



# PROJECT CHINA STONE

## 26 GLOSSARY

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

TERM	DEFINITION
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.
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.
Aquitard	Rock or sediment in a formation, group of formations or part of a formation that is solid and low to impermeable and hinders the transport of water.
Average Recurrence Interval (ARI)	The long-term average number of years between the occurrences of a flood as big as or larger than the selected 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 <sub>90</sub> , the A-weighted noise level that was exceeded for ninety per cent of the monitoring period.
Betts Creek Beds	Geological unit consisting of sandstone interbedded with siltstone, claystone, coal and minor tuff. Contains the target coal seams for the project.
Biodiversity	The diversity of different species of plants, animals and micro-organisms, including the genes they contain.
Bord and pillar mining	A method of underground coal mining using a regular grid of mining tunnels / roadways to progressively cut panels (“bords”) into the coal seam whilst leaving behind pillars of coal to support the mine roof.
Bottom ash	A heavier component of the residue ash from the combustion of coal within the power station.
Box cut	A small excavated area created to provide a secure and safe portal / adit to access the underground mine.
Bund	An embankment or low wall constructed around an area to prevent the inflow or outflow of liquids. Also called bunding.
CALPUFF	An air quality dispersion model which utilises 3D wind fields to simulate the dispersion of emissions and predict ground-level concentrations of air quality pollutants.
Capping	Process of covering an area with benign material.
Carbon dioxide equivalent (CO <sub>2</sub> e)	A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential.

TERM	DEFINITION
Carboniferous	The period of geological time beginning from 360 million to 300 million years ago.
Catchment	The surface drainage area from which a river, stream or reservoir receives its water.
Chain Pillar	A series of pillars left between panels that support the mine roof and allow access to the mine panels as well as air exchange in an underground mine.
Clematis Sandstone	Geological unit, designated Great Artesian Basin aquifer consisting of massive quartzose sandstone with minor interbedded siltstone.
Clinker	A stony component of the residue from the combustion of coal within the power station.
Coal resource	The total amount of useable coal in a given area, as determined through geological surveys.
Coarse rejects	Coal material between 50 mm and 4 mm in size.
Controlled Action	If a proposed action (project, development, activity or alteration of these things) is likely to have a significant impact on one or more matters protected by the EPBC Act, the action will need to be assessed and approved under the EPBC Act before it can proceed.
Crown land	Land owned by the Commonwealth, often leased by the State of Queensland.
Decant pond	The low point on the surface of the distributed tailings facilities beach where supernatant water and runoff collects.
Decommission	Safe removal of plant and equipment following the completion of mining operations.
Dewater	To drain or remove water.
Dispersive	Easily distributed.
Dragline	A piece of mining equipment used in open cut mining to remove large quantities of overburden. Includes a large bucket pulled by a cable.
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.
Ecosystem	An interacting system of animals, plants, other organisms and non-living parts of the environment.
Environmental Impact Statement	This document, which provides an assessment of all project-related activities within the project site. The EIS is considered to be “draft” until such time as the Coordinator-General determines it is a final EIS.
Ephemeral	A watercourse, with defined bed and banks, which flows only intermittently after rain.
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.
Fault	A geological feature in which a geological formation is broken.
Fine rejects	Coal material between 4 mm and 0.3 mm in size.

