

Glossary and abbreviations

Term/abbreviation	Definition
AADT	Average annual daily traffic: the total volume of traffic passing a roadside observation point over a period of a year, divided by the number of days in the year.
AASS	Actual acid sulfate soils - the extremely acidic soils that result from the disturbance or drainage and subsequent oxidation of previously waterlogged potential acid sulfate soils.
Aboriginal scarred tree	Aboriginal scarred trees show evidence of bark or timber removal by Aboriginal people for traditional purposes. Scarred trees provide significant evidence of Aboriginal occupation in what is now a highly modified landscape. There are few developed agricultural areas remaining in the world with preserved signs of pre-modern Indigenous activity. This makes scarred trees in south-east Australia records of human activity of potential world importance (Department of Conservation 2005).
afflux	An increase in water level resulting from additional obstacles in the flow path. In this case, the proposed upgrade embankments would provide an obstacle to the flow path where it crosses the Macleay River floodplain.
agricultural land classifications	The agricultural capability of land is classified by the Department of Lands. Each of the 8 classes reflects the potential sustainable use of the land.
AHD	Australian Height Datum is the datum (adopted by the National Mapping Council of Australia) to which all vertical control for mapping is to be referred.
alluvium	Relatively recent deposits of sedimentary material laid down in river beds, flood plains, lakes, or at the base of mountain slopes.
ARI	Annual recurrence interval: the long-term average number of years between the occurrence of a flood as big as or larger than the selected event. For example, floods with a discharge as great as or greater than a 100 year ARI flood event will occur, on average, once every 100 years.
average weekday 1 hour morning peak traffic	Average weekday 1 hour morning peak traffic is the average volume of traffic (number of vehicles) travelling on the relevant section of road during the morning weekday peak hour.
buffer zone	A buffer zone is established to ensure that a minimum distance limit is set to protect sensitive receivers from vibration and overpressure impacts.
Carbon dioxide equivalent	Enables emissions of different gases to be added together and compared with carbon dioxide. Calculated by multiplying the actual mass of emissions by the appropriate Global Warming Potential factor.
CEMP	Construction Environmental Management Plan - a site specific plan developed for the construction phase of a project to ensure that all contractors and subcontractors comply with the environmental conditions of approval for the project and that the environmental risks are properly managed.
CO	Carbon monoxide
community severance	If a large or busy road cuts through an area, it can have the effect of driving a wedge through a community by limiting people's ability or desire to move through that area, which in turn can reduce accessibility to key services and damage local social networks and community 'cohesion'. The cumulative impact of psychological and physical barriers to movement and social participation created by the transport infrastructure is what constitutes 'community severance' (UK Department for Transport 2006).
compensatory habitat	The provision of land containing one or more key habitats that are acquired and/or committed by a project proponent/land owner for the purpose of nature conservation, to make up for the loss or degradation of one or more key habitat(s).
consolidation (of soils)	Bringing together of materials into one mass or connected whole to become solid or firm. The solidification of loose material or liquid, usually under pressure OR An adjustment of soil particles, in response to compressive stress, that results in lower porosity.
critical habitat	The habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species' critical habitat in the recovery strategy or in an action plan for the species.

Term/abbreviation	Definition
critical infrastructure project	A project (as subject to Part 3A of the EP&A Act) that is considered to be essential to delivering an important government commitment or meeting an immediate community need.
critical storm event	A critical storm event is the duration of a particular rainfall event which produces the highest flood level at a particular geographic location.
dB(A)	Decibel(s) (A-weighted) a unit used to measure noise levels that are adjusted by an electronic filter to approximate the response of a human ear.
dewatering	Use of a system of pumps, pipes and temporary holding dams to drain or divert waterways or wetlands before excavation of soils and sediments can occur.
diamond interchange	A diamond interchange configuration denotes the shape of the interchange when viewed from above. A full diamond interchange has northbound and southbound on and off ramps stemming from an overpass that connects to local roads.
ECRTN	Environmental Criteria for Road Traffic Noise - a document that sets out non-mandatory goals for road traffic noise, and recommended alternatives to meet these noise levels.
edge effects	A change in species composition, physical conditions, or other ecological factors at the boundary between two ecosystems OR The ecological changes that occur at the boundaries of ecosystems; these include changes in species composition, gradients of moisture, sunlight, soil and air temperature, wind speed, etc.
EMS	Environmental Management System: A management approach which enables an organization to identify, monitor and control its environmental aspects. An EMS is part of the overall management system that includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining the environmental policy.
ENCM	Environmental Noise Control Manual, a document developed by the Environment Protection Authority (now Department of Environment and Climate Change) that provides guidelines for noise levels during construction.
endangered ecological community	As defined under the TSC Act, an ecological community that is likely to become extinct or is in immediate danger of extinction.
ENMM	Environmental Noise Management Manual, a NSW RTA document that provides guidelines for assessing maximum noise levels. The guidelines provide a tool to help prioritise and rank mitigation strategies.
environmental assessment (process)	A specialised part of the decision-making process, where the environmental impact of a development proposal or activity is considered in detail, together with other aspects of the development.
Environmental Assessment (Report)	The documentation of the outcomes of the environmental assessment process required under Part 3A of the Environmental Planning and Assessment Act 1979. A formal evaluation of the effect or likely effect of a development or other activity on the environment.
EP&A Act	New South Wales Environmental Planning and Assessment Act 1979, an Act to institute a system of environmental planning and assessment for the State of New South Wales.
EPBC Act	Commonwealth Environment Protection and Biodiversity Conservation Act 1999, protects the environment, particularly matters of National Environmental Significance (Protected matters). It streamlines national environmental assessment and approvals process, protects Australian biodiversity and integrates management of important natural and cultural places.
heavy vehicle	A heavy vehicle is classified as a Class 3 vehicle (a two axle truck) or larger in accordance with the Austroads Vehicle Classification System.
key habitat	Refers to the natural environment inhabited by native flora and/or fauna species, populations or ecological communities that are deemed to be of ecological significance (NSW Roads and Traffic Authority 2001a).
L10	The noise level that is exceeded for 10% of the sample period.

