



**Baralaba South Project
Environmental Impact Statement**

CHAPTER 21

Abbreviations, Acronyms and Glossary

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21.0 Abbreviations, acronyms and glossary

21.1 Abbreviations and Acronyms

ACH Act	Aboriginal Cultural Heritage Act 2003
ADG	Australian Dangerous Goods
AEP	Annual Exceedance Probability
AHD	Australian Height Datum
ALC	Agricultural Land Class
AMTD	Average Middle Thread Distance
ANFO	ammonium nitrate and fuel oil
ANZECC	Australian and New Zealand Environment and Conservation Council
ARI	Average Recurrence Interval
AS	Australian Standard
Biosecurity Act	<i>Biosecurity Act 2014</i> (Qld)
BNCOP	Baralaba North Continued Operations Project
BNM	Baralaba North Mine
BOM	Bureau of Meteorology
BSP	Baralaba South Project
CCC	Community Consultative Committee
CCiA	Climate Change in Australia
CHIMA	Cultural Heritage Investigation and Management Agreement
CHMP	Cultural Heritage Management Plan
CHPP	Coal Handling and Preparation Plant
CMSH Act	Coal Mining Safety and Health Act 1999
CHMP	Cultural Heritage Management Plan
CHPP	Coal Handling and Preparation Plant
CLR	Contaminated Land Register
DAF	Department of Agriculture and Fisheries
DAFF	Department of Agriculture, Fisheries and Forestry
DAWE	Department of Agriculture, Water and the Environment
DCCEEW	Department of Climate Change, Energy, the Environment and Water

DEHP	Department of Environment and Heritage Protection
DES	Department of Environment and Science
DIDO	Drive-in Drive-out
DIN	Dissolved Organic Nitrogen
DNRM	Department of Natural Resources and Mines
DoR	Department of Resources
DO	Dissolved Oxygen
DRDMW	Department of Regional Development, Manufacturing and Water
DSA	Design Storage Allowance
DSDSATSIP	Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships
DSITI	Department of Science, Information Technology and Innovation
DTIS	Department of Tourism, Innovation and Sport
DTMR	Department of Transport and Main Roads
EA	Environmental Authority
EC	Electrical Conductivity
EES	Environmental Earth Sciences
EFO	Environmental Flow Objectives
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EMR	Environmental Management Register
EO Act	Environmental Offsets Act 2014
EO Regulation	Environmental Offsets Regulation 2014
EP Act	<i>Environmental Protection Act 1994</i>
EP Regulation	Environmental Protection Regulation 2019
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EPBC Regulation	Environment Protection and Biodiversity Conservation Regulation 2000
EPC	Exploration Permit for Coal
EPP (Air)	Environmental Protection (Air) Policy 2019 EPP (Noise) Environmental Protection (Noise) Policy 2019
EPP (Water)	Environmental Protection (Water and Wetland Biodiversity) Policy 2019
ERA	Environmentally Relevant Activity

ERP	Emergency Response Plan
ESD	Ecologically Sustainable Development
ESS	Extreme Storm Storage
ETL	Electricity Transmission Line
FFA	Flood Frequency Analysis
FIFO	Fly-in Fly-out
FTE	Full Time Equivalent
GAB	Great Artesian Basin
GBR	Great Barrier Reef
GDE	Groundwater Dependent Ecosystems
GES	General Ecological Significance
GHG	Greenhouse Gas
GNP	Gaangalu Nation People
GRP	Gross Regional Product
GVA	Gross value added
HES	High Ecological Significance
Heritage Act	<i>Queensland Heritage Act 1992</i>
IAA	Important Agricultural Areas
IAS	Initial Advice Statement
ICN	Industry Capability Network
IESC	Independent Expert Scientific Committee
IQQM	Integrated Quantity and Quality Model
LFC	Landscape Fragmentation and Connectivity
LGA	Local Government Area
LW	lacustrine wetland
LWP	Leaf Water Potential
MCU	Material Change of Use
MDL	Mineral Development Licence
MEDLI	Model for Effluent Disposal Using Land Irrigation
MERCP Act	<i>Mineral and Energy Resources (Common Provisions) Act 2014</i>
MERFP Act	Mineral and Energy Resources (Financial Provisioning) Act

