

Glossary and abbreviations

NARRABRI TO NORTH STAR—PHASE 2 ENVIRONMENTAL IMPACT STATEMENT

ARTC

INLAND
RAIL 
An Australian Government Initiative

Abbreviations

Specific acronyms used throughout this EIS are listed and described below.

TERM / ACRONYM	DEFINITION
°C	Degrees Celsius
µg/L	Microgram per litre
µs/cm	Microsiemens per centimetre
AADT	Annual average daily traffic
AAQ NEPM	National Environment Protection (Ambient Air Quality) Measure
AAToS	Average Annual Time of Submergence
ABS	Australian Bureau of Statistics
ACHAR	Aboriginal Cultural Heritage Assessment Report
AEP	annual exceedance probability
AHD	Australian Height Datum
AHIMS	Aboriginal Heritage Information Management System
ALCAM	Australian Level Crossing Assessment Model
ANZEC	Australian and New Zealand Environment Council
ANZECC	Australian and New Zealand Environment and Conservation Council
ANZG	Australia and New Zealand Guidelines
AOI	area of influence
AQMP	air quality management plan
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
ARTC	Australian Rail Track Corporation
AS	Australian Standard
ASS	acid sulfate soils
ATMS	Advanced Train Management System
ATSB	Australian Transport Safety Bureau
AUSRIVAS	Australian River Assessment System
AVTG	<i>Assessing vibration: A technical guideline</i>
BAM	Biodiversity Assessment Method
BC Act	<i>Biodiversity Conservation Act 2016 (NSW)</i>
BDAR	Biodiversity Development Assessment Report
BFMC	Bush Fire Management Committee
BoM	Bureau of Meteorology
CBD	central business district
CCC	Community Consultative Committee
CEEC	critically endangered ecological community
CEMP	Construction Environmental Management Plan
CEMS	Copernicus Emergency Management Service
Ch	chainage
CIZ	Construction Impact Zone
CLM Act	<i>Contaminated Land Management Act 1997 (NSW)</i>

TERM / ACRONYM	DEFINITION
CMA	Catchment management authority
CNVMF	Construction Noise and Vibration Management Framework
CO	carbon monoxide
COAG	Council of Australian Governments
COP21	21 st Conference of the Parties
CSSI	Critical State Significant Infrastructure
CRN	Country Regional Network
Crown Land Act	<i>Crown Land Management Act 2016</i> (NSW)
Cth	Commonwealth
DAWE	Department of Agriculture, Water and the Environment (now Department of Climate Change, Energy, the Environment and Water (DCCEEW))
dB	decibel
dB(A)	A- weighted decibel
DBYD	Dial Before You Dig
DCCEEW	Department of Climate Change, Energy, the Environment and Water (previously the Department of Agriculture, Water and the Environment (DAWE))
DCP	Development Control Plan
DEC	Department of Environment and Conservation (NSW) (former)
DECC	Department of Environment and Climate Change (NSW) (former)
DECCW	Department of Environment, Climate Change and Water (NSW) (former)
DEE	Department of the Environment and Energy (Cth) (former)
DEM	Digital Elevation Model
DfD	Designing for Deconstruction/Disassembly
DIPNR	Department of Infrastructure, Planning and Natural Resources (NSW) (former)
DLWC	Department of Land and Water Conservation (NSW) (former)
DOI	Department of Industry (NSW) (former)
DPE	Department of Planning and Environment (previously the Department of Planning, Industry and Environment (DPIE))
DPI	Department of Primary Industries (NSW)
DPIE	Department of Planning, Industry and Environment (NSW) (now Department of Planning and Environment (DPE))
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities (Cth) (former)
DUAP	Department of Urban Affairs and Planning (NSW) (former)
DWE	Department of Water and Energy (NSW) (former)
EC	electrical conductivity ($\mu\text{S}/\text{cm}$)
EEC	Endangered Ecological Communities
EERS	Emissions and Energy Reporting Scheme
EIS	Environmental Impact Statement
EMS	Environmental Management System
EPA	Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i> (NSW)

