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11 ABBREVIATIONS, ACRONYMS AND GLOSSARY			ARTC	Australian Rail Track Corporation
		SSARY	AS/NZ	Australian/New Zealand Standard
	.1 ABBREVIATIONS AND ACRONYMS		AUSRIVAS	Australian River Assessment System
%	per c	ent	BARBOS	
°C	degre	ees Celsius	BARBOS	Biodiversity Assessment Report and Biodiversity Offset Strategy
μg/m³	micro	ograms per cubic metre	BC Act	NSW Biodiversity Conservation Act, 2016
μm	micro	ometres	500	
μS/cm	micro	Siemens per centimetre	BC Savings Regulation	Biodiversity Conservation (Savings and Transitional) Regulation 2017.
AADT	Annu	al Average Daily Traffic		
AAQ NEF	PM Natio	National Environment Protection Ambient Air Quality Measure	ВСТ	Biodiversity Conservation Trust
			BFMC	Bush Fire Management Committee
ACCC		ralian Competition and sumer Commission	Division	Dive Cooks Of all Divelop
			BlueScope	BlueScope Steel Pty Ltd
ACHA		iginal Cultural Heritage ssment	ВоМ	Bureau of Meteorology
ACHCRs	Abori	Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010	CCL	Consolidated Coal Lease
	Cons		CMSC Act	Coal Mine Subsidence Compensation Act, 2017
ADG Cod	de Austr Code	ralian Dangerous Goods	CO ₂ -e	Carbon dioxide equivalent
AEMD	Δ	Annual Engineers and a	CPP	Coal Preparation Plant
AEMR		al Environmental agement Reports	dB(Lin)	Linear Decibels
AHIMS		iginal Heritage Information agement System	dBA	A-weighted decibels
AHMP	Abori Plan	iginal Heritage Management	DCCC	Dendrobium Community Consultative Committee
AIE	Austr	ralian Industrial Energy	DCEC	Dendrobium Community Enhancement Committee
AIP	Aquif	fer Interference Policy	DCEP	Dendrobium Community Enhancement Program
ALS	Airbo	orne Laser Scanning		Elliancement Flogram
ANZECC		Australian and New Zealand Environmental and Conservation Council	DEC	Department of Environment and Conservation
			DECC	Department of Environment and Climate Change
Approved Methods	Mode	oved methods for the elling and Assessment of Air tants in New South Wales.	DECCW	Department of Environment, Climate Change and Water
AQMP	Air Q	uality Management Plan	DEM	Dust Extinction Moisture



DI Water	Department of Industry – Water	FBA	NSW Framework for Biodiversity
		T B/C	Assessment
DoE	Department of the Environment	FM Act	NSW Fisheries Management
DoEE	Department of the Environment and Energy		Act 1994
DIIS	Department of Industry, Innovation	FSLs	Full Supply Levels
	and Science	g/m²/month	grams per square metre per month
DMR	Department of Mineral Resources	GDE	Groundwater Dependant Ecosystems
DoP	Department of Planning		
DP&I	Department of Planning and Infrastructure	GHG Protocol	Greenhouse Gas Protocol
DPE	Department of Planning and	ha	hectares
DDE	Environment	HEC	Hydro Engineering & Consulting Pty Ltd
DRE	Department of Resources and Energy	HVAS	High Volume Air Samples
DRG	Division of Resources and Geoscience	IBRA	Interim Biogeographic Regionalisation of Australia
DSC	Dams Safety Committee	ICNG	Interim Construction Noise Guideline (DECCW, 2009)
EGP	Eastern Gas Pipeline	ICOMOS	Australian International Council on
EIS	Environmental Impact Statement	1001/100	Monuments and Sites
EMS	Environmental Management Strategy	IEP	Independent Expert Panel for Mining in the Catchment
EP&A Act	Environmental Planning and	Illawarra Coal	Illawarra Coal Holdings Pty Ltd
	Assessment Act, 1979	INP	Industrial Noise Policy
EP&A Regulation	Environmental Planning and Assessment Regulation, 2000	IPART	Independent Pricing and Regulatory Tribunal
EPA	Environment Protection Authority	IDC	
EPBC Act	Environment Protection and	IPC	Independent Planning Commission
	Biodiversity Conservation Act, 1999	IPM	Incremental Profile Method
EPL	Environment Protection Licence	JBS&G	JBS&G Australia Pty Ltd
ERA	Environmental Risk Assessment	KFH	Key Fish Habitat
ERM	Environmental Resource Management	km	kilometres
ESD	Ecologically Sustainable Development	km ²	square kilometres
ESD		kV	kiloVolt
ETL	Electricity Transmission Line		



