

Glossary of terms

Term	Definition
Abiotic	Non-living.
Aboriginal cultural heritage	Aboriginal cultural heritage includes a significant Aboriginal area, object or evidence of archaeological or historic significance.
Acid Sulfate Soil (ASS)	A soil or soil horizon which contains sulphides or an acid soil horizon affected by oxidation of sulphides. Acid sulfate soils are the common name given to naturally occurring sediments and soils containing iron sulphides.
Actual Acid Sulfate Soil (AASS)	Soils containing highly acidic soil horizons or layers resulting from the aeration of soil materials that are rich in iron sulphides, primarily sulphide.
Adopted Middle Thread Distance	The distance in kilometres along the middle of a stream from its mouth or junction with the main river.
Australian Height Datum (AHD)	The datum used for the determination of elevations in Australia. The determination uses a national network of bench marks and tide gauges, and set mean sea level as zero elevation.
Alluvium	A general term for all detrital material deposited or in transit by streams, including gravel, sand, silt, clay and all variation of these. Unless otherwise noted, alluvium is unconsolidated.
Ambient noise	The background noise in an area or environment, being a composite of sounds from many sources.
Amenity	A positive element or elements that contribute to the overall character or enjoyment of an area. For example, open land, trees, historic buildings and the inter-relationship between them, or less tangible factors such as tranquillity.
Analyte	A substance or chemical constituent that is determined in an analytical procedure.
Anthropogenic	Produced or caused by human activities.
Aquatic biota	The organisms living in or depending on the aquatic environment.
Aquifer	An aquifer is an underground layer of water-bearing permeable rock or unconsolidated materials (gravel, sand, silt, or clay) from which groundwater can be usefully extracted using a water well.
Arboreal	Primarily tree dwelling.
Assemblage	An association of interacting populations of organisms in a given waterbody. Examples of assemblages used for biological assessments include: algae, amphibians, birds, fish, reptiles and amphibians, macroinvertebrates (insects, crayfish, clams, snails, etc), and vascular plants.
Average Recurrence Interval (ARI)	It is a means of describing how likely a flood is to occur in a given year. For example, a 100 year ARI flood is a flood that occurs or is exceeded on average once every 100 years.
Baseflow	Streamflow coming from groundwater seepage into a stream or river.
Baseline studies	Studies undertaken on the condition/trends of the existing environment.

Term	Definition
Bioavailable	The state of a toxicant such that there is increased physicochemical access to the toxicant by an organism. The less the bioavailability of a toxicant, the less its toxic effect on an organism.
Biodiversity	Biodiversity is the variation of taxonomic life forms within a given ecosystem, specifically the total of genes, species and ecosystems of an area.
Bioregion	Area which has been arranged by bioregions, which are a landscape-scale approach to classifying the environment using a range of attributes such as climate, geomorphology, geology, soils and vegetation.
Biota	All the organisms, including animals, plants, fungi and micro-organisms in a given area.
Biotic	Life and living organisms.
Buffer zone	The region near the border of a protected area; a transition zone between areas managed for different objectives.
Catadromous	Species that migrate to breed in marine environments
Catchment	The area of land which collects and transfers rainwater into a waterway.
Channelisation	Artificial modification of a watercourse to ensure maximum flow and minimise flooding
Clay	Soil particles <0.002mm in equivalent diameter. A soil textural class containing >40% clay, <45% sand and <40% silt.
Colluvium	Sediment accumulated at the foot of a slope.
Community (ecological)	An integrated group of species inhabiting a given area; the organisms within a community influence one another's distribution, abundance, and evolution.
Confined aquifer	An aquifer bounded above and below by confining units of distinctly lower permeability than that of the aquifer itself.
Consumer Price Index	An index of the changes in the cost of goods and services to a typical consumer, based on the costs of the same goods and services at a base period
Contaminants	Substances that have an adverse effect on the air, water, or soil.
Coordinator-General	The corporation sole constituted under the <i>State Development and Public Works Organisation Act 1938</i> and preserved, continued in existence and constituted under the <i>State Development and Public Works Organisation Act 1971</i>
Crustacea	A phylum of chiefly aquatic arthropods, such as lobsters, prawns, barnacles etc., commonly having the body covered with a hard exoskeleton or carapace.
Cryptic	The secretive behaviour of an animal that conceals or camouflages itself.
Depauperate	Lacking in faunal diversity.
Destratification	Vertical mixing within a lake or reservoir to totally or partially eliminate separate layers of temperature, plant, or animal life.

