

WILPINJONG COAL PROJECT

MAIN REPORT

Section Eight Abbreviations, Acronyms and Glossary

8 ABBREVIATIONS, ACRONYMS AND GLOSSARY

8.1 ABBREVIATIONS AND ACRONYMS

ACHMP	Aboriginal Cultural Heritage Management Plan	CO ₂	carbon dioxide
ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail	CSIRO	Commonwealth Scientific and Industrial Research Organisation
AEMR	Annual Environmental Management Report	Cu	copper
AGE	Australasian Groundwater and Environmental Consultants	DA	Development Application
AHD	Australian Height Datum	dba	A-weighted decibel
AHIMS	Australian Heritage Information Management System	dB	linear decibel
ANFO	ammonium nitrate and fuel oil	DEC	Department of Environment and Conservation
ANZECC	Australian and New Zealand Environment and Conservation Council	DIPNR	Department of Infrastructure, Planning and Natural Resources
ARI	annual recurrence interval	DGRs	Director-General's Requirements
ARTC	Australian Rail Track Corporation	DLWC	Department of Land and Water Conservation
As	arsenic	DMR	Department of Mineral Resources
AS	Australian Standard	DPI	Department of Primary Industries
bcm	bank cubic metre	DPI-Fisheries	Department of Primary Industries – Fisheries
BLMP	Blast Management Plan	DPI-MR	Department of Primary Industries – Mineral Resources
BMP	Bushfire Management Plan	DUAP	Department of Urban Affairs and Planning
Ca	calcium	EC	electrical conductivity
Cd	cadmium	ECA	Enhancement and Conservation Area
CCC	Community Consultative Committee	ECRTN	Environmental Criteria for Road Traffic Noise
CCRP	Cumbo Creek Relocation Plan	EDAW	EDAW Gillespies Australia
CH ₄	methane	EEC	Endangered Ecological Community
CHPP	Coal Handling and Preparation Plant	EFA	Ecosystem Function Analysis
Cl	chloride	EIS	Environmental Impact Statement
CO	carbon monoxide	EL	Exploration Licence
		EPA	Environment Protection Authority
		EP&A Act	<i>Environmental Planning and Assessment Act, 1979</i>

EP&A Regulations		M	million
	<i>Environmental Planning and Assessment Regulation, 2000</i>	m	metre
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act, 1999</i>	m/s	metres per second
		mm/s	millimetre per second
EPL	Environment Protection Licence	m ³ /day	cubic metres per day
EPP	Environmental Protection Plan	Mbcm	million bank cubic metres
ESCP	Erosion and Sediment Control Plan	MCP	Mine Closure Plan
ESD	Ecologically Sustainable Development	Mg	magnesium
FFMP	Flora and Fauna Management Plan	MGATSIC	Murong Gialinga Aboriginal and Torres Strait Islander Corporation
FVMP	Final Void Management Plan	mg/L	milligrams per litre
g/m ² /month	gram per square metre per month	ML	million litres
GRP	gross regional product	MLA	Mining Lease Application
ha	hectare	MLALC	Mudgee Local Aboriginal Land Council
HCO ₃	carbonate	mm	millimetre
Hg	mercury	mm/s	millimetre per second
INP	Industrial Noise Policy	MOP	Mining Operations Plan
IBRA	Interim Bioregional Regionalisation of Australia	MREMP	Mining, Rehabilitation and Environmental Management Process
JORC	Joint Ore Reserves Committee	MSDS	Material Safety Data Sheet
kg/bcm	kilogram per bank cubic metre	Mt	million tonnes
km	kilometre	Mtpa	million tonnes per annum
km ²	square kilometre	MWRC	Mid-Western Regional Council
kV	kilovolt	MVA	mega volt amp
L	litre	Na	sodium
L _{Aeq}	equivalent continuous noise level	NEPM	National Environment Protection Measure
LEP	Local Environmental Plan	NHMRC	National Health and Medical Research Council
LFA	Landscape Function Analysis	NO _x	nitrous oxides
L/s	litre per second	NPV	Net Present Value
LGA	local government area		
LMP	Land Management Plan		

