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7	Study Team	

## Working Papers

A	Water Quality and Hydrology
B	Fluvial Geomorphology
C	Aquatic Ecology
D	Environmental Flows and River Management
E	Terrestrial Ecology
F	Sustainable Resource Use
G	Socioeconomic Assessment
H	Proposed Quart Pot / Munni Cemetery Relocation Plan
I	Roads and Other Infrastructure
J	Air Quality
K	Noise and Vibration
L	Contemporary Heritage
M	Aboriginal Heritage
N	Draft Integrated Land Use Plan
O	Construction Environmental Management Plan Guide

## Technical Annexures

A	Tillegra Dam Concept Design Report
B	Salisbury Road Concept Design Report
C	Geology – Interim Foundation Reports Volumes 1 & 2
D	Geology – Storage Rim Stability and Seepage Reports Volumes 1-5
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# Glossary of key terms and abbreviations

Term	Definition
<b>AADT</b>	annual average daily traffic
<b>ABARE</b>	Australian Bureau of Agricultural and Resource Economics
<b>ABS</b>	Australian Bureau of Statistics
<b>AEP</b>	Annual Exceedance Probability
<b>AGIC</b>	Australian Green Infrastructure Council
<b>AHD</b>	Australian Height Datum
<b>AIHMS</b>	Aboriginal Heritage Information Management System
<b>Alluvium</b>	Silt or fine sand deposited by flowing water
<b>Amphidromous</b>	Fish that migrate between the fresh water and the sea (or estuaries) at a regular life history stage, but not directly to spawn
<b>Anoxic</b>	Lacking in oxygen
<b>ANZECC</b>	Australian and New Zealand Environment Conservation Council
<b>ARI</b>	Annual recurrence interval – the long-term average period (usually expressed in years) between the occurrence of a flood as big as or larger than the selected event
<b>ANCOLD</b>	Australian National Committee on Large Dams
<b>ANZECC/ARMCANZ</b>	Australian and New Zealand Guidelines for Fresh and Marine Quality
<b>Bankfull</b>	Refers to the high flow within a river's channel capacity
<b>BCR</b>	benefit cost ratio
<b>BOM</b>	Bureau of Meteorology
<b>CASET</b>	Computer Aided Sustainability Evaluation Tool
<b>Catadromous</b>	Fish that migrate from fresh water as adults to spawn at sea (or in estuaries)
<b>Catchment</b>	The area drained by a stream or body of water or the area of land from which water is collected
<b>CEEQUAL</b>	Civil Engineering Environmental Quality Assessment and Award Scheme
<b>CEA</b>	cost effectiveness analysis
<b>CFRD</b>	concrete face rockfill dam
<b>CGE</b>	computable general equilibrium
<b>CoAG</b>	Council of Australian Governments
<b>Coffer dam</b>	A temporary dam built to divert a river around a construction site so a dam can be built on dry ground
<b>Concept design</b>	Initial functional layout of a concept, such as a road or road system, to provide a level of understanding to later establish detailed design parameters
<b>CoRTN</b>	calculation of road traffic noise
<b>Council</b>	Dungog Shire Council
<b>CSIRO</b>	Commonwealth Scientific and Industrial Research Organisation
<b>CTGM</b>	Chichester Trunk Gravity Main
<b>DECC/ DECCW</b>	NSW Department of Environment and Climate Change (name changed to Department of Environment Climate Change and Water in August 2009 during finalisation of the EA report, both acronyms are used within this report).
<b>DEWHA</b>	Commonwealth Department of the Environment, Water, Heritage and the Arts (formerly the Department of the Environment and Heritage)
<b>Design speed</b>	A nominal speed used for the design of geometric features of the road, such as curves
<b>DHS</b>	Dungog Historical Society
<b>Diadromous</b>	Fish that migrate between fresh and salt water at regular life history phase, in either direction, but not necessarily to spawn