Term	Definition
Diurnal	Active during the day.
Dissolved oxygen (DO)	The amount of oxygen dissolved in water. This term also refers to a measure of the amount of oxygen available for biochemical activity in a waterbody, an indicator of the quality of that water.
Dynamic Cone Penetrometer (DCP)	Is an instrument designed to provide a measure of the in-situ strength of fine grained and granular subgrades, granular base and subbase materials, and weakly cemented materials.
Ecology	The interrelationships of living things to one another and to their environment or the study of such interrelationships.
Ecosystem	A dynamic complex of plant, animal, fungal and micro-organism communities and associated non-living environment interacting as an ecological unit to form a recognisable self-contained entity.
Effluent	A discharge of pollutants into the environment, partially or completely treated or in its natural state.
Electrical conductivity (EC)	When a voltage is applied across a substance, an electric current will only flow if the substance conducts electricity. When salts dissolve in water, ions are formed and the solution will conduct electricity. As a general rule, the higher the concentration of ions in solution, the better the solution conducts electricity; in other words, its electrical conductivity increases.
Emission	A discharge of pollutants into the environment, partially or completely treated or in its natural state.
Endemic	Restricted to a specific region or locality.
Environment	There is no generally agreed definition of environment in EIA. Increasingly, it means the complex web of inter-relationships between abiotic and biotic components, which sustain all life on earth, including the social/health aspects of human group existence. The Environment as defined in Section 8 of the <i>Environmental Protection Act 1994</i> includes: a) Ecosystems and their constituent parts, including people and communities; b) all natural and physical resources; c) the qualities and characteristics of locations, places and areas, however large or small, that contribute to their biological diversity and integrity, intrinsic or attributed scientific value or interest, amenity, harmony and sense of community; and d) the social, economic, aesthetic and cultural conditions that affect, or are affected by, things mentioned in paragraphs (a) to (c).
Environmental assessment	See Environmental Impact Assessment.
Environmental audit	Process focusing on an existing site or activity which involves a systematic, periodic evaluation of environmental management to objectively review the performance of an organisation, management and/or equipment.
Environmental Impact Statement (EIS)	The process of identifying, evaluating and mitigating the biophysical, social and other relevant effects of development proposals prior to major decisions and commitments been made.

Term	Definition
Environmental Value (EV)	Environmental values are the qualities of waterways that need to be protected from the effects of pollution, waste discharges and deposits to ensure healthy aquatic ecosystems and waterways that are safe and suitable for community use. They reflect the ecological, social and economic values and uses (e.g. swimming, fishing, agriculture) of the waterway.
Environmentally significant areas	Environmentally significant areas include: - "Protected Areas" (as defined under the <i>Nature Conservation Act 1992</i>) - "Critical Habitat" (as defined under the <i>Nature Conservation Act 1992</i>) - Koala Coast Area (as defined under <i>Conservation of Koalas in the Koala Coast - State Planning Policy 1/97</i>); and - Waterways
Environmentally sustainable development (ESD)	Development that focuses on making social, economic, and political progress to satisfy global human needs, desires, aspirations and potential without damaging the environment.
Ephemeral	Short lived, taking place only once eg. Waterways that only last a short period following precipitation
Estuary	Areas where the fresh water meets salt water.
Eutrophication	The process by which a waterbody becomes rich in dissolved nutrients and deficient in oxygen, occurring either as a natural stage or artificially induced by human activities such as the addition of fertilizers and organic wastes from runoff.
Exceedance	An occasion when a goal, guideline or standard is exceeded.
Exchangeable Sodium Percentage (ESP)	Is calculated as the proportion of the cation exchange capacity occupied by the sodium ions and is expressed as a percentage.
Exotic species	A plant or animal introduced from another region.
Facultative	Having the capacity to live under different conditions.
Fauna	Animals found in a given area.
Feral animals	Animals that have reverted to a wild state from domestication.
Flora	Plants found in a given area.
Fragmentation, vegetation	When used in the context of vegetation or habitat, refers to division and isolation of vegetation/habitat by vegetation clearing, isolating species and limiting genetic flow.
Freehold	Land that is privately owned.
Frugivorous	Fruit-eating.
Geology	The composition, structure, physical properties, history, and the processes that shape Earth's components.
Gilgai	Surface microrelief associated with soils containing shrink-swell clays
Greenhouse gas	A gas that is transparent to incoming solar radiation and absorbs some of the longer wavelength infrared radiation (heat) that the Earth radiates back.
Ground truth	To verify on-site data deduced from a model, satellite picture or aerial photograph.

