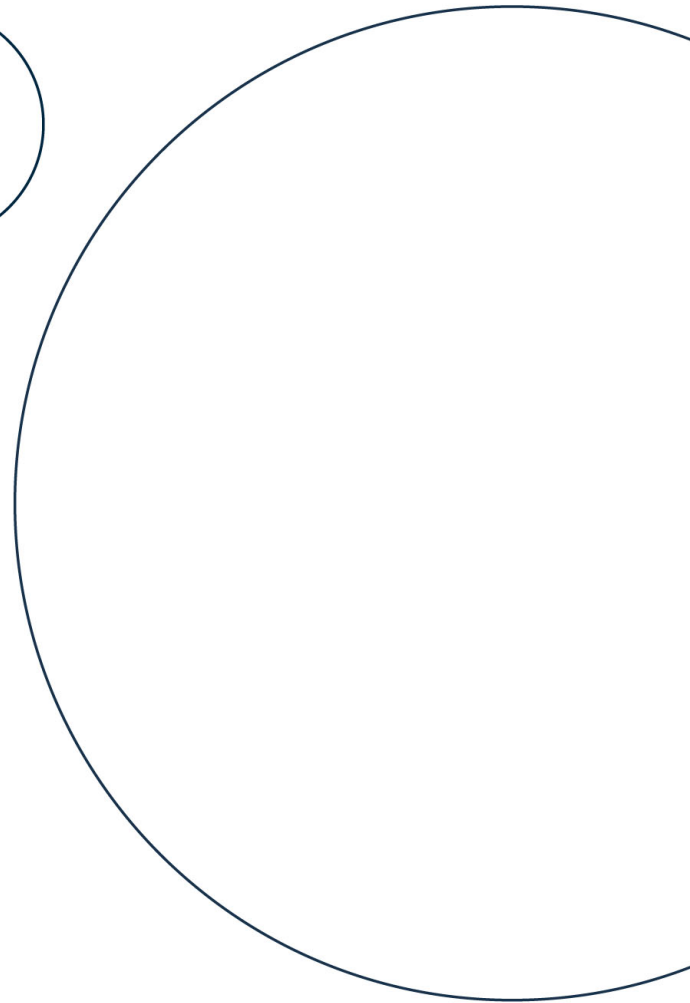
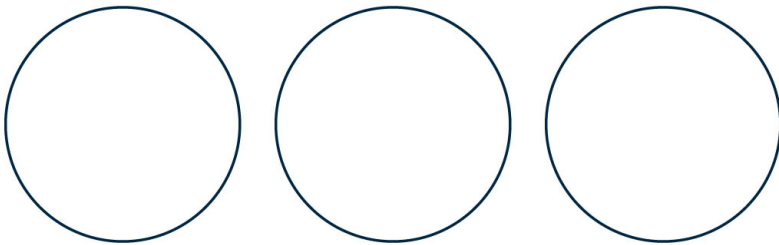


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GLOSSARY



23 GLOSSARY

The following terms are commonly used throughout this EIS. Further explanation or description may be provided in the main report or appendices.

Afflux	The increase in water level resulting from a change in the watercourse or floodplain. The change in water level is relative to the situation which would have taken place prior to when the change was made. Positive afflux represents an increase in water level and a negative afflux represents a decrease in water level.
Alkaline	Basic, or having a pH of 7.0 or higher. Pure water has a pH value around 7 and is neutral.
Alluvium	Sediment deposited by a flowing stream, consisting of unconsolidated materials including gravel, clay, silt and sand.
Anabranch	A stream that branches from a main river then reunites with it.
Anastomosed	Interconnected or joined repeatedly to form a network.
Annual Return	The sending or receiving of yearly documents, for the purposes of the <i>Environmental Protection Act 1994</i> (Qld) as required by the Environmental Protection Agency.
ANZECC/ARMCANZ	Australian and New Zealand Environment and Conservation Council and the Agriculture and Resource Management Council of Australia and New Zealand
Aquatic Macrophyte	A macroscopic plant, visible to the unaided eye, which has adapted to aquatic habitats.
Aquifer	Rock or sediment in a formation, group of formations or part of a formation that is saturated and sufficiently permeable to transmit economic quantities of water to wells and springs
Average Recurrence Interval (ARI)	The long-term average number of years between the occurrence of a flood as big as, or larger than, the selected event.
Avulsion	The sudden shift in the course of a stream during a flood event.
Background Noise	The total noise present and continuous at a given location, excluding extraneous noise and the noise source of interest. Commonly measured using the statistical parameter, LA_{90} , the A-weighted noise level that was exceeded for ninety per cent of the monitoring period.
Berm	A sloped wall or embankment (typically constructed of earth, hay bales, or timber framing) used to prevent inflow or outflow of material into/from an area.
Biodiversity	The diversity of different species of plants, animals and micro-organisms, including the genes they contain.
Brigalow	Ecological community with <i>Acacia harpophylla</i> dominant or co-dominant.

