

Glossary and abbreviations

Term or abbreviation	Definition
AHD	Australian Height Datum
AHIMS	Aboriginal Heritage Information Management System
ARI	Average Recurrence Interval – The estimate of the chance of a flood occurring in any one year
Biodiversity certification	<p>Biodiversity certification switches off the need to undertake further significance assessments for threatened species (under Section 5A of the EP&A Act, the Seven Part Test) in certified areas. In these areas, it is considered that development is not likely to significantly affect any threatened species, population or ecological community, or the habitat of any of these. In non-certified areas, there is no change to the approval process and Threatened species assessments are required as normal under section 5A of the EP&A Act.</p> <p>Biodiversity certification has been conferred on the Growth Centres SEPP and applies to areas within the North West Growth Centre.</p>
Biomantle	Upper soil layer created mainly by organisms
Biophysical environment	Describes both the living (i.e. biological) and non-living (i.e. physical) aspects of the environment
CCTV	Closed Circuit Television
CEMP	Construction Environmental Management Plan
Chainage	A measure of rail track distance from Sydney (Central Station) in kilometres
Clearway 5 — North and West Lines	A section of the Rail Clearways Program that incorporates the North and West Lines
CPTED	Crime Prevention Through Environmental Design
Critical habitat	Critical habitat is the whole or any part or parts of an area or areas of land comprising the habitat of an endangered species, an endangered population or an endangered ecological community that is critical to the survival of the species, population or ecological community as listed in the schedules of the <i>Threatened Species Conservation Act 1995</i> and <i>Environment Protection and Biodiversity Conservation Act 1999</i> .
Crossover	The connection between two tracks allowing trains to cross tracks
CTA	Clearways Technical Advisor
Culvert	A small channel or drain that allows water to pass under a road/rail line
dB	Sound power level in decibels
dBA	'A-weighted' sound power level in decibels. A-weighted noise measurements are those that have been scaled to account for the differential response of the human ear to different sound frequencies (i.e. noises with frequencies within the human ear's most sensitive range are scaled to be louder than noises with frequencies outside of this range).
dB re 10 ⁻⁹ m/s	Vibration level expressed in decibel units with a reference level (re) of 10 ⁻⁹ metres per second (m/s)
DEC	New South Wales Department of Environment and Conservation (now DECC)
DECC	NSW Department of Environment and Climate Change; formally the Department of Environment and Conservation
DGRs	Director-General's Environmental Assessment requirements
Director-General	The Director-General of the NSW Department of Planning
Down Main	The track on which trains travel in a direction away from Sydney
DoP	NSW Department of Planning

Term or abbreviation	Definition
DoS	Degree of Saturation
Duplication	Providing an additional railway track adjacent to an existing track
EA	Environmental Assessment
Earth Potential Rise	The transmission of electrical current through the ground surface. Earth Potential Rise occurs when a large electrical current is discharged to earth as a result of an electrical fault or lightning strike
Edge effected habitat	Edge effected habitat is an area of changed environmental conditions (i.e. altered light levels, wind speed and/or temperature) occurring along the edges of habitat fragments
ENCM	<i>Environmental Noise Control Manual 1994</i> (Environment Protection Authority 1994)
Environmental Assessment	A formal description of a project that is subject to Part 3A of the NSW <i>Environmental Planning and Assessment Act 1979</i> and an assessment of its likely impact on the physical, social and economic environment. The Environmental Assessment is used as a vehicle to facilitate public comment and as the basis for analysing a project that requires planning approval under Part 3A of the NSW <i>Environmental Planning and Assessment Act 1979</i> .
EP&A Act	NSW <i>Environmental Planning and Assessment Act 1979</i>
EPBC Act	Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>
EPL	Environment Protection Licence
ESD	Ecologically Sustainable Development
GCC	Growth Centres Commission
GRP	Gross regional product
Freeboard	A factor of safety expressed in millimetres above a flood level
Frequency Analysis	The process used to examine the tones which make up the overall noise or vibration signal
Headway	The time between two trains passing the same point and travelling in the same direction on the same track
Hertz (Hz)	The units for frequency, which represent the number of cycles per second
High flood risk	All land below the 100 year flood level that is subject to a high hydraulic hazard (i.e. high flood damages, potential risks to life and/or evacuation problems)
ICOMOS	International Council on Monuments and Sites
Impulsiveness	Impulsive noise is characterised by one or more short sharp peaks in the time domain
Island platform	A single two sided platform with tracks running on either side
km/h	Kilometres per hour
kV	Kilovolt
$L_{A1(60 \text{ second})}$	The typical maximum noise level for an event, used in the assessment of potential sleep disturbance during night-time periods
$L_{A10(15 \text{ minute})}$	The noise level exceed for 10% of the 15 minute interval. This is commonly referred to as the average maximum noise level.
L_{A90}	The noise level exceeded for 90% of the sample period. This noise level is described as the average minimum background sound level or simply the background level.
L_{AE}	The 'sound exposure level', which is used to indicate the total acoustic energy of an individual noise event (used in the calculation of $L_{Aeq(24 \text{ hour})}$ values from individual noise events)
L_{Aeq}	The A-weighted equivalent noise level (basically the average noise level). It is defined as the steady sound level that contains the same amount of acoustical

