

Construction Environmental Management Plan (CEMP)

Revision History

Revision N°	Prepared By	Description	Date
1.0	Kylie Eltham	Draft for internal review	27 March 2013
2.0	Kylie Eltham	Final	01/05/13
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Document Acceptance


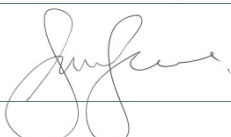
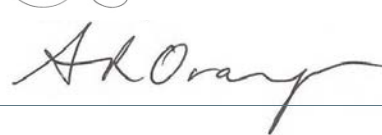
Action	Name	Signed	Date
Prepared by	Kylie Eltham		30 April 2013
Reviewed by	Anna Lewis		09/07/13
Approved by	Alliance Project Manager Alan Orange		9/07/13
on behalf of	M2PP Alliance		

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Quick Reference Guide to Conditions

Condition Number	Condition Requirement	Comments	Key Final CEMP Reference
G.23 and DC.10B(b)	GWRC and KCDC workshop on draft CEMP	Workshop held on 10/04/13	N/A
G.11	Staff training		Section 5
G.9 and G.10	Incident Response		Section 6
G.19A(e)	Ensure that the CEMP and appended management plans have been provided to the Manager (GWRC) with or prior to submitting a SSMP	CEMP and appended management plans to be provided prior to submitting any SSMP	Submitted May 2013
DC.10B(a)	The Requiring Authority shall submit a Construction Environmental Management Plan (CEMP) to the Manager for information at least 15 working days prior to commencement of Work. The CEMP shall include, as appendices, the suite of Management Plans required under condition DC.7 (other than SSMPs).	CEMP to be submitted for information.	Submitted May 2013
G.20	The Consent Holder shall submit a Construction Environmental Management Plan (CEMP) to the Manager for information at least 15 working days prior to commencement of Work. The CEMP shall be in general	CEMP to be submitted for information.	Submitted May 2013

	<p>accordance with the draft CEMP submitted with the application (dated 26 March 2012). The CEMP shall include, as appendices the suite of management plans required under condition G.19 which must be certified prior to commencement of Work.</p>		
G.21	<p>The CEMP and the management plans required under condition G.19 shall include details of:</p> <ul style="list-style-type: none"> a) Staff and contractors responsibilities; b) Training requirements for employees, sub-contractors and visitors; c) Environmental incident and emergency management (including the procedures required under condition G.9); d) Communication and interface procedures; e) Environmental complaints management (required under condition G.8); f) Compliance monitoring; g) Environmental reporting; h) Corrective action; i) Environmental auditing; j) CEMP review; k) Resource Efficiency and Waste Management 	<p>All information required is to be provided within this CEMP and CEMP Appendices.</p>	<p>Section 4.2</p> <p>Section 5</p> <p>Section 6</p> <p>Section 7</p> <p>Section 7.1</p> <p>Section 9</p> <p>Section 9</p> <p>Section 9.5</p> <p>Section 9.4</p> <p>Section 9.6</p> <p>Appendix Q</p> <p>Appendix R</p>

	<p>Plan; and l) Stakeholder and Communication Management Plan. The CEMP shall also confirm construction methodologies and construction timeframes, including staging.</p>		<p>Staging Programme - Appendix C</p>
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1 Introduction

1.1 Background

The MacKays to PekaPeka Expressway project is to be delivered under an Alliance model with a team of engineers, designers, constructors, planners, scientists and administrators from the proponent organisations, namely Beca, Fletcher, Higgins, Goodman and Boffa Miskell. These parties will work together in a high performance culture to deliver the project.

The Construction Environmental Management Plan forms an integral part of the overall Expressway Alliance Project Management Plan and fulfils the requirements of Condition G.20 – G.22 of the resource consent.

1.2 Purpose

The purpose of the Construction Environmental Management Plan (CEMP) is to provide the necessary guidance and background to enable the Alliance team to effectively manage environmental and construction nuisance issues associated with the design and construction of the MacKays to Peka Peka Expressway project.

Further, it demonstrates how the requirements of the resource consents and the designation, as well as industry best practice, will be implemented to provide the Regulatory Authorities confidence that construction will be managed in a way that avoids, remedies or mitigates adverse effects on the environment.

The CEMP provides an overview of the different zones and sections of the construction programme and the key environmental issues to be addressed. In addition, it details the key responsibilities for staff, training requirements, environmental incident and emergency management procedures, communication and interface procedures, environmental complaints management, compliance monitoring, corrective action procedures, environmental reporting, and the CEMP review processes. It also includes the Resource Efficiency and Waste Management Plan (REWMP) and the Stakeholder and Communications Plan (SCMP).

