

Glossary and Abbreviations

A.1 Terms

Term	Definition
Aerobic	Having or providing oxygen.
Aestivate	To be dormant, often buried within the soil or under leaf litter, during months of drought.
Affected person	An Affected person for a project , for the operational land or land joining it are: a registered proprietor; a person recorded in the Land Act 1994 register (as the registered holder of that interest); for land subject to a mining claim etc a holder of or an applicant for the tenement ; for land subject to a relevant resource authority, the holder of the resource authority; an Aboriginal or Torres Strait Islander trustee of the land; an Aboriginal or Torres Strait Islander grantee of the land; Local Government for land held under a lease or State Government for land held under a lease.
Aggradation	The build-up of sediment or some other substance.
Ambient	Surrounding or background.
Ambient noise	The sum of the noise from all sources, near and far, in a given environment.
Anaerobic	Having or producing no oxygen.
Annual Return	The sending or receiving of yearly documents, for the purposes of the EP Act.
Anthropogenic	Caused by humans or human activity.
ANZECC/ARMCANZ	The Australian and New Zealand Environment and Conservation Council and the Agriculture and Resource Management Council of Australia and New Zealand.
Aquifer	Rock or sediment in a formation, group of formations or part of a formation that is saturated and sufficiently permeable to transmit economic quantities of water to wells and springs.
Autotrophic	Organisms that undergo photosynthesis, ie primary producers.
AusRivAS	Australian River Assessment System
Average Minimum Background Noise Level	Assessed as the background noise level per standard time interval that was exceeded for ninety per cent of the interval, defined in AS1055 as the rating background noise level.
Average recurrence interval (ARI)	The average or expected value of the period between exceedances of a given variable.
ARF	Areal Reduction Factor
A-weighted	Filtering a sound level so that a microphone output approximates the frequency response of a human ear to the sound.
Background noise	The noise ordinarily present and continuous at a given location, excluding extraneous noise and the noise source of interest. Commonly measured using the statistical parameter, L_{A90} , the A-weighted noise level that was exceeded for ninety per cent of the monitoring period.
Benthos	The sediment at the bottom of a waterway.
Biodegradation	Breakdown of substances by micro-organisms, particularly bacteria and fungi.
Biomass	Quantity of living organic matter.
Bioregion	Region where the floral or faunal communities are similar.
Borrow pit	An excavation providing earth to be used as a construction material.
Bund	An embankment constructed around an area to prevent the inflow or outflow of liquids. Also called Bunding.
Carbonate	A group of oxide minerals comprising mainly carbon and oxygen. Often composed of the skeletal remains of marine or freshwater organisms. Limestone (calcium carbonate) is a common example of a carbonate mineral.
Carcinogenicity	Any substance which tends to produce a cancer in a body.

