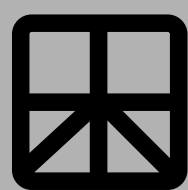


# Austrak Capability Statement

Sleeper design, process, and delivery solutions



# AUSTRAK

**at a  
glance**



**Established  
1980**



**25M**  
Sleepers produced



**1.1M**/Year  
Total capacity



**85%**  
Repeat business<sup>◇</sup>



**3 Factories**  
Across Australia<sup>\*</sup>



**130**  
Employees



**38** standard  
Sleeper products<sup>†‡</sup>



◇ Based on product volume

\* Rockhampton, Wagga Wagga and Geelong

† Standard sleeper products range across Narrow, Standard and Broad gauge

‡ Full product range includes Heavy Haul, Full Depth, Low Profile, Turn Out Beams, Gauge Widening, Transition, Guard Rail, Flat and Canted.

Front cover: Diamond crossover with Austrak bearers



# The Company

## Here for the long haul

Established in 1980, Austrak has become a world leader in the design and manufacture of pre-stressed concrete sleepers, and the largest concrete sleeper manufacturer in Australia.

Since 2018 Austrak has been wholly owned by the Vossloh Group whose core business is rail infrastructure. Throughout the world Vossloh offer integrated rail solutions from a single source; significantly contributing to the safe, reliable and sustainable movement of people and commodities around the world.

Austrak is focused on offering the best in sleeper design and manufacture while providing clients in Australia a channel to the Vossloh Group suite of rail solutions. At our core we are railway people.

Safety, Quality and Sustainability are underpinned by Innovation and Collaboration as the cornerstones of the Austrak client value proposition. We work in close partnership with our customers in an open and consultative way to understand their needs across all key areas from ballast condition to maintenance schedules.

Austrak is a leader in the design, construction, commissioning, and operation of concrete sleeper manufacturing plants, having built and run 13 factories in Australia and overseas. Some factories have been custom-built for projects, and capacities range from 50,000 to more than 1 million sleepers per year. Austrak has produced over 25 million sleepers for medium and heavy-duty rail, including 2 million sleepers for light rail and tramways, and a broad range of products designed to meet the varying needs of our customers.



### CUSTOMER FOCUSED INNOVATORS

**Austrak has strong systems and processes that drive down costs without compromising quality. However, this does not stifle our ability or desire to meet changing client requirements through active innovation and a client centric approach.**



# Innovative Sleeper Solutions

## Pushing the boundaries

Austrak specialises in cost-effective sleeper solutions. Our emphasis on researching and developing sleeper design and production technologies is what makes us the industry leaders in Australia.

Our products meet exacting standards of structural design, beam strength, materials specification and selection, concrete durability, manufacturing process, correct stressing, concrete compaction, dimensional integrity, visual inspection processes, and performance testing. Therefore, our products and processes meet or exceed AS1085 Railway Track Material Specifications.

As part of our commitment to sustainability and innovation we are developing leading edge composite material sleeper technology.

The key to our product advantage is the IP in our products, factory technology and operating systems. We have proven, robust systems, processes, and equipment developed over 40 years of operation.



# Proven Reliability

Over 25 million times

Austrak is a dedicated sleeper company using state of the art manufacturing processes. Benchmarking between factories and performance monitoring ensures efficiency and optimal performance. Reliability, repeatability, and value for money are the hallmarks of the Austrak system.

Our Standard Operating Procedures are the heart of our factory management system, which assures that every sleeper meets the exacting specifications that clients require for the whole design life.

Austrak has designed its own Integrated Management System with built-in quality control processes outlining how the business is operated. This means our processes are repeatable to exacting standards, safely and consistently, giving our clients greater protection.

Processes include:

- State-of-the-art concrete testing laboratories at all factories
- Trained and competent management and operators
- Management systems that ensure compliance to the applicable standards including AS1085 Railway Track Material Specifications
- Record keeping of everything from raw material test results and daily production to operator training records.



# Health and Safety

We take pride in ensuring we all get home safely every day

Health and Safety is a core value at Austrak and will not be compromised. We are committed to creating safe working environments and improving the long-term health and well-being of our people.