Bund	An embankment or low wall constructed around an area to prevent the inflow or outflow of liquids. Also called Bunding.
Carbon Dioxide Equivalent (CO_{2e})	A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential.
Catchment	The surface drainage area from which a river, stream or reservoir receives its water.
Coal Reserve	The component of the Coal Resource which is planned to be mined.
Coal Resource	The total amount of useable coal in a given area, as determined through geological surveys.
Coking Coal	Black coal which can be used to produce a material suitable for iron and steel production.
Confluence	The area where two or more rivers come together to form one river.
Demographics	The statistics of a population or section of a population.
Declared Plants	Prescribed under the <i>Land Protection (Pest and Stock Route Management) Act 2002</i> (Qld), plants that are considered serious or potentially serious pests in Queensland. Landowners including state agencies may be required to control declared pest plants consistent with the guidelines and local government area pest management plans and the Queensland Weeds Strategy 2002–06.
Decommission	The final rehabilitation of a mine site following the completion of mining operations.
Design Discharge	Flow rate or discharge in a river or watercourse corresponding to a designated average recurrence interval.
Discharge	The flow rate in a water course, measured in m ³ /s.
Diurnal	Active during the day.
Dragline	A type of excavating equipment which casts a rope-hung bucket some distance, collects the material by pulling the bucket towards itself on the ground by a second rope, elevates the bucket and dumps the material on a spoil bank, in a hopper, or on a pile.
Easement	A registrable instrument that traditionally burdens one lot and benefits another. The terms of the easement instrument will determine the rights that are given under the easement.
Ecology	The branch of biology that deals with the relations between organisms and their environment.
Ecosystem	An interacting system of animals, plants, other organisms and non-living parts of the environment.
Electrical Conductivity	The ability of a substance (solid, liquid or gas) to transmit electricity.
Emulsion	Suspension of liquid within another liquid.
Endangered Species	Prescribed under the <i>Nature Conservation Act 1992</i> (Qld), a species is endangered if: there have been thorough searches conducted for the wildlife and the wildlife has not been seen in the wild over a period that

is appropriate for the life cycle or form of the wildlife; or the habitat or distribution of the wildlife has been reduced to an extent that the wildlife may be in danger of extinction; or the population size of the wildlife has declined, or is likely to decline, to an extent that the wildlife may be in danger of extinction; or the survival of the wildlife in the wild is unlikely if a threatening process continues.

Endangered Regional Ecosystem

Prescribed under the *Vegetation Management Act 1999* (Qld) and has either (a) less than 10% of its pre-clearing extent remaining; or (b) 10-30% of its pre-clearing extent remaining and the remnant vegetation remaining is less than 10,000 ha.

Environmentally Relevant Activities

Activities listed under Schedule 1 of the *Environmental Protection Regulation 1998* (Qld) that require an Environmental Authority.

Ephemeral

A watercourse with defined bed and banks which flows only intermittently after rain.

Epidemiological Study

Study considering the factors affecting the health and illnesses of individuals and populations.

Erosion

The wearing away of land surface by wind or water, intensified by land-clearing practices related to farming, residential or industrial development, road building, or logging.

Eutrophication

A process whereby pollutants cause a body of water to become over-rich with nutrients causing algae to grow rapidly and deplete the oxygen supply.

Extensometer

A device for measuring small changes in length. Used in geotechnical and materials science areas.

Final Void

The last strip excavated in a series of pits which, together with its access ramp, remains after the cessation of open cut mining.

Fissures

A narrow opening produced by cleavage or separation of parts, a cleft.

Floodplain

Area of land which is subject to inundation by floods up to and including the probable maximum flood event.

Freeboard

The difference in height between the adopted flood planning level and the flood level used to determine the flood planning level. (It provides a factor of safety to compensate for uncertainties in the estimation of flood level across the floodplain.)