Term	Definition
Catchment	A water intake area or all parts of a drainage basin.
Channelisation	The formation of deeper channels within a waterway.
CONCAWE	Method of noise modelling and is the only method dealing explicitly with the influence of wind and the stability of the atmosphere using Pasquill stability categories.
Confined Aquifer	An aquifer that is overlain by a confining bed. The confining bed has a significantly lower hydraulic conductivity than the aquifer.
Conglomerate	Sedimentary rock consisting of poorly sorted grains (typically pebbles surrounded by finer materials, such as sand or silt).
Consolidate	The process or processes by which loose soft or liquid earth materials (e.g. sand) become firm and coherent (e.g. sandstone).
dB	Abbreviation for decibel—the unit of sound measurement.
dB(A)	'A' Weighted overall sound pressure level.
Decibel (weighted) dBA	The measurement of sound pressure level in which the amplitude of the sound signal is negatively weighted in frequencies below 1000 Hz in accordance with a weighing scale known as the 'A' weighing scale. This scale was established to closely simulate human perception of the relative level of pure tone sounds.
DEHP	Queensland Department of Environment and Heritage Protection
Desiccation	Drying out due to the effects of the environment.
Dissolved Oxygen (DO)	The amount of oxygen dissolved in water.
Drainage pattern	The pattern formed by drainage lines, gullies, streams and rivers.
Draw down	A lowering of the watertable of an unconfined aquifer or the potentiometric surface of a confined aquifer caused by pumping of the groundwater from wells.
Easement	A right held by the Proponent to make use of the land of another, for example, for the installation and operation of a pipeline. Also referred to as a right of way.
Ecological Sustainable Development (ESD)	Development that improves the quality of life in a way that maintains the ecological processes on which life depends.
Ecotone	The transitional zone between two vegetation types (ecosystems).
Environmental Authority	Licence or Approval issued under the EP Act to conduct specified 'Environmentally Relevant Activities'.
Environmental flow	Freshwater flow that is maintained solely for environmental reasons.
Environmental impact assessment procedures	Federal or State requirements that must be followed to enable approval to be obtained for a project to proceed.
Environmentally Relevant Activities	Activities listed under the EPR that require an Environmental Authority.
Ephemeral	A stream that flows briefly only in direct response to precipitation in the immediate locality and the channel of which at all times remains above the watertable.
Equivalent persons	Unit of measurement used to determine the demand for sewerage reticulation services.
Euryhaline	Tolerant of a wide range of water salinities.
Eutrophic	A body of water impacted by high nutrients.
Eutrophication	The process by which water bodies, such as lakes, estuaries, or slow-moving streams receive excess nutrients that stimulate excessive plant growth. This enhanced plant growth, reduces dissolved oxygen in the water when dead plant material decomposes and can cause other organisms to die.
Factor prices	Price for factors of production (labour, capital, land, materials).

Term	Definition
Federal Environment Minister	The Minister responsible for administering the EPBC Act
Free Field	A sound field in a medium of such extent that the effects of the boundaries are negligible throughout the region of interest.
Frequency (Hz)	The human ear responds to sound in the frequency range of 20 Hertz 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 and 5000 Hz.
Gaussian (applied to mathematics)	Normal statistical distribution, usually appearing in graph form as a “bell” curve.
Geomorphology	The description and interpretation of landforms.
Greenhouse gases	Gases such as carbon dioxide and methane which, when dispersed in the atmosphere, tend to trap heat.
Gross domestic product	The total market value of goods and services produced in Australia after deducting the costs of goods used up in the process of production (intermediate consumption), but before deducting consumption of fixed capital (depreciation).
Gross regional product / regional economic income	Gross regional product represents a region’s contribution to gross domestic product, or total national income.
Gross value of agricultural production	Equal to the market value of agricultural output (includes goods and services used during production).
Hazchem	Abbreviation used for the hazardous chemical substances coding system used in the Australian Code for the Transportation of Dangerous Goods by Road and Rail. The system is defined in the Australian Standard AS 1216 and uses a classification and labelling system adopted by the United Nations.
Heavy vehicle	A truck, transport or other vehicle with a gross vehicle weight above a specified level (for example: over 8 tonnes).
Heterotrophic	Of bacteria, fungi etc – organisms that do not undergo photosynthesis.
Horizon	A consistently coloured and textured layer of soil.
Hydraulic	Of or relating to water or other liquid in motion; operated, moved, or effected by water or liquid.
Hydrocarbon	A compound consisting of hydrogen and carbon.
IDAS	Integrated Development Assessment System
Initial Advice Statement (InAS)	A document used to initiate the environmental impact assessment procedures of the Queensland Government.
Interested person	Interested person means an unincorporated community or environmental body with a financial or non-financial interest in the local government area that the operational land is in.
Intermittent noise	A noise whose sound pressure level suddenly drops to the background level several times during the period of observation, the time during which the level remains at a constant value different from that of the background level being of the order of 1s or more.
ISC3	Industrial source Complex Version 3 (ISC3) is a standard USEPA steady state Gaussian plume regulatory model which provides indications of ground level concentrations of airborne pollutants.
L ₁₀	Noise level exceeded for 10% of the measurement period. This represents the upper intrusive noise level and is often used to represent traffic/ music noise.

