Glossary

Term	Definition
Abiotic	Pertaining to physical and inorganic components of the environment; non-living.
Abutment	The part of the valley side against which the dam is constructed.
Accretion	(a) The process of growth or enlargement by external accumulation. (b) Sediment accumulation, not necessarily with cementation (opposite to erosion).
Acidic	Quality of being acid; having a pH of less than 7 (see pH)
Acoustic	Acoustics is the science of sound concerned with the generation, transmission and reception of energy in the form of vibrational waves in matter.
Adsorbed	The process of attaching to the outside of a surface.
Allochthonous material	Organic matter that is derived from outside of the aquatic ecosystem, such as leaves of terrestrial vegetation that fall into the stream.
Alluvial (alluvium)	Weathered material transported and deposited by the movement of water.
Alluvial forests	Forests growing in alluvial soils, mainly sand and silt, that a river has carried in suspension and then deposited.
Alluvial plain	A plain formed by the deposition of alluvial material over a long period of time.
AMAs	Administrative arrangements developed by the EPA, Local Government and other parties for land where detailed information is not available but the community is to be provided with information that aids in dealing with land contamination.
Amphidromous	Organisms which migrate between saltwater and freshwater environments however not for breeding purposes.
Anabat	A bat detector that can record the signals of bats for computer analysis. It converts the ultrasonic echolocation signals of bats into audible electronic signals which can be recorded and processed, to assist in identification of the species.
Anadromous	Diadromous species that spend the majority of their life in saltwater and migrate to freshwater to breed.
Anastomosing	Water spreading across the river bed as numerous small channels.
Animal	Any member, alive or dead, of the animal kingdom (other than a human being).
Annual Exceedance Probability (AEP)	the probability that a given flood or river discharge flow will be exceeded in any one year, usually expressed as a percentage.
Anoxic	Without or depleted of oxygen.
Anthropogenic	Effects, processes, objects or materials which do not occur in natural environments but are as a result of, or derived from human activities
Aquatic macrophyte	Submerged, emergent or floating aquatic vegetation that is visible to the naked eye.
Aquiclude	A boundary layer that prevents soil water infiltration.
Aquifer	A water-bearing stratum of permeable rock, sand, or gravel
Aquifer	A rock type with relatively large permeability, able to transmit substantial quantities of water
Arboreal	Living in or among trees.
Australian Height Datum (AHD)	The datum used for determining elevations in Australia which uses a national network of bench marks and tide gauges, and has set mean seal level as zero elevation
Average Recurrence Interval (ARI)	The average interval (in years) between the occurrence of a flow, discharge or rainfall greater than or equal to a specified amount.
Background noise	The underlying level of noise present in the ambient noise, excluding the noise source under investigation, when extraneous noise is removed. This is described using the L_{A90} descriptor.
Barrier beaches	Elongate sandy ridges slightly above high tide level, and running parallel to the shoreline – extended by long shore transport (Brennan, 2004).
Benthic	Pertaining to the bottom of a body of water.
Bioaccumulation	Occurs within a trophic level and occurs when an organism absorbs a toxic substance at a greater rate than that at which the substance is lost resulting in an increase in concentration of that substance in the individual's tissue.
Biodiversity	Biodiversity is short for "biological diversity". It describes the variety of life forms and their habitats that make up a region. Biodiversity includes the diversity of plant and animal species, the diversity of ecosystems formed by communities of these organisms, and the genetic diversity within and between species.

Biofilm	A thin layer of living cells, such as bacteria, protozoa and algae, which coat the surface of a living or non-living substrate.
Biogenic sediment	Sediment produced by the actions of living organisms.
Biomagnification	The increase in concentration of a substance that occurs in a food chain as a consequence of food chain energies and/or low (or nonexistent) rate of excretion/degradation of the substance.
Biotic	Pertaining to living organisms, and usually applied to the biological aspects of an organism's environment.
Borrow pit	A small excavation providing earth to be used for construction material.
Break of Head Tank	A storage reservoir.
CAMBA	CAMBA means the Agreement between the Government of Australia and the Government of the People's Republic of China for the protection of Migratory Birds and their Environment done at Canberra on 20 October 1986, as in force for Australia immediately before the commencement of this Act.