A number of the appendices address construction effects such as erosion and sediment control, contaminated soils, construction noise and construction vibration in more detail.

The successful implementation of the Construction Environmental Management Plan and its appendices will be reflected by the strong environmental culture amongst site staff, their behaviours demonstrated to ensure compliance and the environmental outcomes of the project.

The four management plans requiring certification by Greater Wellington Regional Council (GWRC) which form part of the CEMP are the:

- Erosion and Sediment Control Plan (ESCP);
- Groundwater (Level) Management Plan (GMP);
- Contaminated Soils and groundwater Management Plan (CSGMP); and
- Ecological Management Plan (EMP).

The management plans requiring certification by the Kāpiti Coast District Council (KCDC) are:

- Construction Noise Vibration Management Plan (CNVMP);
- Noise Monitoring Plan (NMP);
- Construction Air Quality Management Plan (CAQMP);
- Construction Traffic Management Plan (CTMP);
- Landscape Management Plan (LMP);
- Settlement Effects Management Plan (SEMP);
- Hazardous Substances Management Plan (HSMP); and
- Contaminated Soils Management Plan (Human Health) (CSMP(HH)).

Figure 1 below describes the relationship of the Management Plans listed above (those required for Certification) and the other Management Plans required by conditions of the consent.

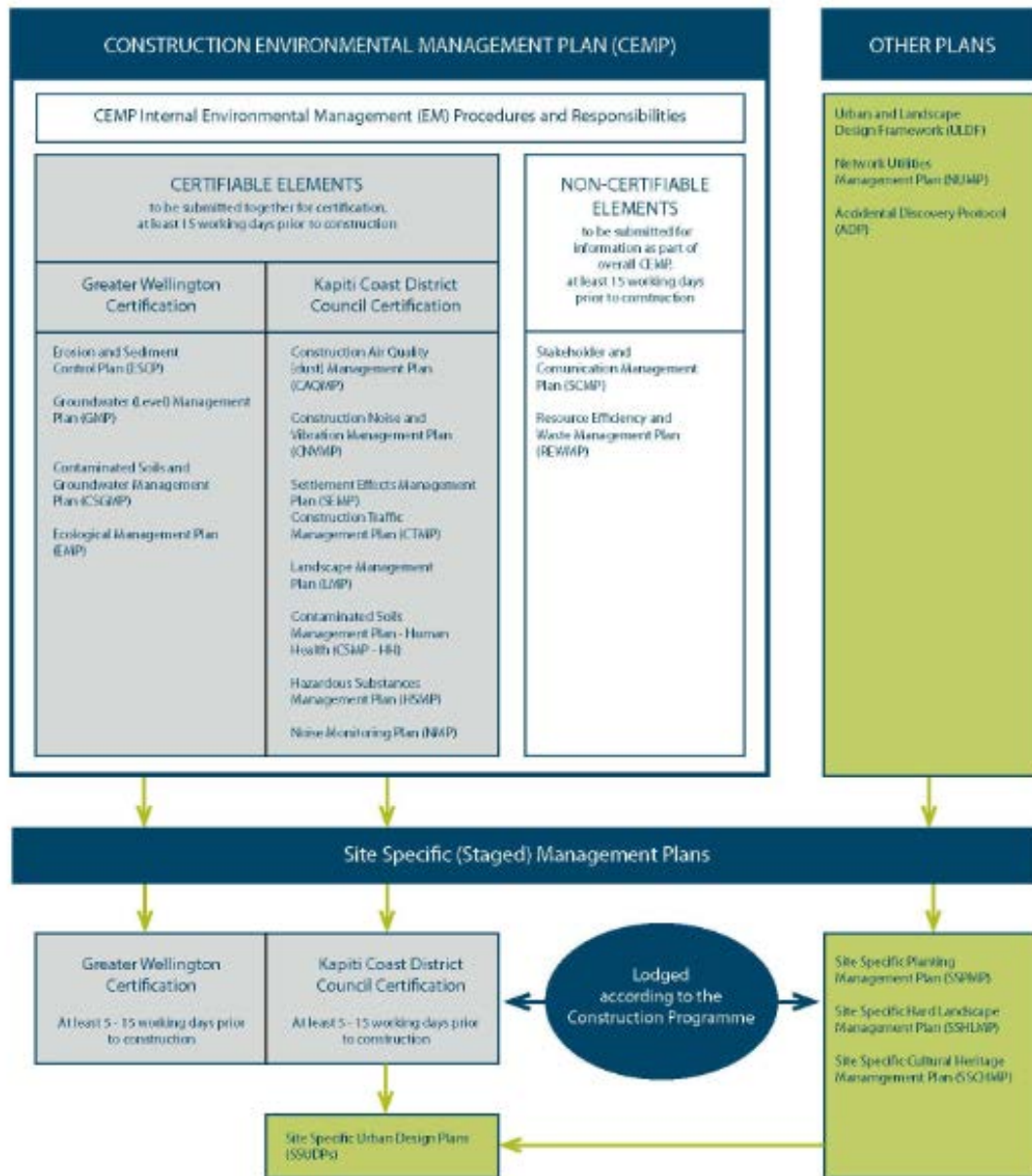
1.2.1 Site Specific Management Plans

Site Specific Management Plans (SSMP's) are required by Condition DC.7A and G.19A (and other specific conditions) for the following:

- Site Specific Urban Design Plans (UDP);
- Site Specific Landscape Management Plans (SSLMP's);
- Site Specific Construction Noise or Vibration Management Plans (SSCNMP and SSVMP);
- Site Specific Traffic Management Plan s(SSTMP's);
- Construction Erosion & Sediment Control Plans (CESCP's); and
- Site Specific Ecological Management Plan (SSEMP).

Figure 1 below shows the relationship of the overarching Management Plans with the SSMP's. The SSMP's will be submitted to the Regulatory Authorities in accordance with the timeframe outlined in the Staging Programme required by Condition DC.10C and G.12 prior to construction commencing in specific stages or section of the Project.