Term	Definition
L ₉₀	Noise level exceeded for 90% of the measurement period. This represents the background noise level excluding nearby sources. Also known as L _{BG} .
Leachate	Elements or compounds in solution which have been dissolved from water flowing over a material.
L _{eq}	Energy averaged noise level over the measurement period. This measure is commonly used when comparing the criterion noise level under the Environmental Noise Regulations and for comparison with relevant standards for air conditioning noise.
L _{max}	Maximum instantaneous noise level during a measured period.
Macroinvertebrate	An invertebrate large enough to be seen without magnification.
Macrophyte	A plant large enough to be seen with the naked eye.
Masking	The raising of a listener's threshold of hearing for a given sound due to the presence of another sound.
Microchiropteran	Of bats, small or micro bat species.
Opportunity cost	Represents the value of alternative uses of economic resources (including labour, capital and materials).
Output	The total market value of production (goods and services) by all industries within an economy.
Oxidation-Reduction Potential (ORP)	The reduction and oxidation characteristics of water, which gives an indication of what oxygen levels are likely to be.
elevated landforms	out-of-pit dumps
Particulate matter	Minute airborne particles.
Perched Aquifer	A region in the unsaturated zone where the soil may be locally saturated because it overlies a low-permeability unit.
Perennial	Lasting for an indefinite amount of time.
Permeability	The capacity of a material to transmit fluid.
PET richness	The richness of pollution-sensitive invertebrate taxa (Plecoptera (stoneflies), Ephemeroptera (mayflies), and Trichoptera (caddisflies)) within an area.
PMP	Probable Maximum Precipitation
Porosity (primary)	The porosity that represents the original pore openings when a rock or sediment formed.
Porosity (secondary)	The porosity that has been caused to by fractures or weathering in a rock or sediment after it has been formed.
Potentiometric Surface	A surface that represents the level to which water will rise in tightly cased wells. The <i>water table</i> is a particular potentiometric surface for an unconfined aquifer.
Power Factor Correction	A technique to improve the efficiency of alternating current electric motors.
Quantitative	An assessment based on the amount or number of something.

Term	Definition
Queensland heritage place	Has the mean given to that term under the <i>Queensland Heritage Act 1992 (Qld)</i>
Rainfall Residual Mass Curve	<p><i>Rainfall residual mass for month_x</i> $= (\text{Actual rainfall for month}_x - \text{average rainfall for month}_x) + (\text{the cumulative sum of } (\text{Actual rainfall for month} - \text{average rainfall for month}) \text{ for all previous months})$</p> <p>This technique creates a cumulative plot of above average or below average rainfall for each month¹. A positive slope on the graph equates to a period of above average rainfall, while a negative residual mass slope equates to a period of lower than average rainfall. This method enables correlation of rainfall with water level fluctuation within groundwater bores, and is similar to the curve created by the twelve month moving average of the monthly rainfall data.</p>
Recharge	Water flowing into an aquifer.
Recharge Area	An area in which there are downward components of hydraulic head in the aquifer. Infiltration moves downward into the deeper parts of an aquifer in a recharge area.
Remnant vegetation	Patches of vegetation amongst a clearing.
Riffle	An area within a stream that is characterised by shallow water, rocky sediment and fast water flows.
Riparian	Pertaining to, or situated on the bank of, a body of water, especially a watercourse such as a river.
Run	An area in a stream that is characterised by moderately straight channels and medium water flow.
Salinity	The total content of dissolved solids in groundwater, commonly expressed as parts of dissolved solids per million parts of solution (ppm), or milligrams of dissolved solids per litre of solution (mg/L). The significance of salinity depends on its nature as well as the amount of the dissolved solids.
Saturation	The extent or degree to which the voids in rock contain water; usually expressed as a percent related to total void or pore space.
SDPWO Act	<i>State Development and Public Works Organisation Act 1971</i>
Semi-confined Aquifer	An aquifer confined by a low-permeability layer that permits water to slowly flow through it. During pumping of the aquifer, recharge to the aquifer can occur across the confining layer. Also known as a leaky artesian or leaky confined aquifer.
Senescing	Aging and deteriorating, e.g pools that dry out over time.
SEWPAC	Department of Sustainability, Environment, Water, Population and Communities
Sodic	Having a high sodium content.
Sodicity	The level of exchangeable sodium cations in the soil, typically expressed as a percentage (ESP). It relates to likely dispersion on wetting and hence ability to be eroded and transported in stormwater. An ESP of greater than 6 % is sodic and greater than 15 % is strongly sodic. ESP levels can be lower in soils that are more saline.
Sound Attenuation	The reduction in the intensity or in the sound pressure level of sound which is transmitted from one point to another.
Sound Power Level	The total sound energy radiated from a source per unit of time. Ten times the logarithm to the base 10 of the ratio of a given power to a reference power.
SoundPLAN	Noise assessment model.
SoR	State of the Rivers