Carboniferous period	The Carboniferous is a major division of the geologic timescale that extends from the end of the Devonian period, about 340 million years ago (mya), to the beginning of the Permian period, about 280 mya
Catadromous species	Diadromous species that spend the majority of their life in freshwater and migrate to saltwater to breed.
Clay borrow area	Clay deposit resources being used in dam core construction.
Coastal Plain	Any plain with its margins on the shore of the sea. Generally a flat featureless area of low relief which is usually underlain by sediments.
Colluvium	A general term applied to loose and incoherent materials accumulated at the foot of a slope, generally by movement of the material by gravity.
Common	The wildlife is common or abundant and is likely to survive in the wild.
Commonwealth marine area	The Commonwealth marine area is any part of the sea, including the waters, seabed, and airspace, within Australia's exclusive economic zone and/or over the continental shelf of Australia, that is not State or Northern Territory waters.
Community	An assemblage of interdependent populations of different species (plants and animals) interacting with one another, and living in a particular area.
Compensatory habitat	A vegetation offset to maintain the extent of remnant vegetation that will be loss as a result of the Project.
Concrete batching plant	A production plant which dispatches concrete.
Conglomerate	Coarse sedimentary rock containing cemented rounded gravel or pebbles
Connectivity	Refers to the ease with which organisms move between particular landscape elements.
Controlled action	An action (including a project, development, undertaking, activity, or series of activities) that is likely to have a significant impact on a matter of National Environmental Significance, as defined by the Commonwealth Minister of the Department of Environment and Water. If an action is controlled it is subject to a rigours assessment and approval process under the provisions of the *Environment Protection and Biodiversity Conservation Act 1999.*
Coquina	A soft, whitish, coral like stone, formed of broken shells and corals, found in low, calcareous beach ridge sequences. Dated beach ridge sequences from the Burdekin area date from around 25000-30000 yBP (Hopley 1970).
Covenant	An agreement or contract between two parties (i.e. landholder and council).
Cracking Clay	Clay soil from surface with large cracking patterns. Usually with gilgai surface features.
CRL Register	A register of 'risk' properties which have been demonstrated (through scientific investigation) to be contaminated land which is causing or may cause serious environmental harm.
Crusher	Machine which crushes rock to produce aggregate material.
Crystobalitic	Form of silica
Cuspated	Points formed by the intersection of two arcs.
CW Rock	Completely Weathered Rock Completely weathered bedrock retains no structures from the original rock. There are no corestones, but there may be mottling. It is composed completely of earth material.
dB(A)	Unit used to measure 'A-weighted' sound pressure levels. A-weighting is an adjustment made to sound-level measurement to approximate the response of the human ear.

Dendritic	Having a form resembling a shrub or tree
Denuded (denudation)	The removal of matter. Commonly used to describe the removal of vegetation, but also refers to the process of mass, or rapid, sediment removal
Dentrates	Wedge shaped blocks that are constructed at a steeper angle than alternating adjacent blocks, thereby creating two different water trajectories and increased energy dissipation.
Dermosols	Soils lacking strong texture contrast and having a structured B horizon
Diadromous species	Organisms that move during their life cycle between freshwater and saltwater environments.
Dispersion	To distribute or suspend fine particles, such as clay, in or throughout a dispersion medium, such as water
Downstream toe	The junction of the downstream face of dam with the ground surface (foundation). Sometimes “Heel” is used to define the upstream toe of a concrete gravity dam.
Duplex	Light surface texture of sand or clay loam abruptly overlying clay.
Ecology	The study of the interrelationships of organisms with and within their environment
Ecosystem	A community and its (living and nonliving) environment considered collectively; the fundamental unit in ecology.
Edge effect	All changes at an ecosystem boundary and within adjacent ecosystems; the negative influence of a disturbed habitat edge on the interior conditions of a habitat, or on species that use the interior habitat.
Electrofishing	A fish sampling technique which uses electric fields and electric currents to capture fish by controlling fish movement and/or immobilising fish.
Embayment	Small bay between minor headlands.
Embeddedness	The degree to which rocks (gravel, cobble and boulders) and snags are covered or sunken into the silt, sand or mud of the stream bottom
Emerson test	A classification of soil aggregates based on their coherence in water. The conditions under which they slake, swell and disperse allow the different aggregates to be separated into eight classes. The test is particularly valuable in a soil conservation context as it grades soil aggregates according to their stability in water.