NPWS	National Parks and Wildlife Service	TSMP	Threatened Species Management Protocol
NSESD	National Strategy for Ecologically Sustainable Development	TSP	total suspended particulates
NSW	New South Wales	TSS	total suspended solids
OC/OP	Organochlorine and Organophosphorus	WAPCP	Weed and Animal Pest Control Plan
Pb	lead	WCPL	Wilpinjong Coal Pty Limited
PHA	Preliminary Hazard Analysis	WBNTCAC	Warrabinga Native Title Claimants Aboriginal Corporation
PM ₁₀	particulate matter less than 10 microns in size	WBYBBRG EEC	White Box, Yellow Box, Blakely's Red Gum Woodland EEC and the Grassy White Box Woodlands EEC
PRP	pollution reduction programme		
PVS	Peak Vector Sum	WSBP	Water Supply Borefield Plan
RBL	rating background level	Zn	zinc
ROM	run-of-mine	µg/L	microgram per litre
ROTAP	Rare or Threatened Australian Plants	µg/m ³	microgram per cubic metre
RTA	Roads and Traffic Authority	µm	micrometre
Se	selenium	µS/cm	microsiemens per centimetre
SEPP	State Environmental Planning Policy		
SLA	Statistical Local Area		
SO ₄	sulphate		
SWMP	Site Water Management Plan		
t	tonne		
TAFE	Technical and Further Education		
TAPM	The Air Pollution Model		
t CO ₂ -e	tonnes CO ₂ equivalent		
TDS	total dissolved solids		
TMP	Traffic Management Plan		
tph	tonne per hour		
TSC Act	<i>Threatened Species Conservation Act, 1995</i>		

8.2 GLOSSARY

Alluvial

A general term for clay, silt, sand and gravel transported by water and deposited, on the bed of a flood plain, river or stream.

Alluvium

Sediment (gravel, sand, silt, clay) transported by water (i.e. deposits in a stream channel or floodplain)

Ambient noise

The all-encompassing noise associated with a given environment. It is the cumulative result of sounds from many sources, both near and far.

Amenity

Useful and enjoyable quality.

Aquatic

Living in or on water, or concerning water.

Aquifer

A sub-surface rock formation containing water in recoverable quantities.

Backfilling

The refilling of cavities created during mining with waste rock or rejects.

Background

The condition (e.g. noise levels, bird populations) already present in an area before the commencement of a specific activity (e.g. a mining operation).

Baseflow

Baseflow is water that discharges from subsurface storage into a stream. This subsurface storage may comprise interflow/underflow as well as deeper groundwater aquifer systems.

Baseline studies

Studies conducted over time to collect a body of information to define specific characteristics of an area (e.g. species occurrence or noise levels) prior to an activity (e.g. a mining operation).

Batter

An engineered slope of soil or rock fill on either side upslope or downslope of a road, embankment or mine waste storage; the sloping banks of cut earth separating different levels in an open-cut pit.

Biological diversity

The diversity of different species of plants, animals and micro-organisms, including the genes they contain, in the ecosystem of which they are part.

Boundary Shear Stresses

Shear stress at the liquid/solid interface caused by the liquid moving past the solid (e.g. forces applied to a channel bank caused by water flow through the channel).

Box cut

An excavation developed to provide access to a lower level of the open cut.

Bund

An earth, rock or concrete wall or mound constructed to restrict the inflow or outflow of liquids or noise.

Catchment

The entire land area from which water (e.g. rainfall) drains to a specific watercourse or water body.

Colluvium

Sediment (gravel, sand, silt, clay) transported by gravity (i.e. deposits at the base of a slope).