## Our Guiding Principles for Safety are:

- Safety is an ethical responsibility
- People are the solution
- Safety is the Presence of Positives.

## Our Health and Safety Objectives are as follows:

- Prevent any and all major or disabling injuries and fatalities to employees and contractors
- Ensure the personal wellbeing of all employees is considered and maintained
- Ensure compliance with Australian law and Vossloh safety requirements
- Maintain an ISO certified Integrated Management System
- Create a culture of ongoing education, engagement and shop floor presence from management.

Austrak operate a program for Prevention of Fatal and Severe Risks by deploying and auditing standards for high-risk work. All our operating factories have third-party accreditation to ISO 45001, Health and Safety Management Systems.







# Community and Diversity

## The essence of care and inclusion

Austrak factories are all located in regional areas, employing local people and using locally based suppliers where possible.

Ethnic and gender diversity is an important company value, and we maintain and are increasing employment and training of Aboriginal and Torres Strait people, who in 2022 make up 10% of our total workforce. We are also focused on raising the level of female participation in our workplace from 15% in 2022 to at least 25%.

Austrak has partnered with Indigenous recruitment firms to help achieve higher than average participation.

In 2020/21, Austrak sponsored a one year training program that resulted in 50 employees across all of our sites being awarded either a Cert III or IV in Process Manufacturing. We are proud of the effort our people made in achieving this goal.

The success of these programs underscore our commitment to leaving a lasting positive legacy in the communities in which we operate.









# Product Range

Versatile and comprehensive

## Axle Load

Sleepers have been designed to accommodate axle loads varying from nine tonne for tram sleepers, through to 30 tonne for freight railways and right up to 50 tonne axle loads for heavy haul lines in the arduous environment of the Pilbara in Western Australia.

## Gauge

Our product range includes: Broad gauge, Standard gauge, Narrow gauge, Narrow/standard dual gauge, Standard/broad gauge changeable, Turnout bearers, Level crossing panels, Monorail sleepers. We also have full depth and low profile designs in all gauges plus the various specialty sleepers needed for an operating railway.

## Turnout Bearers

Austrak is an industry leader in the specialised field of designing and manufacturing pre-stressed concrete beams for turnouts, crossovers, diamonds, and catch-points. These have been developed for varying axle loads and gauges as well as divergence ranging from 1:6 through to 1:25.

## Low Carbon Concrete

The use of green energy cement and increased supplementary cementitious material is being trialled with the aim of reducing carbon emissions by 30 percent.

## Fastening Systems

Austrak capability extends to producing sleepers and turnout products using any and all approved fastening systems including Vossloh, Pandrol and Delkor all being used as recently as 2021.

## Low Profile Timber Replacement

Following an extensive research, development, and testing process, Austrak developed low profile timber replacement sleepers in 2005. The highly engineered solution for replacing ageing timber sleepers was based on extensive rail track data and analysis to ensure the sleepers are a similar size to timber and match the specifications of the line. The sleepers are longer-lasting, more economical, and lower maintenance than timber sleepers. In the last two decades more than 3.2 million low profile timber replacement sleepers have been placed in track across the east coast of Australia.

## Composite Timber Replacement

Austrak engineers have been collaborating with the University of Southern Queensland since 2017 to develop a fibre composite technology, capable of simulating timber sleepers, turnout bearers and bridge transoms. During 2021, a pilot plant has produced over 250 sleepers that are now being tested in track.

## Customised Solutions

We have produced a wide variety of customised product to meet ancillary client needs such as stacker-reclaimer and conveyor footings and monorail sleepers.





## Design

For any requirement

The in-house research and development capability at Austrak ensures we can design sleepers and turnout beams for almost any type of railway requirement.

Whether designed in-house or in conjunction with other specialist consultants, the Austrak experience ensures we can deliver innovative solutions for new requirements. Designs can be made from nominated bending moment requirements or from performance parameters. Design techniques used include the traditional allowable stress method to more modern limit state design.

Austrak has developed and patented its own rational design technique, allowable within the Australian Standards, using specific data collected on operating railroads, to design sleepers that meet the required load case with more material efficiency than the traditional standard design technique. This method enabled the design of low profile sleepers that can be side inserted in existing track.