Term/abbreviation	Definition
LAeq	LAeq is the equivalent sound pressure level (i.e. the steady sound level that, over a specific period of time, would produce the same energy equivalence as the fluctuating sound level actually occurring). LAeq(1h) is the LAeq noise level for a 1 hour period; correspondingly, LAeq(9h) and LAeq(15h) are the LAeq noise levels for 9 and 15 hour periods.
levee	An artificial embankment built for preventing the overflowing of a river.
Lmax	Predicted maximum noise level
LoS	Level of service: a fundamental performance measure used in the planning design and operation of roads. It provides the basis for determining the number of lanes to be provided in the road network.
NO2	Nitrogen dioxide
NSW	New South Wales
OEMP	Operational Environmental Management Plan - a site specific plan developed for the reference during the operation of a development or project, in this case a road, the plan ensures that all contractors and subcontractors engaged in operating and/or maintaining the road comply with the environmental conditions of approval for the project and that the environmental risks are properly managed.
overpressure	Overpressure is pressure created by a device or action that is greater than the surrounding air pressure, for example, a shockwave from a blast.
PAD	Potential archaeological deposit - any location considered to have a moderate to high potential for subsurface archaeological material.
PASS	Potential acid sulfate soils - waterlogged soils that are rich in iron sulfides (pyrite).
PM10	Particulate matter (such as airborne dust or silt) less than or equal to 10 microns in aerodynamic diameter.
PMF	Probable maximum flood - a statistical formula used to calculate a hypothetical flood event that could occur on a particular river basin over a particular duration. This is derived from the probable maximum precipitation over time.
predictive model	<p>There is an extensive body of archaeological research from throughout the central/north coast region of NSW. This was used to establish a set of generalised criteria for predicting the location of Aboriginal sites within the landforms through which the proposed upgrade passes.</p> <p>These data, together with the results of the route selection study, are applicable to the present study area to facilitate the formulation of a predictive model for the area. The predictive model indicates the likelihood of occurrence of particular types of Aboriginal sites in certain landscapes.</p>
riparian zone	A terrestrial area adjacent to, and influenced by, a perennial body of water. Riparian zones provide a functional link between terrestrial and aquatic ecosystems through coarse and fine organic matter input, bank stability, water temperature regulation, sediment and nutrient flow regulation, and maintenance of unique wildlife habitat.
RTA	NSW Roads and Traffic Authority
saltwater intrusion	The invasion of fresh surface water or groundwater by saltwater.
SEPP	State environmental planning policy made under the EP&A Act. A SEPP is proposed by the Minister for Planning and approved by the Governor. They address matters of state significance.
settlement (of soils)	Settlement is the consolidation or shifting of soil caused by the placement of a heavy load such as a fill embankment, much like a sponge is compressed when pressure is applied.
shotcrete	Pneumatically applied cement, water, sand and fine aggregate mix that is sprayed at high velocity on the rock surface and is thus compacted dynamically. Tends to inhibit blocks ravelling from the backs, walls and face of an excavation.
soft soils	Soft soils are mostly consolidated or slightly over-consolidated clays, with varying proportions of organic material, silts and sands (Transport Research Laboratory 1994). When a load, such as an embankment, is applied to such soils, there is potential for downward movement to cause damage to the embankment and surface infrastructure such as pavements.
station	Station represents the distance in metres from the beginning of a road or a key point on the road. In this case, the original location of the start of the proposed upgrade is at South Kempsey at Station 0; therefore Station 500 means it is 500 metres along the alignment from Station 0.

Term/abbreviation	Definition
sub-plan	<p>An issue specific plan under the CEMP or OEMP that details measures to be undertaken to minimise impacts related to a specific issue (such as traffic management) to ensure all contractors and subcontractors comply with the environmental conditions of approval for the project and that the environmental risks are properly managed.</p> <p>Sub-plans will be prepared under the CEMP and OEMP for the proposal to manage the following issues - traffic, noise and vibration, acid sulfate soils, soil and water, hazardous materials, waste, flora and fauna, Indigenous heritage, non-Indigenous heritage, air quality, flooding and drainage, spoil management, urban and landscape design.</p>
temporary crossover	A temporary crossover is a section of road that is required to allow the proposed upgrade to be constructed (e.g. when permanent works are to be constructed over the existing road). The crossover facilitates a diversion of traffic around worksites.
'The proposed upgrade'	The proposed upgrade constitutes the proposal under Part 3A of the EP&A Act.
threatened	As defined under the TSC Act, a species, population or ecological community that is likely to become extinct or is in immediate danger of extinction.
TSC Act	NSW Threatened Species Conservation Act 1995, an Act to conserve threatened species, populations and ecological communities of animals and plants.
vulnerable	As defined under the TSC Act, a species that is likely to become endangered unless the circumstances and factors threatening its survival or evolutionary development cease to operate.