Conductivity	The measurement of the ability of a substance (either a measure of solid, liquid or gas) to transmit electricity; used to determine the amount of salt in a soil sample.	Direct output	The gross value of business turnover of the enterprise.
Confluence	The junction of two streams.	Dyke	A sheet-like vertical intrusion of igneous rock cutting across the strata of older rocks.
Conglomerate	A coarse grained, clastic sedimentary rock composed of rounded or sub-rounded fragments larger than 2 mm in size.	Echolocation	The location of objects by reflected sound.
Cross Section	A two-dimensional diagram of an object presented as if the object had been cut along its length.	Ecologically Sustainable Development (ESD)	Development that improves the quality of life, in a way that maintains the ecological processes on which life depends.
Crusher	That part of a processing plant where the material is mechanically crushed into smaller pieces.	Ecosystem	An interacting system of animals, plants, other organisms and non-living parts of the environment.
Cyclone	A conical vessel that uses centrifugal action to separate particulate matter from air to water.	Electrical conductivity (EC)	The ability of a substance (solid, liquid or gas) to transmit electricity.
dB	Decibel; unit used to express sound intensity.	Embankment	An embankment is constructed by the placement of a series of progressively higher and narrower earth or rock layers.
dBA	Decibels; A-weighted scale; unit used for most measurements of environmental noise; the scale is based upon typical responses of the human ear to sounds of different frequencies.	Emission	The discharge of a substance (e.g. dust) into the environment.
dB(L)	Linear decibels; measurable effect of event (e.g. blast) on air pressure including measurement of generated energy which is below the limit of human hearing.	Endemic	Native plant or animal restricted to a specific locality or geographic region.
Depreciation	The loss in value of capital goods as a result of wear and tear, obsolescence, etc.	Evapo-concentration	The process by which a soluble material being held in suspension becomes more concentrated due to the evaporation of water.
		Fault	Major fracture of the earth's crust caused by the relative movement of the rock masses on either side.

Floristics	The study of the geography of plants, particularly their distribution at different taxonomic levels, i.e. family, genus and species. Patterns of distribution are interpreted in terms of climatic and anthropogenic influence, but above all in terms of earlier continental configurations and migration routes.	Hydraulic Conductivity	A measure of the rate at which water moves through a soil/rock mass. It is the volume of water that moves within a unit of time under a unit hydraulic gradient through a unit cross-sectional area that is perpendicular to the direction of flow.
		<i>ibid.</i>	In the same place.
Greenhouse gases	Gases with potential to cause climate change (e.g. methane, carbon dioxide and non-methane volatile organic compounds). Usually expressed in terms of global warming potential carbon dioxide equivalent.	Igneous	A rock which originated as molten magma from beneath the earth's surface and subsequently came to the surface as an extrusion, or remained below ground as an intrusion.
Groundwater	All waters occurring below the land surface; the upper surface of the soils saturated by groundwater in any particular area is called the water table.	Income	The amount of money or its equivalent received during a period of time in exchange for labour or services, from the sale of goods or property, or as profit from financial investments.
Gross operating surplus	The excess of gross output over the costs incurred in production but before deducting taxes, royalties, dividends, interest, depreciation and land rent payments.	Indirect output	The gross value of business turnover that arises in other enterprises through production-induced linkages (other businesses supplying inputs to production) and consumption-induced linkages (other businesses supplying goods and services demand by employees of the enterprise).
Habitat	The particular local environment occupied by an organism.		
Hardstand areas	Designated areas which are compacted to withstand the pressure of built structures, equipment storage or deposited materials (e.g. a building pad or a product stockpile).	Infrastructure	The supporting installations and services that supply the needs of the Project.
		<i>in-situ</i>	A term used to distinguish material (e.g. rocks, minerals, fossils, etc.) found in its original position of formation, deposition, or growth, as opposed to transported material.
Herpetofauna	Collective term for reptiles and amphibians.		
Hopper	A container/bin used for holding broken ore.	Interburden	Waste rock material in-between layers of <i>in-situ</i> coal material that must be removed during mining.

