharing
- ▶ Thought leadership and external engagement
- ▶ Innovation challenges and initiatives
- ▶ Reducing paper use in the office
- ▶ Reducing office-generated waste
- ▶ Reducing office generated carbon emissions
- ▶ Rewards and recognition for sustainable achievements
- ▶ Continuous improvement and reporting.

A sustainability culture empowers team members to make good decisions and highlights the positive impact that these decisions can have on communities, the environment, the wider supply chain and industry.



Inland Rail Sustainability Team

Sustainability training for staff

Sustainability training helps participants better understand sustainability on the program, how we will achieve an 'Excellent' rating, brainstorm new ideas and initiatives, and report back on progress to date. Training was held in July 2018, August 2018, January 2019 and June 2019 in Brisbane, Melbourne, Sydney, Parkes and Toowoomba, with 30% of staff attending the nine training sessions. The successful achievement of the Inland Rail sustainability objectives does not sit solely with the project or technical teams so the invitation to training is extended to all teams including administrative and support functions.

Cost benefit assessment of infrastructure sustainability (IS) rating

Inland Rail commissioned a Cost Benefit Assessment tool that assesses the costs and benefits of implementing the IS rating on a typical package within the program. The tool is used to engage internal stakeholders in understanding and exploring the costs and benefits of integrating the IS framework into the program and achieving industry best practice standards.

The high-level Cost Benefit Assessment tool has been calibrated to the Narrabri to North Star project but can be customised for any project in the alignment. The benefits of the tool include:

- ▶ Quantifying, in financial terms, the opportunities for optimised sustainability
- ▶ Demonstrating how the IS rating aligns with commercial and sustainability objectives
- ▶ Analysing costs and benefits associated with the implementation of individual IS credits
- ▶ Benchmarking sustainability performance of projects against the IS rating tool
- ▶ Building capacity and future buy-in for whole-of-life sustainability on Inland Rail.



6.3 Independent sustainability certification

Inland Rail has registered for a program rating under the Infrastructure Sustainability Council of Australia (ISCA) rating scheme.

ISCA is the peak body for infrastructure sustainability in Australia and administers the IS rating system which is a voluntary sustainability performance rating scheme. The system evaluates the sustainability of design, construction and operation of all infrastructure asset classes in all sectors.

Many significant transport infrastructure projects in Australia, such as Sydney Metro and the Melbourne Level Crossing Removal Project, have been assessed under this scheme which has delivered significant innovations and benefits to communities and the natural environment.

Each of the 13 Inland Rail projects will be assessed against the ISCA framework providing consistency across the program and challenging the projects to deliver best practice outcomes.

Inland Rail has committed to achieving an 'Excellent' rating under the IS rating system v1.2. This means Inland Rail will need to demonstrate that it has performed at industry best practice standards across 44 individual categories which include stakeholder engagement, ecological connectivity, diversion of waste from landfill, procurement and innovation. The aim is to achieve a score of at least 65 out of 100.

Working across the program to implement best practice and compile the evidence for verification of performance is a significant undertaking. Key elements of achieving an IS rating include the activities detailed below.





7. Social

Social sustainability is about gaining community acceptance and supporting community aspirations for the long term. Inland Rail measures its performance in relation to social sustainability through one overarching objective and associated targets:

- ▶ Social impacts and benefits.

PROGRAM TARGET	MEASUREMENT	STATUS	RESULTS FY18/19
SOCIAL IMPACTS AND BENEFITS			
Stakeholder and community engagement – commit the organisation to active engagement with stakeholders and the community. Effective communication and active engagement are vital to plan, design, construct and operate Inland Rail with the least social impact	Number of community engagement sessions (including Community Consultative Committees) held	Data recorded in Consultation Manager*	328 community engagement sessions
	Stakeholder (government and industry) sentiment survey aiming for >80% satisfaction	Inland Rail component is included in the ARTC Perception Survey to be conducted in October 2019	Not commenced
	Community engagement independently audited	Audited against ISCA Technical Manual v 1.2 Stakeholder credits	Parkes to Narromine and Narrabri to North Star independently audited March 2019
Community health and wellbeing – supporting community wellbeing during the changes that Inland Rail will bring	Number and types of programs supported by Inland Rail	Community Sponsorships and Donations program commenced April 2019	\$69,000 awarded across 22 local groups in Round 1
	Dollars invested in community groups	Community Mental Health Partnership Program commenced	Three partnerships with Primary Health Networks
	Safety awareness of operational rail increased	Contracted project delivery partner responsible for safety awareness during construction	
Workforce management – creating opportunities for development of skilled local and Indigenous workers through the construction and operation of Inland Rail	Projects are meeting or exceeding targets set in project Social Impact Management Plan. Targets are location specific	Parkes to Narromine is the only project currently in construction and with targets	We are working to enhance reporting to determine ability of contracted project delivery partner to meet agreed target

* Consultation Manager is a Customer Relationship Management (CRM) platform, used to manage, record and report pm stakeholder engagement interactions.

PROGRAM TARGET	MEASUREMENT	STATUS	RESULTS FY18/19
SOCIAL IMPACTS AND BENEFITS			
Local and Indigenous industry participation – to support local and Indigenous businesses to access opportunities to participate in Inland Rail	Projects are meeting or exceeding targets set in project Social Impact Management Plan. Targets are location specific	Parkes to Narromine is the only project currently in construction and with targets	We are working to enhance reporting to determine ability of contracted project delivery partner to meet agreed targets
Housing and accommodation – to employ local workers for Inland Rail to reduce the need for non-resident workers. Where accommodation is required for the workforce, it will be delivered in ways that avoid adverse social impacts and enhance economic benefits for local communities	Projects are meeting or exceeding their own commitments in the accommodation plan Accommodation principles approved and in use by Project Teams	Parkes to Narromine is the only project currently in construction. No temporary accommodation required Finalising principles for housing and accommodation for workers	Broad consultation has occurred with the community and other external stakeholders to discuss potential worker accommodation throughout NSW and Qld in accordance with agreed principles



7.1 Stakeholder and community engagement

Effective communications and active engagement are vital to plan, design, construct and operate Inland Rail with the least social and environmental impact and to maximise benefits.

Stakeholder and community engagement at Inland Rail is undertaken in accordance with the International Association for Public Participation (IAP2) spectrum of public participation and the core values for the practice of public participation. Public participation occurs at each stage of project delivery, from concept assessment through design, construction and operation, to provide information and seek input in relation to the needs and interests of affected stakeholders.

Stakeholder and Community Engagement at Inland Rail involves:

- ▶ Providing clear and consistent information about the Inland Rail program and its associated projects
- ▶ Delivering on our commitments and doing what we say we will
- ▶ Working with local communities and stakeholders to understand their concerns and identifying opportunities to minimise impacts through active listening
- ▶ Discussing the local level impacts and benefits of Inland Rail with communities and channelling this information back into project planning, design and construction decision making processes.



Effective communication and active engagement are vital to plan, design, construct and operate Inland Rail with the least social and environmental impact and to maximise benefits.



Laura in the Stakeholder Engagement team took home third place for her ANZAC biscuits at the Toowoomba Royal Show

Participating in community events

Being present at community events is important to raise the profile of Inland Rail and to make the project team accessible to the communities we work in. We want to ensure stakeholders and the community feel comfortable raising any concerns or questions to do with the project, so they get information straight from the source.

