

Section 7

Glossary of Acronyms, Symbols and Terms

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GLOSSARY OF ACRONYMS

AADT	Annual Average Daily Traffic.	DNR	Department of Natural Resources (now Department of Water and Energy).
ADO	Automotive Diesel Oil.	DoH	Department of Housing (NSW).
AEMR	Annual Environmental Management Report.	DoL	Department of Lands (NSW).
AGO	Australian Greenhouse Office.	DoP	Department of Planning (NSW).
AHD	Australian height datum (in metres).	DP	Deposited Plan.
AHIMS	Australian Heritage Information Management System.	DPI (Ag)	Department of Primary Industries (Agriculture) (NSW).
ANZECC	Australian and New Zealand Environment and Conservation Council.	DPI (MR)	Department of Primary Industries (Mineral Resources) (NSW).
ARI	Annual Recurrence Interval	EA	Environmental Assessment.
AS	Australian Standard.	EC	Electrical Conductivity.
ASS	Acid Sulfate Soil and Sediment.	ECRTN	Environmental Criteria for Road Traffic Noise.
CAMBA	China/Australia Migratory Bird Agreement	ENCM	Environmental Noise Control Manual
dB(A)	decibels, A-weighted scale.	EPA	Environment Protection Authority (now part of Department of Environment and Climate Change).
DEC	Department of Environment and Conservation (NSW) (now Department of Environment and Climate Change).	EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth).
DWR	Department of Environment and Water Resources (Commonwealth).	EP&A Act	Environmental Planning and Assessment Act 1979 (NSW).
DGRs	Director-General's Requirements	EPL	Environment Protection Licence
DIPNR	Department of Infrastructure, Planning and Natural Resources (NSW) (Now Department of Planning).	ESD	Ecologically Sustainable Development.
DLWC	Department of Land and Water Conservation (NSW) (Now Department of Water and Energy).	GVM	Gross Vehicle Mass
		HVAS	High Volume Air Sampling.
		INP	Industrial Noise Policy.



JAMBA	Japan/Australia Migratory Bird Agreement	SCSC	Specialist Consultant Studies Compendium.
LALC	Local Aboriginal Land Council.	SEPP	State Environmental Planning Policy.
LEP	Local Environmental Plan.	SH	State Highway.
LGA	Local Government Area.	SR	Shire Road
MR	Main Road.	SWMP	Surface Water Management Plan.
NATA	National Association of Testing Authorities.	TAPM	The Air Pollution Model.
NEPC	National Environment Protection Council.	TDS	Total Dissolved Solids.
NEPM	National Environment Protection Measure.	TSC Act	Threatened Species Conservation Act 1995 (NSW).
NHMRC	National Health and Medical Research Council.	TSP	Total Suspended Particulates
NPW Act	National Parks and Wildlife Act 1974 (NSW).	TAA	Total Actual Acidity
NPWS	National Parks and Wildlife Service (NSW) (now with Department of Environment and Climate Change).	VENM	Virgin Excavated Natural Material
PASS	Potentially Acid Sulfate Soils and Sediment.	WHO	World Health Organisation
PHA	Preliminary Hazard Analysis	WWTP	Waste Water Treatment Plant
POCAS	Peroxide Oxidation Combined Acidity and Sulfate		
POEO Act	Protection of the Environment Operations Act 1997 (NSW).		
PSA	Particle Size Analysis		
REP	Regional Environmental Plan.		
RFI Act	Rivers and Foreshores Improvement Act 1948 (NSW).		
RH	Relative Humidity.		
RTA	Roads and Traffic Authority (NSW).		
RBL	Rating Background Level		