L	litres	NEPC	National Environment Protection Council
L/s	litres per second	NGAF	National Greenhouse Accounts
LAeq	equivalent continuous noise level	NGAF	Factors
LALC	Local Aboriginal Land Council	NGER Act	Commonwealth National Greenhouse and Energy Reporting Act, 2007
Lan	statistical noise exceedance level		
LEP	local environmental plans	NGERS	National Greenhouse Energy Reporting Scheme
LGA	Local Government Area	Niche	Niche Environment and Heritage
LMP	Lighting Management Plan	NMP	Noise Management Plan
m	metres	NNTT	National Native Title Tribunal
m AHD	metres Australian Height Datum	NorBE Test	Net Neutral or Beneficial Effects
m^3	cubic metres		Test
mBGL	metres below ground level	NPfI	NSW Noise Policy for Industry (EPA, 2017)
Mining SEPP	State Environmental Planning Policy (Mining, Petroleum and	NPI	National Pollutants Inventory
	Extractive Industries), 2007	NPV	Net Present Value
ML	megalitres	NPW Act	National Parks and Wildlife Act, 1974
ML	Mining Lease		
ML/annum	megalitres per annum	A I D I A I	N .: 15 1 114/11/11/
ME/amiam	meganires per annum	NPW Regulation	National Parks and Wildlife Regulation, 2009
ML/day	megalitres per day		
		Regulation	Regulation, 2009
ML/day	megalitres per day	Regulation	Regulation, 2009 NSW National Parks and Wildlife
ML/day mm	megalitres per day millimetres	Regulation NPWS	Regulation, 2009 NSW National Parks and Wildlife Service Natural Resources Access Regulator
ML/day mm mm/m	megalitres per day millimetres millimetres per metre Mining Operations Plan Mine Subsidence Engineering	Regulation NPWS NRAR	Regulation, 2009 NSW National Parks and Wildlife Service Natural Resources Access
ML/day mm mm/m MOP MSEC	megalitres per day millimetres millimetres per metre Mining Operations Plan Mine Subsidence Engineering Consultants	Regulation NPWS NRAR	Regulation, 2009 NSW National Parks and Wildlife Service Natural Resources Access Regulator National Strategy for Ecologically
ML/day mm mm/m MOP MSEC	megalitres per day millimetres millimetres per metre Mining Operations Plan Mine Subsidence Engineering Consultants million tonnes	Regulation NPWS NRAR NSESD	Regulation, 2009 NSW National Parks and Wildlife Service Natural Resources Access Regulator National Strategy for Ecologically Sustainable Development
ML/day mm mm/m MOP MSEC Mt Mtpa	megalitres per day millimetres millimetres per metre Mining Operations Plan Mine Subsidence Engineering Consultants million tonnes million tonnes per annum	Regulation NPWS NRAR NSESD NSW NSW Offset Policy	Regulation, 2009 NSW National Parks and Wildlife Service Natural Resources Access Regulator National Strategy for Ecologically Sustainable Development New South Wales NSW Biodiversity Offset Policy for
ML/day mm mm/m MOP MSEC	megalitres per day millimetres millimetres per metre Mining Operations Plan Mine Subsidence Engineering Consultants million tonnes	Regulation NPWS NRAR NSESD NSW NSW Offset	Regulation, 2009 NSW National Parks and Wildlife Service Natural Resources Access Regulator National Strategy for Ecologically Sustainable Development New South Wales NSW Biodiversity Offset Policy for Major Projects (OEH, 2014)
ML/day mm mm/m MOP MSEC Mt Mtpa	megalitres per day millimetres millimetres per metre Mining Operations Plan Mine Subsidence Engineering Consultants million tonnes million tonnes million tonnes per annum Model for Urban Stormwater	Regulation NPWS NRAR NSESD NSW NSW Offset Policy NTS Corp	Regulation, 2009 NSW National Parks and Wildlife Service Natural Resources Access Regulator National Strategy for Ecologically Sustainable Development New South Wales NSW Biodiversity Offset Policy for Major Projects (OEH, 2014) Native Title Services