MIA	Mine Infrastructure Area
ML	Mining Lease
MLA	Mining Lease Application
MLES	Matters of Local Environmental Significance
MNES	Matters of National Environmental Significance
MR Act	<i>Mineral Resources Act 1989</i>
MSES	Matters of State Environmental Significance
MWD	Mine Water Dam
NAF	Non-Acid Forming
NATA	National Association of Testing Authorities
NC Act	<i>Nature Conservation Act 1992</i>
NGER	National Greenhouse and Energy Reporting
NGER Act	<i>National Greenhouse and Energy Reporting Act 2007</i>
NICH	Non-Indigenous Cultural Heritage
N/A	not applicable
NUMA	Non Use Management Area
OMP	Offset Management Plan
PAA	Priority Agricultural Area
PAF	Potentially Acid Forming
PCI	Pulverised Coal Injection
PET	Plecoptera, Ephemeroptera and Trichoptera
PLA	Priority Living Area
PM ₁₀	particulate matter less than 10 micrometres in size
PM _{2.5}	particulate matter less than 2.5 micrometres in size
PMF	Probable Maximum Flood
PMLU	Post-Mining Land Use
PPV	Peak Particle Velocity
PRC Plan	Progressive Rehabilitation and Closure Plan
PRCP schedule	Progressive Rehabilitation and Closure Plan schedule
PW	palustrine wetland
QEOP	Queensland Environmental Offsets Policy

Qld	Queensland
RA	Rehabilitation Areas
RE	Regional Ecosystem
REMP	Receiving Environment Monitoring Program
ROM	Run of Mine
ROP	Resources Operations Plan
RPI Act	<i>Regional Planning Interest Act 2014</i>
RPI Regulation	Regional Planning Interest Regulation 2014
SAT	Spot Assessment Technique
SCL	Strategic Cropping Land
SEG	Simpson Engineering Group Pty Ltd
SHMS	Safety and Health Management System
SIA	Social Impact Assessment
SILO	Scientific Information for Landowners
SIMP	Social Impact Management Plan
SMART	Specific, Measurable, Achievable, Realistic and Timely
SMU	Soil Management Unit
SPRAT database	Species Profiles and Threats Database
SR	Sensitive Receptor
SRI	Significant Residual Impact
SRTM	Shuttle Radar Topography Mission
SSRC Act	<i>Strong and Sustainable Resource Communities Act 2017</i>
STP	Sewage Treatment Plant
TDS	Total Dissolved Solids
TEC	Threatened Ecological Community
TEM	Transient Electromagnetic
the Project	Baralaba South Project
TLO	Train Load Out
TOR	Terms of Reference
TSP	Total Suspended Particulates
TSS	Total Suspended Solids

UMA	Unique Mapping Area
URBS	Unified River Basin Simulator
USGS	United States Geological Survey
VM Act	<i>Vegetation Management Act 1999</i>
VWP	Vibrating Wire Piezometer
Water Act	<i>Water Act 2000</i>
WEPP	Watershed Erosion Prediction Project
WHS Act	<i>Work Health and Safety Act 2011</i>
WoNs	Weeds of National Significance
WPA	Wetland Protection Area
WQO	Water Quality Objectives
WRE	Waste Rock Emplacement
WSS	Water Supply Scheme

21.2 Units

CO ₂ -e	Carbon Dioxide Equivalent	m ³	cubic metre
dB(A)	A-weighted decibel	Mbcm	million bank cubic metres
dB(L)	linear decibel	mm	millimetre
dB(Z)	no weighting applied to the decibel	min.	minimum
dB(lin)	decibel measurement without adjustment	max.	maximum
ha	hectare	mg	milligram
Hz	Hertz	mg/L	milligrams per litre
kg	kilogram	mgbf	metres below ground level
kl	kilolitre	ML	megalitre
km	kilometre	Mt	million tonnes
km ²	square kilometres	Mtpa	million tonnes per annum
km/hr	kilometre per hour	NTU	Nephelometric Turbidity Unit
kv	kilovolt	N/m ²	newtons per square metre
kW	kilowatt	tph	tonnes per hour
L	litre	W/m ²	Watts per square metre
L _{eq,adj}	A-weighted sound pressure level of a continuous steady sound and adjusted for tonal character.	°	degrees
L _{eq,adj,1hr}	A-weighted sound pressure level of a continuous, steady sound adjusted for tonal character that, within a one-hour period, has the same mean square sound pressure of a sound that varies with time.	°C	degrees Celsius
m	metre	%	percent
m ²	square metre	% sat.	percentage saturation
		µg/cm	micrograms per centimetre
		µg/L	micrograms per litre
		µS/cm	microSiemens per centimetre

