

**SECTION 7**

**NEWCASTLE COAL INFRASTRUCTURE GROUP  
COAL EXPORT TERMINAL**

## 7 ABBREVIATIONS, ACRONYMS AND GLOSSARY

### 7.1 ABBREVIATIONS AND ACRONYMS

AADT	Annual Average Daily Traffic	CAMBA	The Agreement between the Government of Australia and the Government of the Peoples Republic of China for the Protection of Migratory Birds and their Environment
ABARE	Australian Bureau of Agricultural and Resource Economics		
ABS	Australia Bureau of Statistics		
ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail	CBD	Central Business District
		CCC	Community Consultative Committee
AEMR	Annual Environmental Management Report	Cd	cadmium
AEP	annual exceedance probability	CEMP	Construction Environmental Management Plan
AGO	Australian Greenhouse Office		
AHD	Australian Height Datum	CET	Coal Export Terminal
AHIMS	Aboriginal Heritage Information Management System	CN <sup>-</sup>	cyanide
		CO <sub>2</sub>	carbon dioxide
ANZECC	Australian and New Zealand Environment and Conservation Council	CO <sub>2-e</sub>	carbon dioxide equivalent
		CO <sub>2-e</sub> /year	tonnes carbon dioxide equivalent per year
AQMP	Air Quality Monitoring Programme	Cr	chromium
ARI	average recurrence interval	CTMP	Construction Traffic Management Plan
ARTC	Australian Rail Track Corporation		
As	arsenic	Cu	copper
AS	Australian Standard	CWRCC	City Wide Residual Contributions Catchment
AS/NZS	Australian Standard/New Zealand Standard	dB	decibel
BHPB	BHP Billiton	dBA	A-weighted decibel
BOS	basic oxygen steelmaking	dB <sub>L</sub>	linear decibel
BPHOS	Big Pond Habitat Offset Scheme	DCP	Development Control Plan
C <sub>6</sub> H <sub>5</sub> OH	phenols	DEC	Department of Environment and Conservation
CAKA	Citizens and Kooragang Alliance	DEH	Department of Environment and Heritage

DET	Department of Education and Training	g/m <sup>2</sup> /month	gram per square metre per month
DG Act	<i>Dangerous Goods Act, 1975</i>	GRP	gross regional product
DIPNR	Department of Infrastructure, Planning and Natural Resources	GSM	global system for mobile communications
DLWC	Department of Land and Water Conservation	GWMP	Groundwater Monitoring Programme
DNR	Department of Natural Resources	ha	hectare
DoP	Department of Planning	HAHS	Hunter Area Health Service
DPI	Department of Primary Industries	HAZOP study	Hazard and Operability study
DUAP	Department of Urban Affairs and Planning	HBOC	Hunter Bird Observers Club
EA	Environmental Assessment	HCMA	Hunter Catchment Management Authority
EARs	Environmental Assessment Requirements	HCN	un-ionised cyanide
EC	electrical conductivity	Hg	mercury
ECRTN	Environmental Criteria for Road Traffic Noise	H:V	horizontal:vertical
EEC	Endangered Ecological Community	Hunter REP	<i>Hunter Regional Environmental Plan, 1989</i>
EIS	Environmental Impact Statement	HVAS	high volume air sampler
EP&A Act	<i>Environmental Planning and Assessment Act, 1979</i>	IBRA	Interim Biogeographic Regionalisation of Australia
EP&A Regulations	<i>Environmental Planning and Assessment Regulation, 2000</i>	INP	Industrial Noise Policy
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act, 1999</i>	JAMBA	The Agreement between the Government of Australia and the Government of Japan for the Protection of Migratory Birds and Birds in Danger of Extinction and their Environment
EPL	Environment Protection Licence	KIWEF	Kooragang Island Waste Emplacement Facility
ERA	Environmental Risk Analysis	kL	kilo litres
ERP	Emergency Response Plan	km	kilometres
ESCP	Erosion and Sediment Control Plan	kV	kilovolts
ESD	Ecologically Sustainable Development	KWRP	Kooragang Wetland Rehabilitation Project
FFMP	Flora and Fauna Management Plan	L <sub>Aeq</sub>	equivalent continuous noise level