Term or abbreviation	Definition
	energy as the corresponding time-varying sound.
$L_{Aeq(9 \text{ hour})}$	The night-time equivalent continuous noise level, which represents the cumulative effects of all the train noise events occurring during in the night-time period between 10 pm and 7 am.
$L_{Aeq(15 \text{ hour})}$	The daytime equivalent continuous noise level, which represents the cumulative effects of all the train noise events occurring in the daytime period between 7 am and 10 pm
$L_{Aeq(24 \text{ hour})}$	The 'equivalent continuous noise level' sometimes also described as the 'energy-averaged noise level'
L_{Amax}	The L_{Amax} noise level is the maximum A-weighted noise level
$L_{Amax (slow)}$	The $L_{Amax (slow)}$ Or $L_{Amax (slow \text{ response})}$ is the maximum noise level occurring during a train passby noise event, measured with a slow time response.
L_{AN}	The A-weighted sound level pressure exceeded for N% of a given measurement period
LAN	Local Area Network — a computer network that covers a small area, such as a group of buildings (for example station facilities)
LEP	Local Environmental Plan
LGA	Local government area.
Light spill	Light spill is associated with the inefficient, unnecessary or excessive use of artificial lighting. Light spill occurs where light falls outside the area intended to be lit, for instance by shining over a fence into a neighbouring property.
Low flood risk	All land above the 100 year flood level and up to the probable maximum flood (PMF) level (i.e. the risk of flooding varies from 1 chance in 100, to 1 chance in approximately 100,000 depending on the location within the floodplain)
LoS	Level of Service
Maintenance siding	Spare track where maintenance trains are stored
Medium flood risk	All land below the 100 year flood level that is subject to a low hydraulic hazard (i.e. significant flood damage and risk to life)
MJ	Mega joules
m/s	Metres per second
mm/s	Millimetres per second
MoT	NSW Ministry of Transport
Narrow band	The spectrum is divided into 400 or more bands of equal width
North West Growth Centre	Area identified for land release and growth in the Sydney Metropolitan Strategy; also known as the North West Sector
North West region of Sydney	The region of Sydney covered by the LGAs of Baulkham Hills, Blacktown, Blue Mountains, Hawkesbury and Penrith, as defined in the Sydney Metropolitan Strategy
NSW	New South Wales
NT	National Trust
Octave band	The centre frequency and width of each band is double the previous band
Overbridge	A bridge over a railway line
Over-pressure	The air pressure pulse emitted during blasting or similar events
PAR	Project Application Report
PB	Parsons Brinckerhoff Australia Pty Ltd — the environmental consultant that prepared this Environmental Assessment on behalf of TIDC
PHA	Preliminary Hazard Analysis