TERM / ACRONYM	DEFINITION
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>
EPG	Emergency Procedure Guide
ESCP	Erosion and Sediment Control Plan
ESD	ecologically sustainable development
ETV	erosion threshold velocity
ETSS	erosion threshold shear stress
eVDV	estimated vibration dose value
EY	Ernst and Young
FFDI	Forest Fire Daily Index
FM Act	<i>Fisheries Management Act 1994 (NSW)</i>
FMP	Floodplain Management Plan
FSR	flood- sensitive receptor
GAB	Great Artesian Basin
GAM	General Assessment Methodology
GDEs	Groundwater dependent ecosystems
GHG	greenhouse gas
GIS	Geospatial Information System
GMMP	Groundwater management and monitoring plan
GSC	Gwydir Shire Council
GTIA	Guide to Traffic Impact Assessment
GWP	global warming potential
ha	hectare
HCV	heavy commercial vehicle
HFC	hydrofluorocarbons
HIL	health investigation level
HSL	health screening level
Hz	hertz
IAQM	Institute of Air Quality Management
IBRA	Interim Biogeographic Regionalisation for Australia
IBC	immediate bulk containers
ICNG	Interim Construction Noise Guideline
ICOMOS	International Council on Monuments and Sites
ID	identification
Infrastructure SEPP	State Environmental Planning Policy (Infrastructure) 2007
IPCC	Intergovernmental Panel on Climate Change
IRAS	Inland Rail Alignment Study
IRDJV	Inland Rail Design Joint Venture (WSP Australia Pty Ltd and Mott MacDonald Pty Ltd)
IRSEO	Indigenous Relative Socioeconomic Index
IS	Infrastructure Sustainability
ISCA	Infrastructure Sustainability Council of Australia
ISO	International Organization for Standardization

TERM / ACRONYM	DEFINITION
kg/m	kilograms/metre
kL	kilolitre
km	kilometres
km/hr	kilometres per hour
km ²	square kilometres
KTP	key threatening process
kV	kilovolt
L/kg	litres/kilogram
LA90	A-weighted noise level exceeded for 90% of the measurement period
LAeq(period)	A-weighted equivalent noise level measured in decibels over a period
LAeq, 15mins	A-weighted equivalent noise level measured in decibels over a period of 15 minutes
LALC	Local Aboriginal Land Council
LCA	landscape character area
LCT	landscape character types
LCZ	landscape character zone
LEP	Local Environmental Plan
LEMC	Local Emergency Management Committee
LGA	local government area
LiDAR	Light Detection and Ranging
LLS Act	<i>Local Land Services Act 2013 (NSW)</i>
LOS	level of service
LSC	Land and Soil Capability
LTI	Lost Time Injury
LUCRA	Land Use Conflict Risk Assessment
LX	level crossing
m	metres
m/s	metres per second
m ²	square metres
m ³	cubic metres
mAHD	Metres above Australian Height Datum
mbgl	metres below ground level
MCA	multi-criteria analysis
mg/L	milligrams per litre
MJ/m ²	megajoules per square metre
mL	millilitres
ML/year	megalitre per yet
mm/s	millimetre per second
MNES	matters of national environmental significance
MPS	Moree Plains Shire
MPSC	Moree Plains Shire Council

TERM / ACRONYM	DEFINITION
MW	megawatts
N2NS Phase 1	Narrabri to North Star Phase 1
N2NS Phase 2	Narrabri to North Star Phase 2
NARCIiM	NSW and ACT Regional Climate Modelling Project
NCA	noise catchment area
NENWRP	New England North West Regional Plan 2036
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NGER Act	<i>National Greenhouse and Energy Reporting Act 2007 (Cth)</i>
NML	noise management level
NO ₂	nitrogen dioxide
NO _x	oxides of nitrogen
NPI	National Pollutant Inventory
NPW Act	<i>National Parks and Wildlife Act 1974 (NSW)</i>
NSW	New South Wales
NSW EPA	New South Wales Environment Protection Authority
NSW WQO	New South Wales Water Quality Objectives
NTU	Nephelometric Turbidity Units
NZS	New Zealand Standard
O ₃	ozone
OEH	Office of Environment and Heritage (NSW)
ONRSR	Office of the National Rail Safety Regulator
OOHW	out of hours work
OSOM	Oversize Overmass
OTSI	Office of Transport Safety Investigations
PAD	Potential Archaeological Deposits
PCT	plant community type
PM	particulate matter
PM ₁₀	particulate matter less than 10 microns diameter
PM _{2.5}	particulate matter less than 2.5 microns diameter
PMF	Probable Maximum Flood
POEO Act	<i>Protection of the Environment Operations Act 1991 (NSW)</i>
PO	performance outcome
PPV	peak particle velocity
PSC	prestressed concrete
QDL	Quantitative Design Limit
QLD	Queensland
RailBAM	rail bearing acoustic monitor
RailSQAD	rail squeal acoustic detector
RAP	Registered Aboriginal Party
RBL	rating background level
RCBC	reinforced concrete box culverts