¹ The rainfall residual mass method was developed by Dr Noel Merrick, Deputy Director, National Centre for Groundwater Management, University of Technology, Sydney to enable correlation of groundwater level fluctuation to rainfall events.

Term	Definition
SPA	<i>Sustainable Planning Act</i>
SP Regulation	<i>Sustainable Planning Regulation 2009</i>
Steady-state noise	A noise having negligibly small fluctuations of sound pressure level within the period of observation.
Subcatchment	An area within a catchment drained by one or more tributaries of the main water body.
Substrate	The underlying base to something, e.g. the streambed.
Temperature inversion	Air temperature usually decreases with height. However, the temperature sometimes increases with height in certain layers. Inversions may be elevated, ie the inversion occurs aloft, or may be surface-based.
Teratogenicity	Leading to the production of foetal abnormalities.
Total dissolved solids (TDS)	The concentration of common dissolved salts found in water and reported by volume (mg/L).
Total suspended solids (TSS)	The concentration of filterable particles in water (retained on a 0.45 μ m filter) and reported by volume (mg/L).
Toxicity	The degree of poison or ill effects that a substance produces.
Traditional owners	Traditional Aboriginal owners or other Aborigines to whom the protection of an area is entrusted in accordance with Aboriginal tradition.
Trophic	Pertaining to food webs.
Turbidity	A measure of the cloudiness of water which is determined by the amount of light scattered by suspended particles.
Unconfined Aquifer	An aquifer in which there are no confining beds between the zone of saturation and the surface. There will be a <i>water table</i> in an unconfined aquifer.
Value added	The market value of goods and services produced by industries (economic output), less the costs of goods and services used by these industries in the production process (intermediate consumption). Total value added within an economy (or by industry) is therefore less than total output. Value added may be measured on a regional basis or industry basis.
Wastewater	Water used in a process to carry unwanted materials away or process water that can no longer be used or is surplus to the process.
Water Table	Level below which the ground is saturated with water.
Water Table	The surface in an unconfined aquifer or confining bed at which the pore water pressure is atmospheric.
Wind rose	A diagram summarising the frequencies of winds of different strengths and directions as measured at a specific point over an extended period of time.

A.2 Abbreviations

Term	Abbreviation
AADT	Average Annual Daily Traffic
ABCC	Acid Buffering Characteristic Curve
ABS	Australian Bureau of Statistics
ACA	Aquatic Conservation Assessments
ACARP	Australian Coal Association Research Program
ACH Act	<i>Aboriginal Cultural Heritage Act 2003</i>
adb	air dried basis
ADWG	Australian Drinking Water Guidelines
AEMSC	Australian Explosives Manufacturer Safety Committee
AEP	Annual Exceedance Probability
Ag	Silver
AGO	Australian Greenhouse Office
AHC	Australian Heritage Commission
AHD	Australian Height Datum
ALCAM	Australian Level Crossing Assessment Model
AMD	Acid Mine Drainage
AMTD	Average Middle Thread Distance
ANC	acid neutralising capacity
ANABAT	Ultrasound bat call detection system
ANEF	Australian Noise Exposure Forecast
ANFO	Ammonium Nitrate Fuel Oil
ANLEC	Australian National Low Emissions Coal Research
ANZECC	Australian and New Zealand Environment and Conservation Council
ARD	Acid Rock Drainage
ARF	Areal Reduction Factor
ARI	Average Recurrence Interval
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
AR&R	Australian Rainfall & Runoff
AS XXXX	Australian Standard number e.g. AS1940
As	Arsenic
ASS	Acid Sulphate Soils
ASTs	Above-ground Storage Tanks
AS/NZS	Australian/New Zealand Standard
ASX	Australian Stock Exchange
ATP	Authority to Prospect
ATSIHP Act	<i>Aboriginal and Torres Strait Islander Heritage Protection Act 1986</i>
AWDT	Average Weekday Daily Traffic
AWQG	Australian Water Quality Guidelines
BCITF	Building and Construction Industry Training Fund
bcm	Bank cubic metre
Bi	Bismuth

