

# RiverLink



PROUDLY DELIVERING

New Zealand  
Upgrade  
Programme



## RiverLink

Notices of Requirement for Designations and  
Applications for Resource Consent

Volume Two: Assessment of Effects on the  
Environment

# Glossary

# Glossary of abbreviations and defined terms

## Abbreviations

The table below sets out the technical abbreviations.

Abbreviation/acronym	Term
AADT	Average annual daily traffic
ACM	Asbestos containing material
AEE	Assessment of environmental effects
AEP	Annual exceedance probability
ANZECC	Australia and New Zealand Environment Conservation Council
ARI	Average recurrence interval
AST	Aboveground fuel storage tank
ATL	Alexander Turnbull Library
BCR	Benefit Cost Ratio
BGL	Below ground level
BMM	Building modification mitigation
BPO	Best practicable option
CAQMP	Construction Air Quality Management Plan
CAS	Crash analysis system
CBD	Central business district
CCTP	Central City Transformation Plan
CEMP	Construction Environmental Management Plan
CLMG	Contaminated Land Management Guidelines
CLMP	Contaminated Land Management Plan
CNVMP	Construction Noise and Vibration Management Plan
CoPTTM	Code of Practice for Temporary Traffic Management
CTMP	Construction Traffic Management Plan
CPT	Cone penetrometer test
CSM	Conceptual site model
CVA	Cultural Values Assessment
dB	Decibel
CIA	Cultural Impact Assessment
CWD	Clean water diversions
DEB	Decanting earth bund

Abbreviation/acronym	Term
District Plan	City of Lower Hutt District Plan
DOC	Department of Conservation
DSI	Detailed site investigation
DWD	Dirty water diversions
ED	Ecological District
EFM	Electric fishing machine
EIR	Environmental Incident Report
EMP	Ecological Management Plan
ENCR	Environmental Non-Compliance Report
ESC	Erosion and sediment control
ESCP	Erosion and Sediment Control Plan
F & G	Fish and Game
FFR	Freshwater Fisheries Regulations 1983
FRP	Fish Recovery Protocols
GCS	General Control Statements
GDP	Gross domestic profit
GPR	Ground Penetrating Radar
GIS	Geographical information system
GNS	GNS Science
GW	Greater Wellington Regional Council
ha	Hectares
HAIL	Hazardous Activities and Industries List
HCC	Hutt City Council
HCV	Heavy commercial vehicles
HNZPT	Heritage New Zealand Pouhere Taonga
HNZPTA	Heritage New Zealand Pouhere Taonga Act
HPMV	High productivity motor vehicle
HRES	Te Awa Kairangi / Hutt River Hutt River Environment Strategy and Action Plan (2018)
HRFMP	Hutt River Floodplain Management Plan; Greater Wellington Regional Council, 2001.
HSR	Highly sensitive receiver, as defined in the Transport Agency Guide to assessing air quality impacts from state highway projects (2015)
IAIA	International Association for Impact Assessment
IBC	Indicative business case
ICOMOS NZ	International Council on Monuments and Sites NZ

Abbreviation/acronym	Term
km	Kilometres
km/h	Kilometres per hour
Km <sup>2</sup>	Square kilometres
LAWA	Land, Air, Water Aotearoa
LIDAR	Light detection and ranging
LOS	Level of service
LTMA	Land Transport Management Act 2003
L/s	Litres per second
m	Metres
m <sup>2</sup>	Square metres
m <sup>3</sup>	Cubic metres
m <sup>3</sup> /year	Cubic metres per year
mbgl	Metres below ground level
MCA	Multi criteria analysis
MCI	Macroinvertebrate community index
MfE	Ministry for the Environment
MfE Dust Guide	Ministry for the Environment Good Practice Guide for Assessing and Managing Dust 2016
MSE	Mechanically stabilised earth
Mw	Magnitude
NCI	Natural character index
NES	National Environmental Standard
NESAQ	Resource Management (National Environmental Standard for Air Quality) Regulations 2004
NESFW	Resource Management (National Environmental Standards for Freshwater) Regulations 2020
NES Soil	Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011
NIWA	National Institute of Water and Atmospheric Research
NLTP	National Land Transport Programme
NoR	Notice of Requirement
NO <sub>2</sub>	Nitrogen dioxide
NPS	National Policy Statement
NPSFM	National Policy Statement for Freshwater Management 2020
NPSUD	National Policy Statement on Urban Development 2020
NTU	Nephelometric turbidity units