TERM / ACRONYM	DEFINITION
REF	Review of Environmental Factors
RING	Rail Infrastructure Noise Guidelines
RMAR	rail maintenance access road
RMS	Roads and Maritime Services (NSW)
RRE	resource recovery exemption
RRMP	Rehabilitation and Reinstatement Management Plan
RSA	Road Safety Audit
RTA	Roads and Traffic Authority (NSW)
RtS	Response to Submissions report
SCR	State-controlled roads
SDS	Safety Data Sheet
SEARs	Secretary's Environmental Assessment Requirements
SEIFA	socio- economic index for an area
SEPP	State Environmental Planning Policy
SEPP 33	State Environmental Planning Policy No 33 (Hazardous and Offensive Development)
SEWPAC	Department of Sustainability, Environment, Water, Population and Communities
SFARP	so far as is reasonably practicable
SHI	State Heritage Inventory
SIAM	Significant Impact Assessment Methodology
SIMP	Social Impact Management Plan
SO2	sulphur dioxide
SoHI	Statement of Heritage Impact
SPIR	Submissions and Preferred Infrastructure Report
SRD SEPP	State Environmental Planning Policy (State and Regional Development) 2011
SRES	Special Report on Emissions Scenarios
SSI	State significant infrastructure
STEM	science, technology, engineering and maths
SWMP	Soil and Water Management Plan
TCS	Train Control System
TDS	total dissolved solids
TEC	threatened ecological community
TfNSW	Transport for New South Wales
TMP	Traffic Management Plan
TOF	top of formation
TOR	top of rail
TSP	total suspended particulates
TSR	Travelling Stock Reserve
UCSC	Unified Soil Classification System
UDLP	urban design and landscape plan
UNFCCC	United Nations Framework Convention on Climate Change

TERM / ACRONYM	DEFINITION
UXO	unexploded ordnance
vd	velocity depth
VdB	vibration velocity
VIP	vegetation integrity plots
VENM	virgin excavated natural material
VOC	volatile organic compound
WARR Act	<i>Waste Avoidance and Resources Recovery Act 2001 (NSW)</i>
Water Act	<i>Water Act 1912 (NSW)</i>
WMA	<i>Water Management Act 2000 (NSW)</i>
WMP	Waste Management Plan
WQO	water quality objectives
WSP	Water Sharing Plan
µg/m ³	micrograms per cubic metre of air

Glossary

Specific terms used throughout this EIS are listed and described below.