Term	Abbreviation
BOD	biochemical oxygen demand
BoM	Bureau of Meteorology
Building Act	<i>Building Act 1975 (Qld)</i>
C1	Diesel fuel, class C1 combustible
Ca(OH) ₂	Calcium hydroxide or slated lime
CaCO ₃	Calcium carbonate
CaO	Calcium oxide
CBR	California Bearing Ratio
CCSD	Cooperative Research Centre for Coal in Sustainable Development
Cd	Cadmium
Cs	Caesium
CEC	Cation Exchange Capacity
CHA	Cultural Heritage Assessment
CHMP	Cultural Heritage Management Plan
CLR	Contaminated Land Register
CMSH Act	<i>Coal Mining Safety and Health Act 1999</i>
CNG	compressed natural gas
CO ₂	Carbon Dioxide
COD	chemical oxygen demand
CoG	Queensland Coordinator General
COP	coefficient of performance
CHPP	Coal Handling Preparation Plant
CR Act	<i>Cultural Record (Landscapes Queensland and Queensland Estate) Act 1987</i>
CRG	Community Reference Group
CSR	Contaminated Site Report
CV	Commercial Vehicle
CWP	Coal Worker's Pneumoconiosis
DAF	dissolved/diffused air flotation
DATSIP	Queensland Department of Aboriginal and Torres Strait Islander Policy
dB	decibels
dBA	A-weighted sound power levels
CHMP	Cultural Heritage Management Plan
DBH	Diameter at Breast Height
DCS	Department of Community Safety
DEEDI	Department of Employment, Economic Development and Innovation
DEEWR	Department of Education, Employment and Workplace Relations
DERM	Former Department of Environment and Resource Management
DET	Department of Education and Training
DEWS	Department of Energy and Water Supply
DHGLP	Former Queensland Department of Housing, Local Government and Planning
DIDO	drive-in/drive-out
DIN	Dissolved Inorganic Nitrogen

Term	Abbreviation
DIP	Department of Infrastructure and Planning
DISITA	Department of Science, Information Technology, Innovation and the Arts
DLGP	Former Queensland Department of Local Government and Planning
DMC	Dense Medium Cyclone
DME	Former Queensland Department of Mines and Energy
DMR	Former Queensland Department of Main Roads
DMRP	Disaster Management and Recovery Plan
DNRM	Former Queensland Department of Natural Resources Mines
DoC	Department of Communities
DOC	Dissolved organic nutrients
DoH	Queensland Department of Housing
DO	Dissolved oxygen
DoS	Degree of Saturation
DPI	Former Queensland Department of Primary Industries
DSDIP	Department of State Development, Infrastructure and Planning
DTMR	Department of Transport and Main Roads
EA	Environmental Authority
EAT	Emerson Aggregate Test
EC	electrical conductivity
ECEC	Effective Cation Exchange Capacity
EEO Act	<i>Energy Efficiency Opportunities Act 2006</i>
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
Electricity Act	<i>Electricity Act 1994 (Qld)</i>
EMM	Environmental Monitoring Manual
EMOS	Environmental Management Overview Strategy
EM Plan	Environmental Management Plan
EMR	Environmental Management Register
EMS	Environmental Management System
ENM	Environmental Noise Model
EP	Equivalent Persons
EP Act	<i>Environmental Protection Act 1994 (Qld)</i>
EPA	Former Queensland Environmental Protection Agency
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>
EPBC Regulations	<i>Environment Protection and Biodiversity Conservation Regulations 2000</i>
EPC	Exploration Permit for Coal
EPP	Environmental Protection Policy
EPP (Air)	<i>Environmental Protection (Air) Policy 2008 (Qld)</i>
EPP (Noise)	<i>Environmental Protection (Noise) Policy 2008 (Qld)</i>
EPP (Waste)	<i>Environmental Protection (Waste Management) Policy 2000 (Qld)</i>
EPP (Water)	<i>Environmental Protection (Water) Policy 2008 (Qld)</i>
(EPR (Waste	<i>Environmental Protection (Waste Management) Regulation 2000 (Qld)</i>