On the Parkes to Narromine project, Inland Rail hosted community drop-in sessions at Parkes, Peak Hill and Narromine, and participated in the Parkes Elvis Festival; Narromine, Parkes and Peak Hill Agricultural Shows; and Parkes Christmas Markets.

On the Narromine to Narrabri project, Inland Rail hosted eight community town hall meetings, participated in the Baradine, Gilgandra, Narrabri and Coonamble Shows and set up project pop-up stalls at four locations along the alignment.

Other projects in the alignment have also been involved in a wide range of community engagement activities – the Tottenham to Albury and Albury to Illabo project teams, for example, were present at Henty Field Days engaging with approximately 1,000 people who visited the marquee.

Being present at community events is important to raise the profile of Inland Rail and to make the project team accessible to the communities we work in.

Engaging with impacted landowners

Inland Rail is committed to tangible and flexible engagement with landowners. More than 100 landowners have properties impacted by the Parkes to Narromine project. As part of our stakeholder engagement activities, Inland Rail met with all impacted landowners to reiterate safety when going near the worksite during construction and general safety around the rail line once operational. The new public and private level crossings were designed in consultation with the users and stakeholders to ensure they are fit for purpose and to make crossing the new line as safe as possible. This consultation was important for both ARTC Inland Rail and the landowners.

Engaging with key agencies

Community safety is a key priority for Inland Rail. We are committed to ensuring that no-one is harmed on our network. Particularly important is engagement with emergency services to ensure their feedback is considered in developing the project we have engaged with local Police, Ambulance, and Fire and Rescue representatives along the alignment. This engagement has focused on working together to understand local impacts and developing a shared approach to management of impacts. Future plans include the potential for shared training activities between local emergency services and project teams.

Community Consultative Committees (CCC)

Inland Rail has established 10 CCCs in the New South Wales and Queensland sections of the alignment. Each committee includes an independent chair and members with a range of backgrounds and interests. On the Kagaru to Acacia Ridge and Bromelton section, for example, long serving former Scenic Rim Mayor, John Brent, is the CCC chair.

Supporting local councils

Inland Rail will operate across more than 37 local government areas in Victoria, New South Wales and Queensland. Councils are vitally important stakeholders across the Inland Rail program. Inland Rail is in regular discussion with councils regarding the potential impacts of Inland Rail on existing infrastructure and services and whether additional design solutions are required.

Inland Rail works with councils to mitigate any potential impacts on:

- ▶ **Safety:** impacts upon council infrastructure must not create unacceptable levels of safety risk exposure and all installed infrastructure must meet minimum safety standards
- ▶ **Connectivity:** impacts on community connectivity will be mitigated as far as possible through the design and installation of alternative connection options
- ▶ **Flooding:** impacts of flooding in communities will be mitigated through design and installation of rail structures, drainage systems and flood protection
- ▶ **Amenity:** impacts on amenity will be mitigated as far as possible
- ▶ **Good quality agricultural land:** we will seek to minimise the impacts on good quality agricultural land
- ▶ **Local Plans:** we will design infrastructure to complement council plans, policies or strategies.



Richard Wankmuller, Hon Michael McCormack MP, Mark Coulton MP, David Saxelby and Mayor Ken Keith at the 13 December 2018 Inland Rail Sod Turn ceremony at Parkes, New South Wales

Inland Rail will operate across more than 37 local government areas in Victoria, New South Wales and Queensland. Councils are vitally important stakeholders across the Inland Rail program.

7.2 Managing social impacts

The construction and operation of Inland Rail will bring changes to communities along the alignment. The nature of the change depends on factors such as the existing landscape and associated land uses, and the proximity of the alignment to land owners, residents and townships. Minimising social impacts and enhancing benefits is key to establishing and maintaining a social licence to operate.

A key focus of Inland Rail is to identify potential social impacts and benefits. For each project along the Inland Rail alignment, Social Impact Assessments (SIA) are being undertaken to identify and assess potential impacts, and inform mitigation actions to enhance benefits.

An important element of SIAs is working with local communities and stakeholders to ensure they have an opportunity to raise concerns or discuss opportunities, and then provide feedback on proposed management strategies. Potential social impacts may include:

- ▶ Noise and vibration during construction and operation
- ▶ Stress or anxiety from property acquisition discussions
- ▶ Risk of road/rail accidents at level crossings
- ▶ Influx of temporary construction workers and camps
- ▶ Changes to amenity and community character from operation of Inland Rail
- ▶ Traffic and machinery movement disruptions.



Members of the Inland Rail Social Performance Team

Inland Rail commits to developing and implementing the following for each project (where relevant) to manage potential social impacts from the program:

- ▶ Local business and industry procurement plans that include opportunities for local procurement and suppliers
- ▶ A workforce management plan to manage local and regional sourcing of the workforce and workers code of conduct
- ▶ Individual property management agreements to manage potential construction impacts on landowners
- ▶ A workforce housing and accommodation plan and consultation with accommodation providers and councils to manage accommodation availability
- ▶ A traffic, transport and access management sub-plan as part of the Construction Environment Management Plan in consultation with relevant stakeholders
- ▶ A safety awareness program to educate the community regarding safety around trains
- ▶ Ongoing stakeholder engagement during detailed design, construction and operation.

Project Social Impact Assessments (also referred to as Socio-Economic Assessments) can be accessed from the Inland Rail website. Currently SIAs have been published for the Parkes to Narromine and Narrabri to North Star projects.

Community-driven design for floodplain crossings

A comprehensive design process was followed for the Condamine floodplain crossing. Independent consultants developed a flood model using data from a range of different sources including Toowoomba Regional Council, the Bureau of Meteorology and government databases. The flood model was validated through meetings with individual landowners on-farm to discuss historic flood events and property flood markers. This local input has been critical to not only understanding how the Condamine Floodplain works, but giving the local community confidence in the design of the draft solution. A large amount of work went into determining the early design of the new crossing, including consultation, geotechnical investigations, flood modelling, environmental and hydrological assessments.

Numerous design options were examined to determine how they would potentially impact flood levels and water behaviour at individual properties within the floodplain. A preliminary design was selected because it minimised impacts downstream and upstream and had minimal impact on existing water flows. This preliminary design was presented to the Southern Darling Downs Community Consultative Committee and then shared with the wider community during two weeks of information sessions across the Darling Downs in November 2018. The process of refining the model is ongoing.

Similar work has commenced for other projects with significant floodplain crossings, such as the Macintyre and Gwydir in New South Wales.

Supporting mental health

Inland Rail recognises that supporting positive community health and wellbeing is critically important. We acknowledge that the uncertainty for landowners and communities can be stressful while we plan Inland Rail. In addition to engaging respectfully and seeking to minimise harm to individuals, we are developing a Mental Health Partnership with Primary Health Networks (PHN) along the alignment. Through the PHNs, the partnership aims to provide enhanced mental health support to residents in local regions by increasing awareness of, and access to, local health service providers. Additionally, community resilience days will be held and Community Consultative Committee members will receive training on navigating their local service networks. Inland Rail will also distribute information to local health professionals to build an understanding of Inland Rail and will work collaboratively with them on supporting the mental and physical health of affected residents.