TERM	DEFINITION
A-weighted decibels [dB(A)]	The A weighting is a frequency filter applied to measured noise levels, to represent how humans hear sounds. The A-weighting filter emphasises frequencies in the speech range (between 1 kHz and 4 kHz), which the human ear is most sensitive to, and places less emphasis on low frequencies at which the human ear is not so sensitive. When an overall sound level is A-weighted it is expressed in units of dB(A).
Aboriginal object	Any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.
Aboriginal place or site	Declared by the Minister for the Environment, in accordance with Section 84 of the <i>National Parks and Wildlife Act 1974</i> (NSW) and by an order published in the Gazette, as a place that, in the opinion of the Minister, is or was of special significance with respect to Aboriginal culture.
Aboriginal places of heritage significance	Defined in the Standard Instrument Principal Local Environmental Plan as an area of land, the general location of which is identified in an Aboriginal heritage study adopted by the council, and that may be shown on the heritage Map. The term may include (but is not limited to) places that are declared as Aboriginal places under section 84 of the <i>National Parks and Wildlife Act 1974</i> (NSW).
Active control (level crossings)	Where the movement of vehicular or pedestrian traffic across a railway crossing is controlled using devices such as flashing signals, gates or barriers (or a combination of these), with the device/s activated prior to, and during, the passage of a train through the crossing.
Ambient noise	The all-encompassing noise at a point composed of sound from all sources near and far.
Annual exceedance probability (AEP)	The chance of a flood of a nominated size occurring in a particular year. The chance of the flood occurring is expressed as a percentage and, for large floods, is generally the reciprocal of the average recurrence interval (ARI). For example, the 1% AEP flood event is equivalent to the 100-year ARI flood event.
Anthropogenic	Human induced. Primarily used to refer to environmental pollution and pollutants originating from human activity.
Approved methods	The documents which list the methods that are legally approved for modelling and assessing various emissions and pollutants in NSW, e.g. air pollutants; water quality.
Aquatic	Water dwelling or related to water.
Aquifer	A groundwater bearing formation sufficiently permeable to transmit and yield groundwater or water bearing rock.
Average recurrence interval (ARI)	The long-term average number of years between the occurrence of a flood of a nominated size.
Background noise	The underlying level of noise present in the ambient noise when extraneous noise (such as transient traffic and dogs barking) is removed. The L 90 sound pressure level is used to quantify background noise.
Ballast	Crushed rock, stone, etc. used to provide a foundation for a railway track. Ballast usually provides the bed on which railway sleepers are laid, transmits the load from train movements, and restrains the track from movement.
Basis of Assessment	Any formal direction from a responsible state or Commonwealth agency under a relevant act, instructing the assessment approach for a Primary Approval Document. This includes the Secretary's Environmental Assessment Requirements (SEARs).
Biobank site	A site to which a biobanking agreement applies. Relevant in New South Wales.
Biodiversity	The variety of plant and animal life in the world or in a particular habitat.
Biodiversity offsets	Biodiversity offsets are measures that benefit biodiversity by compensating for the adverse impacts elsewhere of an action, such as clearing for development. Biodiversity offsets work by protecting and managing biodiversity values in one area in exchange for impacts on biodiversity values in another.
Biophysical environment	The physical environment (water, soil, etc.) as well as the biological activity within it (plants, animals, etc.).

TERM	DEFINITION
Bore	Constructed connection between the surface and a groundwater source that enables groundwater to be transferred to the surface either naturally or through artificial means.
Borrow pit	An area where material (such as sand, gravel or rock) has been excavated and/or processed for construction use at another location.
Bulk freight	Bulk freight generally involves large quantities of homogenous product, typically liquid or loose crushed solid material (such as cement, grains and ores), transported en-masse, without packaging.
Catchment	The land area draining through the main stream, as well as tributary streams, to a particular site. It always relates to an area above a specific location and is usually centered around a main waterbody (usually a river).
Classified road	A road that meets the definition of a classified road and is listed as such under the <i>Roads Act 1993</i> (NSW). It may include (but is not limited to) highways, main roads, and freeways.
Climate	The average weather experienced at a site or region over a period of many years, ranging from months to many thousands of years. The relevant measured quantities are most often surface variables such as temperature, rainfall and wind.
Climate scenario	A plausible and often simplified representation of the future climate, based on an internally consistent set of climatological relationships that has been constructed for explicit use in investigating the potential consequences of anthropogenic climate change, often serving as input to impact models.
Construction compound	An area used as the base for construction activities, usually for the storage of plant, equipment and materials and/or construction site offices and worker facilities.
Construction footprint	Temporary disturbance footprint where only temporary disturbance is proposed (e.g. laydown areas and construction accommodation).
Construction environmental management plan	A site-specific plan developed for the construction phase of a project, to ensure that all contractors and sub-contractors comply with the environmental conditions of approval for the project and that the environmental risks are properly managed.
Crossing loop	A section of track off to the side of the main track/s that allows a train to move to the side so that another train can pass.
Culvert	A structure that allows water to flow under a road, railway, track, or similar obstruction.
Cumulative impacts	Impacts that, when considered together, have different and/or more substantial impacts than a single impact assessed on its own.
Dangerous goods	Dangerous goods are substances or articles that pose a risk to people, property or the environment, due to their chemical or physical properties. They are usually classified with reference to their immediate risk.
Decibel	The measurement unit of sound.
drumMUSTER	<i>drumMUSTER</i> is a national program that has been set up for the collection and recycling of empty, cleaned, non-returnable crop production and on-farm animal health chemical containers.
Earthworks Materials Management Framework (ETC-08-03)	The Earthworks Materials Management Framework provides earthworks material types and compliance requirements. Complying earthworks materials shall be used to construct a stable foundation and formation suitable for ballast and track to be constructed upon, along with associated earthworks for drainage elements, such that it maintains stability and meets safety and performance standards over the design life.
Ecologically sustainable development	Development that uses, conserves and enhances the resources of the community so that ecological processes on which life depends are maintained, and the total quality of life, now and in the future, can be increased.
Ecosystem credit	A measurement of the value of EECs, CEECs and threatened species habitat for species that can be reliably predicted to occur with a plant community type. Ecosystem credits measure the loss in biodiversity values as a result of a proposal, and the gain in biodiversity values at an offset site.
Emission	A substance discharged into the air.
Equivalent continuous sound level [L _{eq}]	The constant sound level which, when occurring over the same period of time, would result in the receiver experiencing the same amount of sound energy.