TERM	DEFINITION
Fluvial	Of, or relating to, or happening in, a river.
Fly ash	A lighter component of the residue from the combustion of coal within the power station that is emitted from the power station stack.
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 a floodplain.
Geochemical	Chemical compositions related to the geology of an area or sample.
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 landforms.
Goaf	The area, into which roof strata have collapsed, which is left after excavation of coal using longwall mining methods.
Granivorous	An animal that feeds primarily grains.
Greenfield	A site that is undeveloped, except for agricultural use.
Greenhouse gas	A gas that may contribute to the total global warming effect. Includes carbon dioxide, methane, nitrous oxide and some fluorine containing compounds.
Groundtruthed	Information that has been taken from the field, rather than desktop information.
Groundwater	Water found beneath the surface of the ground.
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.
Herbaceous	An animal that feeds primarily on vegetation.
Ion	An electrically charged atom or group of atoms formed by the loss or gain of one or more electrons.
Ironstone Jump-up	Mesa-like small, flat topped hills covered in ironstone concretions.
Joe Joe Group	Oldest geological unit within the Galilee Basin consisting of lithic sandstone, siltstone, mudstone and coal.
LA <sub>10, 18 hr</sub>	Noise level exceeded for 10% of the measurement period, over an 18 hour period.
LA <sub>1,adj,15min</sub>	Level exceeded 1% of the time, or the noise level representing the loudest 1% of the time, over a 15 minute period including any relevant adjustments for tonality or other defined characteristics and often used to assess sleep disturbance.
LA <sub>90,15min</sub>	Level exceeded 90% of the time, equivalent to the noise level representing the quietest 10% of the time, in a 15 minute period and is widely recognised as the background noise level.
LA <sub>eq</sub>	The A-weighted equivalent continuous, or logarithmic average, noise level over a defined time period either measured or predicted at a specific location.
LA <sub>max</sub>	Predicted maximum noise level.

TERM	DEFINITION
$LA_{eq,adj,15min}$	Equivalent continuous noise level over a 15 minute period including any relevant adjustments for tonality or other defined characteristics.
Land suitability	Land attributes based on the requirements of a specified land use using current technology and management.
Leachate	The process of removing soluble matter(s) from soil or rock by water.
Levee	An embankment alongside a river constructed to prevent flooding.
Limit of measurable subsidence	Vertical ground movement limit of 20 mm or less, used to define the extent of subsidence.
Loam	A medium textured soil of approximate composition 10-25% clay, 25-50% silt and >50% sand.
Longwall mining	A method of underground mining in which extensive panels of coal (typically 3 km to 4 km long, and 250 m to 400 m in width) are extracted from a seam using a series of mining units, consisting of hydraulic jacks (chocks), roof supports and shields, and mechanical shearers.
Macroinvertebrates	Invertebrates that are big enough to be seen with the naked eye.
Macrophyte	An aquatic plant that is large enough to be visible to the naked eye.
Megawatt	A unit of power that equates to one million watts.
Mitigation	The act of lessening in intensity, to prevent or make less severe.
Moolayember Formation	Geological unit, designated Great Artesian Basin aquifer.
Nectarivorous	An animal that feeds primarily on flower nectar.
Odour unit	Measure of the concentration of an odour (ou).
Open Cut Mining	Process used to remove minerals found over a large area, close to the surface. The mine is dug downward in benches or steps which slope towards the centre of the pit.
Overburden	The surface soil and rock that must be moved away to access coal seams and mineral deposits below.
Permeability	The capacity of a material to transmit fluid.
Permian	The period of geological time beginning from 280 million to 230 million years ago.
pH	A measure of acidity or alkalinity on a scale of 0-14. Neutral solutions have a value of 7, while acidic solutions have values less than 7, and alkaline solutions have values 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.
$PM_{10}$	Particulate matter with an aerodynamic diameter of 10 micrometers or less.
$PM_{2.5}$	Particulate matter with an aerodynamic diameter of 2.5 micrometers or less.
Product coal	Coal that has been processed in a Coal Processing Plant, ready for export to market.