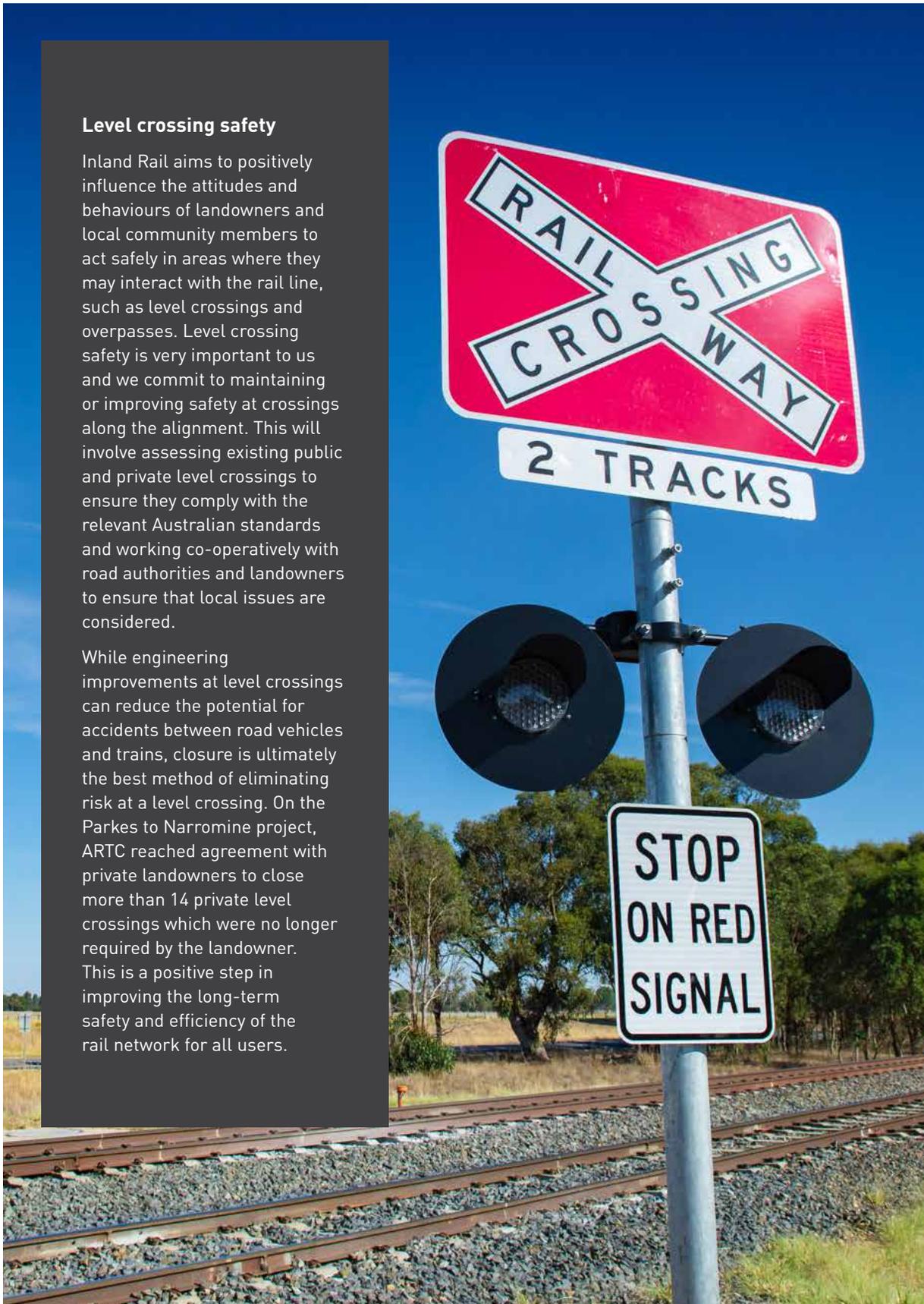
In addition to engaging respectfully and seeking to minimise harm to individuals, we are developing a Mental Health Partnership with Primary Health Networks (PHN) along the alignment.



Level crossing safety

Inland Rail aims to positively influence the attitudes and behaviours of landowners and local community members to act safely in areas where they may interact with the rail line, such as level crossings and overpasses. Level crossing safety is very important to us and we commit to maintaining or improving safety at crossings along the alignment. This will involve assessing existing public and private level crossings to ensure they comply with the relevant Australian standards and working co-operatively with road authorities and landowners to ensure that local issues are considered.

While engineering improvements at level crossings can reduce the potential for accidents between road vehicles and trains, closure is ultimately the best method of eliminating risk at a level crossing. On the Parkes to Narromine project, ARTC reached agreement with private landowners to close more than 14 private level crossings which were no longer required by the landowner. This is a positive step in improving the long-term safety and efficiency of the rail network for all users.



7.3 Enhancing benefits

Inland Rail aims to ensure that the prosperity generated by the program is sustainably shared with the communities which are impacted by construction and that negative impacts are minimised. Working hand in hand means developing a relationship based on mutual understanding and respect. Inland Rail does this through directly meeting and engaging with the community, minimising impacts and providing socio-economic benefits through local employment, business and community development.

Opportunities for local and Indigenous workers and businesses to participate in Inland Rail are facilitated through skills development and mentoring programs to strengthen individual capacity and systems that enable access to employment opportunities as they arise.

Skills academy

Inland Rail has also established a Skills Academy program which is expected to make a positive and long-lasting contribution to skill development and employment prospects. The aim of the Skills Academy is to:

- ▶ Increase the number of skilled residents eligible for employment on Inland Rail and regional industries
- ▶ Increase students' awareness of and abilities in emerging skills of the 21st century such as Science Technology Engineering Mathematics (STEM)
- ▶ Facilitate opportunities for local businesses in new supply chains
- ▶ Develop our people with world-class capabilities.

The Skills Academy has four pillars:



EDUCATION

STEM and trades education in schools, universities and TAFE



SKILLS AND TRAINING

Range of industries apprentices and trades and upgrading industry accreditation



BUSINESS CAPACITY BUILDING

For small to medium enterprise to benefit from procurement opportunities



INLAND RAIL STAFF INVESTMENT

Inland Rail staff investment, training, growth opportunities and leadership development

Community sponsorship

Inland Rail has established a Community Sponsorships and Donations program as part of our broader social performance approach to ensuring the construction of Inland Rail delivers social benefits to our neighbouring communities.

This program enables Inland Rail to make voluntary financial contributions to communities right along the alignment. Eligible not-for-profit organisations are encouraged to apply for funding of between \$1,000 and \$4,000 to support one-off events, projects and activities that contribute to local and regional prosperity, wellbeing and sustainability.

The first round of funding attracted over 50 applications from New South Wales and Queensland. In total, 22 organisations were successful with Inland Rail providing more than \$69,000 to projects contributing to NAIDOC week activities, upgrading sporting facilities, men's shed, Country Women's Association, child-focused organisations and convening small-business capacity building workshops.



Kasie has found that the workers visiting The Railway Hotel in Parkes have been able to fill a gap left by the falling numbers of local clientele in this drought-affected area

Engaging local suppliers

Expressions of Interest (EOI) were called from local suppliers for key construction work on the Parkes to Narromine section of the alignment. Over 400 bidders and local companies who attended local briefings/sessions were encouraged to register their EOI. The sessions were conducted in Parkes, Narromine and Dubbo with the aim of maximising participation for local companies, businesses and job seekers in the area.

Children swim safety program

Inland Rail funded the children's swimming safety program at the Narromine Pool. The sessions taught valuable water safety and swimming skills to the 100 Narromine children that participated. The funding assisted with resources for the Narromine Local Aboriginal Land Council (NLALC) Learn to Swim program and additionally assisted with providing family season passes to all participants enabling them to continue practicing their skills after the end of the Learn to Swim program.