Term	Abbreviation
Management)	
EPR	<i>Environmental Protection Regulation 2008 (Qld)</i>
ERA	environmentally relevant activity
ESA	Equivalent Standard Axils
ESD	ecologically sustainable development
ESP	Exchangeable Sodium Percentage
EVNT	endangered, vulnerable and near-threatened
Forestry Act	<i>Forestry Act 1959 (Qld)</i>
FEL	Front End Loader
FIFO	fly-in/fly-out
FLURP	Final Land Use and Rehabilitation Management Plan
FOPS	Falling Object Protective Structure
FRR	Final Rehabilitation Report
Fisheries Act	<i>Fisheries Act 1994</i>
Ga	Gallium
GAI	Geochemical Abundance Index
GAB	Great Artesian Basin
GARID	TMR Guidelines for Assessment of Road Impacts of Development (TMR, 2006)
GCC	ground calcium carbonate
GDP	Gross Domestic Product
GHG	greenhouse gases
GP	General Practitioner
GQAL	Good Quality Agricultural Land
GRP	Gross Regional Product
gsm	Grams per square metre (of paper)
GSP	Gross State Product
GSV	Ground Surface Visibility
Hazchem	hazardous chemicals
HAZOP	Hazard and Operability Study
ha	hectares
HD	Highly disturbed
HEV	High ecological/conservation value waters
HV	high voltage
H ₂ SO ₄	Sulphuric acid
IBC	International Bulk Container
IDAS	Integrated Development Assessment System
IEMS	Integrated Environmental Management System
InAS	Initial Advice Statement
IO	Input-Output
IPA	<i>Integrated Planning Act 1997 (Qld)</i>
ISC3	Industrial Source Complex Version 3
ISO	International Standards Organisation
ITSF	In-Pit Tailings Storage Facilities

Term	Abbreviation
JORC	The Australasian Joint Ore Reserves Committee
JRLF	Jondaryan Rail Loadout Facility
KRA	Key Resource Area
LRA	Land Resource Area
LA10,1hr	A-weighted sound level exceeded 10% of time
LA90,1hr	A-weighted sound level exceeded 90% of time
LAm _{ax}	peak A-weighted sound level
Leq	noise levels of a continuous steady sound
LGA	Local Government Area
LG Act	<i>Local Government Act 2009</i>
LIPP	Local Industry Participation Plan
Li	Lithium
LNG	liquefied natural gas
LoS	Level of Service
LPPSRM	<i>Land Protection (Pest and Stock Route Management) Act 2002</i>
LS	land suitability
LSMP	Local Stakeholder Management Plan
MBR	Membrane Bioreactor
MCU	Material change of use
MDL	Mineral Development Licence
MHF	Materials Handling Facility
MIA	Mine Industrial Area
MIC	maximum charge mass per delay
ML	Million Litres
ML(s)	Mining Lease (s)
MLA	Mining Lease Application
Mn	Manganese
MNES	Matter of National Environmental Significance
MPA	maximum potential acidity
MR Act	<i>Mineral Resources Act 1989 (Qld)</i>
MSDS	Material Safety Data Sheets
Mt	million tonnes
Mtpa	million tonnes per annum
Na	Sodium
NAC	New Acland Coal Pty Ltd
NC Act	<i>Nature Conservation Act 1992</i>
NC Regulation	<i>Nature Conservation (Wildlife) Regulation 2006</i>
NHCL	New Hope Corporation Limited
NHEPL	New Hope Exploration Pty Ltd
NAPC	New Acland Pastoral Company
NAF	Non Acid Forming
NAG	Net Acid Generation