PCI	Pulverised Coal Injection	SEPP 33	State Environmental Planning
PCT	Plant Community Type		Policy No. 33 (Hazardous and Offensive Development)
PEA	Preliminary Environmental Assessment	SEPP 44	State Environmental Planning Policy No. 44 – Koala Habitat Protection
рН	power of Hydrogen	SEPP 55	State Environmental Planning
PHA	Preliminary Hazard Analysis		Policy No. 55 (Remediation of Land)
PoEO Act	Protection of the Environment Operations Act, 1997	SIDRA	Signalised and Unsignalised Inters Design and Research Aid
Pphm	parts per hundred million	SILO	Scientific Information for Landowners
PSM	Pells Sullivan Meynink		
PSMP	Property Subsidence SIMMCP Management Plan		Dendrobium Area 3B Swamp Impact Monitoring, Management and Contingency Plan
PSTL	Project Specific Trigger Level		(South32, 2017b)
PUR	Polyurethane Resin	SMP	Subsidence Management Plan
Ramboll	Ramboll Environ Australia Pty Ltd	South32	South32 Limited
RAPs	Registered Aboriginal Parties	SRMS	scaled root mean squared
RBL	Rating Background Level	State and Regional	State Environmental Planning Policy (State and Regional Development) 2011
REF	Review of Environmental Factors	Development SEPP	
RING	Rail Infrastructure Noise Guideline (EPA, 2013)	Swamp Offset Policy	Addendum to NSW biodiversity Offsets Policy for Major Projects:
RMS	NSW Roads and Maritime Services		Upland swamps impacted by longwall mining subsidence (OEH, 2016)
RNP	NSW Road Noise Policy (DECCW, 2011)	t	tonnes
ROM	run-of-mine	TARP	Trigger Action Response Plan
SA3	Statistical Area Level 3	TCLP	toxicity characteristics leaching procedure
SCC	specific contaminant concentration	TECs	Threatened Ecological Communities
SDS	Safety Data Sheet		
SEARs	Secretary's Environmental Assessment Requirements	the Minister	NSW Minister for Planning
SEPPs	State Environmental Planning Policy	the Project	Dendrobium Mine – Plan for the Future: Coal for Steelmaking



the proposed

action

EPBC 2017/7855

Three Ports State Environmental Planning

SEPP Policy (Three Ports) 2013

TMP Traffic Management Plan

TSC Act Threatened Species Conservation

Act. 1995

TSP total suspended particulates

Voluntary Voluntary Land Acquisition and Land Mitigation Policy - For State Acquisition Significant Mining, Petroleum and and Mitigation Extractive Industry Developments

Policy (EPA, 2018)

UNFCCC United Nations Framework on

Climate Change

WAL Water Access Licence

WBCSD World Business Council for

Sustainable Development

WIMMCP Dendrobium Area 3B Watercourse

Impact Monitoring, Management

and Contingency Plan (South32, 2017a)

Wingecarribee Local Wingecarribee LEP Environmental Plan 2010

Wollondilly Wollondilly Local

Environmental Plan 2011 LEP

Wollongong

Wollongong Local LEP

Environmental Plan 2009

WRI World Resources Institute 11.2 **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.

Ambient air quality

The all-encompassing air quality

associated with a given

environment. It is the cumulative result of emissions (e.g. dust, particulates) 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.

Background

The condition (e.g. noise levels) already present in an area before the commencement of a specific

activity.

Baseflow

The discharge of sub-surface water into a stream (i.e. groundwater seepages).

Baseline monitoring

Monitoring 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

commencement of a specific

activity.

Biological diversity

The diversity of different species of plants, animals and microorganisms, including the genes they contain, in the ecosystem of

which they are part.