Inter-generational equity	That the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations.	Overburden	Waste rock material overlying <i>in-situ</i> coal that must be removed prior to mining of coal.
Intra-generational equity	The concept that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of their own generation.	Permeability	The ability of a rock or soil to allow fluid to pass through it.
		Permian age	The youngest geological period of the Palaeozoic era, covering a span between approximately 290-250 million years.
L _{Aeq}	The equivalent continuous noise level – the level of noise equivalent to the energy-average of noise levels occurring over a measurement period (NSW INP, 2000).	pH	A measure of the degree of acidity or alkalinity of a solution; expressed numerically (logarithmically) on a scale of 1 to 14, on which 1 is most acid, 7 is neutral acid, and 14 is most basic (alkaline).
Land capability	A method of land use assessment used to estimate the ability of the land to support a particular land use. Classification is based on an assessment of the land's biophysical characteristics.	Podzolic	Soil type found in areas of very high rainfall and low evaporation, developed on siliceous mineral soil.
Lithology	Characteristics of rock including mineral composition, structure, grain-size and arrangement.	Potable water	Water of quality suitable for human consumption.
Lithosols	A shallow single layer soil showing minimal profile development and dominated by the presence of weathering rock and rock fragments.	Pumping Test	A test made by pumping a well for a period of time and observing the response/change in hydraulic head in the aquifer.
Macroinvertebrate	Larger invertebrates (animals without backbones) which can be studied without using a microscope.	Quartz	The most abundant and common mineral, consisting of crystalline silica (silicon dioxide, SiO ₂), crystallizing in the trigonal system.
Mine waste	By-products of mining operations with no economic value.	Rating Background Level (RBL)	The overall single-figure sound background level representing each assessment period (day/evening/night) over the whole monitoring period, and is the level used for assessment purposes.
Mine water	All water used in mining and processing (for dust suppression, in CHPP, etc.).	Reagents	Chemicals used as part of an industrial/mining process.

Recharge	The addition of water to an aquifer, directly from the surface, indirectly from the unsaturated zone, or by discharge from overlying or underlying aquifer systems.	Seepage	Liquid or fluid such as water, seeping or flowing from beneath the ground to the surface.
Rehabilitation	The restoration of a landscape and especially the vegetation following its disturbance.	Slug Test	A test made by the instantaneous addition, or removal, of a known volume of water to or from a well. The subsequent well recovery is measured.
Relative humidity	The ratio of actual moisture in the air to the amount the air could hold if saturated, at a given temperature.	Solodic	Leached, formerly saline soil, associated with semi-arid tropical environments, in which the A soil horizon has become slightly acid, and the B horizon is enriched with sodium-saturated clay.
Remnant vegetation	Native vegetation remaining after widespread clearing has taken place.	Spontaneous combustion	Self heating and ignition of a combustible material such as coal.
Riparian	Pertaining to, or situated on, the bank of a body of water, especially a watercourse such as a river.	Storativity	The volume of water an aquifer releases from or takes into storage per unit surface area of the aquifer, per unit change in head.
Rip-rap	Crushed rock that is compacted into drain inverts to protect against scour/erosion.	Stratigraphic	Stratigraphy - The branch of geology concerned with the origin, composition, sequence, and correlation of rock strata.
Run-of-mine (ROM)	Run-of-mine ore, stockpiled and used to feed the crusher.	Strip ratio	Ratio of overburden waste rock material to coal produced from the open cut. The higher the ratio, the more expensive the coal is to extract.
Runoff	That portion of precipitation (rain, hail and snow) that flows across the ground surface as water.	Subsidies	Monetary assistance granted by a government to a person or group in support of an enterprise regarded as being in the public interest.
Salinity	The total content of dissolved solids in groundwater, commonly expressed as parts of dissolved solids per million parts of solution, or milligrams of dissolved solids per litre of solution (mg/L); the significance of salinity depends on the nature as well as the amount of the dissolved solids.	Substrate	An underlying layer (e.g. of sediment under water).

Tailings	Finely ground residue from processing and extraction of product (e.g. coal) from ore.	Waste rock	Uneconomic rock extracted from the ground during a coal mining operation to gain access to the coal.
Taxa	Classification system for biological groups (i.e. genus).	Weir	A low dam built across a river to raise the water level, divert the water or control its flow.
Temperature inversion	An atmosphere phenomenon in which air temperature increases with height over a particular interval.	Yellow podzolics	Strongly differentiated duplex soils with light to medium textured A1 horizon over a pale A2 horizon over a yellowish, firm to friable B horizon with generally polyhedral structure.
Terrestrial	Living or growing on the land.		
Throw	The amount of vertical displacement produced by a fault.		
Total suspended particulates (TSP)	Particulate matter suspended in solution of air.		
Total suspended solids (TSS)	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).		
Transmissivity	A measure of the rate at which water moves through an aquifer of unit width under a unit hydraulic gradient.		
Value added	The difference between the value of a firm's output and the cost of the inputs of raw materials, components or services brought in to produce that output.		