Endangered	A species is endangered if: ■ there have not been thorough searches conducted for the wildlife and the wildlife has not been seen in the wild over a period that is appropriate for the life cycle or form of the wildlife; or ■ the habitat or distribution of the wildlife has been reduced to an extent that the wildlife may be in danger of extinction; or ■ the population size of the wildlife has declined, or is likely to decline, to an extent that the wildlife may be in danger of extinction; or ■ the survival of the wildlife in the wild is unlikely if a threatening process continues.
Endangered Regional Ecosystem	A regional ecosystem is listed as endangered under the Vegetation Management Act 1999 if remnant vegetation is less than 10 per cent of its pre-clearing extent across the bioregion; or 10-30% of its pre-clearing extent remains and the remnant vegetation is less than 10,000 hectares.
Energy Dissipation	The dispersion of energy.
Environment	The total of all the external conditions that act upon an organism.
Environmental flow	The flow of water that is required to maintain aquatic and riparian ecosystems in streams and rivers.
Environmental Quality	Human (individual or social) concepts of desirable ecological situations.
Ephemeral	Transitory, short-lived.
Epilimnion	Upper waters of a thermally-stratified water body. The upper layer is characterised by warmer and lighter water.
Erosion	The process by which rocks are loosened, worn away and removed from parts of the Earth’s surface. Seven processes of erosion discussed separately; in practice they overlap and it is often difficult to isolate the net effects of any one process. **Rainsplash erosion:** the detachment and removal of soil and debris by raindrop impact. **Overland flow OR surface runoff:** water flowing over the surface before being concentrated into definite streams. **Sheet erosion, sheet wash, or slope wash:** the combined effect of overland flow and rainsplash.

	Gully erosion: the rapid development of gullies, usually in first- or second-order tributaries of streams, BUT also in situations unrelated to an integrated drainage system (eg highly dispersive soils) **Mass Movement:** downhill movement of debris ***en masse*** rather than as individual particles. It can occur slowly (creep), or rapidly (rockfalls, slumps, landslides). **Surface rock creep:** the movement of stones down sloping surfaces. **Fluvial erosion:** the detachment and removal by streams of material in solution, suspension, or as bed load. Includes removal of debris supplied to the streams by slope wash, mass movement, and gullies.
Essential habitat	Vegetation in which a species of wildlife is known to occur that is listed as endangered, vulnerable, near threatened or rare under the *Nature Conservation Act 1992.*
Estuarine	The mouth region of a river that is affected by tides
Euphotic zone	Surface layer of a body of water which receives enough sunlight for photosynthesis.
Eutrophication	Process during which water bodies become enriched with dissolved nutrients resulting in excessive growth of organisms, such as algae, and the subsequent depletion of oxygen.
Evaporation	The process that changes a liquid or a solid into a gas. In the tropical hydrological cycle, this involves the conversion to water vapour and the return to the atmosphere of the precipitation (rainfall) that has reached the earth's surface.
Evapotranspiration	The combined effect of evaporation and transpiration.
Exotic species	Introduced species
Ex-situ	Ex-situ means off site, i.e. protecting a species of plant or animal by removing part of the population from a threatened habitat and placing it in a new location.
Fauna	See definition for 'animals'
Feral	An introduced or domestic animal living in the wild.
Ferrosols	Soils lacking strong texture contrast and having high free iron in B horizon
Fish hopper	Basket-type mechanism which carries fish in fish transfer device.
Flood Plain	That portion of a river valley that is covered during periods of high flood water.
Flora	See definition for 'plants'
Flow duration curve	A cumulative plot showing the percent of time that given flow volumes are equalled or exceeded.
Flow regime	The entire range of flows at a point in a watercourse including variations in the watercourse height, discharge, seasonality, and event duration.
Fluvial	The river system.
Fragmentation	A process of landscape alteration in which natural areas are subdivided into smaller patches.
Full Supply Level (FSL)	The maximum normal operating water surface level of a reservoir.
Gabion structures	Rock contained in a wire basket device used for stability purposes.