TERM	DEFINITION
Existing rail corridor	The corridor within which existing rail infrastructure (including existing, non-operational rail infrastructure) are located. The existing rail corridor is defined by ARTC to mean everywhere within 15 m of the outermost rails; or within the boundary fence, where boundary fences are provided and are closer than 15 m; or, if the property boundary is less than 15 m, the property boundary; or a permanent structure such as a fence, wall or level crossing separating the operating rail corridor from other land.
Fauna	Animal life
Feasibility design	The N2NS design phase, which results in the creation of the reference design that forms the basis of the construction footprint and permanent footprint.
Flora	Plant life
Floodplain	An area of land that is inundated by floods up to and including the probable maximum flood event (flood prone land).
Formation	The earthworks/material, comprising capping and structural fill, on which the ballast, sleepers and tracks are laid.
Freight	Goods transported by truck, train, ship, or aircraft.
Freight task	The amount of freight transport, usually measured in tonnes or tonne-kilometres.
Frequency [f]	The repetition rate of the cycle measured in hertz (Hz). The frequency corresponds to the pitch of the sound. A high frequency corresponds to a high-pitched sound and a low frequency to a low-pitched sound.
Greenfield	A previously undeveloped or unconstructed site.
Greenfield rail corridor	A section of new track within a new rail corridor.
Groundwater	Water that is held in rocks and soil beneath the Earth's surface.
Heritage listed	An item, building or place included on statutory heritage lists maintained by local, state and/or Australian Governments.
Hydrology	The study of rainfall and surface water runoff processes.
Infrastructure sustainability	Infrastructure that is designed, constructed and operated to optimise long-term environmental, social and economic outcomes. An Infrastructure Sustainability (IS) Rating Tool has been developed by the Infrastructure Sustainability Council of Australia (ISCA) in collaboration with the industry, to drive and measure sustainability within infrastructure projects and assets.
Inland Rail Program	The Inland Rail program encompasses the design and construction of a new inland rail connection between Melbourne and Brisbane, via Wagga, Parkes, Moree, and Toowoomba. The route for Inland Rail is about 1,700 km in length. Inland Rail will involve a combination of upgrades of existing rail track and the provision of new track.
Intermodal	The movement of freight using multiple modes of transport (rail, ship, truck) without handling of the freight itself when changing modes. For a railway, this usually refers to the transport of freight in containers, which may be double stacked on the wagons carrying them.
$L_{A90(\text{period})}$	The sound pressure level exceeded for 90 per cent of the measurement period.
$L_{Aeq(\text{time})}$	Typically used to describe ambient (background) noise levels.
$L_{Aeq(1\text{ hour})}$	The busiest 1-hour 'equivalent continuous noise level'—it represents the typical L_{Aeq} noise level from all the proposal noise events during the busiest 1 hour of the assessment period.
$L_{Aeq(15\text{ hour})}$	The daytime 'equivalent continuous noise level'—it represents the cumulative effects of all the proposal noise events occurring in the daytime period from 7 am to 10 pm.
$L_{Aeq(24\text{ hour})}$	The 'equivalent continuous noise level,' sometimes also described as the 'energy-averaged noise level'—it represents the cumulative effects of all the proposed noise events occurring in one day.
$L_{Aeq(9\text{ hour})}$	The night-time 'equivalent continuous noise level'—it represents the cumulative effects of all the proposal noise events occurring in the night-time period, from 10 pm to 7 am.
L_{Amax}	The maximum sound level recorded during the measurement period.
Land use zone	Areas designated by a local government to have a particular function, e.g. retail, rural, residential or commercial.