Volunteer instructors Cait and Chloe with Zaharnah and Creaden



Reduced freight road traffic

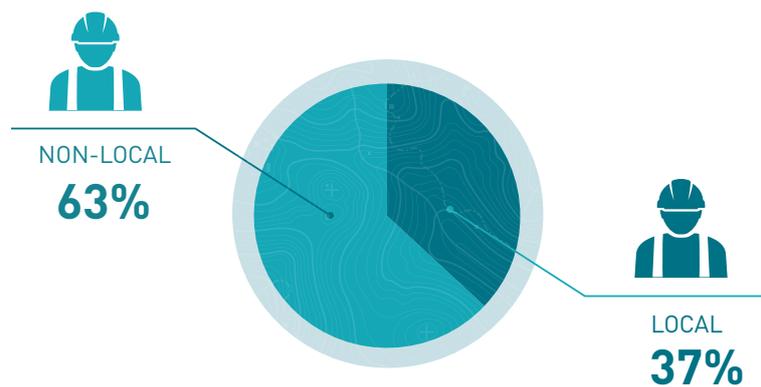
When operational, Inland Rail will provide freight customers with a road competitive service based on reliability, transit time, price and availability. The new rail line will enable freight transport by double-stacked 1,800m long trains. Each train can carry the equivalent freight volume of 110 B-double trucks.

Inland Rail will make our freight transport networks safer and more efficient by removing more than 200,000 truck movements from the road each year by 2050. When ARTC interviewed Parkes Mayor Ken Keith OAM about the benefits that Inland Rail will bring to his shire, he shared that currently a truck passes through the main street of Parkes every minute. With a doubling of freight and supply chain capacity expected by 2050, without Inland Rail this would result in one truck every 30 seconds!

Workforce engagement

Targets agreed by our construction contractor INLink (a joint venture between Fulton Hogan and BMD Construction) on the Parkes to Narromine project include employment targets for local residents, local Aboriginal and Torres Strait Islanders, women, apprentices and young people aged under 25.

The pie chart shows the proportion of the local and non-local workforce employed on the Parkes to Narromine project up to 30 June 2019. 'Local' is defined as any individual whose principal place of residence is in the local government areas of Parkes, Narromine, Orange, Forbes or Dubbo.



Parkes to Narromine local versus non-local workforce

7.4 Indigenous participation

The Inland Rail Indigenous Participation Plan outlines commitments relating to Indigenous participation in the program. Inland Rail will be built and operated on the traditional lands of many Indigenous Nations and their communities. We are working in partnership with Indigenous communities to create meaningful opportunities that deliver lasting benefits for individuals, families and communities.

We know from our conversations with Indigenous communities that providing employment opportunities is an important goal. Inland Rail is committed to creating opportunities for the development of skilled Indigenous workers through the construction and operation of Inland Rail.

We know Indigenous businesses are more likely to employ Aboriginal and Torres Strait Islander staff and generate a range of other social, cultural and economic benefits to Indigenous business owners, families and communities.

We are committed to supporting Indigenous businesses to ensure they are prepared for and provided with opportunities to participate in Inland Rail. As part of this commitment, Inland Rail has engaged two dedicated Indigenous Participation Advisors located in regional towns near the alignment. These roles will be focused on liaising with Indigenous communities and assisting them to be ready for Inland Rail by building skills and business capacity.

Indigenous Rail Worker Program

ARTC is working closely with INLink and their contractors to maximise local participation in specialist areas. The first intake of participants in the Parkes to Narromine section workforce development pilot project are members of Peak Hill's Aboriginal community. The participants have just completed the necessary training which is essential to meet the rail industry worker national competency management system for track workers. Training Services NSW funded the cost of training while Sureway assisted with meeting the cost of Category 3 medicals and other training expenses. Participants who meet all requirements will be given an opportunity to work with Complete Asset Management on rail projects. This is the culmination of a lengthy engagement and planning process involving community, government and industry.





Cultural awareness training

Raising awareness of Aboriginal and Torres Strait Islander people and culture in Inland Rail is important to us and is a commitment under our Indigenous Participation Plan. We do this through cultural awareness training and appropriate Acknowledgement of Country.

Inland Rail provides cultural awareness training for all staff. Since training started in December 2018, 44 staff have participated. The training covers the history and experience of Aboriginal and Torres Strait Islander people, their heritage and cultural values and relationship to lands and waters, and how culture and cultural heritage-related matters are to be addressed on the Inland Rail program.

Staff have been provided with a palm card in their lanyard that outlines when an Acknowledgement of Country is appropriate for meetings and gatherings, and the wording to be used.

Inland Rail will ensure that staff have the awareness and competence to develop relationships and engage respectfully with Traditional Custodians across the program.

INTERVIEW: Wally Walker

Long-serving ARTC employee and current Indigenous Participation Advisor, Wally Walker was enticed out of retirement to facilitate communication with local Aboriginal groups.

“I have spent 41 years working in the rail industry and loved it,” Mr Walker said. “I retired earlier this year, but eight weeks later Inland Rail approached me to be involved with the Indigenous Participation Plan. I know a lot of people in the communities Inland Rail is aiming to recruit in and I knew I could help turn the current excitement about this project into results,” he said.

“Not everyone will be suited to working on building infrastructure, but I want to help people think broader than that. There are opportunities in administration, technical jobs and support services to consider. I want to get people to open their eyes about the options and find people a purpose to get up of a morning and go out to do some rewarding work”, he added.



8. Environment

Environmental sustainability is protecting and restoring environmental and cultural values for the long term. Inland Rail measures its performance in relation to environmental sustainability through one key objective and associated targets:

- ▶ Protect and enhance local environment and heritage.

PROGRAM TARGET	MEASUREMENT	STATUS	RESULTS FY18/19
PROTECT AND ENHANCE THE LOCAL ENVIRONMENT AND HERITAGE			
Ecological connectivity is maintained or enhanced	Mapped or defined ecological corridors are maintained or enhanced. Measured through number of crossings and design solutions implemented through each phase	Currently reported for Parkes to Narromine and Narrabri to North Star. In the process of collecting program-wide data	Data collection underway
No serious pollution incidents occur during construction and operations	Measured by number of pollution incidents with severity rating of 1 = significant	No severity 1 pollution incidents on the program	Zero serious pollution incidents
Heritage items are avoided where possible and pro-actively managed during construction	Design has avoided known heritage items where possible and suitable mitigation/management was implemented. During construction, known items avoided. Unidentified finds are managed as per Construction Environment Management Plan (CEMP)	There was one near miss of known heritage item on Parkes to Narromine but this was managed	Zero heritage items impacted



Members of Parkes to Narromine project environmental team

8.1 Protecting biodiversity

Inland Rail will primarily be constructed in modified environments that have been previously disturbed and cleared. This historical loss of natural environments highlights the importance of protecting and maintaining remaining habitats and biodiversity, particularly in undisturbed areas.

The construction of linear infrastructure in ecologically sensitive areas has the potential to impact biodiversity and local wildlife through clearing and fragmentation of habitat, introduction of invasive species and predators, and sediments and contaminants entering watercourses and environments. Inland Rail is committed to minimising the impact of construction and operational activities on the natural environment.