**GLOSSARY OF SYMBOLS AND
UNITS**

°	degrees.	kW	kilowatts.
°C	degrees Celsius.	L	litre.
%	percentage.	L/s	litres per second.
\$M	million dollars.	L/t	litres per tonne.
<	less than.	L/hr	litres per hour.
≤	less than or equal to.	L_{A10}	sound level exceeded 10% of the sampling time.
>	greater than.	L_{A90}	sound level exceeded 90% of the sampling time.
≥	greater than or equal to.	L_{Aeq}	the L _{Aeq} 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.
cm	centimetre (= 10mm).	L_{Aeq 1 hour}	the “equal energy” average noise level over 60 minutes – used for assessing impacts of noise from motor vehicles on public roads.
D%	dispersion percentage.	L_{Aeq T}	sound level of continuous noise which emits the same energy as the fluctuating sound over a given time period (T).
dB	decibel, unit used to express sound intensity.	L_{Amax}	the absolute maximum noise level measured in a given time interval.
dB(A)	the unit of measurement of sound pressure level heard by the human ear, expressed in “A” scale.	L_{AN}	the A-weighted sound pressure level exceeded by N% of a given measured period.
deg	degrees.	m	metre (= 100cm).
g	gram (= 0.001 kilogram).	m AHD	metres Australian Height Datum.
g/m²/month	grams per square metre per month – unit for deposited dust.	M	million.
ha	hectare (100m x 100m).	m²	square metre.
kg	kilogram (= 1 000 grams).	m³	cubic metre.
kL	kilolitre (= 1 000 litres).	m/s	metres per second.
km	kilometre (= 1 000 metres).		
km²	square kilometre (= 1 million m ²).		
km/hr	kilometres per hour.		
kV	kilovolts.		
kVA	kilowatt – amperes.		



mg	milligram (weight unit = 0.001 gram).
mg/L	milligrams per litre (parts per million).
ML	megalitre.
MLpa	megalitres per annum.
mm	millimetre (= 0.001 metres).
mm/s	millimetres per second
Mt	million tonnes (metric tonne = 1 000kg).
Mtpa	million tonnes per annum.
NTU	Nephelometric turbidity units.
PM₁₀	particulate matter <10µm in diameter.
SWL	standing water level.
t	tonne (= 1 000kg).
tpa	tonnes per annum.
tph	tonnes per hour
V:H	vertical to horizontal ratio
µS/cm	microsiemens per centimetre – unit of electrical conductivity
µm	micrometres (= 0.001mm)
µg/m³	micrograms (1 x 10 ⁻⁶ grams) per cubic metre



GLOSSARY OF TERMS

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

acid sulfate soil and sediment – Common name given to soil and sandy sediment containing iron sulfides (iron pyrite) which oxidise creating sulfuric acid.

adverse weather conditions (with respect of dust) – conditions, such as high wind, that assist the movement of dust from the Project Site towards receptors.

adverse weather conditions (with respect of noise) – conditions, such as temperature inversions or gentle winds (<3m/s) from the Project Site towards receptors.

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 humans or from natural processes, causing adverse effects to humans 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 man-made 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.

alkaline – having a pH greater than 7.0.

alkalinity – in water analysis a measure of the carbonates, bicarbonates, hydroxides and occasionally the borates, silicates and phosphates in the water.

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.

amphibian – animals (such as frogs) adapted to live both on land and in water.

anecdotal evidence – informal, oral or written evidence of an event.

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.

arboreal – pertaining to tree habitats.

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

artefact – anything made by human workmanship, particularly by previous cultures (such as chipped and modified stones used as tools).

atmospheric stability – a measure of turbulence which determines the rate at which the effluent is dispersed as it is transported by the wind.

attenuation – reduction in sound pressure levels between two locations.

average annual daily traffic (AADT) – unit of assessment of traffic flow along a road.

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, (such as VENM).

background dust level – dust level in the absence of Project-related activities.

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).

basalt – fine-grained, dark volcanic igneous rock.

baseline monitoring – monitoring performed prior to commencement of the Project.

batter – an engineered slope of soil or rock fill on either side upslope or downslope of a road or embankment.

biodiversity – the full range of living things and the ecosystem in which they live.

biophysical – relating to the biological and physical attributes of the environment.

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 non-desirable 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.

catch drain – drain used to intercept and redirect runoff.

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

cation – an ion having a positive charge and characteristically moving toward a negative electrode.

channel – river or irrigation channel, includes bed and bank.

clay – a size term denoting particles, regardless of mineral composition, with diameter less than 0.004 mm.

community – a combination of plants that are dependent 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.

concentration – the amount of a substance, expressed as mass or volume, in a unit volume of air.

conductivity – the measurement of the ability of a substance (either a measure of solid, liquid or gas) to transmit electricity; a measure of the salt content.

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

contour bank – an earth bank constructed across a slope parallel to contours.

