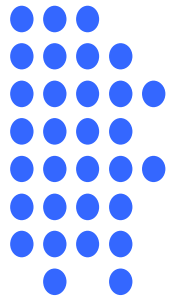


Section 9

Glossary of Acronyms, Technical Terms and Symbols



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ADO	Automotive Diesel Oil.	EPA	Environment Protection Authority.
AEMR	Annual Environmental Management Review.	EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth).
AGO	Australian Greenhouse Office.	EP&A Act	Environmental Planning and Assessment Act 1979 (NSW).
AHD	Australian height datum (in metres).	ESD	Ecologically Sustainable Development.
AHIMS	Australian Heritage Information Management System.	GAB	Great Artesian Basin.
ANZECC	Australian and New Zealand Environment and Conservation Council.	GGG	Gas Gathering System
AS	Australian Standard.	INP	Industrial Noise Policy.
CSG	Coal Seam Gas	LALC	Local Aboriginal Land Council.
DA	Development Application.	LEP	Local Environmental Plan.
dB(A)	decibels, A-weighted scale.	LGA	Local Government Area.
DECC	Department of Environment and Climate Change (NSW).	NPWS	National Parks and Wildlife Service
DEH	Department of Environment and Heritage (Commonwealth).	PAL	Petroleum Assessment Lease
DIPNR	Department of Infrastructure, Planning and Natural Resources (NSW) (Now Department of Planning).	PEL	Petroleum Exploration Licence
DLWC	Department of Land and Water Conservation (NSW) (Now Department of Water and Energy).	PPL	Petroleum Production Lease
DNR	Department of Natural Resources. (Now Department of Water and Energy)	PHA	Preliminary Hazard Analysis
DoP	Department of Planning (NSW).	REP	Regional Environmental Plan.
DP	Deposited Plan.	RO	Reverse Osmosis.
DPI	Department of Primary Industries (NSW).	RTA	Roads and Traffic Authority (NSW).
DPI(MR)	Department of Primary Industries (Mineral Resources) (NSW).	RBL	Rating Background Level
EA	Environmental Assessment.	SEPP	State Environmental Planning Policy.
		SMU	Soil Mapping Unit.
		TAPM	The Air Pollution Model.
		WPPS	Wilga Park Power Station

SYMBOLS AND UNITS

°	degrees.	L	litre.
°C	degrees Celsius.	LAeq	the LAeq is the “equal energy” average noise levels, and is used in some instances for the assessment of traffic noise effects or the risk of hearing impairment due to noise exposures.
%	percentage.	m	metre (= 100cm).
dB	decibel, unit used to express sound intensity.	m AHD	metres Australian Height Datum.
dB(A)	the unit of measurement of sound pressure level heard by the human ear, expressed in “A” scale.	ML	megalitre (= 1 000m ³).
deg	degrees.	mm	millimetre (= 0.001 metres).
ha	hectare (100m x 100m).	PJ	Petajoule
kL	kilolitre (= 1 000 litres).	t tonne	(= 1 000kg).
km	kilometre (= 1 000 metres).	TCF	Trillion Cubic Feet 10 ¹⁸ joules or roughly equivalent to 1 000 petajoules
km²	square kilometre (= 1 million m ²).	-	Terajoule 10 ¹² joules or roughly the equivalent of 1 million cubic feet of natural gas
km/hr	kilometres per hour.		
kW	kilowatts.		

GLOSSARY OF TERMS

A horizon – part of soil profile immediately below the topsoil.

aerial photograph – a photograph of the landscape taken from a plane (typically covering several kilometres across) used for the surveying and interpretation of vegetation type, geology, land use, etc.

air pollutant – a substance in ambient atmosphere, resulting from the activity of man or from natural processes, causing adverse effects to man and the environment (also called "air contaminant").

air pollution emissions inventory – all information, collection and processing system containing data on emissions of, and sources of, air pollution from both manmade and natural causes.

air quality criteria – quantitative relationship between a pollutant's dose, concentration, deposition rate or any other air quality related factors, and the related effects on receptors, e.g. humans, animals, plants, or materials. Air quality criteria serve as the scientific basis for formulating ambient air quality standards or objectives.

alluvial – pertaining to material, such as sand or silt, deposited by running water (e.g. a creek or river).

ambient level – existing level of a phenomenon without the influence of the project.

amenity – the desirability of an area.

aquifer – rock or sediment capable of holding and transmitting groundwater; a layer of water-bearing material which is permeable and can transmit significant quantities of water.

aquitard – a layer of water-bearing material which is relatively impermeable and cannot transmit significant quantities of water.

archaeology – the scientific study of human history, particularly the relics and cultural remains of the distant past.

attenuation – reduction in sound pressure levels between two locations.

average annual rainfall – the average amount of rain to fall at a specific location over the period of 1 year (measured in millimetres).

