

MACHEnergy

Mount Pleasant Operation

A JOINT VENTURE WITH
JODA
Japan Coal Development Australia



Section 10

Abbreviations, Acronyms and Glossary

TABLE OF CONTENTS

10	ABBREVIATIONS, ACRONYMS AND GLOSSARY	10-1
10.1	ABBREVIATIONS AND ACRONYMS	10-1
10.2	GLOSSARY	10-6

10	ABBREVIATIONS, ACRONYMS AND GLOSSARY	ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
10.1	ABBREVIATIONS AND ACRONYMS	ANZECC & ARMCANZ Guideline	<i>Australian and New Zealand Guidelines for Fresh and Marine Water Quality</i>
%	per cent		
µg/m ³	micrograms per cubic metre	ARTC	Australian Rail Track Corporation
µS/cm	microSiemens per centimetre	AS	Australian Standard
°	degree	AS/NZS	Australian and New Zealand Standard
°C	degrees Celsius	AUSRIVAS	Australian River Assessment System
1997 EIS	<i>Mount Pleasant Mine Environmental Impact Statement</i>	Australia ICOMOS	Australia International Council on Monuments and Sites
ACDF	Aboriginal Community Development Fund	BAM	Biodiversity Assessment Method
ACHA	Aboriginal Cultural Heritage Assessment	BC Act	<i>NSW Biodiversity Conservation Act, 2016</i>
ADG Code	Australian Code for Transport of Dangerous Goods by Road and Rail	BCD	Biodiversity Conservation Division
AEP	Annual Exceedance Probability	BC Regulation	<i>NSW Biodiversity Conservation Regulation, 2017</i>
AGE Consultants	Australasian Groundwater and Environmental Consultants Pty Ltd	BDAR	Biodiversity Development Assessment Report
AHIMS	Aboriginal Heritage Information Management System	BFMC	Bush Fire Management Committee
AHMP	Aboriginal Heritage Management Plan	Bio-Analysis	BIO-ANALYSIS Pty Ltd
AHIP	Aboriginal Heritage Impact Permit	BoM	Commonwealth Bureau of Meteorology
AIA	Australian Institute of Architects	BSAL	Biophysical Strategic Agricultural Land
AIP	NSW Aquifer Interference Policy	CCC	Community Consultative Committee
AnalytEcon	AnalytEcon Pty Ltd	CEEC	Critically Endangered Ecological Community
ANZG	Australian New Zealand Guidelines	CHPP	Coal Handling and Preparation Plant
ANFO	ammonium nitrate and fuel oil	CIC	Critical Industry Cluster
ANZECC	Australian and New Zealand Environmental and Conservation Council	CPI	Consumer Price Index
		Coal & Allied	Coal & Allied Operations Pty Ltd

CO ₂ -e	carbon dioxide equivalent	DPI	NSW Department of Primary Industries
Commonwealth Minister	Commonwealth Minister for the Environment and Energy	DPIE	NSW Department of Planning, Industry and Environment
Community Strategic Plan	<i>Community Strategic Plan 2017 – 2027</i>	DUAP	NSW Department of Urban Affairs and Planning
CPDP	Conceptual Project Development Plan	EC	electrical conductivity
DAWE	Commonwealth Department of Agriculture, Water and the Environment	ED3	Environmental Dam 3
		EDMIA	Environmental Dam Mine Infrastructure Area
dB	decibel	EEC	Endangered Ecological Community
dBL	linear decibel	EFA	Ecosystem Function Analysis
dB(A)	A-weighted decibel	EIS	Environmental Impact Statement
DEC	NSW Department of Environment and Conservation	ELA	Eco Logical Australia
DECC	NSW Department of Environment and Climate Change (now Biodiversity Conservation Division)	ENRS	Environment and Natural Resource Solutions Pty Ltd
DECCW	NSW Department of Environment, Climate Change and Water	ENSR Australia	ENSR Australia Pty Ltd
		EnRisKS	Environmental Risk Sciences
DEE	Commonwealth Department of Environment and Energy (now Commonwealth Department of Agriculture, Water and the Environment)	EP&A Regulation	<i>NSW Environmental Planning and Assessment Regulation, 2000</i>
		EP&A Act	<i>NSW Environmental Planning and Assessment Act, 1979</i>
DLWC	NSW Department of Land and Water Conservation	EPA	NSW Environment Protection Authority
DNG	Derived Native Grassland	EPBC Act	<i>Commonwealth Environment Protection and Biodiversity Conservation Act, 1999</i>
DoP	NSW Department of Planning	EPL	Environment Protection Licence
DotE	Commonwealth Department of the Environment (now Commonwealth Department of Agriculture, Water and the Environment)	ERA	Environmental Risk Assessment
DP&E	Department of Planning and Environment (now Department of Planning, Industry and Environment)	ESD	Ecologically Sustainable Development
		EU	European Union
DP&I	NSW Department of Planning and Infrastructure (now Department of Planning, Industry and Environment)	Extent	Extent Heritage Pty Ltd
		FM Act	<i>NSW Fisheries Management Act, 1994</i>