Figure 1 – Environmental Management Plans and Site Specific Management Plans

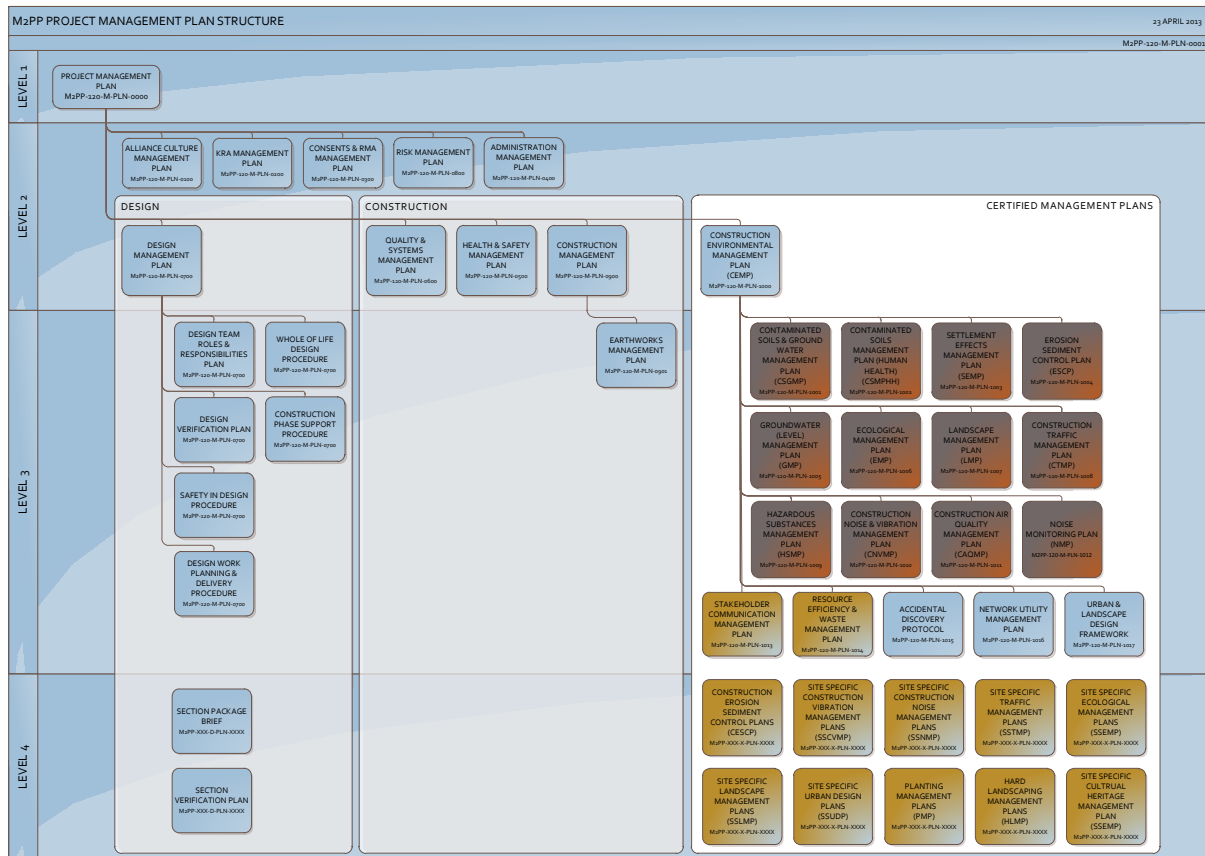


1.3 Alliance systems

This CEMP and its supporting Management Plans forms the platform on which the environmental culture for the Project will be developed from.

Figure 2 below identifies how the CEMP and the appendices align with the wider project management plans and systems which are to be implemented on the project.

Figure 2 – Alliance systems overview



1.4 Project description

The MacKays to Peka Peka Expressway is approximately 16 kilometres of new Expressway and will become the new State Highway 1 once completed. Construction works start just south of Poplar Ave (chainage 1,900m) and extend to just north of Peka Peka Road (chainage 18,050m).

The Expressway once completed will include:

- A four lane median divided Expressway (two traffic lanes in each direction);
- Partial interchange at Poplar Avenue;
- Full interchange at Kāpiti Road;
- Four lane bridge over the Waikanae River;
- Full interchange at Te Moana Road;
- Partial interchange at Peka Peka Road;
- Grade separated overbridges and underbridges to cross local roads, watercourses and the Expressway;
- Stormwater treatment and attenuation facilities;

- Provision of a shared cycleway/walkway separated from the shoulder of the Expressway; and
- Provision of a bridleway over sections of the corridor.

The project has been divided into three zones and a number of specific construction sections:

South Zone

This zone includes chainage 1900 to 4500 and includes the following specific construction sections:

- Poplar Avenue (POP)
- Poplar Avenue–Raumati Road (POP–RAU)
- Raumati Road – Wharemauku Stream (RAU – WHA)
- Wharemauku Stream – Kāpiti Road (WHA – KAP)
- Kāpiti Road Interchange (KAP).

Central Zone