We apply a hierarchy of strategies which first seeks to avoid impacts through design, secondly to minimise these impacts, and finally to offset any unavoidable impacts. Inland Rail will continually investigate opportunities to enhance and restore environmental values and prevent pollution.

The environmental approval strategy for each of the projects is determined by State and Federal legislative requirements. Each project will involve detailed investigations on flora and fauna with controlled (regulated) actions required for any impacts on threatened species and ecological communities.

An Environmental Management Plan for construction and operation will be developed for each project to ensure that harm is minimised and that approved mitigation strategies are implemented. Inland Rail will adopt environmental management practices such as:

- ▶ Maintaining bioregional corridor connectivity including fauna-sensitive design
- ▶ Offsets will be provided for state and federal species impacts
- ▶ Suitably qualified ecologists will undertake pre-clearance surveys and be present on site during clearing
- ▶ Clearing will be limited to what is required for safety purposes, and previously disturbed areas will be used where possible to avoid unnecessary clearing of vegetation and habitat. Disturbances will be reinstated and/or rehabilitated.



- ▶ Reroute the alignment
- ▶ Redesign the infrastructure so it avoids impacts.



- ▶ Fauna-sensitive design (connectivity)
- ▶ Best practice environmental management
- ▶ Involve local community in solutions.



- ▶ Restore equivalent ecological communities
- ▶ Collaborate with local stakeholders
- ▶ Enhance environments, where possible.

Inland Rail is committed to minimising harm to threatened species such as the Regent Honeyeater and recreating woodland habitat where any impacts are unavoidable.

Rehabilitating landscapes

Inland Rail has developed a Landscape and Rehabilitation Strategy to guide delivery of a consistent approach to the integration of environmental management measures and design treatments through landscape design and establishment across the program. It recognises that the 1,700km rail corridor intersects with varying landscapes and landform types, requiring specific approaches to the design and implementation of landscape and rehabilitation treatments. The strategy acknowledges that successful and sustainable landscape and rehabilitation design relies on cross-discipline integration to create a positive lasting legacy, with consideration of the long-term maintenance of areas modified as a result of the project. The strategy also describes a series of typical landscape scenarios that demonstrate how the range of components, including rail engineering, road realignments, structures, and temporary works areas can be integrated throughout the landscape design, where required to achieve desired or conditioned outcomes.

Protecting the Regent Honeyeater

The Regent Honeyeater is a striking medium-sized bird with a soft metallic bell-like call. It is rated as critically endangered at both a state and federal level. According to the New South Wales Government's threatened species profile, the species profile was once recorded between Adelaide and the central coast of Queensland but this has dramatically declined over the last 30 years to between north-eastern Victoria and south-eastern Queensland. In New South Wales the distribution is very patchy and confined to two main breeding areas – Capertee Valley and Bundarra-Bundarra region – and surrounding fragmented woodlands. As stated by the New South Wales Government, the Regent Honeyeater is a flagship threatened woodland bird whose conservation will benefit a large suite of other threatened and declining woodland fauna due to the species richness of the woodlands it inhabits. Inland Rail is committed to minimising harm to threatened species such as the Regent Honeyeater and recreating woodland habitat where any impacts are unavoidable.

Key objectives underpinning the strategy are:

- ▶ Conserve and connect
- ▶ Design and implement self-sustaining solutions
- ▶ Drive integrated outcomes.



Regent Honeyeater



NSW biodiversity Offset Strategy

New South Wales has a statutory scheme for biodiversity offsets, under the *Biodiversity Conservation Act 2016*. Biodiversity offsets are a compensatory measure for any residual significant biodiversity impacts following the implementation of Inland Rail mitigation measures. Assessments to date indicate that most Inland Rail projects in New South Wales are likely to have such impacts. Offset obligations are measured in terms of biodiversity offset credits. These credits are tradeable commodities created by landowners carrying out biodiversity conservation or enhancement measures on their land under statutory agreements with the New South Wales Government. In the Parkes to Narromine section, for example, offsets will be actively pursued for impacts to threatened species habitat and vegetation communities.

Protecting koalas

Inland Rail is committed to protecting flora and fauna across the alignment. To date, our ecological surveys have identified the presence of koalas in proximity to the proposed rail alignment. Koalas are protected under State and Commonwealth environmental legislation. Inland Rail will continue to assess the potential impacts and look to develop appropriate design solutions to ensure that koala populations and their habitat and wildlife corridors are not impacted. We have reviewed recent project practice across the eastern seaboard and have undertaken additional investigations and surveys to increase our depth of knowledge about koala populations along the alignment. This will be used to inform an Inland Rail strategy for koala management.

Working with the community to identify local environmental values

The local community in the Gowrie to Kagaru section of the alignment has a strong appreciation of the ecological values connected to flora and fauna. They raised concerns that Inland Rail wouldn't be able to adequately identify all the locally significant species in the study area and surrounds. In response, Inland Rail has run community training sessions on Wildnet (a database of species records administered by the Queensland Government's Department of Environment and Science) enabling community members to log sightings of fauna, including migratory species, through the area. In addition to its own studies, the project draws on information available in Wildnet, which better protects the area through community input.

8.2 Managing environmental impacts

Inland Rail is committed to leaving the surrounding environment in the same or better condition than it was prior to the project commencing. We will work through the appropriate environmental and planning assessment processes for each state to obtain the necessary approvals for construction to commence. While Victoria, New South Wales and Queensland have different planning approval legislations, all three processes involve appropriate field studies, environmental assessments and community consultation.

Potential environmental impacts caused by the construction and operation of Inland Rail may include:

- ▶ Noise and vibration from construction and operations
- ▶ Dust from clearing, crushing, traffic and site operations
- ▶ Vegetation clearing for construction
- ▶ Emissions from plant, equipment and vehicles
- ▶ Spills from diesel, chemical and waste storage facilities
- ▶ Releases of soil from erosion during storms and from construction activity
- ▶ Light pollution during night time construction works.

Project environmental assessment documentation can be accessed on the Inland Rail website. Currently documents have been published for the Parkes to Narromine and Narrabri to North Star projects.

Inland Rail commits to the following in relation to managing environmental impacts:

- ▶ Managing adverse impacts with respect to traffic and transport issues such as traffic operations, road capacity on the surrounding network, site access and road safety through a Construction Traffic Management Plan
- ▶ Managing impacts to biodiversity by reducing the amount of vegetation clearing required as far as practical and offsetting unavoidable impacts through consideration of biodiversity offset sites and purchase of offsets credits
- ▶ Managing construction and operational noise and vibration, and implementing control measures via liaison with affected parties in locations where sensitive receptors are identified.
- ▶ Ensuring air quality management controls due to dust from construction and movement of equipment and machinery are implemented through the Construction Environment Management Plan (CEMP)
- ▶ Mitigating any erosion, sedimentation and contamination of soils and surface waters through the control measures included in the soil and water sub-plan in the CEMP
- ▶ Incorporating design measures to avoid or minimise potential impacts on flooding and hydrology and achieving ARTC's design standards for flood immunity through installing structures such as culverts and watercourse crossings
- ▶ Mitigating impacts on water courses by implementing erosion and sediment control measures during construction in accordance with the CEMP. If required, a surface water monitoring framework will be prepared to guide the monitoring of water quality. Specific measures will be in place to manage impacts on groundwater resources used during piling works
- ▶ Avoiding impacts on known Aboriginal and non-Aboriginal heritage sites through design, and implementing measures to manage any unexpected finds through the CEMP
- ▶ Designing the project to minimise potential impacts on landscape and visual amenity through careful siting of project elements and minimising clearing as far as practical.