LALC	Local Aboriginal Land Council	NHFI Act	<i>Newcastle Harbour Foreshore Improvement Act, 1953</i>
LEP	Local Environmental Plan	NHMRC	National Health and Medical Research Council
LGA	local government area	NMP	Noise Monitoring Programme
LPG	liquid petroleum gas	NPC	Newcastle Port Corporation
m	metre	NPWS	National Parks and Wildlife Service
m/s	metres per second	NSESD	National Strategy for Ecologically Sustainable Development
m/year	metres per year	NSW	New South Wales
m <sup>3</sup>	cubic metre	NTU	nephelometric turbidity units
MAHC	Maaingal Aboriginal Heritage Co-Operative	OCP	organochloro pesticides
mg/L	milligram per litre	OEMP	Operation Environmental Management Plan
ML	mega litres	OPP	organophosphate pesticides
mm	millimetre	PAH	polycyclic aromatic hydrocarbons
mm/s	millimetres per second	PAHA	Preliminary Aboriginal Heritage Assessment
Mn	manganese	PASS	potential acid sulphate soils
MR	main road	Pb	lead
MSDS	Material Safety Data Sheet	PCB	polychlorinated biphenyls
Mt	million tonnes	PFM	Planning Focus Meeting
Mtpa	million tonnes per annum	pH	measure of acid/alkaline condition
MVA	megavolt amps	PHA	Preliminary Hazard Analysis
NCC	Newcastle City Council	PM <sub>10</sub>	particulate matter less than 10 microns in size
NCIG	Newcastle Coal Infrastructure Group	POEO Act	<i>Protection of the Environment Operations Act, 1997</i>
NEPC	National Environment Protection Council	PRPs	Pollution Reduction Programs
NEPM	National Environment Protection Measure	PSC	Port Stephens Council
NEPM Guideline	National Environment Protection (Assessment of Site Contamination) Measure	PWCS	Port Waratah Coal Services
Newcastle DCP	<i>Newcastle Development Control Plan, 2005</i>	RAAF	Royal Australian Air Force
Newcastle LEP	<i>Newcastle Local Environmental Plan, 2003</i>	RBL	rating background level

RIC	Rail Infrastructure Corporation	TSMP	Threatened Species Management Protocol
RLMC	Regional Land Management Corporation	TSP	total suspended particulates
REP	Regional Environmental Plan	TSS	total suspended solids
RTA	Roads and Traffic Authority	USDA	United States Department of Agriculture
SCMP	Spontaneous Combustion Management Plan	VCP	Vegetation Clearance Protocol
Se	selenium	WMP	Waste Management Plan
SEMP	Soil and Excavation Management Plan	Zn	zinc
SEPP	State Environmental Planning Policy	µg/L	micrograms per litre
SFG	Stakeholders Focus Group	µg/m <sup>3</sup>	micrograms per cubic metre
SLAs	Statistical Local Areas	µm	micrometre
SO <sub>4</sub>	sulphate	µS/cm	micro siemens per centimetre
SSD	Statistical Subdivision	<LD	less than the limit of detection

## 7.2 GLOSSARY

SWMP	Site Water Management Plan	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.
SWGMP	Surface Water and Groundwater Monitoring Programme	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.
t	tonne	Amenity	Useful and enjoyable quality.
t-m	tonne-metres	Aquatic	Living in or on water, or concerning water.
TDS	total dissolved solids	Aquifer	A sub-surface rock formation containing water in recoverable quantities.
TEOM	tapered element oscillating microbalance	Background	The condition (e.g. noise levels) already present in an area before the commencement of a specific activity (e.g. the Project).
TMP	Traffic Management Plan		
TN	total nitrogen		
TP	total phosphorus		
tph	tonnes per hour		
TPH	total petroleum hydrocarbons		
TPH C6-C9	total petroleum hydrocarbons (six to nine carbon fraction)		
TPH C10-C36	total petroleum hydrocarbons (ten to 36 carbon fraction)		
TSC Act	<i>Threatened Species Conservation Act, 1995</i>		

