







**Transport Infrastructure**  
*Development Corporation*

Rail Clearways Program—Kingsgrove to Revesby  
Quadruplication Project

## **Environmental Assessment**

Sinclair Knight Merz

Rail Clearways Program – Kingsgrove to Revesby Quadruplication Project

**ENVIRONMENTAL ASSESSMENT**

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# **Rail Clearways Program Kingsgrove to Revesby Quadruplication Project**

## **Environmental Assessment**

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## Glossary of terms and abbreviations

Term:	Definition
ADG	Australian Dangerous Goods.
AHD	Australian Height Datum. The standard reference level used to express the relative elevation of various features. A height given in metres AHD is essentially the height above sea level.
Airshed	Lower atmosphere within a defined geographic area.
Ambient	The background level at a specific location, being a composite of all sources.
Annual Average Daily Traffic (AADT)	Annual average daily traffic volume representing the total traffic in both directions at a specified location calculated from mechanically obtained axle counts.
Annual Exceedance Probability (AEP)	The probability of a flood event exceeding a nominated level in a year. A one percent AEP is the probability of an event exceeding a nominated level in 100 years.
Aquifer	Geologic formation, group of formations, or part of a formation capable of transmitting and yielding economic quantities of water.
Archaeology	The scientific study of human history, particularly the relics and cultural remains of the distant past.
ARI	Average Recurrence Interval-average or expected period between exceedance of a flood.
ASSMAC	Acid Sulphate Soils Management and Advisory Committee.
ATRICS	Advanced Train Running Information Control System.
Background Noise Level	The ambient sound pressure noise level in the absence of the sound under investigation exceeded for 90 percent of the measurement period. Normally equated to the average minimum A-weighted sound pressure level.
Batter	The side slope of walls, embankments and cuttings or the degree of such slope, usually expressed as a ratio of horizontal distance to one vertical height.
Benthos	Flora and fauna found below water level.
Bore	A cylindrical drill hole sunk into the ground from which water is pumped for use or monitoring.

Term:	Definition
BTEX	Benzene, toluene, ethylbenzene and xylene, volatile organic compounds (VOCs).
Buffer	A physical barrier, structure or width of land which encloses, partially encloses or defines a particular environment. It serves to minimise the impacts of non-desirable external influences on the adjoining environment.
Bund Wall	A wall erected to prevent the escape of various emissions into the environment (liquids, noise or views).
Catchment	The area drained by a stream or body of water or the area of land from which water is collected.
CBD	Central Business District.
CEMP	Construction Environmental Management Plan.
Chainage	Measure of rail track distance from Sydney Central Station in kilometres.
Clay	Very fine grained sediment, often defined as having a particle size less than 2 microns (0.002mm) in diameter.
Compaction	The process of compressing individual grains in a soil or sediment in response to pressure.
Confluence	Flowing together.
Conservation	The management of resources in a way that will benefit both present and future generations.
Contaminant	Any physical, chemical, biological or radiological substance or matter in water or soil that is not of natural origin.
Contamination	The degradation of the natural environment as a result of human activities.
dba	Decibels using the A-weighted scale measured according to the frequency of the human ear.
DECC	NSW Department of Environment and Climate Change.
Decibel (dB)	A scale unit used in the comparison of powers and levels of sound energy. The number of decibels is ten times the logarithm to the base of ten of the ratio of the powers.
Degree of Saturation	The ratio of the traffic volume entering an intersection in a specific period to the capacity of the intersection during that period.

<b>Term:</b>	<b>Definition</b>
Department of Planning (DoP)	NSW Government department responsible for planning with a role in the assessment of the Proposal and making a recommendation to the Minister for Planning whether it should proceed.
Down rail tracks	Tracks that provide train services away from Sydney.
DPI (Fisheries)	Department of Primary Industries – Fisheries Division.
EEC	Endangered ecological community.
Ecology	The relationship between living things and their environment.
Ecologically Sustainable Development	Using, conserving and enhancing the resources of the community 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	A functional unit of energy transfer and nutrient cycling in a given place. It includes all relationships within the biotic community and between the biotic components of the system.
Ecotone	Transition zone between two different plant communities.
Emission	Discharge of a substance to the environment.
EMR	Environmental Management Representative.
Environment	A term for all the conditions (physical, chemical, biological and social) in which an organism or group of organisms, including humans, exists.
Environmental Assessment (EA)	A formal description of a project and an assessment of its likely impact on the physical, social and economic environment. It includes an evaluation of alternatives and an overall justification of the Project. The EA is used as a vehicle to facilitate public comment and as the basis for analysing the Project with respect to granting approval under relevant legislation.
Environment Protection Licence	A licence that allows pollution of the environment under controlled conditions regulated by the Department of Environment and Climate Change.
EMP	Environmental Management Plan.
EPA	NSW Environment Protection Authority (now part of the Department of Environment and Climate Change).
EPBC Act	Environment Protection and Biodiversity Conservation Act (Commonwealth).
Equivalent Continuous Sound Level (LAeq)	The constant sound level which when operating over the same time interval as a fluctuating sound over an extended time, is equivalent to the same sound energy.