Environmental field studies

Environmental Field Studies consist of various types of surveys and investigations carried out to inform the design and environmental assessment of Inland Rail. These may include any of the following surveys:

- ▶ Ecological – flora and fauna, aquatic ecology
- ▶ Water quality
- ▶ Groundwater
- ▶ Soils and geology
- ▶ Noise
- ▶ Air quality
- ▶ Cultural Heritage
- ▶ Transport
- ▶ Land use
- ▶ Landscape and visual amenity.

Environmental Field Studies consist of various types of surveys and investigations carried out to inform the design and environmental assessment of Inland Rail.

Reducing noise impacts on the community

The Inland Rail Noise and Vibration Strategy is a practical and best-for-community approach to management of potential impacts. Inland Rail is aware that enhancement works required between Tottenham and Albury, for example, may generate ‘new’ noise and vibration impacts during construction, operation and maintenance. We will manage potential impacts through rail alignment design and location of signals, passing loops and bridges. To better understand how our works and the introduction of double-stacked freight trains might affect our neighbours, we will be assessing existing operational noise and vibration and modelling this against potential changes when Inland Rail is operational.

8.3 Heritage protection

Heritage places provide deep and inspirational connection to community and landscape and to the past and lived experiences. Heritage is passed from generation to generation and typically includes both tangible and intangible attributes such as sites of historical events, buildings, early infrastructure, spiritual landscapes, ceremonial sites or artefact scatters. Depending on the context, heritage may or may not be formally recognised or registered. This provides an opportunity for engaging with the community to enhance heritage through interpretation and celebration.

Inland Rail is committed to achieving excellence in Cultural Heritage management by:

- ▶ Developing systems and processes to ensure agreed heritage management commitments are met
- ▶ Meeting all statutory and regulatory obligations under relevant heritage legislation
- ▶ Managing heritage by agreement with relevant parties, as required
- ▶ Providing opportunities for wider learning about the significance of Cultural Heritage.

In particular, Inland Rail recognises Indigenous peoples' inherent connection to their traditional lands, which includes their continuing responsibility of stewardship and caring for Country. We are building positive working relationships with Indigenous cultural knowledge holders to promote understanding and help manage potential impacts to Indigenous heritage.



This original artwork design was created by Marcus Lee. Marcus Lee Design is a certified supplier of Supply Nation.

Inland Rail Indigenous artwork story

The Inland Rail alignment is symbolised by the dual tracks diagonally spanning across Queensland, New South Wales and Victoria, connecting Brisbane to Melbourne.

Travelling through Country, the three States of purple, green and blue intersect throughout many Indigenous communities reflected with the changing artistic patterned expressions.

Providing lasting benefits, the connecting pathways intersect and engage with communities providing real employment opportunities for Indigenous Australians through the planning, construction and operation of Inland Rail.

Glenrowan and Ned Kelly

The Tottenham to Albury project team has been investigating options to achieve the required vertical clearances for Inland Rail through Glenrowan. The Glenrowan heritage precinct is included on the National Heritage List and is where the pursuit, siege and capture of the Kelly Gang occurred in 1880. The railway played a significant part in the story.

While track lowering was initially identified as the preferred design solution, the project team consulted with the local council, community representatives and Heritage Victoria, and decided to review the approach. A 'heritage in design' workshop was held in late May 2019, bringing together heritage specialists to consider a range of alternate options and provide advice to the project team. The project team has sought to address community and regulator concerns prior to entering into formal project approval process and recognises the significance of the Glenrowan precinct in the local, state and national context.



Macquarie River cache from Narramine to Narrabri project

Safekeeping Indigenous cultural artefacts

Inland Rail Cultural Heritage surveys have discovered numerous artefacts, scarred trees and sites of significance to Aboriginal people. During the Narramine to Narrabri project Cultural Heritage survey, a number of scarred trees were identified. Scarred trees show evidence of early Aboriginal connection. The bark was often used for shields, canoes, carry trays or ceremonial wrapping, or the scars could indicate a direction of travel or a message. Also located during the survey were cylindrical conical stones or 'cylcons'. These stone implements are very significant and used for a number of purposes by Traditional Owners. One of the cylcons has been handed to the Local Aboriginal Land Council by the landowner for safe keeping. A 'Care and Control' process is underway in line with the appropriate state legislation. This will ensure the ongoing protection of the cylcon.



Ned Kelly Museum, Glenrowan



Historic Moree station

Heritage footbridge in Culcairn

The Albury to Illabo section of the Inland Rail alignment is an enhancement to 185km of existing rail corridor from the VIC/NSW border to Illabo in regional New South Wales. While we will use the existing rail line, we need to make enhancements and modifications to the track and some structures such as footbridges and road bridges, signal structures, aerial cables and level crossings to create the horizontal and vertical clearances required for double-stacked container trains. Double-stacked container trains will run along the existing corridor through the town of Culcairn, north of Albury.

A disused footbridge is located within the curtilage (surrounding area) of State Heritage-listed Culcairn railway station and yard group. The bridge does not have the required vertical clearance for double-stacked containers. In response to community feedback, Inland Rail is assessing the feasibility of relocating the bridge to an adjacent area for conservation. The community and the Greater Hume Shire Council have identified preferred areas to relocate the bridge for further assessment, and agreed in principle to relocation subject to heritage, safety and contamination matters being considered. An archaeologist will be commissioned to advise on conservation measures for the footbridge and to ensure that its relationship to the Culcairn railway station and yard is appropriately managed. The proposed conservation measures will be subject to approval by the Heritage Council.

Designing to avoid heritage impact

The 2km study area for the Illabo to Stockinbingal project was designed to exclude a sensitive cultural heritage area along the alignment. This cultural heritage area was discovered during the concept phase of the project and the project team has been continually refining the study area to avoid any impact to cultural heritage. The benefit of broad study areas is that they provide the project team with 'room to move' in cases where something prevents the project from constructing in that area. The Illabo to Stockinbingal project demonstrates how Inland Rail can adapt design as the project evolves.



Section of completed North West Connection track near Parkes

9. Economic

Economic sustainability is the productive and efficient use of resources to deliver whole-of-life cost savings and sustainability benefits for the long term. Inland Rail measures its performance in relation to economic sustainability through three key objectives and associated targets:

- ▶ Future proofing operations
- ▶ Optimise resource efficiency and waste management
- ▶ Sustainable procurement and supply chain.

