

Northern Corridor Improvements

Assessment of
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Executive summary

The Northern Corridor Improvements Project (the Project) is an accelerated project that has been identified by the Government as being necessary to capitalise on the benefits of the Western Ring Route Project. The Western Ring Route is intended to provide an alternative route through the Auckland Region to that provided by the current route State Highway 1 (SH1) through metropolitan Auckland and its CBD. In doing so the Western Ring Route will provide an alternative motorway route from South Auckland via State Highway 20 (SH20), State Highway 16 (SH16), and State Highway 18 (SH18) and connecting to SH1 on the North Shore.

The Waterview Connection and SH16 causeway projects are currently under construction to complete this link. The Project will bring SH18 and its connection to SH1 up to full motorway standard, and thus assist in delivering the full benefits of the Western Ring Route once the Waterview connection is functioning.

The Project works on SH1 extend from Oteha Valley Road in the north to Constellation Drive in the south and on SH18 from the Albany Highway Interchange in the west to the SH1 connection. Key elements of the Project include capacity and safety improvements to SH18 and SH1 within the Project Area, including the construction of a motorway to motorway connection for northbound traffic at the SH18 to SH1 interchange and additional lanes and improved connections to the local roading network. These elements of the Project will necessitate alterations to both the SH18 and SH1 designations to provide sufficient footprint for the Project works.

Complementary to the above, the Project incorporates an extension to the Northern Busway from its current terminus at Constellation Bus Station to the Albany Bus Station. A shared pedestrian/cycleway path will also be provided along the eastern side of SH1. These elements of the Project will require new designations. An upgrade of the existing Constellation Bus Station is proposed which also requires an alteration to the existing bus station designation.

A preliminary design has been developed for the Project to accurately quantify the extent of land required and assess potential environmental effects. Further detailed design will occur once the Project moves into the construction phase. While the detailed design may differ from the preliminary design it is intended that the detailed design will not depart from the environmental effects parameters established by the preliminary design.

Consultation with directly affected landowners and key stakeholders has taken place prior to and through the development of the preliminary design. Stakeholders consulted include Mana Whenua, Auckland Council entities, affected business organisations and sports organisations, and utility operators with assets potentially affected by the Project. Engagement with the wider community has been undertaken by way of newsletters, social media, the development of a Project website and open days. Opportunities for the community to comment on the Project have been provided via feedback forms, a Project 0800 number and the operation of a Project office. Where practicable, the



development of the preliminary design has responded to the feedback received during the consultation process.

The Project area is within Auckland's North Shore and traverses established residential and commercial areas as well as areas currently undergoing development. The current designation corridor is constrained by surrounding land uses. In order to meet the objectives of the Project it is necessary for the works to extend beyond the existing designations and for land to be acquired at certain locations along the corridor. As a consequence of this, careful consideration has been given to alternative sites, routes and methods of undertaking the necessary work to minimise the amount of additional land required and also to avoid where practicable adverse environmental effects of the Project.

The preliminary design has also been developed to avoid where practicable adverse environmental effects of the Project. In this regard, the design includes comprehensive treatment of stormwater from both existing and new pavement, the provision of noise attenuation walls adjacent to those sensitive receivers which will be affected by operational noise, construction techniques to ensure that potential effects from works within the Rosedale Closed Landfill are contained and measures to protect identified habitat values.

Based on the preliminary design a comprehensive assessment of actual and potential environmental effects has been undertaken, commencing with an assessment of the existing environment and the identification of the resource consents required to undertake the necessary works. In this regard, all resource consents required for the Project are covered by the Auckland Unitary Plan Operative in Part as of 15 November 2016 and no other consents are considered necessary in terms of other operative district or regional planning instruments.

Construction activities to be undertaken for the Project will require a range of resource consents which include those for vegetation removal, works within Significant Ecological Areas, earthworks, works on contaminated land including the Rosedale Closed Landfill, extensions to culverts, reclamation of a watercourse, stormwater discharge and diversion, groundwater diversion, and discharges of contaminants. Overall, the resource consents have a non-complying activity status.

All of the Technical Assessments have concluded that any adverse environmental effects of the Project can be avoided through design or are capable of mitigation to an acceptable level. Accordingly, a suite of mitigation measures are proposed that will ensure that any adverse environmental effects are reduced to an acceptable level and comply with all relevant statutory tests.

An Urban Design and Landscape Framework has been prepared for the Project corridor which is provided with the Notices of Requirement and resource consent documentation. This document is to be used to inform subsequent more detailed Urban Design and Landscape Plans which are to be included with Outline Plans of Works prepared at the detailed design stage of the Project.

Beyond this, the Project brings a number of significant benefits. These include the wider regional transportation benefits that will accrue from the contribution the Project make to the completion of the Western Ring Route and the extension of the Northern Busway down to more local benefits provided by the shared use path and the improvement of local connections.