<b>Term:</b>	<b>Definition</b>
Erosion	The wearing away of the land surface by the action of water, wind and ice.
ESD	Ecologically sustainable development.
Eutrophication	Excessive nutrients in a water body causing dense plant growth, whose decomposition leads to oxygen depletion and subsequent death of animal life.
Excavate	Dig into natural material and remove using specialist machinery.
Express service	Train service stopping only at a limited number of stations.
Extraction	A term referring to the removal of material from the earth synonymous with quarrying.
Fauna	All animals including birds, reptiles, marsupials and fish.
Flora	All plants.
Frequency	Similar to the pitch of a musical note in sound pressure fluctuations of cycles per second (Hertz). Most sounds comprise a composite of frequencies of varying sound pressure levels in the range of 20 Hertz to 20,000 Hertz.
Friable	Easily crumbled.
Front-end loader	Machine used to lift and place soil, earth, rocks and other materials within an extraction site or to load products into trucks.
Gradient	Rate of change of a given variable with distance, such as temperature or elevation.
g/m <sup>2</sup> /month	grams per square metre per month.
Greenhouse effect	Changes in climate that could occur due to increases in atmospheric concentrations of certain gases.
Groundwater	Subsurface water contained within the saturated zone.
Habitat	The place where an organism lives; habitats are measurable and can be described by their flora and physical components.
Heritage	Things of value which are inherited from the past.
Hydrocarbon	Any organic compound, gaseous, liquid or solid, consisting only of carbon and hydrogen.
Impact	The effect of human-induced action on the environment.
Infiltration	The process of surface water soaking into the soil.
Infrastructure	Supporting installations and services supplying the needs of a project.

<b>Term:</b>	<b>Definition</b>
Introduced species	Plants and animals not native to Australia and known or thought to have been brought here by humans.
Landform	A specific feature of the landscape or the general shape of the land.
Layover	Track where trains can be temporarily located between services.
LED	Light-emitting Diode.
LEP	Local Environmental Plan.
LGA	Local Government Area.
Level of Service	A qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers.
Local (all stops) service	Train service stopping at all stations.
Local track	Rail track normally accommodating local services stopping at each station.
$\mu\text{g}/\text{m}^3$	micrograms per cubic metre.
$\mu\text{s}/\text{cm}$	microsiemens per centimetre.
Main track	Rail track normally accommodating express services with limited stops.
$\text{mg}/\text{L}$	milligrams per litre.
Mitigation measures	Measures put in place to reduce an impact.
MLALC	Metropolitan Local Aboriginal Land Council
Modelling	Use of mathematical equations to simulate and predict real events and processes.
Monitoring	Regular measurement of components of the environment to understand their condition and establish if necessary standards are being met.
Native	Local inhabitant of a defined place.
NPV	Net present value: the present value of the net economic/financial benefit.
NPWS	NSW National Parks and Wildlife Service (now part of the Department of Environment and Climate Change).
NSW	New South Wales.
Overbridge	Structure providing a facility to cross over the rail corridor.

Term:	Definition
PAH	Polycyclic aromatic hydrocarbons-toxic products of combustion.
PCB	Polychlorinated biphenyl-toxic organo-chlorine compound previously used in electrical equipment.
Permeable material	Material that permits water to move through it at perceptible rates under the hydraulic gradients normally present.
pH	A measure of acidity or alkalinity of a solution, numerically equal to 7 for neutral solution, increasing with increasing alkalinity and decreasing with increasing acidity. Originally stood for the words potential of hydrogen.
Proponent	The person or organisation proposing to carry out a development, in this case Transport Infrastructure Development Corporation on behalf of the State Government of NSW.
Propagule	Any part of an organism capable of independent growth.
Quadruplication	Duplication of a twin track line to provide a total of four tracks.
Receptor	An environmental modelling term used to describe a map reference point where the impact is predicted. A sensitive receptor is a home, work place, school or other place where people spend some time. An elevated receptor is a point above ground level.
Rehabilitation	Preparation of a final landform following extraction and its stabilisation with vegetation.
Remnant vegetation	Native vegetation remaining after widespread clearing has taken place.
Resource	Potentially usable material in a defined area that can be economically extracted.
RL	Reduced level, usually in metres to an arbitrary datum.
RTA	NSW Roads and Traffic Authority.
Run-off	The proportion of precipitation discharged through surface water systems.
Sedimentation basin	An area where runoff is ponded to allow sediment to be deposited. The longer the time the runoff is held, the smaller the size of the sediment deposited. Such basins have to be regularly cleaned.
Semi-fast service	Train service stopping at a selected number of stations, rather than all but more than the express service.
Shale	A laminated sediment in which the constituent particles are predominantly in the clay size.

<b>Term:</b>	<b>Definition</b>
Silt	Sediment comprising most particles between 0.004mm and 0.063mm.
Species	Taxonomic grouping of organisms that are able to interbreed with each other but not with other species.
SREP	Sydney Regional Environmental Plan.
SEPP	State Environmental Planning Policy.
Stakeholder	An individual or group with an interest in the Proposal.
Stockpile	Mound used to store material.
Stormwater	Rainwater which runs off catchments following rain events. The untreated water is carried into creeks, rivers and lakes.
SWMS	Safe Work Method Statement.
Terrestrial	Relating to the land as distinct from air or water.
TIDC	Transport Infrastructure Development Corporation.
Topography	The physical relief and contours of the area.
Topsoil	The surface layer of a soil profile containing most of the organic material and viable life forms and seeds.
Total Dissolved Solids	The dissolved mineral content of groundwater, commonly expressed in milligrams/Litre.
Total Suspended Solids	A measure of suspended solids concentrations in a water body and expressed in terms of mass per unit of volume.
TPH	Total Petroleum Hydrocarbons.
TSC Act	Threatened Species Conservation Act (NSW).
Turbidity	A measure of light penetration through a water column containing particles of matter in suspension.
Turnback	Configuration of tracks allowing trains to terminate a service and return to its starting point.
Underbridge	Structure providing a facility to cross under the rail corridor.
Up rail tracks	Tracks providing rail services towards Sydney.
Water quality	Degree or lack of contamination.
Water table	The surface of saturation in an unconfined aquifer at which the pressure of the water is equal to that of the atmosphere.
1 in 100 Year Flood Level	The flood which occurs on average once every 100 years. Also known as the 100 year Average Recurrence Interval of a flood.