PROGRAM TARGET	MEASUREMENT	STATUS	RESULTS FY18/19
FUTURE PROOFING OPERATIONS			
Design for climate change resilience by undertaking a climate change risk assessment across Inland Rail and addressing extreme and high risks	Number of climate change risk assessments undertaken and demonstrating no residual extreme or high risks	Assessments are a requirement of Project Sustainability Management Plans	Completed for Parkes to Narromine and Narrabri to North Star projects to date
Incorporate future proofing into design to preserve opportunities for future capacity and adaptation	Quantity of track that meets 'future proofing' technical specifications such as 30 tonne axle load and 3,600m train length	Future proofing considered in all design requirements	All projects consider these specifications
OPTIMISE RESOURCE EFFICIENCY AND WASTE MANAGEMENT			
Identify and implement opportunities to reduce material use and maximise the use of materials with low embodied environmental impact	Number of materials with Environmental Product Declarations	Data currently being collected to measure this target	Under development
Reduce design, construct and operational greenhouse gas (GHG) emissions by 15% across Inland Rail through smart design and construction	Measure performance against program base case (as determined by ISCA methodology)	Work on program GHG base case profile commenced	Under development
Landfill diversion targets: 80–100% by volume of spoil	Measure performance against project base case (as determined by ISCA methodology). Uncontaminated spoil only	Parkes to Narromine is the only project currently in construction and is on track to meet the target	Parkes to Narromine on track to meet target

PROGRAM TARGET	MEASUREMENT	STATUS	RESULTS FY18/19
OPTIMISE RESOURCE EFFICIENCY AND WASTE MANAGEMENT			
Landfill diversion targets: 50–90% by volume of inert and non-hazardous waste	Measure performance against project base case (as determined by ISCA methodology). Construction and demolition and municipal waste only	Parkes to Narromine is currently the only project in construction and is on track to meet the target	Parkes to Narromine on track to meet target
Landfill diversion targets: 40–60% by volume of office waste	Measure performance against project base case (as determined by ISCA methodology). Site offices and Inland Rail offices only	Base case for Parkes to Narromine site offices and Inland Rail offices not commenced	Currently not reported
Reduce potable water by 10% across Inland Rail from the base case	Measure performance against project base case (as determined by ISCA methodology). Construction potable water only	Parkes to Narromine is currently the only project in construction and is on track to meet the target	Parkes to Narromine on track to meet target
Use 50% of non-potable water on site	Measure performance against project base case (as determined by ISCA methodology). Applicable to construction camps only	Parkes to Narromine is currently the only project in construction. No temporary accommodation required	Currently not reported
SUSTAINABLE PROCUREMENT AND SUPPLY CHAIN			
Consider whole of life and environmental, social and economic impacts in tender evaluation criteria	Sustainability (social, environmental, economic) criteria have 15% weighting in tender evaluation	Implemented on all materials and construction tenders	100% of material and construction tenders
Implement a sustainability procurement policy	Sustainability questionnaire included in tender templates and used in all procurement packages	Implemented on all materials and construction tenders	100% of material and construction tenders
Undertake engagement activities with potential suppliers to raise sustainability awareness	Sustainability information included in a minimum of three industry engagements per year	Sustainable Procurement Plan under development and will include these activities	Activities commenced September 2019

9.1 Future proofing

The four key elements of the Inland Rail Service Offering are 98% reliability, road competitive pricing, less than 24 hours transit time between Melbourne and Brisbane and freight availability in line with market needs.

These performance outcomes are driving the Inland Rail Service Offering technical specifications:

- ▶ Designing for a train length of 1,800m and potentially 3,600m and allowing trains to be double-stacked. This significantly increases the payload of each train – with an initial capacity of 110 B-double loads of freight, rising to 216 for a 3,600m train
- ▶ Designing for a combination of axle load and train speed will allow Inland Rail to meet the needs of freight customers to carry heavier loads at higher speeds. The axle loads specified are sufficient for the type of freight that will be carried on Inland Rail in the future
- ▶ Designing for interoperability such as running the same rolling stock on Inland Rail and the rest of the national freight rail network; providing for a standard gauge connection to all major ports and providing a dual gauge connection throughout Queensland to allow seamless connectivity with the regional narrow-gauge network.



Future proofing signalling

Inland Rail signalling systems will be designed to enable future plug-in of Advanced Train Management Systems (ATMS) when this technology becomes operational across the ARTC network. ATMS is expected to deliver benefits such as closer train operation, improved reliability, improved safety, efficiency and flexibility, additional protection for trackside workers, operator savings through less fuel consumption, and reduced operation and maintenance requirements.

Designing for efficient maintenance

Inland Rail is designing for Tilting Signal Masts across the program. Tilting masts work by enabling the signal mast to be lowered by maintenance workers for replacement of bulbs. The dangers associated with working at height are removed and work can be carried out safely and comfortably at ground level. Mast lowering can be undertaken by a single person using a drill. The use of LED lights for signalling also means maintenance requirements are reduced, train drivers have improved visibility and energy use is reduced.

FUTURE PROOFING INCLUDED IN TECHNICAL SPECIFICATIONS

Train Length	1,800m with future proofing for ultimate 3,600m train length
Axle Load / Max Speed	21 tonnes @ 115km/h, 25 tonnes @ 80km/h, with future proofing for 30 tonnes @ 80km/h
Double Stacking	7.1m clearances for double-stacked operation
Interoperability	<p>Full interoperability with the interstate mainline standard gauge network</p> <p>Dual-gauging to provide for connectivity to the Queensland narrow gauge regional network</p> <p>Connections to regional and national freight networks providing for standard gauge connections to the ports of Melbourne, Port Kembla, Sydney, Newcastle, Brisbane, Adelaide and Perth</p>

9.2 Climate change resilience

Resilience in the context of Inland Rail is the ability of the rail track and associated infrastructure to absorb shocks and trends such as extreme weather and natural disasters and retain its functionality, reliability and structure for current and future generations. Resilience is not the absence of shocks but the planning and design of infrastructure to withstand these shocks over time.

Infrastructure has always been designed with consideration of climatic and historical weather events such as wind speed or heat exposure. Current weather events and trends have shown that this is no longer adequate. Climate change means that the future climate is likely to be more severe and impactful than in the past.

Extensive scientific monitoring and research has shown that climate change is already causing more frequent and severe heat waves, disrupting historical rainfall patterns, and increasing storm intensity and damage.

Predicting future impacts of a changing climate is difficult as it is dependent on a range of variables including: the timeframe (impacts in 2030 will be different to those in 2090); carbon emissions (whether there are low, medium or high emissions in the future) and how nations (and the world) address continuing emissions.

Program-wide climate change risk assessment

The risk of ongoing climate-related changes to the operation of Inland Rail into the future (100 years and beyond) could be significant. As part of designing for a resilient, reliable and future proofed railway, Inland Rail is being designed with consideration of risks such as:

- ▶ Increased demand on and/or failure of power infrastructure
- ▶ Increased incidence of extreme heat
- ▶ More intense rainfall and flooding
- ▶ Structural deterioration and soil subsidence, erosion, movement and cracking
- ▶ Increased risk of storm events closing the rail line
- ▶ Increased risk of bushfire events closing the rail line.

All projects will be required to assess risks in line with a program-wide climate change risk assessment and develop adaptation treatments for extreme, high and medium risks.



Flood sign indicator, Wangaratta

9.3 Maximising resource efficiency

Inland Rail through its project delivery partners will construct or upgrade sections of the alignment in accordance with the approved design and associated management plans. Approximately 1,100km of existing rail line will be upgraded, and 600km of new corridors will be defined and built. The upgrade works in particular provide significant opportunities for reuse and recycling of existing materials and Inland Rail has achieved significant sustainability outcomes with respect to material recovery and reuse.

Resource efficiency initiatives that can potentially be implemented on Inland Rail include:

- ▶ Efficient route alignment that reduces construction footprint and operational fuel requirements
- ▶ Creating industry-first design standards based on successfully piloting alternative or recycled materials
- ▶ Design improvements that shorten construction schedules and reduce associated machinery and fuel use
- ▶ Significant reductions in construction water used for dust suppression, site offices and construction camps through efficiency and recycling initiatives
- ▶ Significant reductions in construction fuel and energy use for site vehicles, machinery, site offices and construction camps through efficiency and renewable/battery initiatives
- ▶ Effective waste separation, reuse and recycling through participating in regional initiatives, for example, soft plastic recycling.