g/m ² /month	grams per square metre per month	LA10	A-weighted noise exceeded by 10% for the measurement period. Commonly referred to as the average maximum.
GDE	Groundwater Dependent Ecosystem		
GP	General Practitioner	LAeq	equivalent continuous noise level (A-weighted)
GT Environmental	GT Environmental Pty Ltd	LAFmax	maximum noise level criteria
GHG Protocol	Greenhouse Gas Protocol	LALC	Local Aboriginal Land Council
ha	hectare	LAN	noise exceedance level
HEC	Hydro Engineering & Consulting	LSC Class	Land and Soil Capability Class
HRSTS	Hunter River Salinity Trading Scheme	LEP	Local Environmental Plan
HVAS	High Volume Air Samplers	LGA	Local Government Area
HVCCC	Hunter Valley Coal Chain Coordinator	LiDAR	Light Detection and Ranging
HWD1	High Wall Dam 1	m	metre
HWD2	High Wall Dam 2	mm	millimetre
IESC	Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development	MACH	MACH Mount Pleasant Operations Pty Ltd and the unincorporated Mount Pleasant Joint Venture
Infrastructure SEPP	State Environmental Planning Policy (Infrastructure) 2007	MACH Energy	MACH Energy Australia Pty Ltd
IPC	Independent Planning Commission	m AHD	metres Australian Height Datum
ISO	International Organization for Standardisation	Mangoola Operations	Mangoola Coal Operations Pty Ltd (a subsidiary of Glencore plc)
JAL	Just Add Lime	Mbcm	million bank cubic metres
JBS&G	JBS&G Australia Pty Ltd	MDBC	Murray – Darling Basin Commission
kg	kilogram	MEG	Department of Mining, Exploration and Geoscience (within the Department of Regional NSW)(formerly Division of Resources and Geoscience)
km	kilometre	MIA	mine infrastructure area
km ²	square kilometre	MIC	Maximum Instantaneous Charge
kt	kilotonnes	Mining SEPP	State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007
kV	kilovolt		
L	litre	ML/day	megalitres per day

ML/year	megalitres per year	NGER Act	Commonwealth <i>National Greenhouse and Energy Reporting Act, 2007</i>
ML	Mining Lease		
mm/s	millimetres per second	NHMRC	National Health and Medical Research Council
Mm ³	million cubic metres	NPC	Newcastle Ports Corporation
MNES	Matters of National Environmental Significance	NPfI	Noise Policy for Industry
Mod 2	South Pit Haul Road Modification	NPI	National Pollutant Inventory
Mod 3	Mine Optimisation Modification	NPV	net present value
Mod 4	Rail Modification	NOW	NSW Office of Water
MOP	Mining Operations Plan and Rehabilitation Management Plan	NRAR	Natural Resources Access Regulator
MSC	Muswellbrook Shire Council	NSESD	National Strategy for Ecologically Sustainable Development
Mt	million tonnes	NSW	New South Wales
Mtpa	million tonnes per annum	OEH	NSW Office of Environment and Heritage
Mt CO ₂ -e	million tonnes of carbon dioxide equivalent	PAD	Potential Archaeological Deposit
Mt CO ₂ -e/ Mt ROM coal	million tonnes of carbon dioxide equivalent per million tonnes of run-of-mine coal	PAF	Potentially Acid Forming
MWD	Mine Water Dam	PCT	Plant Community Type
MWD2	Mine Water Dam 2	PHA	Preliminary Hazard Analysis
MWD3	Mine Water Dam 3	PM ₁₀	particulate matter with an equivalent aerodynamic diameter of 10 µm or less
NAF	non-acid forming	PM _{2.5}	particulate matter with an equivalent aerodynamic diameter of 2.5 µm or less
NAG	Noise Assessment Groups	PoEA Act	NSW <i>Protection of the Environment Administration Act, 1991</i>
NCIG	Newcastle Coal Infrastructure Group	PoEO Act	NSW <i>Protection of the Environment Operations Act, 1997</i>
NDC	Nationally Determined Contribution	PWCS	Port Waratah Coal Services Ltd
NEPC	National Environment Protection Council	RAP	Registered Aboriginal Party
Net Zero Plan	Net Zero Plan Stage 1: 2020 – 2030	RCE	Riparian, Channel and Environmental
NGA Factors	National Greenhouse Accounts Factors	Regional Plan	The Hunter Regional Plan 2036