Geomorphological Time Periods	**Proterozoic (2500-545 million years ago)** During the Proterozoic two mountainous blocks, the Mt Isa Inlier and the Georgetown massif (current area of the Einasleigh Uplands) were formed. Formation was a result of faulting, folding, thrusting of deposited marine and terrestrial sediments, extrusive volcanics and igneous intrusions. Widespread metamorphism was associated with igneous intrusions and the deforming tectonic activities (Brennan, 2004). **Palaeozoic (545-251 million years ago)** Extensive erosion and planation was the major process occurring during this period. Weathered sediments were stripped from the two Proterozoic blocks and deposited within the Tasman geosyncline between these two divisions. North-west of the Proterozoic Mt Isa Inlier, a shallow sea transgressed from the south depositing carbonate-dominated marine sediments. These comprise the Barkly Tableland of the upper Nicholson and Settlement Catchments today. In the Einasleigh Uplands some extrusive volcanics accompanied erosion processes and resulted in the formation of the Newcastle and Croydon Ranges in the Norman and Gilbert Catchments. In the west, erosion continued to form an extensive plain that grew eastwards, and by the early Mesozoic, the whole of the Gulf region was reduced to a flat plain (Brennan, 2004). **Mesozoic (251-65 million years ago)** The Proterozoic to Mesozoic cycle of erosion was terminated by earth movements

	that warped the flat plains. The result was the transgression (higher sea levels) of the sea into the Carpentaria and Eromanga Basins and the widespread deposition of Mesozoic sediments, namely sandstone, siltstone, mudstone, limestone, shale and conglomerate overlying the erosion surface of old, deformed Proterozoic rocks. By the end of the Mesozoic, the only extruding Palaeozoic rocks remained in the east (Einasleigh Uplands) (Brennan, 2004). **Early-Mid Tertiary (65-34 million years ago)** During this period the Mesozoic plain was uplifted ad warped resulting in widespread erosion of the Mesozoic sediments. By the Mid-Tertiary most of the area was again reduced to a low relief plain that underwent laterisation (Brennan, 2004). **Late Tertiary – Quaternary (34 million years ago to present)** Uplifting and warping increased slopes and initiated another period of erosion and planation. Streams adjusted to a new base level (increased sea levels) and the erosional surfaces extended inland forming the dissected river valleys seen today. At the upland margins of the Gulf Plains, the late Cretaceous rocks (end of the Mesozoic period) were removed, and within the steeper ranges rocks formed at end of the Palaeozoic period were eroded away. Accompanying widespread erosion was extensive deposition and the formation of new alluvial fans in the lower reaches of the Gulf Catchments (Brennan, 2004). Along the coastline, down-warping lowered the laterised older Tertiary plain to wave action level (hence increased sea levels). This formed low cliffs and a marine terrace. Due to a low offshore gradient and wave action, and high loads of terrestrial sedimentation, constructional landforms were formed (eg, barrier beaches and islands). A later drop in sea level and subsequent emergence of land led to the abandonment of barrier beaches that occur as parallel ridges around the Gulf of Carpentaria today, and the formation of a new lower, marine terrace (Brennan, 2004). Some volcanic eruptions in the eastern block (Einasleigh Uplands) also occurred during this period, resulting in infilling of older valleys, particularly in the upper Flinders and Gilbert Catchments (Brennan, 2004).
Geomorphology (geomorphological)	The form or shape of the landscape and the processes that modify and change it.
Gilgai	Melon hole, mound depression surface.
Global Warming	The warming of the earth's atmosphere generally attributed to the burning of fossil fuels. Also referred to as "The Greenhouse Effect" - the capacity of the atmosphere to transmit short-wave energy (visible and ultra violet light) to the earth's surface, and to absorb and retain heat radiating from the surface.
Grey-wacke	A variety of sandstone generally characterized by its hardness, dark color, and poorly-sorted, angular grains of quartz, feldspar, and small rock fragments set in a compact, clay-fine matrix.
Grid-decking	A type of wire mesh used in the fish transfer device.
Groundwater	Water found underground in porous rock or soil strata
Habitat	The biophysical medium or media occupied (continuously, periodically or occasionally) by an organism or group of organisms.
Harp trap	A trap used to capture microchiropteran bats, consisting of metal poles connected by fishing wire.
Herpetofauna	Includes reptiles and amphibians.
Historical No Failure Yield (HNFY)	This is the maximum volume of water that can be supplied from the dam for every year of the simulation period.