Gauging Station

A site on a river where water levels and flow velocities are measured.

Gaussian Curve

Normal curve: a symmetrical curve representing the normal distribution.

Geological

Relating to the earth, the rocks of which it is composed, and the changes which it has undergone or is undergoing.

Geomorphology

The study of the characteristics, origin, and development of land forms.

Geotechnical

Relating to the form, arrangement and structure of the geology.

Goaf

Underground excavation remaining after longwall extraction of coal into which roof strata have collapsed.

Greenhouse Gases	A number of gases that may contribute to the total global warming effect including carbon dioxide, methane, nitrous oxide and some fluorine containing compounds.
Groundwater	Water beneath the surface of the ground, consisting mainly of surface water that has seeped down.
Habitat	The native environment where a given animal or plant lives or grows, often described in terms of geography, climate and vegetation.
Haul Road	A major road formation designed for large haul trucks and other mining equipment that are not allowed on public roads unless under escort conditions.
Hazardous Waste (Hazardous Dam)	Any substance, whether liquid, solid or gaseous, derived by or resulting from, the processing of minerals that tends to destroy life or impair or endanger health.
Highwall	The advancing face of an open cut excavation, on the down dip side of the pit excavation; opposite the low wall.
Hydrology	Science dealing with the properties, distribution and circulation of the earth's water.
Hydraulic Analysis	The study of flow of waterways. In particular, the evaluation of flow parameters such as water level, extent and velocity.
Hydrologic Analysis	The study of water and its constituents as they move through the natural processes that constitute the hydrological cycle (i.e. rainfall, runoff, evaporation, infiltration).
Indigenous	Originating in and characterising a particular region or country.
Infiltration	To undergo the process in which a fluid passes into the pores of a solid.
In situ	In the original or actual place.
Initial Advice Statement (IAS)	A document used to initiate the environmental impact assessment procedures of the Queensland Government.
Interburden	Material of any nature that lies between two or more bedded coal seams or ore zones.
Inundation	Flooding, overflowing or deluge.
Invertebrate	An animal such as an insect or mollusc that lacks a backbone or spinal column.
Land Capability	Land attributes for arable, pastoral and other agricultural land uses involving current technology and agronomic management practices.
Land Suitability	Land attributes based on the requirements of a specified land use using current technology and management.
Leaching	The process of removing soluble matter(s) from soil or rock by water.
Levee	An embankment alongside a river constructed to prevent flooding.

Longwall Mining	A method of underground mining in which coal is fully extracted from a seam using a series of equipment, including hydraulic jacks (chocks), roof supports and shields and mechanical shearers.
L₁₀	Noise level exceeded for 90% of the measurement period.
Macroinvertebrates	Invertebrates that are big enough to see with the naked eye.
Megalitre (ML)	One million litres.
Millions of Tonnes	In metric tonnes.
Mitigation	The act of lessening in intensity, to make less severe.
Morphology	The study of form, including the physical form of lands, regions, or towns.
Native Species	In relation to flora and fauna, indigenous to Australia or belonging to the natural flora or fauna of a region.
Not Of Concern Regional Ecosystem	Prescribed under the <i>Vegetation Management Act 1999</i> (Qld) and has more than 30% of its pre-clearing extent remaining and the remnant vegetation remaining is more than 10,000 ha.
Of Concern Regional Ecosystem	Prescribed under the <i>Vegetation Management Act 1999</i> (Qld) and has either (a) 10-30% of its pre-clearing extent remaining, or (b) the remaining vegetation is less than 10,000 ha.
Overburden	The surface soil and rock that must be moved away to access coal seams and mineral deposits below.
Oxbow	A U-shaped bend in a river or stream.
Permeability	The capacity of a material to transmit fluid.
pH	A measure of acidity on a scale of 0-14. Acidic materials have a value less than 7 while alkaline materials have a value above 7.
Piezometer	A type of well that is used to find the depth of the water table by measuring the level of the water in it.
Pit	An excavation (hole) for the removal of mineral deposits.
PM₁₀	Particulate matter with an aerodynamic diameter of 10 micrometers or less.
Probable Maximum Flood	The largest flood that could conceivably occur at a particular location.
Potable Water	Water of sufficient quality to be used as drinking water.
Q100	The flood event with an average Recurrence Interval of 100.
Quaternary	The period of geological time beginning two to three million years ago and extending to the present.
RAFTS	A computer model for routing rainfall through a catchment to predict stream flow.
Rating Curve	A diagrammatic representation of the stage (water level) and discharge relationship.