## Testing

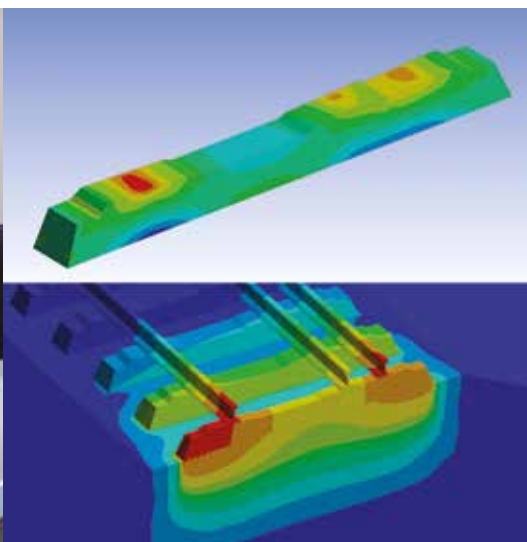
To the nth degree

Comprehensive testing is an integral part of the Austrak design and production process. Sleeper designs are modelled, tested with repeated load cycles, and refined to ensure they meet the train speed and load-bearing specifications of our client's performance expectations.

During production we test materials to ensure conformity to material specifications, we test our concrete to ensure conformity to concrete specifications and we test sleepers to ensure they meet the design and load requirements.

Sample sleepers are taken from each batch and tested for bending moment, cracking, pre-stress wire bond development as well as checking of all the key dimensions. Every single sleeper is visually checked for defects as part of our Quality Assurance program.

Our on-site laboratories at our Wagga Wagga and Rockhampton factories are undergoing full NATA accreditation and all sites' testing equipment is NATA calibrated in accordance with the prescribed schedule to give our clients additional piece of mind.





# Production Technology

Systemised, scalable and responsive

The Austrak robust, proven manufacturing systems, processes, and equipment as well as continual research and development all ensure that we stay a leader in the field of sleeper design and production.

Factory employees undergo rigorous training to ensure quality, productivity and safety are of the highest standard. Our operational and management staff bring extensive experience to the business and a client-focused approach to each project.

Austrak has a national network of four strategically located factories. If needed however, we can build and operate factories near any larger projects to provide cost and logistics efficiencies. For example, two factories were built in the Northern Territory to manufacture two million sleepers for the 1,410 kilometre rail line from Alice Springs to Darwin.

Our factories operate under the Austrak developed work methods and quality assurance standards which are third party accredited to ISO 9001, ISO 14001 and AS/NZS 4801.

## Currently Austrak has factories in:

- Geelong, Victoria
- Rockhampton, Queensland
- Wagga Wagga, New South Wales.

## In the past we have built and operated factories in:

- Dubai, U.A.E
- Mackay, Queensland
- Wickham, Western Australia
- Townsville, Queensland
- Katherine, Northern Territory
- Tennant Creek, Northern Territory
- South Hedland, Western Australia
- Malaysia.



# Major Projects

## A record of reliability and repeatability

Austrak has delivered projects internationally and domestically. These projects showcase not only our capacity on significant projects but also our remote capability; successfully completing projects ahead of schedule in some of the most remote locations in the world.

### ARTC Inland Rail, Melbourne to Brisbane

*Client:* Australian Rail Track Corporation (ARTC)

*Location:* New South Wales

*Overview:* The Australian Rail Track Corporation (ARTC), with the support of the Federal Government, initiated the Inland Rail Project in 2017 to provide a double stacked freight track from Melbourne to Brisbane. Austrak supplied over 200,000 sleepers for the Narrabri to Northstar section in 2019-2020 and is contracted to supply a further 1.3 million standard and dual gauge sleepers to Inland Rail for the remaining sections to the north of Narromine.



### Alice Springs to Darwin Railway

*Client:* Australasia Railway Corporation (Austrak was a subcontractor to ADrail)

*Location:* Northern Territory

*Overview:* The Alice Springs to Darwin railway line was one of the largest infrastructure projects ever undertaken in Australia. As part of the overall project, Austrak was charged with the responsibility of manufacturing approximately two million concrete sleepers in just 16 months for the 1410 kilometre single track railway.