21.3 Glossary

Acid mine drainage: Also termed acid rock water or acid rock drainage, refers to the outflow of acidic water from metal mines or coal mines. Acid mine drainage occurs naturally within most environments as part of the rock weathering process. However, this is exacerbated by large-scale earth disturbances characteristic of mining and other large construction activities, usually within rocks containing an abundance of sulphide minerals.

Administering Authority: As defined in section 4 of the EP Act:

- a) for a matter, the administration and enforcement of which has been developed to local government under section 514 – the local government: or
- b) for another matter – the chief executive.

Alluvial: Sand, silt, clay, gravel, or other matter deposited by flowing water, as in a riverbed, floodplain, delta, or alluvial fan.

Ambient air quality: The all-encompassing air quality associated with a given environment. It is the cumulative result of emissions (e.g. dust, particulates and gases) from many sources, both near and far.

Ambient noise: The existing noise level experienced at a specific location.

Amenity: Useful and enjoyable quality

Annual Exceedance Probability: The probability that a flood of a defined magnitude or larger will occur in any year.

Aquatic: Living in or on water or concerning water.

Aquifer: A geological formation bearing groundwater that is permeable (unconfined) or impermeable (confined) to the transmission of groundwater.

Baseline monitoring: Monitoring conducted over a specified period to collect data to define a specific characteristic of an area before the commencement of a specific activity.

Bilateral agreement: An agreement between the Commonwealth of Australia and the State of Queensland relating to an environmental assessment that allows the Commonwealth Minister for the Environment to rely on specified environmental impact assessment processes of the State of Queensland in assessing actions under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Biosecurity: Procedures and measures designed to prevent and respond to pests and diseases that threaten Australia's economy and environment.

Blasting: The use of explosives to fracture rock, coal or other materials for later recovery.

Bund: Also termed a bund wall or bunding, is an embankment that is constructed around an area and / or structure that is designed to prevent inflow or outflow of water or can be used to reduce the impact of noise to the surrounding environment.

Clean water: Water from undisturbed catchments, suitable for discharge without treatment.

Coal seam: A bed or stratum of coal.

Coal reject: Solid waste produced during the processing of coal, typically from a CHPP. Coal reject typically comprises crushed siltstone, mudstone and fine-grained sandstone, which is mined as coal seam roof, parting or floor material during the extraction of ROM coal. Coal reject is commonly produced in different size fractions (fine and coarse reject).

Coarse reject: Coarse solid waste materials produced from the CHPP as part of the processing of coal.

Controlled action: If a proposed action is considered likely to have a significant impact on a Matter of National Environmental Significance, the action requires assessment and approval under the EPBC Act before it can proceed.

Critical habitat: As defined by the NC Act:

- 1) Critical habitat is habitat that is essential for the conservation of a viable population of protected wildlife or community of native wildlife, whether or not special management considerations and protection are required. (NC Act)
- 2) A critical habitat may include an area of land that is considered essential for the conservation of protected wildlife, even though the area is not presently occupied by the wildlife.

Critical habitat: As defined by the EPBC Regulations 2000:

Identification of critical habitat

- 1) For subsection 207A(1) of the Act, the Minister may, in identifying habitat, take into account the following matters:
 - a) whether the habitat is used during periods of stress; Examples of period of stress: Flood, drought or fire.
 - b) whether the habitat is used to meet essential life cycle requirements; Examples: Foraging, breeding, nesting, roosting, social behaviour patterns or seed dispersal processes.
 - c) the extent to which the habitat is used by important populations;
 - d) whether the habitat is necessary to maintain genetic diversity and long-term evolutionary development;
 - e) whether the habitat is necessary for use as corridors to allow the species to move freely between sites used to meet essential life cycle requirements;
 - f) whether the habitat is necessary to ensure the long-term future of the species or ecological community through reintroduction or re-colonisation;
 - g) any other way in which habitat may be critical to the survival of a listed threatened species or a listed threatened ecological community.