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

cross-section – a two-dimensional representation of an area presented as if the area had been cut along its length.

culvert – large pipe or channel carrying water underneath a structure (e.g. a road or railway track) or underneath the ground.

cumulative – increasing by successive additions.

cutter-suction dredge – a floating pump that extracts sand through mechanically cutting and then pumping the sand to a specified location.



deceleration lane – a lane used for decreasing speed before leaving a through road.

decibel – unit expressing difference in power between acoustic signals.

density – 1. The mass of a substance (e.g. sediment) divided by its volume; water has a density of exactly 1 kilogram per litre;
2. The coverage of vegetation (e.g. trees) per unit of distance (along a linear transect) or unit of area (in an area transect).

deposition – laying down of particulate material (e.g. sediment in a lake).

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

diversion bank – an earth bank constructed to divert water away from disturbed areas.

drainage line – a passage along which water concentrates and flows towards a stream, drainage plain or swamp intermittently during or following rain.

drawdown – the difference between the water level observed during pumping and the non-pumping water level (static water level or static head).

dredge pond – water body created through the removal of sand or sediments through the use of a dredge.

drilling – the action of boring holes (usually less than 30 centimetres in diameter into the ground, typically to establish a water bore or to investigate the geology found at depth.

dust suppressant – any substance used to prevent dust disturbance.

dust concentration – the amount of a substance, expressed as mass or volume, in a unit volume of air.

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

electrical conductivity (EC) – the ability of a substance (either solid, liquid or gas) to transmit electricity, often used as a measure of salinity.

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.

emission – a discharge of a substance (e.g. dust) 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 a planning application for a major project – covering the project description, assessment of impacts and proposed safeguards and commitments.

environmental constraint – limitation on a project by components of the existing environment.

environmental policy – statement by an organisation of its intentions and principles, in relation to the overall environmental performance, which provides a framework for action and for the setting of its environmental objectives and targets.

erodibility – the tendency of soil, earth or rock to erode.



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.

evaporation – the loss of water as vapour from the surface of a liquid that has a temperature lower than its boiling point.

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 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.) particularly in a defined area or over a defined time period.

fill – material imported (either from elsewhere on-site or off-site) and emplaced to raise the general surface level of a site.

fill sites – land proposed to be developed by the Proponent which requires its elevation to be raised to provide a level of flood immunity.

fines – material such as clay or silt sized particles.

fines return pond - excavation for placement of fine materials washed from the dredged and processed sand.

front-end loader – machine used to lift and place soil, earth, rocks, etc. on a construction site or product stockpiles.

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

geotechnical – technical or engineering aspects relating to soil, rock and other materials.

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.

gradient – rate of change of a given variable (such as temperature or elevation) with distance.

grassland – an extensive area of largely treeless land covered mainly by natural grasses.

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.

groundwater dependent ecosystem – those parts of the environment, the species composition and natural ecological processes of which are determined by the permanent or temporary presence or influence of ground water.

groundwater depression – localised lowering of the water table.

groundwater surface – the upper surface of the water table.

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



head (hydraulic head) – energy contained in a water mass, produced by elevation, pressure or velocity.

heavy metal – normally trace metal of high density which may be environmentally hazardous.

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.

hydraulic conductivity (k) – the rate of flow of water through the soil profile or in an aquifer through a cross section of unit area under a unit hydraulic gradient, at the prevailing temperature. Usually expressed in units of metres per second or metres per day.

hydraulic gradient – the direction of flow of groundwaters.

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

igneous – a rock or mineral that solidified from molten or partly molten material.

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).

infiltration – the process of surface water soaking into the soil.

inflow – flow directed into a particular feature, such as a lake or dredge pond.

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.

intermittent – flows periodically, irregularly.

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.

invertebrate – commonly, animals without a backbone (jellyfish, worms, molluscs, etc.).

ion – an atom or compound that has gained or lost an electron, so that it is no longer electrically neutral but carries a positive or negative charge.

jointing – planes of discontinuity in rockmass which exhibit no evidence of relative movement.

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 LGA or municipality.

long-term – a period of time often associated with annual air quality standards. Long-term models usually address pollutant concentrations over several seasons to one year.



low loader – a trailer which has a relatively low carrying deck and used to transport large items of equipment such as bulldozers or scrapers.

low-yielding – an aquifer which yields water at a low rate.

major project – an activity as defined under the State Environmental Planning Policy (Major Projects) 2005.

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

management strategy – a policy or direction that assists in actions required to address issues.

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).

mobile equipment – wheeled or tracked self propelled equipment such as trucks and front-end loaders.

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

mudstone – sedimentary rock formed from the consolidation of silt and clay.