Holocene	The period of geological time extending from about 10,000 years ago to the present.
Holomixis	Complete mixing of the lake or water body, for example during winter when the epilimnion starts to cool.
Hydraulic Conductivity	Describes the ability of a rock to transmit water through pore spaces or fractures
Hydrodynamics	The movements of water and other liquids
Hypolimnion	Bottom layer of a thermally-stratified water body. This bottom layer is characterised by cold water which is usually low or lacking in oxygen.
Hyporheic	Hyporheic zone is where there is mixing of shallow groundwater and surface water in a region beneath and lateral to a stream bed
Igneous rock	Rock produced under conditions involving intense heat, as rocks of volcanic origin or rocks crystallised from molten magma.
Intake Towers	Water take off point for water supply distribution.
Intertidal	The area between high and low tide.

Intrusive noise	Refers to noise that intrudes above the background level by more than 5 dB(A).
Inundation area	The area that will be flooded with water above the existing water level, from raising of the dam.
JAMBA	JAMBA means the Agreement between the Government of Japan and the Government of Australia for the Protection of Migratory Birds and Birds in Danger of Extinction and their Environment done at Tokyo on 6 February 1974, as in force for Australia immediately before the commencement of this Act.
Kandosols	Soils lacking strong texture contrast and having a massive B horizon
Kurosols	Soils with strong texture contrast and having pH <5.5 in B horizon
$L_{A(xx)}$	The $L_{A(XX)}$ refers to statistical indicators that represent the percentage of time that a noise level is exceeded. These levels are commonly the L_{A1}, L_{A10}, and the L_{A90}, and are graphed to show how these levels change over the course of a 24 hour period.
L_{A90}	Is an important statistical indicator that represents the A-weighted sound pressure level that is exceeded for 90% of the time over which the noise is measured. This is often termed the background noise.
Lacustrine habitat	Lake environment, pertaining to standing water bodies.
L_{Aeq}	Although the L_{Aeq} is not a statistical indicator, it is probably one of the most important of the noise descriptors. It represents the equivalent continuous A-weighted noise level for the measurement period. This is the level of noise energy averaged over the measurement period.
L_{Amax} Maximum noise level	The highest noise level during a specified time period or during a specified number of events expressed as the absolute maximum value of the root-mean-square (r.m.s.) sound pressure level using time weighting 'F'.
L_{Amin} Minimum noise level	The lowest noise level during a specified time period or during a specified number of events expressed as the absolute minimum value of the root-mean-square (r.m.s.) sound pressure level using time weighting 'F'.
Laterisation	General term for a process that converts rock or soil to laterite. Laterite is a highly weathered sub-soil or material rich in secondary oxides of iron, aluminium, and is generally devoid of primary silicates such as quartz and kaolinite (Brennan, 2004).
Lentic habitat	Standing or still water habitats such as lakes and ponds.
Lime	Calcium carbonate nodules.
Limnological process	Referring to the chemical, physical and biological properties of bodies of freshwater.
Listed species	A plant or animal included in a schedule of vulnerable, rare or endangered biota, such as the schedules in the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) or the *Nature Conservation (Wildlife) Regulation 2004* (Qld).
Littoral	The shoreward region of a body of water in which light penetrates to the bottom.
Littoral vegetation	Vegetation that occurs within the littoral zone.
Lotic habitat	Flowing water habitats such as rivers and streams.
Macroinvertebrate	Organisms without a backbone which are large enough to be seen with the naked eye.
Mass movement	The downslope movement of earth caused by gravity. Includes but is not limited to landslides, rock falls, debris avalanches, and creep. It does not however, include surface erosion by running water.
Megachiropteran bats	Megachiropteran bats are larger than the microbats and feed on fruit, nectar and pollen, i.e. flying foxes.
Metalimnion	Middle layer of a thermally-stratified body of water. The metalimnion is the transition layer between the epilimnion and hypolimnion and is also referred to as the thermocline.
Metamorphic sediment / rock	Rock or sediment that has exhibited a change in structure or composition.
Metamorphism	Transformation of a pre-existing rock into a new rock by the action of heat (thermal metamorphism associated with igneous intrusions) or by severe compressional earth movements (regional metamorphism associated with folding, faulting etc). Changes occur to the texture, composition, physical or chemical structure of the original rock (Brennan, 2004).