<b>DNR</b>	NSW Department of Natural Resources
<b>DO/L</b>	Amount of dissolved oxygen (milligrams) per litre
<b>DoC</b>	NSW Department of Commerce (name changed to Department of Services, Technology and Administration in August 2009 during finalisation of the EA report, both acronyms are used within this report).
<b>DoP</b>	NSW Department of Planning
<b>DGRs</b>	Director-General's requirements
<b>DPI</b>	NSW Department of Primary Industries (name changed to Industry and Investment NSW in August 2009 during finalisation of the EA report, both acronyms are used within this report).
<b>DSC</b>	NSW Dams Safety Committee
<b>DSC</b>	Dungog Shire Council
<b>DSEP</b>	Dam Safety Emergency Plan
<b>DSRD</b>	NSW Department of State and Regional Development
<b>DWE</b>	NSW Department of Water and Energy
<b>DWTW</b>	Dungog Water Treatment Works
<b>EA</b>	environmental assessment
<b>EARs</b>	environmental assessment requirements
<b>ECRD</b>	Earth core rockfill
<b>ESD</b>	Ecologically sustainable development – the use and conservation of community 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
<b>EEC</b>	endangered ecological community
<b>Embankment</b>	A mound or bank of earth or stone formed to support a roadway, serve as a protective barrier, or the like
<b>EMP</b>	environmental management plan
<b>EMS</b>	environmental management system
<b>Environment protection licence</b>	A licence that allows pollution of the environment under controlled conditions regulated by the Department of Environment and Climate Change
<b>Environmental flow</b>	The amount of water required by a water course to maintain a healthy ecosystem
<b>Eoi</b>	expression of interest
<b>EP&amp;A Act</b>	NSW <i>Environmental Planning and Assessment Act 1979</i>
<b>EPBC Act</b>	Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>
<b>Extirpate</b>	To become locally extinct
<b>FDCV</b>	fixed cone dispersion valve
<b>FIDIC</b>	International Federation of Consulting Engineers
<b>Fresh</b>	Flow which is greater than the median flow for a particular season
<b>FSL</b>	Full supply level – the level of the storage at 100 per cent capacity; set at RL 152.3 for Tillegga Dam
<b>GGAS</b>	Greenhouse Gas Abatement Scheme
<b>GDP</b>	Gross Domestic Product
<b>GIS</b>	Geographic Information System
<b>GHG</b>	Greenhouse Gas
<b>GL</b>	gigalitres
<b>GRI</b>	Global Reporting Initiative - A multi-stakeholder, international organisation that has developed a Sustainability Reporting Framework and accompanying guidelines to allow organisation to report on their environmental, economic and social performance.