B horizon – subsoil material located below the A horizon material and above the parent rock.

backfill – material used to fill created void.

background noise level – the level of the ambient sound indicated on a sound level meter in the absence of the sound under investigation (eg sound from a particular noise source; or sound generated for test purposes).

bore – a well, usually of less than 20cm diameter, sunk into the ground and from which water is pumped.

buffer – a physical barrier / structure or width of land that encloses, partially encloses, or defines a particular environment. A buffer serves to minimise the impacts of undesirable external influences on the adjoining environment.

bulldozer – an item of tracked mobile earth moving equipment fitted with a front blade and with rear rippers used for pushing and ripping soil and rock.

bund – embankment of clay or weathered rock emplaced for visual or acoustic screening.

catchment area – the area determined by topographic features within which rainfall will contribute to runoff at a particular point.

coal seam – a layer of coal within the geological strata.

community – a combination of plants that are dependant on their environment and influence one another and modify their own environment. They form together, with their common habitat and other associated organisms, an ecosystem, which is also related to neighbouring ecosystems and to the macroclimate of the region.

conservation – the management of resources in a way that will benefit both present and future generations.

contractor – specialist brought in to perform a specific task, such as the construction of mine infrastructure.

decibel – unit expressing difference in power between acoustic signals.

dispersibility – a characteristic of soils relating to their structural breakdown in water into individual particles.

dust – particles of mostly mineral origin generated by erosion of surfaces and the mining and handling of materials.

ecology – the relationship between living things and their environment.

ecologically sustainable development (ESD) – using, conserving and enhancing the community's resources so that ecological processes on which life depends are maintained and the total quality of life, now and in the future can be increased.

ecosystem – the totality of biological processes and interactions within a specified physical environment.

Emerson Class No. – ranking given to a soil or clay according to the Emerson crumb test.

emission – a discharge of a substance (e.g. CO₂) into the environment.

emission factor – an expression for the rate at which a pollutant is generated as a result of some activity, divided by the level of that activity.

environment – a general term for all the conditions (physical, chemical, biological and social) in which an organism or group of organisms (including human beings) exists.

Environmental Assessment (EA) – a report required to accompany an application for project approval for a major project – covering the project description, assessment of impacts and proposed safeguards and commitments.

ephemeral – not permanent, e.g. a stream that flows only seasonally or after rainfall or a lake that periodically dries out.

erosion – the wearing away of the land surface (whether natural or artificial) by the action of water, wind and ice.

erosion potential – the susceptibility of a parcel of land to the prevailing agents of erosion. It is dependent on a combination of climate, landform, soil, land use and land management factors.

excavate – to dig into natural material or fill using an excavator or other machinery.

excavator – item of earth moving equipment fitted with a bucket on an articulated boom and used for digging material from a face in front of, or below the machine.

existing air quality – the quality of the ambient air near ground level, expressed as concentrations or deposition rates or air pollutants – also expressed as ambient air quality.

exotic – introduced or foreign, not native.

fauna – a general term for animals (birds, reptiles, marsupials, fish etc.)

fugitive emission – emission not entering the atmosphere from a stationary vent (stack). Examples of fugitive dust sources include vehicular traffic on unpaved roads, handling of raw materials, wind erosion of dusty surfaces, etc.

grader – an item of earthmoving equipment, rubber tyred and fitted with a centrally mounted blade and rippers used to shape and trim the ground surface.

greenhouse – the heating of the earth's surface because outgoing long-wavelength radiation from the earth is absorbed and re-emitted by the carbon dioxide and water vapour in the lower atmosphere and eventually returns to the surface.

groundcover – vegetation that grows close to the ground (such as grasses and herbs) providing protection from erosion.

groundwater – 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.

habitat – the place where an organism normally lives; habitats can be described by their floristic and physical characteristics.

heritage – the things of value which are inherited.

heritage significance – of aesthetic, historic, scientific, cultural, social, archaeological, natural or aesthetic value for past, present or future generations.

hydrogeology (geohydrology) – the study of groundwater and the related geologic aspects of surface waters.

impact – the effect of human induced action on the environment.

in-situ – a term used to distinguish material (e.g. rocks, minerals, fossils, etc.) found in its original position of formation, deposition, or growth, as opposed to transported material.

indigenous – belonging to, or found naturally in, a particular environment (see also exotic).

infrastructure – the supporting installations and services that supply the needs of a project eg. road or rail.

inter-generational equity – the principle 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.

inversion – a weather term for a surface defining the boundary between two layers of air or different temperatures; generally used in meteorology with respect to an increase of temperature with height in contrast with the usual decrease of temperature with height in the troposphere. An inversion layer is distinguished by its large stability, which limits the turbulence and therefore the dispersion of pollutants.

landform – a specific feature of a landscape (such as a hill) or the general shape of the land.

loam – loose soil composed of clay and sand, especially a kind containing organic matter and of great fertility.