Regional Land Use Plan	<i>The Upper Hunter Strategic Regional Land Use Plan</i>	Significant Impact Guidelines for Water Resources	<i>Significant impact guidelines 1.3: Coal seam gas and large coal mining developments – impacts on water resources</i>
RING	<i>Rail Infrastructure Noise Guideline</i>		
RLD	Rail Loop Dam	SLR	SLR Consulting Australia Pty Ltd
RMS	NSW Roads and Maritime Services (now Transport for NSW)	SMS	Short Messaging Service
RNP	NSW Road Noise Policy	State and Regional Development SEPP	<i>State Environmental Planning Policy (State and Regional Development) 2011</i>
ROM	run-of-mine		
RTA	NSW Roads and Traffic Authority (now Transport for NSW)	t	tonnes
RTCA	Rio Tinto Coal Australia	t CO ₂ -e	tonnes of carbon dioxide equivalent
SA3 Region	Upper Hunter Statistical Area Level 3 Region	TAS	Todoroski Air Sciences
SAII	serious and irreversible impact	TDS	Total Dissolved Solids
SD1	Sediment Dam 1	TEM Survey	Transient Electromagnetic Survey
SD3	Sediment Dam 3	TEOM	Tapered Elements Oscillating Microbalance
SD4	Sediment Dam 4	TfNSW	Transport for New South Wales
SDS	Safety Data Sheet		
SEA	South East Archaeology	the Approved Methods	<i>Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales</i>
SEARs	Secretary's Environmental Assessment Requirements	the JORC Code	<i>Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves</i>
SEPP 33	<i>State Environmental Planning Policy No. 33 – Hazardous and Offensive Development</i>	the Best Practice Report	<i>NSW Coal Mining Benchmarking Study: International Best Practices Measures to Prevent and/or Minimise Emissions of Particulate Matter from Coal Mining</i>
SEPP 55	<i>State Environmental Planning Policy No. 55 – Remediation of Land</i>		
SEPP	State Environmental Planning Policy	the Project	Mount Pleasant Optimisation Project
SEWPaC	Commonwealth Department of Sustainability, Environment, Water, Population and Communities	tph	tonnes per hour
		TSP	total suspended particulates
		TTPP	The Transport Planning Partnership
SIA	Social Impact Assessment		
SIDRA	SIDRA INTERSECTION 9	UHAQMN	Upper Hunter Air Quality Monitoring Network
SIGNAL	Stream Invertebrate Grade Number Average Level	UNFCCC	United Nations Framework Convention on Climate Change

US EPA	United States Environmental Protection Agency	Aquatic	Living in or on water, or concerning water.
VAHS	Veritas Archaeology and Historic Service	Aquifer	
VCU	visual character unit		A sub-surface rock formation containing water in recoverable quantities.
VPA	VPA Visual Planning and Assessment		
VLAMP	<i>Voluntary Land Acquisition and Mitigation Policy For State Significant Mining, Petroleum and Extractive Industry Developments</i>	Aquitard	A geological unit that is less permeable than an aquifer and incapable of transmitting useful quantities of water.
WAL	Water Access Licence		
WBCSD	World Business Council for Sustainable Development	Average Recurrence Interval	The expected value or average value of the periods between exceedances of a given event magnitude. A term used in water engineering. Also known as “return period”.
WHO	World Health Organisation		
Wilkinson Murray	Wilkinson Murray Pty Ltd		
WM Act	<i>NSW Water Management Act, 2000</i>	Background	The condition (e.g. noise levels) already present in an area before the commencement of a specific activity.
WRI	World Resources Institute		
WSP	Water Sharing Plan		

10.2 GLOSSARY

A-weighted decibel (dBA)	Unit used for most measurements of environmental noise; the scale is based upon typical responses of the human ear to sounds of different frequencies.	Baseflow	The discharge of sub-surface water into a stream (i.e. groundwater seepages).
Alluvial	A general term for clay, silt, sand and gravel transported by water and deposited on the bed of a floodplain, river or stream.	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.
Alluvium	Sediment (gravel, sand, silt, clay) transported by water (i.e. deposits in a stream channel or floodplain).	Biodiversity	The diversity of different species of plants, animals and micro-organisms, including the genes they contain, in the ecosystem of which they are part.
Amenity	Useful and enjoyable quality.		