## GLOSSARY OF KEY TERMS AND ABBREVIATIONS

<b>HCRCMA</b>	Hunter-Central Rivers Catchment Management Authority
<b>HEP</b>	hydroelectric power
<b>HWC</b>	Hunter Water Corporation
<b>Hypolimnetic</b>	Describes a deeper, cooler layer of a waterbody which results from stratification
<b>ICOLD</b>	International Commission on Large Dams
<b>ICOMOS</b>	Australia International Council on Monuments and Sites
<b>ILUP</b>	Integrate land use plan
<b>IPART</b>	Independent Pricing and Regulatory Tribunal
<b>IUCN</b>	World Bank and World Conservation Union
<b>IWRP</b>	Integrated Water Resource Plan
<b>kg/m<sup>3</sup></b>	kilograms per cubic metre
<b>km/h</b>	kilometres per hour
<b>L<sub>A10</sub></b>	The noise level which is exceeded for 10 % of the sample period. During the sample period, the noise level is below L <sub>A10</sub> level for 90% of the time. The L <sub>A10</sub> is a common noise descriptor for environmental noise and road traffic noise
<b>L<sub>A90</sub></b>	The noise level which is exceeded for 90% of the sample period. During the sample period, the noise level is below L <sub>A90</sub> level for 10% of the time. This measure is commonly referred to as background noise level
<b>L<sub>Aeq</sub></b>	The equivalent continuous sound level. This is the energy average of the varying noise over the sample period and is equivalent to the level of constant noise which contains the same energy as the varying noise environment. This measure is also a common measure of environmental noise and road traffic noise
<b>Lacustrine</b>	Pertaining to lakes
<b>LALC</b>	Local Aboriginal Land Council
<b>Lentic</b>	Freshwater habitat characterised by standing or still waters
<b>LEP</b>	Local environment plan
<b>LGA</b>	Local Government Area
<b>L/m<sup>2</sup>/hr</b>	litres per square meter per hour
<b>Lotic</b>	Freshwater habitat characterised by running waters
<b>L/s</b>	litres per second
<b>LWD</b>	large woody debris
<b>mAHD</b>	metres above Australian Height Datum
<b>ML</b>	megalitres
<b>ML/d</b>	megalitres per day
<b>ML/yr</b>	megalitres per year
<b>m/s</b>	metres per second
<b>m<sup>3</sup>/s</b>	cubic metres per second
<b>m<sup>3</sup>/yr</b>	cubic metres per year
<b>NECP</b>	National Environment Protection Council
<b>NEPM</b>	National Environmental Protection Measures
<b>NES</b>	(matter of) national environmental significance
<b>NO<sub>2</sub></b>	nitrogen dioxide
<b>NPV</b>	net present value
<b>NPWS</b>	NSW National Parks and Wildlife Service (part of the Department of Environment and Climate Change)

<b>PA</b>	planning approval
<b>PAD</b>	potential archaeological deposit
<b>PFM</b>	planning focus meeting
<b>PMF</b>	Probable maximum flood
<b>PM<sub>2.5</sub></b>	Particulate matter less than or equal to 2.5 micrometres in diameter
<b>PM<sub>10</sub></b>	Particulate matter less than or equal to 10 micrometres in diameter
<b>POEO Act</b>	NSW <i>Protection of the Environment Operations Act 1997</i>
<b>PPV</b>	Peak particle velocity – measured in millimetres per second (mm/s)
<b>Potamodromous</b>	Fish whose life history is contained entirely within fresh water. Migrations, if they occur, do so within the freshwater system
<b>PWA</b>	Planning Workshop Australia
<b>RBL</b>	rating background levels
<b>REP</b>	Regional environmental plan
<b>RFO</b>	river flow objective
<b>RFS</b>	NSW Rural Fire Service
<b>RL</b>	Reduced level
<b>RCCD</b>	roller compacted concrete dam
<b>RTA</b>	Roads and Traffic Authority
<b>SEPP</b>	State Environmental Planning Policy
<b>SOCs</b>	Statement of Commitments
<b>TAPM</b>	The Air Pollution Model
<b>Taskforce</b>	Whole of Government Taskforce
<b>TDCRG</b>	Tillegra Dam Community Reference Group
<b>t/ha/yr</b>	tonnes per hectare per year
<b>Thermocline</b>	The middle layer in a thermally stratified lake or storage where the temperature declines with depth
<b>TMP</b>	traffic management plan
<b>TN</b>	Total nitrogen
<b>TDS</b>	Total dissolved solids – the dissolved mineral content of groundwater, commonly expressed in milligrams per litre
<b>TOC</b>	total organic carbon
<b>TP</b>	Total phosphorus
<b>TSC Act</b>	NSW <i>Threatened Species Conservation Act 1995</i>
<b>TSP</b>	Total suspended particulates
<b>TSR</b>	travelling stock reserve
<b>t/yr</b>	tonnes per year
<b>UDIA</b>	Urban Development Institute of Australia
<b>UNCSD</b>	United Nations Commission on Sustainable Development
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>USACE</b>	United States Army Corps of Engineers
<b>µg/m<sup>3</sup></b>	micrograms per cubic metre
<b>µs/cm</b>	microsiemens per centimetre
<b>VM</b>	value management
<b>WCD</b>	World Commission on Dams
<b>WRAPP</b>	Waste Reduction and Purchasing Policy
<b>WSAA</b>	Water Services Association of Australia