Term	Definition
Habitat	The physical and chemical environment in which a plant or animal lives.
Habituated	To become accustomed to a particular situation
Highest Astronomical Tide (HAT)	The highest tide level that can be predicted under average meteorological conditions and any combination of astronomical conditions.
Heritage	Places, objects and Indigenous languages that have aesthetic, architectural, historical, scientific, technological or social significance or other special value for future generations as well as for the community today.
Horizon (Soil)	A layer of soil, approximately parallel to the soil surface, differing in properties and characteristics from adjacent layers below or above it.
Household Income	This is the income earned by employees as part of the normal operations of the economy.
Hydrocarbons	An organic chemical compound of hydrogen and carbon. Hydrocarbons are a large class of liquid, solid or gaseous organic compounds that are the basis of almost all petroleum products.
Hydrology	The science dealing with the properties, distribution and circulation of water.
Initial Advice Statement (IAS)	A report containing a brief, preliminary evaluation of the types of impacts that would result from an action. Often used as a screening process to assess whether or not proposals should undergo full scale EIA.
Insectivorous	Insect-eating.
Introduced species	A species occurring in an area outside of its historically known natural range as a result of intentional or accidental dispersal by human activities.
Invertebrate	An animal without a backbone composed of vertebrae, that is, segments or bone comprising a column through which the spinal cord passes, not including protozoans see <i>also</i> vertebrate.
Lacustrine	Living in or growing beside a lake.
Landform	A component used in the description of the dominant land surface features, which enables the terrain of an area to be described and communicated.
Landform Element	Enables the description of dominant land surface features, which are 40m or more across.
Landform Pattern	Enables the description of dominant land surface features, which are more than 600m across.
Landscape character	The distinct and recognisable pattern of elements that occur consistently in a particular type of landscape. It reflects particular combinations of geology, landform, soils, vegetation, land use and human settlement.
Leasehold	Land owned by government but leased to a specific person or organisation for a specific purpose.