Bund	An earth, rock or concrete wall or mound constructed to restrict the inflow or outflow of liquids or noise.	Drawdown	The localised lowering of groundwater level.
Catchment	The entire land area from which water (e.g. rainfall) drains to a specific watercourse or water body.	Ecologically Sustainable Development (ESD)	Development that improves the quality of life, in a way that maintains the ecological processes on which life depends.
Cliff	A continuous rockface having a minimum height of 10 m, a minimum length of 20 m and minimum slope of greater than 55°.	Ecosystem	An interacting system of animals, plants, other organisms and non-living parts of the environment.
Conveyor	Fixed mechanical apparatus consisting of a continuous moving belt used to transport coal from one place to another.	Electrical Conductivity (EC)	The ability of a substance (either solid, liquid or gas) to transmit electricity.
Cross-section	A two-dimensional diagram of an object presented as if the object had been cut across its length.	Emission	The discharge of a substance (e.g. dust) into the environment.
Cyclone	A conical vessel that uses centrifugal action to separate particulate matter of differing specific gravity.	Existing/Approved	An existing component or activity at the Mount Pleasant Operation, or a component or activity which is approved, but not yet constructed and operated.
Decibel (dB)	Unit used to express sound intensity.	Fault	Major fracture of the earth's crust caused by the relative movement of the rock masses on either side.
Decommissioning	Removal or reuse of infrastructure.	Fracturing	Fractures formed in a stream bed or rockbar which result in water diversion and reduced pool water levels.
Depressurisation	Depression in the potentiometric surface of an aquifer. Depressurisation does not necessarily result in physical drawdown within constrained aquifer units.	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.	Infrastructure	The supporting installations and services that supply the needs of the Project.
Groundwater Dependent Ecosystem (GDE)	An ecosystem that has its species composition and natural ecological processes wholly or partially determined by groundwater.	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.
Habitat	The particular local environment occupied by an organism.	LA10	A-weighted noise exceeded by 10% for the measurement period. Commonly referred to as the average maximum.
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.	LAeq	A-weighted equivalent continuous noise level – the level of noise equivalent to the energy-average of noise levels occurring over a measurement period.
Hydraulic gradient	The change in static head (i.e. elevation and pressure) per unit of distance in a given direction (units: dimensionless).	Mine water	Water that accumulates within or drains from, active mining and infrastructure areas, and any other areas where runoff may have come in contact with carbonaceous material.
Hydraulic properties	Parameters that measure the rate at which water moves through a soil/rock mass.	Mitigation	Measures undertaken to limit the adverse impact of natural hazards, environmental degradation and technological hazards.
<i>in-situ</i>	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.	Overburden	Waste rock material overlying <i>in-situ</i> coal that must be removed prior to mining of coal.
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.	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 before present.	Remnant Vegetation	Native vegetation remaining after widespread clearing has taken place.
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, and 14 is most basic (alkaline).	Riparian	Pertaining to, or situated on, the bank of a body of water, especially a watercourse such as a river.
Population	A group of individuals of one species in an area.	Runoff	A portion of precipitation (rain, hail and snow) that flows across the ground surface as water.
Potable water	Water of quality suitable for human consumption.	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).
Rating Background Level	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.	Seepage	Liquid or fluid such as water, seeping or flowing from beneath the ground to the surface.
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.	Slope	ranging between 18° and 35° with numerous continuous rock outcrops with lengths greater than 20 m and heights greater than 5 m or discontinuous rock outcrops or rock face features with lengths less than 20 m, heights less than 5 m and slopes greater than 55°.
Rehabilitation	The restoration of a landscape and especially the vegetation following its disturbance.	Spontaneous combustion	Self-heating and ignition of a combustible material such as coal.
Relative humidity	The ratio of actual moisture in the air to the amount the air could hold if saturated, at a given temperature.	Stakeholder	Any individual, group or organisation that can affect, be affected by, or perceive itself to be affected by the behaviour of a company or an organisation.

Stratigraphy

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

Subsoil

Soils that underlie the top layer of soil, typically having lower levels of organic matter and associated micro-organisms than in topsoil.

Temperature inversion

An atmosphere phenomenon in which air temperature increases with height over a particular interval.

Terrestrial

Living or growing on the land.

Topsoil

The upper or top layer of soil, that typical has higher levels of organic matter and associated micro-organisms.

Total suspended particulate matter (TSP)

The mass of all particulate matter suspended in a solution (e.g. the air).

Tributary

A smaller watercourse, which discharges into a larger watercourse.

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.