TERM	DEFINITION
Landscape	All aspects of a tract of land, including landform, vegetation, buildings, villages, towns, cities and Infrastructure.
Landscape character	The combined quality of built, natural and cultural aspects that make up an area and provide its unique sense of place.
Landscape character zone	An area of landscape with similar properties or strongly defined spatial qualities, distinct from areas immediately adjacent.
Landscape feature	A component, part or feature of the landscape that is prominent or eye-catching, e.g. hills, buildings, vegetation.
Landscape quality	Largely subjective judgement based on particular characteristics that influence the way in which the environment is experienced, including special interests such as cultural associations or heritage interests, the presence and/or type of elements and condition.
Level crossing	A place where rail lines and a road cross at the same elevation.
Level crossing protection	The level of control provided at level crossings, which is determined on a case- by-case basis and depends on the particular characteristics of a crossing. It generally falls into two categories: passive protection (uses warning signage only) or active protection (uses either signage and flashing lights, or signage/flashing lights with boom gates).
Level of service	Defined by Austroads as a measure for ranking operating road and intersection conditions based on factors such as speed, travel time, freedom to manoeuvre, interruptions, comfort and convenience.
L _{max}	The maximum sound pressure level measured over the measurement period.
L _{min}	The minimum sound pressure level measured over the measurement period.
Local road	Road used primarily to access properties located along the road.
Maximum parameters approach	Defined by DPIE as the maximum extent of the project, e.g. spatial extent (project footprint), height, processing capacity or throughput. It could be considered as the realistic full extent of the project. This allows the proponent to clearly identify the maximum extent of elements of the project that require further design following EIS finalisation.
Metres above Australia Height Datum (mAHD)	The elevation in metres with respect to the Australian Height Datum (AHD). The AHD sets mean sea level as zero elevation. Mean sea level was determined from observations recorded by 30 tide gauges around the coast of the Australian continent for the period 1966–1968.
Non-bulk freight	Non-bulk freight is generally characterised as any containerised, packaged or other unitised freight, such as: pallets; motor vehicles and trailers; laden transported vehicles and live animals. It is generally placed or lifted onto or into transport vehicles or holds. It often involves heterogeneous goods being moved between dispersed locations. Non-bulk freight varies in density, perishability and fragility.
PAD	A PAD is a location that is considered to have a potential for sub-surface cultural material. This is determined from a visual inspection of the site, background research of the area and the landform's cultural importance.
Passive control (level crossings)	Where the movement of vehicular or pedestrian traffic across a railway crossing is controlled using signs or devices that are not activated by the approach or passage of a train, relying on the road user to detect the approach or presence of a train by direct observation.
Permanent footprint	The rail corridor, which includes the rail tracks and associated infrastructure, as well as other permanent works associated with the proposal.
Pioneer line	Rail lines constructed to a lesser standard than main rail lines, providing access to mainly agricultural areas.
PM2.5	Particulate matter 2.5 microns or less in diameter. This is a classification of particles by size rather than chemical properties.
PM10	Particulate matter 10 micrometres or less in diameter. Particles in this size range make up a large proportion of dust that can be drawn deep into the lungs. This is a classification of particles by size rather than chemical properties.
Possession	A period of time during which a rail line is blocked to trains, to permit work to be carried out on or near the line.

