

SARAJI EAST MINING LEASE PROJECT

Environmental Impact Statement

Abbreviations and Glossary

Abbreviations and Glossary

Abbreviation	Meaning
A' Weighted	Frequency filter applied to measured noise levels to represent how humans hear sounds
AADT	Annual Average Daily Traffic
ABA	Acid Base Accounting Evaluation of the balance between acid generation and acid neutralisation processes. Generally determines the maximum potential acidity and the inherent acid neutralising capacity
ABCC	Acid Buffering Characteristic Curve A test to determine the proportion of acid neutralising capacity of a sample that may be readily available for acid neutralisation
ABS	Australian Bureau of Statistics
ACCU	Australian Carbon Credit Units
ACH Act	<i>Aboriginal Cultural Heritage Act 2003</i> (Qld)
Acid	A measure of hydrogen ion (H ⁺) concentration; generally expressed as pH
ADG Code	Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
AECOM	AECOM Australia Pty Ltd
AEP	Annual Exceedance Probability The probability that a given rainfall total accumulated or peak flow rate for a given duration will be exceeded in any one year. Refer to Chapter 8 Surface Water Resources for a conversion to average recurrence interval.
AHD	Australian Height Datum
ALC	Agricultural Land Classification
ALCAM	Australian Level Crossing Assessment Model
ALUM	Australian Land Use Management
AMD	Acid and Metalliferous Drainage Mineral waste materials characterised by low pH, elevated metal concentrations, high sulfate concentrations and high salinity. The term AMD is used more recently to replace the term acid rock drainage as metalliferous and saline drainage can occur under pH-neutral conditions
Amenity	The pleasantness of a place as conveyed by desirable attributes including visual, noise and odour
ANC	Acid Neutralising Capacity A measure of a sample's maximum potential ability to neutralise acid, expressed as kg H ₂ SO ₄ per tonne of sample. See also acid buffering characteristic curve
ANC/MPA Ratio	The ratio of the acid neutralising capacity to the maximum potential acidity of a sample. Used to assess the risk of a sample generating acid conditions
ANZECC	Australia and New Zealand Environment and Conservation Council

Abbreviation	Meaning
ARD	Acid Rock Drainage Acid rock drainage from mineral waste materials characterised by low pH, elevated metal concentrations, high sulfate concentrations and high salinity
ARI	Average Recurrence Interval The average, or expected, value of the periods between exceedances of a given rainfall total accumulated or peak flow rate for a given duration. Refer to Chapter 8 Surface Water Resources for a conversion to annual exceedance probability
ARI	Average Recurrence Interval
Artist's impression	An indicative visual representation illustrating the appearance of a proposal. Typically to communicate a concept when photomontages are not available and/or when accuracy cannot be assured
AS	Australian Standard
ASS	Acid sulphate soil. Acid sulfate soil is the common name for soils that contain metal sulfides. In an undisturbed and waterlogged state, these soils may pose no or low risk. However, when disturbed or exposed to oxygen, acid sulfate soils undergo a chemical reaction known as oxidation. Oxidation produces sulfuric acid which has led to these soils being called acid sulfate soils.
ATP	Authority To Prospect
ATSIHP Act	<i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984</i>
AUL	Auxiliary Left-turn Treatment
BBN	Brigalow Belt North Bioregion
BHP	BHP Billiton Limited
BMA	BM Alliance Coal Operations Pty Ltd
BMC	BHP Billiton Mitsui Coal
BoM	Bureau of Meteorology
BPA	Biodiversity Planning Assessment
CAMBA	China Australia Migratory Bird Agreement
CCA	Consequence Category Assessment
CH ₄	methane
Character	A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another and often conveys a distinctive sense of place. This term does not imply a level of value or importance
CHL	Commonwealth Heritage List
CHMP	Cultural Heritage Management Plan
CHPP	Coal Handling and Preparation Plant
CHR	Channelised Right-turn Treatment
CLR	Contaminated Land Register
CMSH Act	<i>Coal Mining Safety and Health Act 1999</i>
CO ₂	carbon dioxide
CO ₂ -e	carbon dioxide equivalent