Abbreviation/acronym	Term
NZAA	New Zealand Archaeological Association
NZDWS v	New Zealand Drinking Water Standard 2008
NZFFD	New Zealand Freshwater Fish Database
NZS 6803	New Zealand Standard NZS 6803:1999 “Acoustics – Construction Noise”
NZS 6806	New Zealand Standard NZS 6806:2010 “Acoustics – Road traffic noise – New and altered roads”
NZUPT	New Zealand Upgrade Programme Transport
OGPA	Open graded porous asphalt
OCP	On-call procedure
ONRC	One network road classification system
PM <sub>10</sub>	Describes inhalable particles, with diameters that are generally 10 micrometres and smaller
PM <sub>2.5</sub>	Describes inhalable particles, with diameters that are generally 2.5 micrometres and smaller
PPFs	Protected premises and facilities
PNBST	Port Nicholson Block Settlement Trust
PNRP	Proposed Natural Resources Plan for the Wellington Region (Appeals version 2019 updated for court order dated 1 July 2021)
PPV	Peak particle velocity
PSI	Preliminary site investigation
PWA	Public Works Act 1981
QMCI	Quantitative Macroinvertebrate Community Index
QMS	Quality Management System
RFP	Operative Regional Freshwater Plan for the Wellington Region
RHA	Rapid Habitat Assessment
River	Te Awa Kairangi/the Hutt River
RLTP	Regional Land Transport Plan 2015
RLTS	Regional Land Transport Strategy 2010
RMA	Resource Management Act 1991
RAQMP	Regional Air Quality Management Plan for the Wellington Region
RPDL	Regional Plan for Discharges to Land for the Wellington Region
RPS	Regional Policy Statement for the Wellington Region
RSP	Regional Soil Plan for the Wellington Region
SEMP	Specialised Environmental Management Plans
SEV	Stream Ecological Valuation
SH2	State Highway 2

Abbreviation/acronym	Term
SLUR	Greater Wellington Regional Council's Selected Land Use Register
SNA	Significant Natural Areas
SOP	Standard Operating Procedure
SQEP	Suitably qualified and experienced practitioners
SRIA	Social and recreation impact assessment
SRP	Sediment retention pond
SSBC	Single Stage Business Case
SSESCP	Site Specific Erosion and Sediment Control Plan
SSF	Super silt fences
SSTMP	Site Specific Traffic Management Plans
TLB	True left bank
TPH	Total petroleum hydrocarbons
TRB	True right bank
TSS	Total suspended solids
TTM	Temporary traffic management
ULDF	Urban and Landscape Design Framework
UST	Underground fuel storage tank
vpd	Vehicles per day
vph	Vehicles per hour
Waka Kotahi	Waka Kotahi New Zealand Transport Agency
WHO AQG	World Health Organisation Air Quality Guideline
WTT	Wellington Tenths Trust
WWL	Wellington Water Limited

## Defined terms

The table below sets out the defined terms (and some acronyms above apply).

Term	Definition
Ambient air	The air outside that reflects the cumulative effect of all activities both human induced and natural. It does not refer to indoor air, air in the workplace, or to contaminated air as it is discharged from a source.
Ambient noise/vibration	The total noise or vibration existing at a specified point and time associated with a given environment, excluding the sound or vibration requiring control. It is a composite of all noise or vibration sources, near and far.
Amenity values	Defined in section 2(1) of the RMA as “those natural or physical qualities and characteristics of an area that contribute to people’s appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes.”
Annual exceedance probability	The probability of exceeding a given threshold within a period of one year. It can be applied to any type of risk”.
Archaeological site	Defined in section 6 of the Heritage New Zealand Pouhere Taonga Act 2014 as “Means, subject to section 42(3),  (a) any place in New Zealand, including any building or structure (or part of a building or structure), that  (i) was associated with human activity that occurred before 1900 or is the site of the wreck of any vessel where the wreck occurred before 1900; and  (ii) provides or may provide, through investigation by archaeological methods, evidence relating to the history of New Zealand; and  (b) includes a site for which a declaration is made under section 43(1).”
At risk	In relation to ecology, the New Zealand Threat Classification System defines ‘at risk’ as follows:  At Risk species aren’t considered Threatened, but they could quickly become so if declines continue, or if a new threat arises. <ul style="list-style-type: none"> <li>• Declining: population declining but still common.</li> <li>• Recovering: small population but increasing after previously declining.</li> <li>• Relict: small population stabilised after declining.</li> <li>• Naturally Uncommon: naturally small population and therefore susceptible to harmful influences.</li> </ul>
Average annual daily traffic	The equivalent to the total volume of traffic passing a roadside observation point over the period of a calendar year, divided by the number of days in that year for which traffic volumes were recorded. Measured in vehicles per day.