Term	Definition
Macroinvertebrates	Animals without backbones that can be seen with the unaided naked eye.
Macrophyte	An emergent, submergent or floating type of aquatic plant, which provides cover for fish and acts as a substrate for aquatic invertebrates, as well as to produce oxygen and serve as food for some fish and other wildlife.
Melonhole Gilgai	Irregularly distributed large depressions, usually greater than 3m in diameter or greatest dimension, subcircular or irregular and varying from closely spaced in a network of elongate mounds to isolated depressions set in an undulating shelf with occasional small mounds. Some depressions may also contain sinkholes of gilgai usually greater than 0.3m; horizontal interval usually 6-5m.
Microbat	Typically having large ears and feeding primarily on insects
Microrelief	Is relief up to a few metres about the plane of the land surface
Mitigation	Measures taken to reduce adverse impacts on the environment.
Monitoring	Activity involving repeated observation, according to a pre-determined schedule, of one or more elements of the environment to detect their characteristics (status and trends).
N Value	The number of blows per 0.3m of depth during a SPT
Native title	Recognition of rights held by Aboriginal or Torres Strait Islander people according to their laws and customs involving location of land, the rights held, and identification of the holder of the rights.
Natural resources	Natural features that have ecological, economic, recreational, educational or aesthetic value.
Nature conservation	The protection, management and promotion of wildlife habitat for the benefit of wild species, as well as the communities that use and enjoy them.
Nectivorous	Nectar-eating.
Nocturnal	Active during the night.
Oxidise	The process of reacting with oxygen.
Palustrine	Palustrine wetlands are primarily vegetated non-channel environments of less than 8 ha. They include billabongs, swamps, bogs, springs, soaks etc, and have more than 30% emergent vegetation.
Permeable	A rock unit with interconnected pore spaces that allow movement of water.
pH	A measure of acidity or alkalinity, expressed on a logarithmic scale from 1 to 14. 1 is most acid, 7 is neutral and 14 is most alkaline.
Physio-chemical	Of or relating to physiological chemistry.
Population (ecological)	A group of individuals with common ancestry that are much more likely to mate with one another than with individuals from another such group.
Potamodromous	Species migrating wholly within freshwater systems for breeding.

Term	Definition
Potential Acid Sulfate Soil (PASS)	Soils which contain iron sulfides or sulfidic material which have not been exposed to air or oxidised. The field pH of these soils in their undisturbed state can be pH 4 or more and may be neutral or slightly alkaline. However, they pose a considerable environmental risk when disturbed, as they will become very acidic when exposed to air and oxidised.
Precautionary principle	The principle that advises that uncertain outcomes or the lack of full scientific certainty should be fully addressed to prevent environmental degradation.
Producer Price Index	A comprehensive index of wholesale price changes, often viewed as an indicator of future retail price changes
Proponent	Queensland Rail
Proposal	Any project, policy, program, plan or other activity.
Protected area	A legally established land or water area under either public or private ownership that is regulated and managed to achieve specific conservation objectives.
Public consultation	A range of techniques that can be used to inform, consult or interact with stakeholders affected by a proposal.
RAMSAR	Convention on Wetlands of International Importance. The Convention, including the List of Wetlands of International Importance established under it, is administered by the IUCN.
Recolonisation	The reestablishment of organisms into habitats that they previously occupied.
Refugia	Accessible microhabitats or regions within a stream reach or watershed where adequate conditions for organism survival are maintained during circumstances that threaten survival.
Regional Ecosystem (RE)	Regional ecosystems were defined by Sattler and Williams (1999) as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil.
Register of the National Estate (RNE)	A national heritage register that covers significant natural, historic and Aboriginal and Torres Strait Islander places across Australia.
Rehabilitation	The recovery of specific ecosystem services in a degraded ecosystem or habitat.

Term	Definition
Remnant vegetation	<p>If there is a regional ecosystem map, remnant vegetation is vegetation that is mapped as being within a remnant endangered regional ecosystem, a remnant of concern regional ecosystem, or a remnant not of concern regional ecosystem on the map. If there is a remnant map, remnant vegetation is vegetation that is mapped as remnant vegetation on the map. The following methodology is used when determining if vegetation is remnant:</p> <ul style="list-style-type: none"> * 50% of the predominant canopy cover that would exist if the vegetation community were undisturbed; and * 70% of the height of the predominant canopy that would exist if the vegetation community were undisturbed; and * composed of the same floristic species that would exist if the vegetation community were undisturbed. <p>Queensland's vegetation management legislation protects remnant vegetation on freehold land and state land as well as certain non-remnant vegetation on state land.</p>
Riffle	A rocky shoal or sandbar lying just below the surface of a waterway.
Riparian vegetation	Vegetation living on or beside a river or creek bank.
Rollingstock	A locomotive, plus coal wagons that comprise a train (can also include passenger carriages or goods wagons).
Scoping	An early activity to identify the impacts that are most likely to be significant and require investigation during the EIA.
Screening	Preliminary activity undertaken to classify proposals according to the level of assessment that should occur.
Sediment	Inorganic and organic particulate matter on the bottom of the water column of rivers, lakes, estuaries and oceans.
Sedimentation	The process that deposits soils, debris and other materials either on the ground surfaces or in bodies of water or watercourses.
Sensitive land uses	Sensitive land uses are defined as residential uses (noise sensitive land use – dwelling), sensitive community and commercial uses (noise sensitive land uses other than a protected area or a dwelling) or environmentally significant areas.
Site visit	A visit to a proposed development site conducted by planning officers, councillors, environmental scientists or inspectors to clarify the appearance of a site or visualise the effects of the proposal.
Stakeholders	Those who may be potentially affected by a proposal. Stakeholders may include government agencies; conservation groups; relevant business groups; relevant industry groups; local/regional Chambers of Commerce; Aboriginal groups/Land Councils/Councils of Elders; residents/businesses within hearing, sight or smell of project or project related activities; potential competitors; community groups; and politicians/elected representatives.
Standard Penetration Test (SPT)	Is an in-situ dynamic penetration test designed to provide information on the geotechnical engineering properties of soil
Sub-catchment	Term applied to smaller catchments, which make up and provide water into a larger catchment.