Term	Abbreviation
NAPP	Net Acid Producing Potential
NATA	National Association of Testing Authorities
NC Act	<i>Nature Conservation Act 1992</i>
NCWR	Nature Conservation (Wildlife) Conservation
NEPC	National Environment Protection Council
NEPC Act	<i>National Environment Protection Council (Queensland) Act 1994</i>
NEPM	National Environment Protection Measure
NEPM	National Environment Protection Measure for Ambient Air
NGA	National Greenhouse Accounts
NGER Act	<i>National Greenhouse and Energy Reporting Act 2007</i>
NHCA	New Hope Coal Australia
NHCL	New Hope Corporation Limited
NHEPL	New Hope Exploration Pty Ltd
NHG	New Hope Group
NO ₂	Nitrogen dioxide
NO _x	oxides of nitrogen
NPI	National Pollutant Inventory
NPV	Net Present Value
NSG	No Suitable Group
NTU	Nephelometric Turbidity Units
NVMP	Noise and Vibration Management Plan
O ₂	Oxygen
ORP	Oxidation – Reduction Potential
PAAs	Priority Agricultural Areas
PAF	Potentially Acid Forming
PAF-LC	Potentially Acid Forming – Low Capacity
PALUs	Priority Agricultural Land Uses
PAWC	Plant Available Water Capacity
Pb	Lead
PCBs	Polychlorinated Biphenyls
PDLU	preferred dominant land use
PFR	Parallel flow regenerative
PHA	Preliminary Hazard Analysis
PHIDU	Public Health Information Development Unit
PKRA	Potential Key Resource Area
PLAs	Priority Living Areas
PMF	Probable Maximum Flood
PMP	Probable Maximum Precipitation
PPE	Personal Protective Equipment
ppm	parts per million
PWD	Process Water Dam
QBH	Queensland Bulk Handling

Term	Abbreviation
QFRS	Queensland Fire and Rescue Service
QH	Queensland Health
QH Act	<i>Queensland Heritage Act 1992</i>
QldRA	Queensland Reconstruction Authority
QMEA	Queensland Minerals and Energy Academy
QMRM	Queensland Multi-Regional Model
QPS	Queensland Police Service
QPWS	Queensland Parks and Wildlife Service
QR	Queensland Rail
former QT	Former Queensland Department of Transport
QT	Queensland Treasury
QWQG	Queensland Water Quality Guidelines
RAFTS	Hydrologic, rainfall and runoff computer modelling program
REMP	Receiving Environment Management Plan
RIA	Road Impact Assessment
RIP	Roads Implementation Programme
RMU	ring main unit
RoM	Run-of-Mine
ROPS	Rollover Protective Structures
ROAR	Reach Out and Recover
RPAC	Regional Planning Advisory Committee
RTA	Registered Training Authority
RUM	road use management
S	Sulphur
SAR	Sodium Adsorption Ratio
Sb	Antimony
SBRPF	Surat Basin Regional Planning Framework
SCA	Shell Coal of Australia
SCR	State Controlled Roads
SD	Sediment Dam
SDA	Shell Development (Australia) Pty Ltd
SDPWO Act	<i>State Development and Public Works Organisation Act 1971</i>
SEIFA	Socio-Economic Indices for Areas
SEM	scanning electron microscope
SES	State Emergency Service
SEWPaC	Commonwealth Department of Sustainability, Environment, Water, Population and Communities
SF	State Forest
SKM	Sinclair Knight Merz
SMD	Slightly to moderately disturbed
SMU	Soil Mapping Unit
SO ₂	sulphur dioxide
SPP	State Planning Policy