Catchment

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

Coal Wash

By-product of the coal washing process generally comprising a mixture of carbonaceous shale and mudstone with minor quantities of sandstone and low-quality coal.

Coking Coal

Self-coking coal with ash of less than 10% and volatile matter of 21-23%, excellent capacity for carrying 'soft' coking coals in a blend.

Conveyor

Fixed mechanical apparatus consisting of a continuous moving belt used to transport coal from one place to another.

Cross Section

A two-dimensional diagram of an object presented as if the object had been cut along its length.

Crusher

That part of a preparation plant where material is mechanically crushed into smaller pieces.

Cyclone

A conical vessel that uses centrifugal action to separate particulate matter of differing specific gravity.

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.

dB(Lin)

Linear decibels; measurable effect of an event (e.g. blast) on air pressure including measurement of generated energy which is below the limit of human hearing. Drift

An underground passage driven through rock to access or intersect a coal seam.

Dyke

A sheet-like vertical intrusion of igneous rock cutting across the strata of older rocks.

Ecologically Sustainable Development (ESD)

Development that improves the quality of life, in a way that maintains the ecological processes on which life depends.

Ecosystem

An interacting system of animals, plants, other organisms and non-living parts of the environment.

Electrical Conductivity (EC)

The ability of a substance (either solid, liquid or gas) to transmit electricity.

Emission

The discharge of a substance (e.g. dust) into the environment.

Fault

Major fracture of the earth's crust caused by the relative movement of the rock masses on either side.

Fracturing

Fractures formed in a stream bed or rockbar which result in water diversion and reduced pool water levels.

evels.

Gate roads

An underground roadway (tunnel) that provides access to a working longwall for continuous mining.

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 carbon dioxide equivalent.



Groundwater

All waters occurring below the land surface; the upper surface of the soils saturated by groundwater in any particular area is called the watertable.

Habitat

The particular local environment occupied by an organism.

Hardstand areas

Flat or gently sloping surface that has been engineered such that it is suitable for trafficking by vehicles and/or infrastructure.

Hopper

A container/bin used for holding coal material.

Hydraulic properties

Parameters which measure the rate at which water moves through a soil/rock mass.

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.

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.

Infrastructure

The supporting installations and services that supply the needs of the Project.

In-situ

A term used to distinguish material (e.g. soils, minerals, fossils, etc.) found in its original position of formation, deposition, or growth, as opposed to transported material.

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.

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.

LAeq

The equivalent continuous noise level – the level of noise equivalent to the energy-average of noise levels occurring over a measurement period.

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.

Macroinvertebrate

Larger invertebrates (animals without backbones) which can be studied without a microscope.

Permeability

The ability of a rock or soil to allow fluid to pass through it.

рΗ

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, and 14 is most basic

(alkaline).

Population

A group of individuals of one species in an area.

Portal

The surface entry or exit point of an underground access passage.



Potable water

Water of quality suitable for human consumption.

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.

Rehabilitation

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

Relative humidity

The ratio of actual moisture in the air to the amount the air could hold if saturated, at a given temperature.

Remnant vegetation

Native vegetation remaining after widespread clearing has taken place.

Riparian

Pertaining to, or situated on, the bank of a body of water, especially a watercourse such as a river.

Run-of-mine (ROM)

Raw coal, stockpiled and used to feed the crusher in the coal preparation plant.

Runoff

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

Salinity

The total content of dissolved solids in groundwater or surface water, commonly expressed as parts of dissolved solids per million parts of solution, or milligrams of dissolved solids per litre of solution (mg/L).

Seepage

Liquid or fluid such as water, seeping or flowing from beneath the ground to the surface.

Spontaneous Combustion

Self-heating and ignition of a combustible material such as coal.

Stratigraphic

Stratigraphy - The branch of geology concerned with the origin, composition, sequence, and correlation of rock strata.

Substrate

An underlying layer (e.g. of sediment under water).

Terrestrial

Living or growing on the land.

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).

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.

Ventilation Shaft

An opening on the land surface down to the underground workings in which fresh air is introduced or ventilation air is exhausted.