Abbreviation	Meaning
Coarse Rejects	Coarse mineral waste materials (usually in pieces greater than 2 cm) produced from the Coal Handling and Preparation Plant as part of the processing of coal. Coarse rejects usually comprise the carbonaceous mudstone, siltstone and fine-grained sandstone located immediately above and below the product coal, which is mined during coal extraction. See also 'Tailings'
CQCA	Central Queensland Coal Associates
CQGP	Central Queensland Gas Pipeline
CSG	Coal Seam Gas
CSIRO	The Commonwealth Scientific and Industrial Research Organisation
DAF	Department of Agriculture and Fisheries
DATSIP	Department of Aboriginal and Torres Strait Islander Partnerships
dB	decibel
dB(A)	'A' Weighted overall sound pressure level
DCCEE	Department of Climate Change and Energy Efficiency
DEEDI	Department of Employment, Economic Development and Innovation
DEHP	Department of Environment and Heritage Protection
DEO	Desired Environmental Outcome
DERM	Department of Environment and Resource Management
DES	Department of Environment and Science
DEWHA	Department of the Environment, Water, Heritage and the Arts
DILGP	Department of Infrastructure Local Government and Planning
DIP	Department of Infrastructure and Planning
DNPRSR	Department of National Parks, Recreation, Sport and Racing
DNRM	Department of Natural Resources and Mines
DNRME	Department of Natural Resources, Mines and Energy
DoEE	Department of the Environment and Energy
DoS	Degree of Saturation
DRO	Desired Regional Outcome
DSA	Design Storage Allowance
DSDMIP	Department of State Development Manufacturing Infrastructure and Planning
DTM	Digital Terrain Model
DTMR	Department of Transport and Main Roads
EA	Environmental Authority
EC	Electrical Conductivity. The EC of water is a measure of its ability to conduct an electric current. The EC of soils will vary depending on the texture and amount of moisture held by the soil particles. Electrical conductance increases with soluble salt content and thus allows simple interpretation of salinity.
EETM	Emission Estimation Technique Manuals
Effect	The landscape or visual outcome of a proposed change. It may be the combined result of sensitivity together with the magnitude of the change
EGI	Environmental Geochemistry International

Abbreviation	Meaning
EIS	Environmental Impact Statement
EMR	Environment Management Register
EP Act	<i>Environmental Protection Act 1994</i>
EP Regulation	Environmental Protection Regulation 2008
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EPC	Exploration Permit for Coal
EPP (Noise)	Environmental Protection Policy (Noise) 2009
EPP (Water)	Environmental Protection Policy (Water) 2009
ERA	Environmentally Relevant Activity
ERE	Endangered regional ecosystem
ERIN	Queensland Government Environmental Resources Information Network
Erosion	The displacement of soil, rock or dissolved material by wind or water flow from one location on the earth and then travels to another location.
ESA	Environmentally Sensitive Area
ESCP	Erosion Sediment Control Plan
ESP	Exchangeable sodium percentage
ESS	Extreme Storm Storage
EVNT	Endangered, Vulnerable and Near Threatened
EWP	Elevated Work Platform
EWPC	Eungella Water Pipeline Company
FCCM	Fort Cooper Coal Measures
FHA	Fish habitat area
FIA	Failure Impact Assessment
FIFO	Fly in Fly out
Fisheries Act	<i>Fisheries Act 1992</i>
FPC	Foliage protection cover
Forestry Act	<i>Forestry Act 1959</i>
Frequency (Hz)	The human ear responds to sound in the frequency range of 20 Hertz (Hz) to 20,000 Hz. A combination of sound pressure and frequency determine perceived loudness. The centre frequency of an octave is double the frequency of the lower octave. Sound measurements are usually taken at 16 one-third octave bands between 50 Hz and 5000 Hz
FTE	Full Time Equivalent
FY	Financial Year
GALE	<i>Guidelines for Agricultural Land Evaluation in Queensland</i>
GBRMP	Great Barrier Reef Marine Park
GBRWHA	Great Barrier Reef World Heritage Area
GDE	Groundwater Dependent Ecosystems
GHG	Greenhouse Gas