Term	Abbreviation
SPA	<i>Sustainable Planning Act 2009</i>
SPPs	State Planning Policies
SP Regulation	<i>Sustainable Planning Regulation 2009</i>
STP	Sewage Treatment Plant
SWL	standing water levels
SWL	sound power levels (noise)
T/bcm	In Situ Overburden Densities
TDS	Total Dissolved Solids
the draft Regional Plan	Darling Downs Statutory Regional Plan
the ANZECC Guidelines	Australian and New Zealand Guidelines for Fresh and Marine Water Quality, ANZECC Guidelines
the Mine	the existing New Acland Coal Mine
the NEPM	<i>National Environment Protection (Assessment of Site Contamination) Measure 1999</i>
the revised Project	New Acland Coal Mine Stage 3 Project
the ROP	<i>Condamine and Balonne Resource Operations Plan 2008 Amended December 2011 (Revision 3)</i>
the original proposal	New Acland Coal Mine Stage 3 Expansion Project
the Planning Scheme	Toowoomba Regional Planning Scheme
the Tip	former Acland Tip
TI Act	<i>Transport Infrastructure Act 1994</i>
TIN	Triangular Irregular Model
TLF	Train Loadout Facility
TMP	Traffic Management Plan
TN	Total Nitrogen
ToR	Terms of Reference
tph	Tonne per hour
TSF	Tailings Storage Facility
TSS	Total Suspended Solids
TRC	Toowoomba Regional Council
TTC	Trade Training Centre
UPS	Uninterruptable Power Supply
USEPA	United States Environmental Protection Agency
UST	underground storage tanks
USEPA	United States Environmental Protection Agency
Vkt	Vehicle kilometres travelled
VM Act	<i>Vegetation Management Act 1999</i>
Vpd	Vehicle Trips Per Day
Vph	Vehicles per hour
W	Tungsten
Water Act	<i>Water Act 2000</i>

Term	Abbreviation
WHO	World Health Organisation
WMP	Waste Management Plan
WRMP	Water Resource Management Plan
WRR Act	Waste Reduction and Recycling Act 2011
WSSR Act	<i>Water Supply (Safety and Reliability) Act 2008</i>
WTP	Water Treatment Plant
WWTP	Waste Water Treatment Plant
WWRF	Wetalla Wastewater Reclamation Facility
Zn	Zinc

Units

Time Intervals	
s	second
d	day
hr	hour
hr/d	hour per day
a	annum
Length	
km	kilometre
m	metre
cm	centimetre
mm	millimetre
Mass	
kg	kilogram
t	tonne
t/a	tonnes per annum
t/h	tonnes per hour
Density	
g/m ³	grams per cubic metre
mg/l	milligram per litre
Area	
m ²	square metre
ha	hectare
Volume	
m ³	cubic metre
Mm ³	Million cubic metres
ML	Mega Litre (1,000,000 litres)
L	Litre
Flow Rate	
m ³ /s	cubic metre per second
m ³ /d	cubic metre per day
L/min	litres per minute
kg/d	kilogram per day
ML/d	megalitre per day
ML/a	megalitre per annum
Nm ³ /hr	Normalised flow rate; normal cubic metre per hour
CFU/100ml	Colony-forming units per 100ml of water
Org/100ml	Organisms per 100ml of water
Energy	
GJ/day	giga joule per day
PJ/a	peta joule per annum
kW	kilowatt

MW	megawatt
kJ/kg	kilojoule per kilogram
MWh	megawatt hour
Temperature	
°C	degrees Celsius
°F	degrees Fahrenheit
Noise	
dB	decibel
dB(A)	decibel (A-Weighted scale)
Potential	
kV	kilovolt
mS/cm	milli Siemens per centimetre
µS/cm	micro Siemens per centimetre
Frequency	
Hz	hertz

A.3 Prefixes for Units

Quantity	Symbol	Value
exa	E	10 ¹⁸
peta	P	10 ¹⁵
tera	T	10 ¹²
giga	G	10 ⁹
mega	M	10 ⁶
kilo	k	10 ³ (1000)
hecto	h	10 ² (100)
deca	da	10 ¹ (10)
deci	d	10 ⁻¹ (0.1)
centi	c	10 ⁻² (0.01)
milli	m	10 ⁻³ (0.001)
micro	µ	10 ⁻⁶
nano	n	10 ⁻⁹
pico	p	10 ⁻¹²
femto	f	10 ⁻¹⁵
atto	a	10 ⁻¹⁸