Term	Definition
Average Recurrence Interval	The average time period between rainfall or flow events that exceed a given magnitude.
Background concentrations	Defined in the NES Soil as “naturally occurring ambient concentrations of the element (contaminant) in soil in the area local to the land”.
Berm	The area of land between the river bed and inner toe of the stopbank.
Best practicable option	Defined in section 2(1) of the RMA, as “in relation to a discharge of a contaminant or an emission of noise, means the best method for preventing or minimising the adverse effects on the environment having regard, among other things, to –  (a) the nature of the discharge or emission and the sensitivity of the receiving environment to adverse effects; and  (b) the financial implications, and the effects on the environment, of that option when compared with other options; and  (c) the current state of technical knowledge and the likelihood that the option can be successfully applied.”
Construction works	Activities undertaken to construct the Project.
Contaminant	Defined in section 2(1) of the RMA, as “any substance (including gases, odorous compounds, liquids, solids, and micro-organisms) or energy (excluding noise) or heat, that either by itself or in combination with the same, similar, or other substances, energy, or heat –  (a) when discharged into water, changes or is likely to change the physical, chemical, or biological condition of water; or  (b) when discharged onto or into land or into air, changes or is likely to change the physical, chemical or biological condition of the land or air onto or into which it is discharged.”
Contaminated land	Defined in section 2(1) of the RMA, as “land that has a hazardous substance in or on it that –  (a) has significant adverse effects on the environment; or  (b) is reasonably likely to have significant adverse effects on the environment.”
Cumec	A cumec measures water flow. 1 cumec (1 cubic metre per second) equals 1 cubic metre passing a given point every second.
dB L <sub>Aeq(24h)</sub>	Sound pressure level average, A-weighted, sound pressure level over the measurement period of 24 hours.
Designation	Defined in section 166 of the RMA, as “a provision made in a district plan to give effect to a requirement made by a requiring authority

Term	Definition
	under section 168 or section 168A or clause 4 of Schedule 1 of the RMA.”
Proposed designation boundary	The boundary of the land to which the notice of requirement applies.
Discharge	Defined in section 2(1) of the RMA, as including emitting, depositing, and allowing to escape.
Erosion control	Methods to prevent or minimise the erosion of soil, in order to minimise the adverse effects that land disturbing activities may have on a receiving environment.
Fish passage	The movement of fish between the sea and any river, including up-stream or downstream in that river.
Flocculation	The process whereby fine particles suspended in the water column clump together and settle. In some instances, this can occur naturally, such as when fresh clay-laden flows mix with saline water, as occurs in estuaries. Flocculation can be used to promote rapid settling in sediment retention ponds by the addition of flocculating chemicals (flocculants).
Groundwater	Natural water contained within soil and rock formations below the surface of the ground.
Group	Te Awa Kairangi Group
Heavy vehicle	A motor vehicle having a gross laden weight exceeding 3500 kg.
Historic Heritage site	<p>A site that is not identified as an archaeological site, but which has heritage significance. Defined in section 2 of the RMA as:</p> <p>a) Those natural and physical resources that contribute to an understanding and appreciation of New Zealand’s history and cultures deriving from any of the following qualities:  Archaeological, Architectural, Cultural, Historic, Scientific, Technological; <i>and</i></p> <p>b) Includes –</p> <ol style="list-style-type: none"> <li>i. Historic sites, structures, places, and areas; <i>and</i></li> <li>ii. Archaeological sites; <i>and</i></li> <li>iii. Sites of significance to Maori, including waahi tapu; <i>and</i></li> <li>iv. Surroundings associated with the natural and physical resources</li> </ol>
Hui	Meeting or workshop with Mana Whenua.
Kaitiakitanga	Guardianship.