The new Brolgan Road level crossing in Parkes, new rail formation and what will become a new intermodal terminal for Pacific National

Improved track formation specifications

Inland Rail has explored the best options to improve the track formation for better performance, less maintenance and future proofing for heavier trains and loads. The design constraints detail no increase to the original project budget, the complete removal of the original track material to eliminate hidden soft spots, no disposal of existing track earthworks material outside the corridor and maximum utilisation of existing natural materials.

Through collaboration, an opportunity was identified by our technical advisors to produce new earthworks materials and construction specifications that are performance driven and allow for the use of a wide range of materials and conditions to develop a suitable design.

This resulted in a design that incorporates all existing and available materials and a track structure that will perform exceptionally well over the next 100 years. This has been a great outcome for the environment, community and future of freight rail.

Smart material design

Inland Rail, in collaboration with AusTrack, has developed an innovative prefabricated pre-cast concrete sleeper design that has reduced the requirement for steel wire reinforcing in the sleeper. This has decreased material costs of production which was part of a wider productivity initiative by Inland Rail to provide a reliable supply of sleepers to meet the program requirements.

Material reuse on significant scale

Inland Rail has investigated opportunities to maximise the program-wide reuse of existing materials. The existing track does not meet the design specifications of Inland Rail in terms of capacity load but is still in good condition and is being utilised by wider ARTC operations and the Department of Transport for NSW (TfNSW) for the Country Rail Network. On the Parkes to Narromine project, the following material/quantities will be reused either within the project or on other rail projects:

- ▶ Rail track – approximately 147.5km of rail to be reused by Department of Transport for New South Wales
- ▶ Rail track – approximately 50km of rail to be reused by ARTC
- ▶ Steel sleepers
 - approximately 90,000 to be reused by ARTC
- ▶ Ballast, capping and ash layer
 - approximately 300,000 tonnes reincorporated into Inland Rail formation works
- ▶ All turnouts and ground frames reused by ARTC throughout their network.

Almost 100% of materials that are in good condition will either be reused on site or for non-Inland Rail projects. This provides significant savings in waste management and landfill costs, significantly reduces the need for ARTC and the New South Wales Government to purchase new materials and provides associated environmental benefits from recycling and reuse.



Removal of the rail and formation (the foundation of the track)

New rail track profile

Inland Rail, in collaboration with steel supplier Whyalla Steelworks, has developed a pre-fabricated rail profile to reduce grinding requirements during construction. Usually in rail construction an initial grind is undertaken on site to:

- ▶ improve wheel/rail characteristics
- ▶ extend the rail life
- ▶ reduce surface defects
- ▶ reduce risk of fires from wheel/rail sparks
- ▶ enable a higher axle load/ speed.

Whyalla Steelworks is undertaking this initial grind or rail profiling during manufacture of the steel rail track which means that the construction initial grind is not required. By removing this construction requirement, we can reduce the construction schedule, associated noise and annoyance impacts to the community, and fuel to power the grinding machinery.

Inland Rail has investigated opportunities to maximise the program-wide reuse of existing materials.

9.4 Sustainable supply chain

Working with our supply chain partners and building capacity to deliver productivity improvements and wider environmental and socio-economic benefits is a key priority for Inland Rail. A sustainable supply chain is when procurement of goods and services gives preference to suppliers that provide environmental, social and economic benefits. On a large infrastructure project such as Inland Rail, a significant proportion of the investment funding is passed through to the supply chain.

To ensure that wider benefits are achieved through procurement, we have published our commitments in a Sustainable Procurement Policy. This policy states that Inland Rail will:

- ▶ Require major suppliers to demonstrate evidence of their environmental and sustainability policies
- ▶ Use sustainability (social, environmental and economic) metrics during tender evaluation
- ▶ Encourage local and Indigenous businesses and suppliers to get involved in the Inland Rail supply chain
- ▶ Endeavour to provide all tiers of our prospective supply chain, including Local and Indigenous businesses, with the necessary tools and information required to get involved
- ▶ Ensure relevant products and services have recognised environment and social labelling.

Supply chain opportunities will be identified throughout all sections of the Inland Rail alignment. Our contractor INLink is constructing the first project for Inland Rail - the Parkes to Narromine section. INLink has responsibility for ensuring that Inland Rail's sustainability commitments are implemented during construction and reporting performance on a regular basis.

The Inland Rail Skills Academy will facilitate access to business capacity building programs for small to medium enterprises along the alignment. These programs aim to inform Indigenous and local businesses and facilitate opportunities to participate in major supply chains.

Sustainability Procurement Questionnaire

The purpose of the sustainability questionnaire is to seek information from suppliers which demonstrates to Inland Rail their environmental and sustainability policy practices. It is important to Inland Rail that potential suppliers are aware of the specific sustainability risks and opportunities relevant to the goods or services they supply.

Inland Rail tender templates include the sustainability questionnaire, and this has been applied to all material and construction work procurement issued in the FY18/19. For all materials and construction contracts, the sustainability function is involved in evaluating tenders in line with the sustainability questionnaire.

Productivity gains

Inland Rail has worked with its major supply chain partners to reduce the time between placing an order and delivery to site. We worked closely with our Australian sleeper suppliers, Rocla and AusTrack, to implement productivity efficiencies that have enabled faster and more consistent sleeper production.

We assisted Rocla to enhance their existing production methodologies, increase the efficiency of their forced steam concrete curing process, increase production output, reduce energy costs, and minimise production downtime.

We worked with AusTrack to refine their pre-cast concrete sleepers design and reduce the material content and weight. This reduced costs, while maintaining the required quality standards.

We worked with our rail track supplier, Onesteel Whyalla, to refine the profile of the rail track within their production process. This eliminates the need for an initial on-site rail track profile grind to shape the rail track to match the wheel profile of the trains. This reduces the time between installation and operation.

Creating regional jobs

Inland Rail aims to support regional manufacturers and suppliers where possible.

Whyalla is the third largest city in South Australia with a population of more than 23,000. It has a long and proud history of manufacturing rail steel including being awarded contracts to supply rail for the Parkes to Narromine and Narrabri to North Star sections of the Inland Rail program. Contracts with Inland Rail make a real difference to the lives of locals and ensure industries from small business to large steel manufacturers remain internationally competitive.

Twenty new jobs were created in the Southern Highlands to produce 200,000 concrete sleepers for the first stage of the Parkes to Narromine project. Rocla's Braemar concrete sleeper plant in Mittagong was awarded a \$20m contract to deliver the work. Rail company Pacific National made the delivery of sleepers to Peak Hill near Parkes. Over a six month period, Pacific National will run a train once a week from Mittagong to Peak Hill, carrying around 9,000 concrete sleepers each trip.





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Our commitment to using sustainably sourced production materials and processes

Printer

Printcraft (Brisbane Queensland Australia)

Printcraft is Queensland's largest privately owned printing company. Printcraft holds ISO certification. They use water-based varnishes, soy-based inks and recycle all of their waste paper and packaging.

Paper

Grange Offset

Grange Offset is an Australian made PEFC certified paper stock. It is also manufactured in facilities with ISO 14001 EMS certification and made elemental chlorine-free with ISO 9706 Longlife certification.



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ARTC

The Australian Government is delivering
Inland Rail through the Australian
Rail Track Corporation (ARTC), in
partnership with the private sector.