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).

neutral – neither acidic nor basic (e.g. a pH equal to 7.0).

northern extraction site – area north of Altona Drive (realigned) from which the loamy and fine sand resources would be recovered.

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.

operations phase – that period after construction and prior to decommissioning, during which extraction of the resource takes place.

oxidation – the process of combining with oxygen, such as through exposure to the atmosphere.

particle size distribution – the relative proportions of particles (e.g. in a sediment) that fall within specific size categories.

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

permeability – a material property relating to the ability of the material to transmit water.

pervious – permeability.

pH – a measure of the degree of acidity or alkalinity of a solution; expressed numerically (logarithmically) on a scale of 1 to 14, on which 1 is most acid, 7 is neutral acid, and 14 is most basic (alkaline).

piezometer – a hole drilled specifically for the monitoring of groundwater levels and water quality.



pipeline corridors – corridors in which the delivery and tailwater return to pipes are located. The corridors extend from the southern extraction site to the fill sites.

Project Application – an application to the Department of Planning for approval of a major project (see **Appendix 1**).

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.

potable – water suitable for human consumption.

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.

progressive rehabilitation – rehabilitation of disturbed areas as soon as practicable after they are released during the life of the Project or after the final landform is achieved.

Project Site – the area of land covered by the project application and correspondent with the boundaries of Lot 2 DP216705 and Lot 21 DP1082482. Includes the northern and southern extraction sites and processing area.

Proponent – person, organisation or company proposing to carry out an activity / seeking project approval (ie. Gales-Kingscliff Pty Ltd).

quadrat – a square survey area for a flora study.

quantify – to determine the quantity or amount of a component in a substance.

Quaternary – geological period of time from 2 million years before present to present.

Ramsar listed wetlands – wetlands recognised to have considerable ecological value in accordance with the Ramsar convention.

recharge – the addition of water to an aquifer, directly from the surface, indirectly from the unsaturated zone, or by discharge from overlying or underlying aquifer systems.

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 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.

relief – the variation in landscape elevation over a region.

remnant woodland – native woodland remaining after widespread clearing has taken place.

reptile – cold-blooded vertebrates, including lizards, snakes, turtles, and crocodiles.

resource – the estimated volume of sand and other useable material within a defined area.

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

riparian – pertaining to a river or stream bank.

runoff – that portion of the rainfall falling on a catchment area that flows from the catchment past a specified point.

saline – water with high salt concentration.



salinity – the dissolved content of water expressed in terms of milligrams per litre.

sand slurry – sand mixed with water

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

scraper – irregularly shaped artefact that has been modified in a manner that suggests use in scraping activities, notably woodworking.

screening – a process which separates loose materials/sand into various size fractions – this usually involves a mechanical vibration of the material over a series of decks fitted with steel mesh, steel plate or polyurethane or rubber mats with fixed sized apertures.

sediment – material such as mud and sand that has been moved and deposited by water, ice or wind.

sequence (geological) – layers of (predominantly) sedimentary rocks sourced from a common geological environment or period.

short-term – a period of time associated with air quality standards for pollutant exposures ranging between one hour and twenty four hours.

silt – classic sediment, most of the particles of which are between 0.063mm and 0.004mm in diameter.

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.

southern extraction site – area south of Altona Drive (realigned) from which the loamy and fine sand resources would be recovered.

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 adiabatic lapse rate. Vertical air motions are suppressed. The turbulence intensity is low resulting in poor dispersion conditions.

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 or despatch.

stormwater – surface water runoff immediately after rainfall.

stratigraphy – the succession and age of strata of rock and unconsolidated material. Also concerns the form, distribution and lithologic composition of the strata.

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.

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

sulfate – a bivalent negative ion of sulphur and oxygen (SO_4^{2-}).

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

suspended solids – analytical term applicable to water samples referring to material recoverable from the sample by filtration.

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.

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.

total suspended particulates (TSP) – the mass of all particulate matter suspended in a solution.

total suspended solids – a common measure used to determine suspended solids concentrations in a waterbody and expressed in terms of mass per unit of volume (e.g. milligrams per litre).

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

weathered rock – rock affected to any degree by the processes of chemical or physical weathering.

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 erosion – wearing away of exposed soil, earth, or rock surfaces by the abrasive action of wind-blown particles (e.g. grains of sand).

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.

yield – (of a water bore) 1) the capacity of the bore to produce water. 2) the amount of water actually withdrawn.



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