Term	Definition
Substrate	An inert substance containing or receiving a nutrient solution on which micro-organisms grow.
Suspended solids	Small particles of solid pollutants that float on the surface of, or are suspended in, sewage or other liquids.
Sustainable development	Development that meets the needs and aspirations of the current generation without compromising the ability to meet those of future generations.
Targeted survey (flora and fauna)	A survey with the specific objective of determining the presence or absence, in the survey area, of species and communities of conservation significance and/or their habitats.
Terms of Reference (TOR)	Documented requirements governing EIS structure and implementation.
Tertiary	A period of time between sixty five and three million years ago, prior to the Quaternary period.
Threatened species	A species that is facing an extremely high risk of extinction in the wild in the immediate (critically endangered), near (endangered) or medium-term (vulnerable) future.
Topography	A description (or visual representation on a map) of the shape of the land, for example, contours or changes in the height of land above sea level.
Total Suspended Particulates (TSP)	Total suspended particulates (in air). Includes all particulates from the smallest up to those 50µm in diameter. Particles less than 10 µm (PM10) and particles less than 2.5 µm (PM2.5) are of greatest concern for human health because they are inhaled deeply into the lungs.
Total Suspended Solids (TSS)	A measure of the suspended solids in wastewater, effluent, or water bodies, determined by tests for total suspended nonfilterable solids.
Toxicants	Any chemical or mixture of chemicals that presents a risk of death, disease, injury, or birth defects in organisms that ingest or absorb it.
Train consists	Locomotives and coal wagons
Transmissivity	The measure of the amount of water that can be transmitted horizontally through a unit width by the full saturated thickness of the aquifer under a hydraulic gradient of 1.
Tributary	A stream or other body of water, surface or underground, which intermittently contributes its water in small quantities to another larger stream or body of water.
Trophic	Any class of organisms that occupy the same position in a food chain, as primary consumers, secondary consumers, and tertiary consumers.
Turbidity	Measure of the clarity of water.
Unconfined aquifer	An aquifer containing water that is not under pressure; the water level in a well is the same as the water table outside the well.
Variation	An instance of change; the rate or magnitude of change
Vertebrate	An animal with a backbone composed of vertebrae, that is segments or bone comprising a column through which the spinal cord passes see <i>also</i> invertebrate.

Term	Definition
Vulnerable species	A plant or animal, whose population is decreasing, has been seriously depleted or is at risk due to threatening processes.
Waste	Waste is any material or object that is no longer wanted and requires disposal. If a material or object is re-usable, it is still classed as waste if it has first been discarded.
Waste water	Water carrying wastes from homes, businesses and industries that is a mixture of water and dissolved or suspended solids.
Wetlands	An area that is saturated by surface or ground water with vegetation adapted for life under those soil conditions, as swamps, bogs, fens, marshes, and estuaries.
Wildlife corridor	Strips of land conserved and managed for wildlife, usually linking more extensive wildlife habitats.