Abbreviation	Meaning
GL	gigalitre
GMA	Groundwater Management Area
GRP	Gross Regional Product
GSP	Gross State Product
GTIA	Guide to Traffic Impact Assessment
GWh	gigawatts per hour
GWP	Global Warming Potential
ha	hectare
HFC	hydrofluorocarbons
HIL	Health-based Investigation Level
HVR	High Value Regrowth
IAA	Important Agricultural Areas
IAS	Initial Advice Statement
IBRA	Interim Biogeographic Regionalisation for Australia
ICOMOS	International Council on Monuments and Sites
IESC	International Environmental Scientific Committee
ILUA	Indigenous Land Use Agreement
Impact	The categorisation of effects. Legislative context should be considered in defining impacts and their significance
Interburden	Waste rock material between mined coal seams. See also “Spoil”
IRC	Isaac Regional Council
ISO	International Organization for Standardization
JAMBA	Japan Australia Migratory Bird Agreement
JORC	Joint Ore Reserves Committee
JSA	Job Safety Analysis
Kinetic test	Procedure used to measure the geochemical/weathering behaviour of a sample of mine material over time
kL	kilolitre
kL/h	kilolitres per hour
KLC	Kinetic Leach Column Used to characterise ongoing leachate from composite potential coal reject samples subjected to routine wetting and drying cycles
km	kilometre
km/h	kilometres per hour
km ²	square kilometres
kN	kilo newton
KRA	Key Resource Area
kV	kilovolts
L/a	litres per annum

Abbreviation	Meaning
L/d	litres per day
L ₀₁	Noise level exceeded for 1% of the measurement period. The L ₀₁ represents a 'typical maximum' noise level and is often used to represent intermittent noises
L ₁₀	Noise level exceeded for 10% of the measurement period. The L ₁₀ represents the intrusive noise level and is often used to represent traffic/ music noise
L ₉₀	Noise level exceeded for 90% of the measurement period. This represents the background noise level excluding nearby sources
L _{Aeq(T)}	A-weighted energy-averaged noise level over the measurement period (T)
L _{Amax(T)}	The maximum A-weighted noise level over the measurement period (T)
Landscape	Landscape is an all-encompassing term that refers to areas of the earth's surface at various scales. It includes those landscapes that are: urban, rural and natural; combining bio-physical elements with the cultural overlay of human use and value
LCA	Landscape Character Assessment
LCT	Landscape Character Type
LG Act	<i>Local Government Act 2009</i>
LGA	Local Government Area
L _{LIneq(T)}	Linear weighted energy-averaged noise level over the measurement period (T)
LOR	Limit of Reporting
LoS	Level of Service
LTAA	Long Term Affected Area
LTCC	Longwall Top Coal Caving
LULUCF	Land use, land use change and forestry
LVIA	Landscape and Visual Impact Assessment
LVIA Assessment Area	Land within the potential viewshed of, and forming the wider landscape context of, the Project Site, extending up to 15 km from the Project Site
m	metre
m ³	cubic metres
m ³ /a	cubic metres per annum
m ³ /d	cubic metres per day
m ³ /s	cubic metres per second
m ³ pt	cubic metres per tonne
Magnitude of change	The extent of change that will be experienced by receptors. This change can be adverse or beneficial. Factors that could be considered in assessing magnitude are: the proportion of the view/landscape affected; extent of the area over which the change occurs; the size and scale of the change; the rate and duration of the change; the level of contrast and compatibility
MAW	Mine Affected Water
mbGL	Metres Below Ground Level
MCM	Moranbah Coal Measures
MIA	Mine Infrastructure Area
MIC	Maximum Instantaneous Charge