To meet this daunting challenge, Austrak designed, constructed and commissioned two strategically located factories at Tennant Creek and Katherine.

By constructing and managing its own factories, the project team was in complete control of the supply chain, manufacturing processes and quality control, being well positioned to deliver the job in the most cost effective and timely fashion.





# BHP Billiton Iron Ore

*Client:* BHP Billiton Iron Ore

*Location:* Western Australia

*Overview:* Austrak's long-term relationship with BHP commenced in 1986 when the company was contracted to manufacture and supply sleepers and turnout bearer sets for the partial duplication of the line to Mt Newman, Yandi, Whaleback and Jimblebar. The relationship continues with a new three year contract executed in 2021.

To date, Austrak has manufactured and supplied about 1.6 million sleepers and 200 turnout bearer sets for BHP.

To support BHP's requirements, Austrak rapidly built and commissioned a single bed rail sleeper factory at South Hedland in Western Australia. A new five bed factory was built and commissioned at Wedgefield in 2000 and this supports BHP's current needs.



## Queensland Rail Projects

*Client:* Queensland Rail and Aurizon

*Location:* Queensland

*Overview:* Austrak is proud to have a 30 year relationship with Queensland's passenger services. Austrak have extended their current contract in 2021 for a further 3 years.



## Aurizon Projects

*Client:* Queensland Rail and Aurizon

*Location:* Queensland

*Overview:* Austrak is proud to have a 30 year relationship with Queensland's freight rail services, initially as Queensland Rail and now as Aurizon. In 2019, Austrak renewed its long-standing relationship with Aurizon with a new 3 year contract.



## Rio Tinto Iron Ore Projects

*Client:* Rio Tinto Ltd, Norths Ltd and Robe River Associates

*Location:* Western Australia

*Overview:* Since 1987 Austrak has had an ongoing relationship with Rio Tinto, one of the world's leading mining and exploration companies.

Austrak has supplied various projects for Rio Tinto including Robe River Project, North Limited Project, Hope Downs 4 Rail, RCE283 and most recently Gudai-Darri between 2020 and 2021.



## Fortescue Metals Group Projects

*Client:* Fortescue Metals Group (FMG)

*Location:* Western Australia

*Overview:* FMG contracted Austrak to manufacture and supply materials necessary to lay the inaugural 255 kilometres of single track railway that connects the company's port facilities at Port Hedland with their iron ore mine site. To meet this challenge, Austrak used its existing local factory in Wedgefield, Port Hedland in Western Australia to ensure all sleeper production met the demanding schedule.

Austrak also supplied 445,000 sleepers for FMG's Solomon Expansion Project in the Pilbara from the existing Port Hedland factory and a new factory in Dubai, UAE, which was built to supply the project.





# Our Management

## A team of significant accomplishment

The experience of our team is inimitable; having a deep knowledge of sleeper manufacturing and rail operations; underpinned by the global, technical and financial resources of the Vossloh Group.



**Murray Adams**

*Managing Director*

5 year tenure and 12 years leading Australian and global construction materials businesses.



**Tom Heyer**

*Business Development Manager*

13 year tenure in Turnouts, fibre composite R&D, business development and sleeper sales.



**Kim West**

*Financial Controller*

7 year tenure and 20 years in accounting roles within manufacturing businesses.



**Ross Smith**

*National Operations Manager*

1 year tenure and 15 years in leadership positions within global manufacturing leaders.



**Michael Willis**

*National Quality and Improvement Manager*

11 year tenure in quality management, factory management and improvement.



**Vanessa Scott Hubbard**

*National Safety & Systems Manager*

3 year tenure and 20 years in safety leadership with major rail providers such as QR and Aurizon.



**Adam Clifton**

*National Engineering Manager*

15 years tenure in process optimisation, factory construction and capital improvements.



**Claire Bauer**

*Human Resources Manager*

3 year tenure and 17 years working in HR, recruitment and other business roles within major companies globally.



**Larry Hadley**

*Business Development and Industry Specialist*

27 year tenure in Turnouts, factory construction, commissioning and management, and Business Development.



**Terry Keay**

*National Maintenance and Process Manager*

17 year tenure in maintenance, factory management, process optimisation and commissioning.





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**vossloh.com**