When assessed holistically it is considered that the Project makes efficient use of the existing physical resource of the State highway network such that its positive effects will significantly outweigh any adverse effects and accordingly achieve the purpose of the Resource Management Act.



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Glossary of Abbreviations

AAAQS	Auckland Ambient Air Quality Standards
AC	Auckland Council
ACDP:NS	Auckland Council District Plan North Shore Section
ACRP:ALW	Auckland Regional Plan: Air, Land and Water
ACRP:SC	Auckland Regional Plan: Sediment Control
ACRPS	Auckland Council Regional Policy Statement
AEE	Assessment of Environmental Effects
AEP	Annual Exceedance Probability
AFGL	Above Finished Ground Level
AMA	Auckland Motorway Alliance
ARI	Annual Recurrence Interval
AS/NZS	Australia/New Zealand Standard
AT	Auckland Transport
ATMS	Advanced Traffic Management System
AUP	Auckland Unitary Plan Operative in Part (15 November 2016)
Bol	Board of Inquiry
BPO	Best Practicable Option
CAQMP	Construction Air Quality (Dust) Management Plan
CAUs	Census Area Units
CBD	Central Business District
CCO	Council Controlled Organisation
CCTV	Closed-circuit Television
CEMP	Construction Environmental Management Plan
CESCPs	Construction Erosion and Sediment Control Plans
CHI	Cultural Heritage Inventory
CLCLR	Closed Landfill and Contaminated Land Response team
CMA	Coastal Marine Area
CNVMP	Construction Noise and Vibration Management Plan
CO ₂	Carbon dioxide
CPTED	Crime Prevention Through Environmental Design
CSAs	Construction Support Areas
CSMP	Contaminated Site Management Plan
CTMP	Construction Traffic Management Plan
CVA	Cultural Values Assessment
DBC	Detailed Business Case



DHC	Double Hollow Core
DoC	Department of Conservation
DSI	Detailed Site Investigation
EPA	Environmental Protection Authority
FA	Fisheries Act 1983
FFR	Freshwater Fisheries Regulations 1983
GPSLT	Government Policy Statement on Land Transport 2015/16-2024/25
GRPA	Government Roding Powers Act 1989
HAIL	Hazardous Activities and Industries List
HUR	High Use Road
HCV	Heavy Commercial Vehicles
Hockey	Harbour Hockey Charitable Trust
IAP2	International Association for Public Participation
IBC	Indicative Business Case
IIG	Central-Northern Iwi Integration Group
ITP	Integrated Transport Programme 2012-2041
ITS	Intelligent Transport System
LCMS	Landfill Construction Management Plan
LHSP	Landfill Health and Safety Plan
LRWP	Landfill Reinstatement Works Plan
LTMA	Land Transport Management Act 2003
MCA	Multi Criteria Assessment
MCI	Macroinvertebrate Community Index
MfE	Ministry for the Environment
MPD	Maximum Probable Development
MSE	Mechanically stabilised earth
NBC	National Business Case 2015
NDC	Network Discharge Consent
NES	National Environmental Standard
NES _{ETA}	NES for Electricity Transmission Activities
NES _{AQ}	National Environmental Standards for Air Quality 2004
NES _{Soil}	Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011
NH2	North Harbour 2 Watermain
NHHS	North Harbour Hockey Stadium
NIP	National Infrastructure Plan



NLTP	National Land Transport Programme
NoR	Notices of Requirement
NPS	National Policy Statement
NPS _{ET}	National Policy Statement on Electricity Transmission 2008
NPS _{FM}	National Policy Statement for Freshwater Management 2014
NZ Transport Agency	New Zealand Transport Agency
OGPA	Open Graded Porous Asphalt
OF	Outfall
OPW	Outline Plan of Works
PAUP	Proposed Auckland Unitary Plan Decision Version
PM ₁₀	Fine Particular Matter
PPF	Protected premises and facilities in accordance with NZS 6806:2010
PRG	Project Reference Group
PSI	PSI Preliminary Site Investigation
PWA	Public Works Act 1981
RA	Reserves Act 1977
RLTP	Regional Land Transport Programme
RMA	Resource Management Act 1991
RoNS	Roads of National Significance
RPS	Regional Policy Statement
RTN	Rapid Transport Network
RWWTP	Rosedale Wastewater Treatment Plant
SAR	Scheme Assessment Report
SEA	Significant Ecological Areas
SH x	State Highway (number)
SHS	State Highway Strategy of 2007
SMA	Stone Mastic Asphalt
SMAF	Stormwater Management Area Control - Flow
SOI	Statement of Intent 2015-2019
SRP	Sediment Retention Pond
SQMCI	Semi-Quantitative Macroinvertebrate Community Index
SUP	Shared Use Path
TP10	AC's Stormwater Treatment Devices: Design Guidelines Manual
TP90	Technical Publication 90: Erosion and Sediment Control Guidelines for Land Disturbing Activities
TSP	Total Suspended Particulate
TSS	Total Suspended Solids