Metamorphosed sedimentary rocks	Changed in form or nature, a metamorphic rock is created by heat and pressure such that the minerals, fabric, colour are changed, but not the composition
Metasediment	Sediments or sedimentary rock which has been subjected to metamorphism
Microchiropteran bats	Microchiropteran bats are relatively small mammals. These species are specially adapted for flight with wing membranes up to 25cm. They use both eye sight and echolocation for finding their way around at night and locating prey, being mostly insects.

Microhabitat	Within this habitat area there is a low availability of ground microhabitat including leaf litter, logs and branches
Migratory species	A migratory species listed and protected under the provisions of the EPBC Act.
National heritage place	Under the EPBC Act, a World Heritage property is either: ■ an Australian property on the World Heritage List kept under the World Heritage Convention; or ■ a property declared to be a World Heritage property by the Commonwealth Environment Minister.
Native species	A species that is indigenous to Australia or an external Territory, or periodically or occasionally visits.
Natural Environment	The complex of atmospheric, geological, and biological characteristics found in an area in the absence of artefacts or influences of a well-developed technological human culture.
Not of Concern Regional Ecosystem	A regional ecosystem is listed as Not of concern under the Vegetation Management Act 1999 if remnant vegetation is over 30 per cent of its pre-clearing extent across the bioregion, and the remnant area is greater than 10,000 hectares.
Notifiable Activity	Those activities that cause or are likely to cause contamination as listed under Schedule 2 of the EP Act.
Nuclear action	A nuclear action is: ■ establishing or significantly modifying a nuclear installation; ■ transporting spent nuclear fuel or radioactive waste products arising from reprocessing; ■ establishing or significantly modifying a facility for storing radioactive waste products arising from reprocessing; ■ mining or milling uranium ores, excluding operations for recovering mineral sands or rare earths; ■ establishing or significantly modifying a large-scale disposal facility for radioactive waste. A decision about whether a disposal facility is large scale will depend on factors including: ■ the activity of the radioisotopes to be disposed of, ■ the half-life of the material, ■ the form of the radioisotopes, and ■ the quantity of isotopes handled; or ■ de-commissioning or rehabilitating any facility or area in which an activity described above has been undertaken; or ■ any other type of action set out in the EPBC Regulations.
Of Concern Regional Ecosystem	A regional ecosystem is listed as of concern under Vegetation Management Act 1999 if remnant vegetation is 10-30 per cent of its pre-clearing extent across the bioregion; or more than 30 per cent of its pre-clearing extent remains and the remnant extent is less than 10,000 hectares.
Ogee crest	A highly efficient type of overflow weir with an S-shape that closely follows the profile of free-falling water over a vertically faced weir.
Old growth forests	Forests that are both little disturbed and ecologically mature.
Opportunistic	When the conditions are ideal.
Overburden	The material that lies above the area of economic interest.
Pelagic zone	The water column associated with the surface or middle depths of a water body, away from the bottom.
Permeability	The capacity of a material (rock) to transmit fluids (groundwater)
Permeable Rock	Rock through which water can pass, either via (a) a network of pores between the grains, or (b) interconnected joints, bedding planes and fissures (more correctly termed 'pervious rock')
Permian	The period of geological time extending from about 285 to 250 million years ago.
PET richness	Refers to the sum total of all taxa from the orders Plecoptera (the stoneflies), Ephemoptera (mayflies), and Tricoptera (caddisflies).
pH	"power hydrogen". Negative logarithm of hydrogen-ion concentration; a numerical expression of acidity or alkalinity.
Piezometer	A small diameter water bore used to measure the hydraulic head of groundwater in aquifers.
Planation	Processes of erosion results in the formation of fundamentally, flat, even or level surfaces (Brennan 2004).
Plant	A member, alive or dead, of the plant kingdom or of the fungus kingdom, and includes a part of a plant and plant reproductive material.

Pleistocene	The first part of the Quaternary period of geological time lasting from about 2 million years to 10,000 years ago.
Population	Occurrence of a species or ecological community in a particular area.
Porosity	Is a measure of void spaces in various rock types
Potadromous species	Organisms which complete their entire life cycle in fresh water.
Precambrian	The period of geological time extending from about 285 to 250 million years ago.