<p><b>Basecourse</b></p> <p>Layer of selected fill material that is engineered to desired specifications (e.g. crushed rock material below railway sleepers).</p>	<p><b>Combined stacker/reclaimer</b></p> <p>Mobile equipment used to stack coal onto the coal stockpiles and reclaim coal from the coal stockpiles via bucket-wheel.</p>
<p><b>Baseline studies</b></p> <p>Studies conducted over time to collect a body of information to define specific characteristics of an area (e.g. background noise levels) prior to an activity (e.g. the Project).</p>	<p><b>Consolidation</b></p> <p>The reduction in the volume of the soil, equivalent to the volume of water drained, causing settlement.</p>
<p><b>Batter</b></p> <p>A slope of soil or rock fill (e.g. on either side of a road or rail embankment).</p>	<p><b>Conveyor</b></p> <p>Fixed mechanical apparatus consisting of a continuous moving belt used to transport coal from one place to another.</p>
<p><b>Berm</b></p> <p>An elongated mound or bund formed on either side of coal stockpiles used to contain surface water runoff and to separate coal stockpiles.</p>	<p><b>Cross-section</b></p> <p>A two-dimensional diagram of an object presented as if the object had been cut along its length.</p>
<p><b>Biological diversity</b></p> <p>The diversity of different species of plants, animals and micro-organisms, including the genes they contain, in the ecosystem of which they are part.</p>	<p><b>dB</b></p> <p>Decibel; unit used to express sound intensity.</p>
<p><b>Brackish</b></p> <p>Water that is salty but less so than typical seawater.</p>	<p><b>dBA</b></p> <p>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.</p>
<p><b>Buffer Bin</b></p> <p>Container/bin used to temporarily store coal conveyed from the coal storage area during shiploading operations.</p>	<p><b>dB</b></p> <p>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.</p>
<p><b>Bund</b></p> <p>An earth, rock or concrete wall or mound constructed to restrict the inflow or outflow of liquids, noise, or views.</p>	<p><b>Depreciation</b></p> <p>The loss in value of capital goods as a result of wear and tear, obsolescence, etc.</p>
<p><b>Capping layer</b></p> <p>A low permeability layer placed across the ground surface to minimise the infiltration of water.</p>	<p><b>Direct output</b></p> <p>The gross value of business turnover of the enterprise.</p>
<p><b>Catchment</b></p> <p>The entire land area from which water (e.g. rainfall) drains to a specific watercourse or water body.</p>	<p><b>Dredge</b></p> <p>A vessel or barge fitted with machines (e.g. bucket ladder, grab or suction dredging machinery) for underwater excavation.</p>

<p><b>Dredged material</b> Material excavated by dredge.</p>	<p><b>Groundwater</b> 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.</p>
<p><b>Ecologically Sustainable Development (ESD)</b> Development that improves the quality of life, in a way that maintains the ecological processes on which life depends.</p>	<p><b>Gross operating surplus</b> The excess of gross output over the costs incurred in production but before deducting taxes, royalties, dividends, interest, depreciation and land rent payments.</p>
<p><b>Ecosystem</b> An interacting system of animals, plants, other organisms and non-living parts of the environment.</p>	<p><b>Habitat</b> The particular local environment occupied by an organism.</p>
<p><b>Electrical conductivity (EC)</b> The ability of a substance (solid, liquid or gas) to transmit electricity.</p>	<p><b>Hardstand areas</b> Flat or gently sloping surface that has been engineered such that it is suitable for trafficking by vehicles and/or for the construction of structures on it.</p>
<p><b>Embankment</b> An embankment is constructed by the placement of a series of progressively higher and narrower earth or rock layers.</p>	<p><b>Hopper</b> A container/bin used for holding broken coal.</p>
<p><b>Emission</b> The discharge of a substance (e.g. dust) into the environment.</p>	<p><i>ibid.</i> In the same place.</p>
<p><b>Endemic</b> Native plant or animal restricted to a specific locality or geographic region.</p>	<p><b>Income</b> 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.</p>
<p><b>Flyways</b> Geographical routes used by shorebirds for the purposes of migration.</p>	<p><b>Infrastructure</b> The supporting installations and services that supply the needs of the Project.</p>
<p><b>Geo-membrane</b> A very low permeability membrane (e.g. plastic) used as a barrier to limit the movement of liquid or gas.</p>	<p><b>Inter-generational equity</b> 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.</p>
<p><b>Geo-synthetic</b> Permeable synthetic fabric membrane used to improve the stability and load-bearing quality of soils.</p>	
<p><b>Greenhouse gases</b> 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.</p>	