Abbreviation	Meaning
Mitigation	Measures to avoid, reduce and manage identified potential adverse impacts
MIW	Mackay Isaac Whitsunday
ML ¹	Mining Lease
ML	megalitre
ML/a	megalitres per annum
ML/d	megalitres per day
ML/year	mega litres per year
MLA	Mining Lease Application
mm	millimetres
MNES	Matters of National Environmental Significance
MPA	Maximum Potential Acidity Maximum Potential Acidity. Calculated by multiplying the total sulfur or sulfide-sulfur (S CR) content of a sample by 30.6 (stoichiometric factor) and expressed as kg H ₂ SO ₄ per tonne
MR Act	<i>Minerals Resources Act 1989</i>
MSDS	Material Safety Data Sheet
MSES	Matters of State Environmental Significance
Mt	million tonnes
Mtpa	million tonnes per annum
MW	megawatts
MWh	megawatts per hour
N ₂ O	nitrous oxide
NAF	Non Acid Forming. Geochemical classification criterion for a sample that will not generate acid conditions
NAPP	Net Acid Producing Potential, expressed as kg H ₂ SO ₄ per tonne. Calculated by subtracting the ANC from the MPA
NATA	National Association of Testing Authorities
NC Act	<i>Nature Conservation Act 1992</i>
NC Regulation	Nature Conservation (Wildlife Protection) Regulation 1992
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NGA	National Greenhouse Accounts
NGER Act	<i>National Greenhouse and Energy Reporting Act 2007</i>
NHL	National Heritage List
NMD	Neutral Metalliferous Drainage Near neutral pH but contains elevated dissolve metals and sulfate salinity
NNTT	National Native Title Tribunal
NPI	National Pollutant Inventory

¹ Note: the abbreviation ML is used twice within the document and should be read in the context of the section specific to its use.

Abbreviation	Meaning
NT Act	<i>Native Title Act 1994</i>
OSOM	Over-Size-Over-Mass
Overburden	Waste rock material overlying the uppermost mined coal seam. See also Spoil
PAA	Priority Agricultural Area
PAD-LC	Potential Acid Forming – low capacity
PAF	Potential Acid Forming Geochemical classification criterion for a sample that has the potential to generate acid conditions.
Pasquil Stability Classes	There are six distinct atmospheric classes typically used to represent atmospheric stability. These range from Class A to Class F. Each of these classes represents a differing ability of sound to propagate across terrain
PFC	Perfluorocarbons
PFNC	Planning for Noise Control
Photomontage	A visual representation of a proposal from a receptor viewpoint, on a photographic base
PIA	Pavement Impact Assessment
PJ	petajoule
PL	Petroleum Lease
PLA	Priority Living Area
PMST	Protected Matters Search Tool
PPE	Personal Protective Equipment
QAS	Queensland Ambulance Service
QFES	Queensland Fire and Emergency Services
QGSO	Queensland Government Statisticians Office
QH Act	<i>Queensland Heritage Act 1992</i>
QLUMP	Queensland Land Use Mapping Program
QPS	Queensland Police Service
QR	Queensland Rail
QTRIP	Queensland Transport and Roads Investment Program
QTT	Queensland Treasury and Trade
QWQG	Queensland Water Quality Guidelines
RBL	Rating Background Levels
RCP	Road Corridor Permits
RE	regional ecosystem
Receptor	A place, route, viewer audience or interest group which may require assessment
REDD	Regional Ecosystem Description Database
REMP	Receiving Environment Monitoring Program
RIDA	Regional Interests Development Approval
RMP	Rehabilitation Management Plan

Abbreviation	Meaning
RNE	Register of the National Estate
ROKAMBA	Republic of Korea Australia Migratory Bird Agreement
ROM	Run of Mine Coal as it comes from the mine prior to screening or processing
ROP	Resource Operation Plan
ROPS	Rollover Protective Structures
RPI Act	<i>Regional Planning Interests Act 2014</i>
RWD	Raw Water Dam
SA4	Statistical Area 4
SCA	Strategic Cropping Area
Scenic amenity	A measure of the relative contribution of each place in the landscape to the collective appreciation of open space as viewed from places that are important to the public (Department of Natural Resources, 2001)
SCR	State Controlled Road
S CR	Chromium reducible sulphur Analytical procedure to determine the sulfide-sulfur concentration in a sample
SDPWO Act	<i>State Development and Public Works Organisation Act 1971</i>
SEA	Strategic Environmental Area
SEM	Single Event Maximum
Sensitivity	Susceptibility of a landscape or receptor to change without losing valued attributes
SES	Queensland State Emergency Services
SF ₆	sulphur hexafluoride
SFAIRP	So far as is reasonable practicable
SHR	Queensland State Heritage Register
SIA	Social Impact Assessment
SIDRA	Signalised and unsignalised intersection design and research aid
SIMP	Social Impact Management Plan
SMU	Soil Mapping Unit. Soils grouped into a single management unit on the basis of similar morphology, position on the landscape, substrate and chemistry.
Sound Power Level	The total sound energy radiated from a source per unit of time. The sound power is a property of the source and not affected by the surrounding environment
Sound Pressure Level	The sound pressure level is a property of the surrounding environment and is dependent on the distance to the source and surrounding surfaces.
Spoil	Waste rock material overlying and between coal seams. Spoil overlying a mined coal seam is called overburden. Spoil between mined coal seams is called interburden
SPP	State Planning Policy
Static test	Procedure for characterising the geochemical nature of a sample at one point in time. Static tests may include measurements of mineral and chemical composition of a sample and the Acid Base Account