TERM	DEFINITION
Private Stock Underpass	A structure (e.g. a culvert) in a rail formation designed to allow the movement of stock under the rail line between private property on either side of the rail line.
Private level crossing	A crossing of the rail line at grade, which is located within the rail corridor to provide access to, or between, private property adjacent to the rail line.
Proposal	The construction and operation of the North Star to Border Phase 2 section of Inland Rail.
Proposal site	The area that would be directly affected by construction works (also known as the construction footprint). It includes the location of proposal infrastructure, the area that would be directly disturbed by the movement of construction plant and machinery, and the location of the storage areas/compounds sites, etc. that would be used to construct that infrastructure.
Rail alignment	The exact positioning of the track, accurately defined both horizontally and vertically, along which the rail vehicles operate.
Rail corridor	The corridor within which the rail tracks and associated infrastructure are located.
Rail level	The theoretical level of the running surface of the rails.
Rail maintenance access road	A road running adjacent to the rail alignment to provide access for maintenance vehicles and personnel.
Rating background level	The overall background level for each day, evening and night period for the entire length of noise monitoring.
Reference design	The N2NS engineering design created during the feasibility design phase, which forms the basis of the construction footprint and permanent footprint.
Relic	A relic is defined by the <i>Heritage Act 1977</i> (NSW) as, ' <i>any artefact, object or material evidence which relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and which is of State or local heritage significance.</i> '
Risk	Chance of something happening that will potentially have an undesirable effect. It is measured in terms of likelihood and consequence.
Road reserve	A legally defined area of land within which facilities such as roads, footpaths and associated features may be constructed for public travel.
Scarred trees	Trees that feature Aboriginal derived scars are distinct due to the scar's oval or symmetrical shape and the occasional use of steel or, more rarely, stone axe marks on the scar's surface. Scarred trees are identified by the purposeful removal of bark for use in the manufacture of artefacts such as containers, shields and canoes. The bark was also used for the construction of shelters. Other types of scarring include toeholds cut in the trunks or branches of trees for climbing purposes and the removal of bark to indicate the presence of burials in the area.
Scour	The erosion of material by the action of flowing water.
Section 170 Heritage and Conservation Register	Under section 170 of the <i>Heritage Act 1977</i> (NSW), all state government agencies must keep and administer a database of heritage assets, called a Section 170 Heritage and Conservation Register. ARTC is also required to maintain such a register.
Sensitive receivers	Land uses that are sensitive to potential noise, air and visual impacts, such as residential dwellings, schools and hospitals
Sensitivity	The sensitivity of a landscape character area or view and its capacity to absorb change. In the case of visual impact this also relates to the type of viewer and number of viewers.
Single line track	Trains travelling in both directions share the same track.
Sound pressure level	The amount of sound at a specified point.
Species credit	The class of biodiversity credits created or required for the impact on threatened species that cannot be reliably predicted to use an area of land based on habitat surrogates. Species that require species credits are listed in the threatened species profile database.
Spoil	Material generated by construction.
Standard gauge	Gauge refers to how far apart the rails on a railway track are spaced. Standard gauge indicates that the rails will be spaced 1.435 m apart.

TERM	DEFINITION
Strahler stream order	Classification system that gives a waterway an 'order' according to the number of tributaries associated with it.
State significant infrastructure	Major transport and services infrastructure which has been declared to be State significant infrastructure under the EP&A Act.
Study area	The study area is defined as the wider area including and surrounding the proposal site, with the potential to be directly or indirectly affected by the proposal (e.g. by noise and vibration, visual or traffic impacts). The actual size and extent of the study area varies according to the nature and requirements of each impact assessment technical report.
Surface water	Water flowing or held in streams, rivers or other wetlands in the landscape.
Terrestrial	On or relating to the earth or dry land.
Track	The structure consisting of the rails, fasteners, sleepers and ballast, which sits on the formation.
Track formation	Refer to the definition of formation.
Traffic noise	The total noise resulting from road traffic. The L eq sound pressure level is used to quantify traffic noise.
Travelling stock reserves/routes	Travelling stock reserves are parcels of Crown land reserved under the <i>Crown Land Management Act 2016</i> (NSW) for use by travelling stock.
Tributary	A river or stream flowing into a larger river or lake.
Turnout	A junction point where a rail vehicle can leave a given track for a branching or parallel track.
Underbridge	A bridge spanning an opening under a railway or road. Note, the term underbridge is used interchangeably with the general term bridge in this EIS.
View	The visual experience from the viewers perspective.
Visual amenity	The value of a particular area or view in terms of what is seen.
Visual catchment	Extent of potential visibility to or from a specific area, feature or proposal.
Visual impact	The impacts on the views from residences, workplaces and public places. This can be positive (i.e. benefit or an improvement) or negative (i.e. adverse or a detraction).
Waste	Waste is defined by the EPA as any matter (whether liquid, solid, gaseous or radioactive) that is discharged, emitted or deposited in the environment in such volume, constituency or manner as to cause an alteration to the environment.
Waste management hierarchy	The waste management hierarchy is a set of priorities for the efficient use of resources, which underpins the objectives of the <i>Waste Avoidance and Resource Recovery Act 2001</i> (NSW). The waste management hierarchy progresses from avoidance (most preferred), to re-use/recycling, to disposal (least preferred).
Water table	The surface of saturation in an unconfined aquifer, or the level at which pressure of the water is equal to atmospheric pressure.

A technical glossary for additional terms may be found in ARTC specifications, including ETC-08-03: Earthworks Materials Specification.