<p>Intra-generational equity</p> <p>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.</p>	<p>Rating Background Level (RBL)</p> <p>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.</p>
<p><math>L_{Aeq}</math></p> <p>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).</p>	<p>Recharge</p> <p>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.</p>
<p>Mangroves</p> <p>Many different species of trees and shrubs that grow in the intertidal zone which tolerate varying amounts of saltwater and support themselves in muddy soils which are often denied of oxygen. Characteristically, mangrove forest is low and dense with a tangle of aerating roots projecting above the mud.</p>	<p>Rehabilitation</p> <p>The restoration of a landscape and especially the vegetation following its disturbance.</p> <p>Relative humidity</p> <p>The ratio of actual moisture in the air to the amount the air could hold if saturated, at a given temperature.</p>
<p>Permeability</p> <p>The ability of a rock or soil to allow fluid to pass through it.</p>	<p>Remnant vegetation</p> <p>Native vegetation remaining after widespread clearing has taken place.</p>
<p>pH</p> <p>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).</p>	<p>Runoff</p> <p>That portion of precipitation (rain, hail and snow) that flows across the ground surface as water.</p> <p>Salinity</p> <p>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.</p>
<p>Population</p> <p>A group of individuals of one species in an area.</p>	<p>Saltmarsh</p> <p>Saltmarshes include a variety of salt-tolerant plants and occur as a band at the landward edge of the mangrove zone.</p>
<p>Potable water</p> <p>Water of quality suitable for human consumption.</p>	<p>Secant pile walls</p> <p>Secant pile walls are formed by a series of interlocking drilled shafts which form a continuous watertight wall and are used primarily where there is a high water table or unsuitable ground conditions.</p>
<p>Preload</p> <p>The placement of a temporary load or surcharge (e.g. dredged material) to consolidate (i.e. compress) the existing soils on which a load will be applied (e.g. coal stockpiles) to avoid excessive settlement in the future.</p>	



<p><b>Silt Curtain</b></p> <p>Typically woven or non-woven polypropylene skirts with float and ballast assemblies used during the construction of wharf facilities and dredging operations to control sediments and minimise the potential for associated water quality impacts.</p>	<p><b>Terrestrial</b></p> <p>Living or growing on the land.</p>
<p><b>Shorebirds</b></p> <p>Birds which are also known as “waders” because of their habit of wading in shallow water to feed. They form a large and diverse group including curlews, godwits, sandpipers, stilts, plovers and oystercatchers.</p>	<p><b>Total suspended particulates (TSP)</b></p> <p>Particulate matter suspended in solution of air.</p> <p><b>Total suspended solids (TSS)</b></p> <p>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).</p>
<p><b>Spontaneous combustion</b></p> <p>Self heating and ignition of a combustible material such as coal.</p>	<p><b>Train Unloading Station</b></p> <p>Structure used for the transfer of coal from train coal wagons onto conveyors.</p>
<p><b>Subsidies</b></p> <p>Monetary assistance granted by a government to a person or group in support of an enterprise regarded as being in the public interest.</p>	<p><b>Transfer Point</b></p> <p>A point where coal is transferred from one conveyor to another.</p>
<p><b>Substrate</b></p> <p>An underlying layer (e.g. of sediment under water).</p>	<p><b>Value added</b></p> <p>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.</p>
<p><b>Taxa</b></p> <p>Classification system for biological groups (i.e. genus).</p>	<p><b>Wearing Course</b></p> <p>The top visible layer of a road or track.</p>
<p><b>Temperature inversion</b></p> <p>An atmosphere phenomenon in which air temperature increases with height over a particular interval.</p>	<p><b>Wick drain</b></p> <p>A drain hole placed vertically down into the ground with a material inserted with strong capillary properties to facilitate the drainage of groundwater. Particularly used during preloading of soils to aid in the consolidation process.</p>