Abbreviation	Meaning
t	tonne
t/a	tonnes per annum
t/yr	tonnes per year
Tailings	Very fine-grained mineral waste materials produced from the CHPP as part of the processing and washing of coal. Tailings, also called ‘fines’ or ‘fine rejects’ typically comprise very fine-grained mudstone, claystone and sand present in the CHPP wastewater, which for the Project is filtered to remove the water from the tailings, leaving behind ‘dewatered tailings’. See also “Coarse Rejects”
TCP	Traffic Control Permits
TDS	Total Dissolved Solids
TEC	Threatened Ecological Community
Temperature inversion	A meteorological phenomenon which typically occurs on cloudless nights in winter when the ground becomes cooler than the surrounding air
the Project	Saraji East Mining Lease Project
the Project Footprint	The Project’s mining activities and associated infrastructure are not proposed to impact the full extent of the Project Site; direct impacts will be constrained to a smaller area of approximately 3,541 ha within MLA 70383, MLA 70459, ML 70142 and ML 1775. This area is referred to as the Project Footprint.
The Project Site	The Project Site is generally bound by Exploration Permit for Coal (EPC) 837, EPC 2103, MLA 70383, MLA 70459, ML 1775, ML 70142 and ML 1782. The Project Site encompasses approximately 11,427 hectares (ha) of land.
TI Act	<i>Transport Infrastructure Act 1994</i>
TJ	terajoule
ToR	Terms of Reference
Total sulfur	Total sulfur content of a sample, generally measured using a ‘LECO’ analyser and expressed as ‘% S’
tph	tonnes per hour
Transport Operations Act	<i>Transport Operations (Road Use Management) Act 1995</i>
UNFCCC	United Nations Framework Convention on Climate Change
UWIR	Underground Water Impact Report
v/c	volume/capacity
Values	Any aspects of landscape or views people consider being important. Landscape and visual values may be reflected in local, state or federal planning regulations, other published documents or be established through community consultation and engagement, or as professionally assessed
View	Any sight, prospect or field of vision as seen from a place; may be wide or narrow, partial or full, pleasant or unattractive, distinctive or nondescript, and may include background, mid ground and/or foreground elements or features
Viewpoint	The specific location of a view, typically used for assessment purposes
Viewshed	Areas visible from a particular location (may be modelled or field-validated)
Visual absorption capacity	The potential for a landscape or scene to absorb a particular change without a noticeable loss of valued attributes
Visual amenity	The attractiveness of a scene or view

Abbreviation	Meaning
Visual representation	Graphic representation of a proposal in context showing its likely appearance and scale
VM Act	<i>Vegetation Management Act 1999</i>
VMOLA	<i>Vegetation Management and Other Legislation Amendment Act 2018</i>
VWP	Vibrating Wire Piezometer
Water Act	<i>Water Act 2000</i>
WBM	Water Balance Model
WHL	World Heritage List
WHO	World Health Organization
WMS	Water Management System
WoNS	Weeds of National Significance
WRP	Water Resource Plan
WSSR Act	<i>Water Supply (Safety and Reliability) Act 2008</i>
WTC	Waste Transport Certificate
WTP	Water Treatment Plant
ZTV	Zone of Theoretical Visibility
µg/L	micrograms per litre