Cumulative impacts: The impacts on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions.

Drawdown: The localised lowering of the groundwater level.

Ecologically sustainable development: Using, conserving and enhancing the community's resources 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: A functional unit consisting of all the living organisms (plants, animals and microbes) in a given area, and all the non-living physical and chemical factors of their environment, linked together through nutrient cycling and energy flow.

Electrical conductivity: The measure of water's capability to pass electrical flow, which is directly relation to the concentration of ions in the water.

Environment: As defined in section 8 of the EP Act:

- a) Ecosystems and their constituent parts, including people and communities; and
- b) all natural and physical resources; and
- c) the qualities and characteristics of locations, places and areas, however large or small, that contribute to their biological diversity and integrity, intrinsic or attributed scientific value or interest, amenity, harmony and sense of community; and
- d) the social, economic, aesthetic and cultural conditions that affect, or are affected by, things mentioned in paragraphs (a) to (c).

Environmental authority: As defined in section 4 of the EP Act:

- a) Generally—
 - i) An environmental authority issued under section 195 that approves an environmentally relevant activity applied for in an application; or
 - ii) If a replacement environmental authority is issued for an environmental authority – the replacement environmental authority; or
- b) For chapter 5, part 14, division 3, see section 316 A.

Environmentally relevant activities: As defined in subdivision 4, section 18 of the EP Act:

Each of the following is an environmentally relevant activity:

- a) an agricultural ERA as defined under section 79;
- b) a resource activity as defined under section 109; and
- c) an activity prescribed under section 19 as an environmentally relevant activity.

Environmental value: As defined in section 9 of the EP Act:

- a) A quality or physical characteristic of the environment that is conducive to ecological health or public amenity or safety; or
- b) Another quality of the environment identified and declared to be an environmental value under an environmental protection policy or regulation.

Ephemeral stream: A stream that flows only briefly during and following rainfall in the immediate locality.

Essential habitat: As defined in section 20AC of The VM Act:

- 1) Essential habitat, for protected wildlife, is a category A area, a category B area or category C area shown on the regulated vegetation management map—
 - a) that has at least 3 essential habitat factors for the protected wildlife that must include any essential habitat factors that are stated as mandatory for the protected wildlife in the essential habitat database; or
 - b) in which the protected wildlife, at any stage of its life cycle, is located.

Fine reject: Fine-grained mining waste materials produced from a CHPP as part of the processing and washing of coal.

Full-time equivalent (FTE): A unit of measurement equal to one employee working a full-time job over a specified time period.

Greenhouse gas: Any atmospheric gas that contributes to the greenhouse effect.

Gross regional product: Gross regional product is a monetary measure of the market value of all final goods and services produced in a region or subdivision of a country in a given period of time.

Groundwater: The water beneath the Earth's surface in soil pore spaces and in the fractures of rock formations.

Groundwater Dependent Ecosystems (GDE): Ecosystems that are reliant on either the subsurface presence or surface expression of groundwater.

Material environmental harm: As defined in subdivision 3, section 16 of the EP Act:

- 1) Material environmental harm is environmental harm (other than environmental nuisance)—
 - a) that is not trivial or negligible in nature, extent or context; or
 - b) that causes actual or potential loss or damage to property of an amount of, or amounts totalling, more than the threshold amount but less than the maximum amount; or
 - c) that results in costs of more than the threshold amount but less than the maximum amount being incurred in taking appropriate action to—
 - i) prevent or minimise the harm; and
 - ii) rehabilitate or restore the environment to its condition before the harm.
- 2) In this section—
 - a) maximum amount means the threshold amount for serious environmental harm.
 - b) threshold amount means \$5000 or, if a greater amount is prescribed by regulation, the greater amount.