Precipitation	A collective term for the moisture, either liquid or solid, that falls on the earth from the atmosphere. In North Queensland this is usually in the form of rain.
Probable Maximum Flood (PMF)	The flood resulting from the worst flood-producing catchment conditions that can be realistically expected in the prevailing meteorological conditions.
Prograde (progradation)	The accumulation of sediments and the subsequent migration of a bank or coastline outwards from the land.
Propagation	The reproduction of plants.
Ramsar wetland	Under the EPBC Act, a Ramsar wetland is either: ■ an Australian wetland on the List of Wetlands of International Importance kept under the Ramsar Convention; or ■ a wetland declared to be a Ramsar wetland by the Commonwealth Environment Minister.
Rare	An animal is rare / near threatened if: ■ the population size or distribution of the wildlife is small and may become smaller; or ■ the population size of the wildlife has declined, or is likely to decline, at a rate higher than the usual rate for population changes for the wildlife; or ■ the survival of the wildlife in the wild is affected to an extent that the wildlife is in danger of becoming vulnerable.
Recharge	The process involving the infiltration of water from the surface to groundwater.
Recovery plans	A recovery plan is a document stating the research and management actions necessary to stop the decline, support the recovery and enhance the chance of long-term survival in the wild, of a stated species or community of protected wildlife.
Referable Dam	Under section 481 of the *Integrated Planning Act 1997* (Qld) (IPA), a dam, or a proposed dam after its construction will be, a "referable dam" if - (a) a failure impact assessment of the dam, or for the proposed dam, is required to be carried out under this part; and (b) the assessment states the dam has, or the proposed dam after its construction will have, a category 1 or category 2 failure impact rating. Under IPA, when a dam must be failure impact assessed is also addressed under section 481. It states that a person who proposes to construct a dam must have the dam failure impact assessed if the dam, after its construction, will be— (a) more than 8 m in height and have a storage capacity of more than 500 ML; or (b) more than 8 m in height and have a storage capacity of more than 250 ML and a catchment area that is more than 3 times its maximum surface area at full supply level. A development permit under the *Integrated Planning Act 1997* (IPA) is required for the construction of a new referable dam. A development permit is also required for works that will increase the storage capacity of an existing referable dam by more than 10 per cent.
Regional Ecosystems	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.
Regrowth	A young, usually even-aged forest stand that has regenerated after disturbance.
Regulated Waste	Waste defined under the Qld Environmental Protection (Waste) Policy as waste that contains a significant quantity and concentration of a hazardous contaminant; or waste in which the hazardous contaminant exhibits hazardous characteristics because of its toxicity, carcinogenicity, mutagenicity, teratogenicity, flammability, corrosivity, reactivity, ignitability or infectiousness, through its physical, chemical or biological characteristics; or waste that may cause environmental harm if improperly transported, treated, stored, disposed or otherwise managed.
Rehabilitation	Making the land useful again after a disturbance. It involves the recovery of ecosystem functions and processes in a degraded habitat.
Remnant vegetation	Small remaining areas of naturally occurring vegetation in a landscape that has been altered by human activity such as agriculture. These remnants were once part of a

	continuously vegetated landscape.
Retrogressive (type of failure)	Shallow ongoing surface failure.
Rill erosion	The removal of soil by numerous small channels only several inches deep. Rills occur mainly on recently cultivated soils or recent cuts and fills
Riparian	Pertaining to, or situated on the bank of, a body of water, especially a watercourse such as a river.
Riverine	Pertaining to rivers
Rudosols	Soils with negligible pedological organisation
Saddle Dam	Dam which is on the edge of the impoundment line which fills a depression.
Salinity	The concentration of any salt.
Scour outlet	Drain for a main outlet pipe.
Sediment	Any usually finely divided organic and / or mineral matter deposited by air or water in non-turbulent areas.
Shear zones	A wide zone of distributed shearing in rock. Typically this is a type of fault but it may be difficult to place a distinct fault plane into the shear zone. Shear zones may form zones of much more intense foliation, deformation, and folding.
Sheet erosion	Erosion of thin layers of earth-surface material, more or less evenly, from extended areas of gently sloping land by broad continuous sheets of running water, without the formation of rills, gullies, or other channelised flow
Shotcrete	Shotcrete is a term used for sprayed concrete. Shotcrete is mortar or concrete conveyed through a hose and pneumatically projected at high velocity onto a surface.