Term or abbreviation	Definition
Peak Particle Velocity (PPV)	The maximum instantaneous vibration velocity
Probable maximum flood (PMF)	An estimate of the largest flood that could conceivably occur and is typically used to consider implications arising from the design of major infrastructure and flood evacuation
Proponent	The person/company proposing to carry out development of the Project (TIDC)
Quakers Hill to Vineyard Duplication	The Project as described in this Environmental Assessment
Rail Clearways Program	A NSW Government initiative to address issues of reliability and passenger growth on the Sydney metropolitan rail network
Rail corridor	The area of land owned by RailCorp between Quakers Hill and Vineyard
RailCorp	Rail Corporation of New South Wales
Rating background level (RBL)	The background noise level representing ambient conditions in each assessment period (daytime, evening and night-time)
re	Reference level (refer dB re 10^{-9} m/s)
Richmond Branch Line	Predominately a single track line which currently carries City-bound and Richmond-bound train services. The Quakers Hill to Vineyard Duplication formulates part of the Richmond Branch Line.
RLA	Richmond Line Alliance
rms	Root mean squared (refer V_{rms})
RTA	NSW Roads and Traffic Authority
S170 Register	A Heritage and Conservation Register kept by RailCorp in accordance with Section 170 of the <i>Heritage Act 1977</i>
Scenic quality	Refers to the degree to which the visual aesthetics of a landscape are valued from a human point of view (Brodbeck 2005)
SEPP	State Environmental Planning Policy
Shared user path	A path used by bicycles and pedestrians, and sometimes also local traffic (e.g. a service road)
SHI	State Heritage Inventory
SHR	State Heritage Register
Side platform	A single sided platform servicing only one train track
SIDRA	Road intersection modelling software package
Soffit	The underside of an architectural structure, for example a beam or arch under the roof of a building. Soffit commonly refers to the eave under a roof.
South West Growth Centre	Area identified for land release and growth in the Sydney Metropolitan Strategy; also known as the South West Sector
Sound Power Level (SPL)	The rate at which a source emits acoustic energy
SPI	Sustainability-promoting Interpretation
SREP	Sydney Regional Environmental Plan
Stage 1	The first stage of the Project that would be delivered: construction of Project components between Quakers Hill and the new Schofields Station (including removal of the existing Schofields Station and construction of the Schofields pedestrian footbridge). Proposed to be constructed and operational by 2011.
Stage 2	The second stage of the Project that would be delivered: construction of Project components north of the new Schofields Station as far as Vineyard and including the new Vineyard Station. Delivery of Stage 2 has been deferred until a date to be determined.
Study area (flora and fauna)	The subject site and any additional areas that are likely to be affected by the Project, either directly or indirectly

Term or abbreviation	Definition
Subject site (flora and fauna)	The specific area that will be covered by the Project. This includes the areas of the proposed rail corridor widening and the sites of the new Schofields and Vineyard stations, including the bus interchanges and car parking
Sydney Metropolitan Strategy	The Strategy outlined in the report <i>Metropolitan Strategy, City of Cities — A Plan for Sydney's Future</i> (NSW Government 2005a)
Terminating shunting neck	A 'dead-end' section of track
The Project	The proposed Quakers Hill to Vineyard Duplication as described in this Environmental Assessment
TIDC	Transport Infrastructure Development Corporation
Tonality	Tonal noise contains one or more prominent tones
TPDC	Transport Population and Data Centre
TSC Act	NSW <i>Threatened Species Conservation Act 1995</i> .
Track possession	Temporary shut down of part of the rail network to facilitate maintenance, construction or emergency works
Turnback	A track from which train services terminate and change direction
Turnouts	The intersection and mechanisms for the meeting of two tracks
Up Main	The track on which trains travel in a direction towards Sydney
VDV	Vibration Dose Value
V_{rms}	Root mean squared vibration velocity
Viewshed	The area from which the Project (or a part of it) would be visible
vph	Vehicles per hour
Western Line	Section of the CityRail network that extends from Central to Blacktown, and branches in two from Blacktown to Richmond (Richmond Arm) and from Blacktown to Emu Plains