Term	Definition
Kāinga	Māori village
Kōiwi	Human remains
$L_{Aeq}(t)$	The average, A-weighted, sound pressure level over the measurement period, t.
$L_{A90}(t)$	The A-weighted sound pressure level equalled or exceeded for 90% of the measurement period, t. This is commonly referred to as the background noise level.
$L_{AFmax}$	The maximum fast time weighted, A-frequency weighted sound pressure level which occurs during the measurement period.
Mana	Prestige, authority, control, power, influence, status, spiritual power, charisma - mana is a supernatural force in a person, place or object.
Mauri	The essential quality and vitality of a being or entity.
New Melling Station	The station to replace the existing Melling station, in the new location. This may be in the form of relocating and refurbishing the existing station, or a newly constructed station.
Ngā Taonga Nui a Kiwa	Those large freshwater and coastal entities from which mana whenua derive cultural and spiritual identity, their status as mana whenua and the associated responsibilities that come with that including those of kaitiaki. These places are the larger rivers and harbours that have a long history of multiple and complex resource use associated with large populations. Ngā Taonga Nui a Kiwa emphasises the importance of mana whenua relationships with rivers, lakes, harbours and estuaries.
Pā	Fortified Māori village
Piece of land	The portion of a site, or property, on which hazardous activities are being, have been or are more likely than not to have been undertaken. The NES Soil applies to the piece of land occupied by the HAIL activity. A piece of land may extend beyond the property parcel.
Pier	Vertical support structure for a bridge.
Planform	Vertical projection of an object on a horizontal plane, e.g. a map.
PM10	Particulate matter with a diameter less than 10 micrometres.
PM2.5	Particulate matter with a diameter less than 2.5 micrometres.
Project	The RiverLink project.
Project area	The area within the proposed designation boundary, and immediate surrounds to the extent Project works extend beyond this boundary.

Term	Definition
Project works	All proposed activities associated with the Project.
Protected Premises and Facilities	<p>Spaces in buildings used for:</p> <ul style="list-style-type: none"> <li>residential activities</li> <li>marae</li> <li>overnight medical care</li> <li>teaching (and sleeping) in educational facilities</li> <li>playgrounds that are part of educational facilities that are within 20m of buildings used for teaching purposes.</li> </ul> <p>PPFs are the locations where road-traffic noise is assessed and for which noise mitigation measures may be required. NZS 6806 does not apply to PPFs in urban areas that are located more than 100m from the edge of the closest traffic lane for the new or altered road, or PPFs in rural areas located more than 200m from the edge of the closest traffic lane.</p>
River bed	The area of land which the waters of the river cover at its fullest flow without overtopping its banks.
River corridor	Area of land between the top of the left and right stopbanks. Broadly this includes (1) the river bed; and (2) the land area between any river bed and the stopbank adjacent to the river bed; and (3) where there is no stopbank the area of land adjacent to the river bed from Melling Bridge to Moonshine Bridge, the land area between the river bed and State Highway 2 (but not including state highway 2), other than any residential activity area identified in the Proposed District Plan for Hutt City or the Operative District Plan for Hutt City.
Sediment control	Measures to prevent or minimise the discharge of sediment that has been eroded.
Sediment yield	That sediment which leaves the sediment retention devices and enters the receiving environment.
Sinuosity	Describes the degree of meandering of a riverbed.
Sound exposure level	Sound exposure level (SEL) parameter closely related to $L_{Aeq}$ for assessment of events (rail vehicle pass-bys) that have similar characteristics but are of different duration. The value of acoustic energy over a 'normalised' 1-second period as the actual noise event under consideration.
Stabilised area	An area inherently resistant to erosion such as rock, or rendered resistant by the application of aggregate, geotextile, vegetation or mulch. Where vegetation is to be used on a surface that is not otherwise resistant to erosion, the surface is considered stabilised once an 80% vegetation cover has been established.

Term	Definition
State highway	Means a road, whether or not constructed or vested in the Crown, that is declared to be a State highway under section 11 of the National Roads Act 1953, section 60 of the Government Rooding Powers Act 1989 (formerly known as the Transit New Zealand Act 1989), or under section 103 of the LTMA.
Taonga	A treasured/highly prized object or natural resource.
Taonga Tuturu	Artefact of Māori origin
The Application	Notice of Requirement and applications for resource consent
Threatened	<p>In relation to ecology, the New Zealand Threat Classification System defines 'threatened' as follows:</p> <p>Threatened species have the greatest risk of extinction.</p> <ul style="list-style-type: none"> <li>• Nationally Critical: most severely threatened, facing an immediate high risk of extinction.</li> <li>• Nationally Endangered: facing high risk of extinction in the short term.</li> <li>• Nationally Vulnerable: facing a risk of extinction in the medium term.</li> </ul>
True left bank	The left bank of a river when facing downstream. In the case of RiverLink, this is the eastern bank, i.e. the side that includes the Lower Hutt CBD.
True right bank	The right bank of a river when facing downstream. In the case of RiverLink, this is the western bank, i.e. the side that includes Melling Railway Station and State Highway 2.
Urupa	Burial ground