Mineral waste: Overburden, interburden and similar 'waste rock' (spoil) material mined and disposed during extraction of coal. In this EIS, the definition of Mineral Waste also extends to coal reject from the CHPP.

Non-acid forming (NAF): Considered unlikely to be a source of acidic drainage.

Offset: An action that balances, counteracts, or compensates for the adverse impacts of another action.

pH: A relative measure of the acidity or alkalinity of a water based upon a scale that ranges between 0 and 14 with 7 being neutral.

PM₁₀: Fine airborne particles with a diameter of less than 10 µm are small enough to be breathed into the lungs.

PM_{2.5}: Particles with an aerodynamic diameter of less than 2.5 µm.

Potential habitat: An area of land where the species is not known to occur but where the species could potentially occur.

Potentially acid forming (PAF): Material that has a significant sulphur content and is likely to generate acid in excess of its inherent neutralising capacity.

Regional ecosystem: A vegetation community in a bioregion that are consistently associated with a particular combination of geology, landform and soil.

Rehabilitation: The restoration of a landscape and especially the vegetation following its disturbance.

Remnant vegetation: Woody vegetation is mapped as remnant where the dominant canopy has greater than 70% of the height and greater than 50% of the cover relative to the undisturbed height and cover of that stratum and is dominated by species characteristic of the vegetation's undisturbed canopy.

Runoff: A portion of precipitation (rain, hail and snow) that flows across the ground surface as water.

Sediment dam: A structure that is designed to settle suspended sediment.

Serious environmental harm: As defined in subdivision 3, section 17 of the EP Act:

- 1) Serious environmental harm is environmental harm (other than environmental nuisance)—
 - a) that is irreversible, of a high impact or widespread; or
 - b) caused to:
 - i) an area of high conservation value
 - ii) or an area of special significance; such as the Great Barrier Reef World Heritage Area; or
 - c) that causes actual or potential loss or damage to property of an amount of, or amounts totalling, more than the threshold amount; or
 - d) that results in costs of more than the threshold amount being incurred in taking appropriate action to—
 - i) prevent or minimise the harm; and
 - ii) rehabilitate or restore the environment to its condition before the harm.

- 2) In this section—

threshold amount means \$50000 or, if a greater amount is prescribed by regulation, the greater amount.

Spoil dump: The area where mine waste (overburden or other waste material removed in mining, quarrying, dredging, or excavating) are disposed of or piled.

Stakeholder: A person, group or organisation that has an interest in the Project.

Stratigraphy: A branch of geology concerned with the order and relative position of strata and their relationship to geological time.

Stygofauna: Aquatic invertebrates that live in groundwater systems.

Terrestrial: Living on land or on the ground.

Tonnes of carbon dioxide equivalent: Concentration of CO₂ that would cause the same level of radiative forcing as a given type and concentration of greenhouse gas.

Topsoil: The upper most layer of soil where the highest concentration of organic matter and micro-organisms are found.

Total suspended particulate: Tiny airborne particles that are less than 100 µm in diameter.

Waste: As defined in subdivision 2, section 13 of the EP Act:

- 1) Waste includes anything, other than a resource approved under the Waste Reduction Act, Chapter 8, that is—
 - a) left over, or an unwanted by-product, from an industrial, commercial, domestic or other activity; or

- b) surplus to the industrial, commercial, domestic or other activity generating the waste.
- 2) Waste can be a gas, liquid, solid or energy, or a combination of any of them.
- 3) A thing can be waste whether or not it is of value.
- 4) For subsection (1), if the approval of a resource under the Waste Reduction Act, chapter 8, is a specific approval, the resource stops being waste only in relation to the holder of the approval.
- 5) Despite subsection (1), a resource approved under the Waste Reduction Act, chapter 8, becomes waste—
 - a) when it is disposed of at a waste disposal site; or
 - b) if it is deposited at a place in a way that would, apart from its approval under that chapter, constitute a contravention of the general littering provision or the illegal dumping of waste provision under that Act—when the depositing starts.
- 6) In this section—
 - a) for waste disposal site see the Waste Reduction Act, section 8A.
 - b) Waste Reduction Act means the Waste Reduction and Recycling Act 2011