UC	Universal Column
UDLF	Urban Design and Landscape Framework
UHH	Upper Harbour Highway
UV	Ultra Violet
WA	Wildlife Act 1953
WQV	Water Quality Volume
WRR	Western Ring Route
Watercare	Watercare Services Limited



Terms	Definitions
Alignment	The route or position of the proposed motorway, Busway and/ or SUP.
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.
Amenity	As defined in section 2 of the RMA, amenity values means 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.
Archaeological site	As defined in Part 2 of the Heritage New Zealand Pouhere Taonga Act 2014: Any place in New Zealand that - (a) Either- Was associated with human activity that occurred before 1900; or Is the site of the wreck of any vessel where that wreck occurred before 1900; and (b) Is or may be able through investigation by archaeological methods to provide evidence relating to the history of New Zealand:
AS/NZS 1158	The Australia and New Zealand Standard for Lighting for Roads and Public Spaces.
Auckland Council	The unitary authority in terms of the Local Government (Auckland Council) Act 2009 and the Local Government (Auckland Transitional Provisions) Act 2010 which replaced the eight existing councils in the Auckland Region as of October 2010.
Best Practicable Option	Defined in Section 2 of the RMA. In relation to a discharge of a contaminant or an emission or noise, this means the best method for preventing or minimising the adverse effects on the environment.
Culvert	A pipe, designed to convey water under an embankment.
dBA	A measurement of sound level which has its frequency characteristics modified by a filter (A-weighted) so as to more closely approximate the frequency bias of the human ear.
Designation	Defined in Section 2 and Section 166 of the RMA as provision made in a district plan to give effect to a requirement made by a requiring authority under section 168 or section 168A or clause 4 of Schedule 1.
Discharge	An activity that results in a contaminant being emitted deposited or allowed to escape.
Diversion of Stormwater	Redirecting stormwater from its existing course of flow; causing it to flow by a different route.
Do Minimum	Term used in the context of a comparison between the effects of a project and the effects that would occur if the project was not undertaken (i.e. for the comparative evaluation of the effects 'with and without' the Project).
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.
Heritage Site	A site that contributes to an understanding and appreciation of New Zealand's history and cultures. A heritage site can be derived from



Terms	Definitions
	archaeological, architectural, cultural, historic, scientific and technological investigations.
Hydrology	The branch of science concerned with the properties of the earth's water.
Leq	The time averaged sound level (on a log/energy basis) over the measurement period (normally A-weighted).
Motorway	As defined in Part 2 of the Public Works Act 1981: A motorway declared as such by the Governor-General in Council under section 138 of this Act; and includes all bridges, drains, culverts, or other structures or works forming part of any motorway so declared; but does not include any local road, access way, or service lane (or the supports of any such road, way, or lane) that crosses over or under a motorway on a different level.
Noise Mitigation	An activity or structure which reduces/mitigates the impact or effect of noise.
Overflow	A discharge from a combined sewer or wastewater network resulting from the flows being greater than the conveyance capacity within the network.
Overland Flow Path	The natural flow path of stormwater over the ground.
Paul Matthews Road Interchange	A new interchange inclusive of the reconfiguration of the existing Caribbean Drive intersection, a new eastbound off-ramp from SH18 and a direct connection of Paul Matthews Road to Upper Harbour Highway via a new bridge structure.
Pedestrian/Cycleway	A dedicated facility for the shared-use of pedestrians and cyclists.
Pier	Vertical support structure for a bridge.
PM ₁₀	Fine particulate matter with an equivalent aerodynamic diameter of less than 10, 2.5 or 1 micrometres respectively. Fine particulates are predominantly sourced from combustion processes. Vehicle emissions are a key source in urban environments.
Project Area	The Project area is the Project corridor and immediate surrounds.
Project Corridor	The Project corridor is the extent of works contained on SH18 between Albany Highway and Constellation Drive, and SH1 between Upper Harbour Highway interchange and 90 m north of the Oteha Valley Road interchange. The Busway component of the works extends from Constellation Bus Station to the Albany Bus Station at Oteha Valley Road.
The Project or NCI Project	The Northern Corridor Improvements Project including alterations to designations, new designations and activities requiring regional resource consents.
Sediment Control	Capturing sediment that has been eroded and entrained in overland flow before it enters the receiving environment.
Western Ring Route (WRR)	A strategic State highway route which provides an alternative to SH1 as a regional route for traffic traversing Greater Auckland. The WWR requires the completion of links and new lanes to combine the South-western (SH20), North-western (SH16) and Upper Harbour (SH18) highways into a continuous 48km motorway. The WWR will link the North Shore, West and South Auckland.