Single line grout curtain	Impermeable barrier below the footprint of the dam.
Slaking	The partial breakdown of soil aggregates in water due to the swelling of clay and the expulsion of air from pore spaces.
Sloughing	Erosion process caused by water.
Sodic	Refers to the dominance of sodium on the exchange complex of the soil. High levels of sodium can cause moisture infiltration problems and the accompanying, generally high soil pH, can cause nutrient disorders.
Soil Aggregation	The lumping together of soil particles into a coherent mass.
Soil Profile	The physical and chemical features of the soil imagined or seen in vertical section from the surface to the point at which the characteristics of the parent rock are not modified by surface weathering or soil processes.
Species	A group of biological entities that (a) interbreed to produce fertile offspring; or (b) possess common characteristics derived from a common gene pool.
Species richness	A botanical term indicating a measure of the number of species of plants or animals occurring in a given area.
Spillway	A weir, channel, conduit, tunnel, gate or other structure, designed to permit discharges from the reservoir when pondage levels rise above FSL; can include secondary, auxiliary, emergency spillway or fuse plugs.
Spotter/catcher	An ecologist who is accredited by the QPWS to capture and relocate fauna (mainly mammals) from trees prior to vegetation clearance.
Stability berm	A constructed rock surcharge which acts to stabilise a slope.
Stilling Basin	A stilling basin is a still body of water which provides a means to absorb or dissipate the energy from the spillway discharge and protects the spillway area from erosion and undermining.
Stress	The result or consequent state of a physical or chemical, or social, stimulus on an organism or system
Sub-species	A geographically separate population of a species, being a population that is characterised by morphological or biological differences from other populations of that species.
Systematic	In a methodical and organised way.
Taxa	Taxonomic group of any rank (for example as species, genus, family, class, order).
Tenosols	Soils with weak pedological organisation
Terrain	A tract of land and its physical features with emphasis on bedrock geology.
Terrestrial	Pertaining to land, the continents, and/or dry ground. Contrasts to aquatic.
Tertiary	The period of geological time extending from about 65 to 2 million years ago.
Thermocline	The zone of rapid vertical temperature change in a thermally-stratified body of water.

Threatened	A collective term for native plants and animals which are presumed extinct, endangered and vulnerable.
Threatened species and ecological communities	Threatened species or ecological communities listed and protected under the provisions of the EPBC Act.
Topography	Description or representation of natural or artificial features of the landscape; the description of any surface, but usually the earth's.
Translocation	The transfer of plants and animals from one part of their range to another.
Transpiration	The loss of water from plants, normally as vapour.
Ubiquitous	Having or seeming to have the ability to be everywhere at once.
Understorey	A general term for the plants of a community occurring at levels lower than the top stratum.
Vertosols	Soils with high clay content (>35%), cracks & slickensides
Vulnerable	A species is vulnerable if: ■ its population is decreasing because of threatening processes, or ■ its population has been seriously depleted and its protection is not secured, or ■ its population, while abundant, is at risk because of threatening processes, or ■ its population is low or localised or depends on limited habitat that is at risk because of threatening processes.
Waste	A substance that is left over, or an unwanted by-product, from an industrial, commercial, domestic or other activity; or surplus to the industrial, commercial, domestic or other activity generating wastes.
Weathering	Changes in the coherence, texture and composition of rocks and minerals by either physical (mechanical) or chemical processes as a result of exposure at the Earth's surface.
Weed	A plant that is considered undesirable because it threatens the persistence of native plants.
Weir	A barrier constructed across a watercourse below the banks of that watercourse that hinders or obstructs the flow of water in the watercourse.
Wetlands	Low-lying areas regularly inundated or permanently covered by shallow water. Usually important areas for birds and other wildlife.
Wildlife	An animal, plant or specimen derived from an animal or plant.
Wildlife corridor	A strip of habitat that facilitates fauna movement between otherwise isolated patches of habitat.
World Heritage property	Under the EPBC Act, a World Heritage property is either: ■ an Australian property on the World Heritage List kept under the World Heritage Convention; or ■ a property declared to be a World Heritage property by the Commonwealth Environment Minister.
Zeolitic	Group of structures containing large internal cavities.