TERM	DEFINITION
Quaternary	The period of geological time beginning two to three million years ago and extending to the present.
Rainfed broadacre cropping	Rainfed broadacre cropping utilises large tracts of land for crops such as sorghum, sunflower, wheat, safflower, cotton, chick peas, millet and oats. These crops are often grown in sequence, with the actual crops planted being dependent upon rainfall.
Raw coal	Unprocessed coal.
Raw water	External raw water supply likely to be provided by a piped water supply. This water is suitable for use in the mine but would require treatment prior to use as potable water.
Regional ecosystem	A vegetation community in a bioregion that is consistently associated with a particular combination of geology, landform and soil.
Rehabilitation	Reshaping of a disturbed area to a geotechnically and geochemically stable condition, followed by revegetation.
Reject material	Coal materials between 50 mm and 0.3 mm in size (comprising coarse and fine reject materials), and non-coal materials rejected from the coal preparation plant.
Remnant vegetation	Native vegetation remaining after an area has otherwise been cleared: consisting of 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.
Rewan Formation	Geological unit, regionally recognised aquitard, marker bed for the base of the Great Artesian Basin. Consists of fine grained, grey-green lithic sandstone, siltstone and claystone.
Riparian	Pertaining to, or situated on, the bank of a body of water, such as a river.
Run of Mine Coal	Newly mined coal that has not undergone processing.
Runoff	The portion of rainfall that is not infiltrated or evaporated, and flows along the ground surface.
Salinity	The concentration of dissolved salts within a body of water.
Seam	A thin layer or stratum of coal or rock.
Sediment	Solid particles which tend to settle in a liquid.
Sensitive receptors	Locations which may be sensitive to the impacts of the project, such as residences, commercial or industrial facilities, accommodation villages.
Socio-economic	Of, or relating to, both social and economic considerations.
Sound power	Sound energy emitted by a source. Sound power levels are commonly measured in decibels (dBL).
Spotter Catcher	An individual or corporation, as licensed by the Department of Environment and Heritage, who holds a current Rehabilitation Permit under the Queensland <i>Nature Conservation Act 1992</i> , to remove, relocate, or rehabilitate protected animals whose habitat will be destroyed or impacted by human activity.

TERM	DEFINITION
Stock route	A road or route ordinarily used for travelling stock or declared under a regulation to be a stock route, as defined in the <i>Land Protection (Pest and Stock Route Management) Act 2002</i> .
Strata	Layers of rock or soil with internally consistent characteristics that distinguish it from contiguous layers.
Stratigraphy	The arrangement and succession of rock layers and layering (stratification).
Stygofauna	Aquatic invertebrates that live within groundwater systems.
Subsidence	The expression, at ground level, of the controlled collapse of overlying strata into the goaf following extraction of the coal seam.
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.
Tailings	Tailings are reject coal and non-coal materials that are less than 0.3 mm in size, and that will be subject to dewatering.
Temperature inversion	A situation whereby temperature within the atmosphere increases with altitude rather than the normal occurrence of atmospheric temperatures decreasing with altitude. This results in a layer of dense cool air closest to the land surface.
Tension cracking	Cracks occurring in the ground's surface as a result of the tensile strains developed at the chain pillar edges following subsidence.
Tertiary	The period of geological time from 63 million to 2 million years ago.
Tertiary Sediments	Geological unit, consisting of weakly consolidated siltstone and fine sandstone.
Thermal coal	Coal primarily used for power generation.
Topography	The surface features of an area of land.
Topsoil	The upper most layer of soil where the highest concentration of organic matter and micro-organisms are found. Often referred to as the "A" horizon.
Triassic	The period of geological time beginning from 250 million to 200 million years ago.
Tuff (Tuffaceous)	Type of rock consisting of consolidated volcanic ash ejected from vents during a volcanic eruption.
Underburden	The geological formation that is beneath the coal formation.
Underground mining	The mechanical extraction of minerals from a deep mine, usually several hundred metres below the surface.
Void / final void	Residual open cut pit left in perpetuity post mining.
Waste	An unwanted by-product or surplus product, including a gas, liquid, solid or energy, from an industrial, commercial, domestic or other activity.

TERM	DEFINITION
Watercourse	<p>Under the <i>Water Act 2000</i>, a watercourse is defined as a river, creek or other stream, including a stream in the form of an anabranch or a tributary, in which water flows permanently or intermittently, regardless of the frequency of flow events—</p> <p>(a) in a natural channel, whether artificially modified or not; or</p> <p>(b) in an artificial channel that has changed the course of the stream.</p>
Waterway	<p>Under the <i>Fisheries Act 1994</i>, a waterway is includes a river, creek, stream, watercourse or inlet of the sea.</p>