Local Environmental Plan (LEP) – a plan developed by a council to control development in part or all of their shire or municipality.

major project – an activity as defined under the State Environmental Planning Policy (Major Projects).

mammal – animal of the class mammalia, distinguished by the presence of hair and mammary glands.

migratory – passing, usually predictably (based on aquatic species), from one region or climate to another, for purposes of feeding, breeding, or other biological purposes.

mitigation measure – measure employed to reduce (mitigate) an impact (such as the construction of a perimeter bund to reduce sound emissions).

monitoring – systematic sampling and, if appropriate, sample analysis to record changes over time caused by impacts such as mining; the regular measurement of components of the environment to understand a feature of the environment and/or establish that environmental standards are being met.

native – said of an organism or group of organisms that is restricted to a particular region or environment. A local inhabitant of a place.

natural – existing in, or formed by, nature (generally excludes anything obviously modified by human beings).

noxious – introduced species considered to be harmful to native species or to the habitat of native species.

nutrient – generally refers to nitrogen and phosphorus, which are essential for biological growth.

offset strategy – a method of providing for disturbance attributable to the project through additional or compensatory measures.

particulate matter – small solid or liquid particles suspended in or falling through the atmosphere - sometimes expressed by the term particulates.

Permian – the geological period of time from 280 to 225 million years.

Petroleum Assessment Lease (PAL) – a lease issued by the Department of Primary Industries (Mineral Resources) for petroleum resources assessment in a defined area.

Petroleum Exploration Licence (PEL) – a licence issued by the Department of Primary Industries (Mineral Resources) for petroleum exploration in a defined area.

Petroleum Production Licence (PPL) – a licence issued by the Department of Primary Industries (Mineral Resources) for petroleum production in a defined area.

pollution – the alteration of air, soil, or water as a result of human activities such that it is less suitable for any purpose for which it could be used in its natural state.

population – a group of organisms all of the same species occupying a particular area.

precautionary principle – where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation; a principle of ESD which states that decisions about any proposed development should be guided by careful management to avoid serious and irreversible damage to the environment.

Project Site – the area of land covered by the Project Approval and correspondent with the area of impact

Proponent – person, organisation or company proposing to carry out an activity / seeking

Regional Environmental Plan (REP) – a plan prepared by the State Government Department responsible for planning where controls on development are considered on a regional and/or statewide basis.

rehabilitation – the preparation of a final landform after construction and its stabilisation with grasses, trees and shrubs.

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

resource estimate – an estimate of potentially usable gas in a defined area based on preliminary information.

revegetation – replacement of vegetation, principally grasses and legumes on areas disturbed by mining activities.

Riparian – pertaining to a river or stream bank.

scarred tree – tree with cuts in its bark or wood made by Aborigines.

secondary extraction – removal of residual coal after extraction.

silt-stop fencing – fine mesh fencing normally installed downslope of a sediment source, designed to trap silt and sediment and allow the water to pass through.

soil erosion hazard – the susceptibility of an area of land to erosion and includes rainfall erosivity, slope, soil erodibility and cover.

source – the place where pollutants are emitted into the atmosphere. Sources may be point, area or line sources. Often the term “source” is used for a whole plant or an installation (i.e the Wilga Park Power Station)

species – a taxonomic grouping of organisms that are able to interbreed with each other but not with members of other species.

species diversity – a measure of the number of different species in a given area.

stable – used with respect to the atmospheric boundary layer, when the vertical temperature gradient is greater than the

stakeholder – person, group or organisation or company with an interest in an activity or outcome.

stockpile – a pile used to store material for future use (e.g. Topsoils)

stripping – removal of vegetation and topsoil.

structure (soil) – the physical texture of the soil arising from the interrelationship between the grain size, composition, and organic nature of a soil.

subcrop – a geologic unit that is exposed beneath an overlying geologic layer.

subsoil – the layer of soil lying below the topsoil; usually contains less organic matter and is less fertile.

surface water – all water flowing over, or contained on, a landscape (e.g. runoff, streams, lakes etc).

sustainable development – development that meets the needs of the present without compromising the ability of future generations to meet their needs (World Commission on Environment and Development 1990).

temperature inversion – an atmospheric state where there is an increase in air temperature with height.

Terrajoule – equivalent to 10^{12} joules or 1 million cubic feet (of natural gas)

terrestrial – of or relating to the land, as distinct from air or water.

texture (of soil) – variations in composition, grain size distribution, and structure.

topography – the physical relief and contour of a region.

topsoil – the surface or upper layer of soil, usually containing more organic material, viable life forms, seeds and nutrients than the subsoil beneath it.

tributary – a stream or river that flows into a larger river or lake.

Trillion Cubic Feet – equivalent to 1000 petajoules

weed – any plant (in particular an herbaceous one) that survives in an area where it is harmful or troublesome to the desired land use.

wildlife – non-domesticated fauna.

wildlife corridor – a strip of vegetation that has a design purpose of allowing animals to pass from one area to another and acting as an undisturbed area for wildlife preservation.

wind direction – the direction from which the wind, averaged over a certain period of time, is blowing.

wind rose – diagrammatic representation of wind direction, strength, and frequency of occurrence over a specified period.

woodland – plant communities dominated by trees whose crowns shade less than 30% of the ground.

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