Raw Coal	Newly mined coal that has not undergone processing.
Regional Ecosystem	A vegetation community in a bioregion that is consistently associated with a particular combination of geology, landform and soil.
Regulated Waste	Non-domestic waste mentioned in schedule 7 of the <i>Environment Protection (Waste) Regulation 1998</i> , (whether treated or immobilised) and includes: a) for an element – any chemical compound containing the element b) anything that has contained the waste.
Rehabilitation	Reshaping of a disturbed area to a geotechnically and geochemically stable condition, followed by revegetation.
Reject	Gravel-sized non-coal material rejected from the coal wash plant (> 1mm size fraction).
Reject, breaker	Coarse rejects from the raw coal stream.
Remnant Vegetation	Native vegetation remaining after an area has otherwise been cleared: <ul style="list-style-type: none">• covering more than 50% of the undisturbed predominant canopy;• averaging more than 70% of the vegetation's undisturbed height; and• composed of species characteristic of the vegetation's undisturbed predominant canopy.
Revegetation	Establishment of suitable plant species to support the agreed post mining land use and control soil erosion to sustainable levels.
Riparian	Pertaining to, or situated on the bank of a body of water, especially a watercourse such as a river.
Root Zone	Near-surface part of the soil where plant roots are active.
Run of Mine Coal	Unprocessed raw coal.
Runoff	Water that flows along the surface of soil following rainfall. The portion of rainfall that is not infiltrated or evaporated.
Salinity	A measure of the concentration of dissolved salts.
Seam	A thin layer or stratum, as of coal or rock.
Sediment	Solid particles which tend to settle in a liquid.
Sediment Dams	Large impoundment structures used to retain rainfall runoff and settle out solids, prior to discharge of water.
Semi Soft Coal	A type of coking coal that requires blending with hard coking coal.
Shotfirer	A person responsible for the safe loading, tying in and initiation of blasts.
SIGNAL	A biotic index used to quantitatively assess the relative health of waterbodies.
Silt Traps	Small impoundment structures built within a drainage line, which retard water flow and allow suspended solids to settle out.

Slurry	Fine coal and other material washed from marketable coal during the cleaning process.
Socio-economic	Of or relating to both social and economic considerations.
Sodicity	Refers to soil containing levels of sodium that affect its stability. Sodic soils are dispersible and are thus vulnerable to erosion.
Spoil	Mined overburden (used interchangeably in this report with overburden).
Spontaneous Combustion	Spontaneous ignition of a combustible material such as coal.
Subsoil	The layer of soil between the topsoil and bedrock. Usually consists of clay and oxidised materials leached from the topsoil ("A" horizon). Often referred to as the "B" horizon.
Subsidence	Controlled collapse of overlying strata into the goaf following extraction of the coal seam and its expression at ground level.
Supernatant	The clear fluid above a sediment or precipitate.
Tails/Tailings	Water slurry of fine coal from the processing of coal (< 1mm size fraction).
Taxa	Categories in the biological classification system for all living organisms.
Tensile Strain	Strain caused by bending and/or stretching a material.
Tertiary	The period of geological time from 63 million to 2 million years ago.
Thermal Coal	Coal used to generate electricity.
Topography	Description of all the physical features of an area of land and their relative positions, either in words or by way of map.
Topsoil	The upper most layer of soil where most plant nutrients are found. Highest concentration of organic matter and micro organisms. Often referred to as the "A" horizon.
Total Suspended Solids	A common measure used to determine suspended solids concentrations in a waterbody and expressed in terms of mass per unit of volume (e.g. milligrams per litre).
Transect	A long, narrow sample study area.
Turbidity	A degree of cloudiness in water caused by suspended particles.
Vertebrate	An animal with a backbone or spinal column.

Vulnerable Species	Prescribed under the <i>Nature Conservation Act 1992</i> (Qld), a species is vulnerable if: its population is decreasing because of threatening processes, or its population has been seriously depleted and its protection is not secured, or its population, while abundant, is at risk because of threatening processes, or its population is low or localised or depends on limited habitat that is at risk because of threatening processes.
Waste	Anything left over, or an unwanted by-product, from an industrial, commercial, domestic or other activity, or surplus to the industrial, commercial, domestic or other activity generating the waste including a gas, liquid, solid or energy.
Water Table	Level below which the ground is saturated with water.