This zone includes chainage 4500 to 11500 and includes the following specific construction sections:

- Kāpiti Road–Mazengarb Road (KAP–MAZ)
- Mazengarb Road Bridge
- Mazengarb Road– Otaihanga (MAZ–OT)
- Otaihanga Road Bridge
- Otaihanga Project Office/Yard
- Otaihanga Road – Waikanae River (OT–WAI)
- Waikanae Bridge
- Waikanae River – Te Moana Road (WAI – TEM).

Northern Zone

This sector includes chainage 11500 to 18050 and includes the following specific construction sections:

- Te Moana Interchange (TEM)
- Te Moana Road – Ngarara Road (TEM – NGA)
- Ngarara Road (NGA)
- Smithfield Road (SMI)
- Smithfield to CH15400 (SMI – 15400)
- 15400 to Peka Peka (15400 – PP)
- Peka Peka Interchange (PP).

2 Project consents and designation

Consent Type	Consent Description	Consent Number	General Conditions	Specific Conditions
Designation				
	A new designation for the construction, operation and maintenance of a state highway (MacKays Crossing to peka peka Expressway) from 2 km north of MacKays Crossing to Te Kowhai Road, Peka Peka in the Kāpiti Coast District	NSP 12/01.001	DC.1 – DC.81	N/A
Resource Consent from KCDC				
	Consent pursuant to the NES for Assessing & Managing Contaminants in Soil to protect Human Health to the NES for Assessing Contaminants in Soil to protect Human the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health			
Resource Consents from GWRC				
	Land Use Consent s9(2) Land use consent to disturb soil for the construction of roading and tracking for the MacKays to Peka Peka Expressway.	NSP 12/01.003	G.1 – G.44	E.2 – E.11
	Land Use Con s9(2) Land use consent to disturb soil in areas identified as being erosion prone, and to undertake large scale vegetation clearance for the MacKays to Peka Peka Expressway.	NSP 12/01.004	G.1 – G.44	E.2 – E.11

Consent Type	Consent Description	Consent Number	General Conditions	Specific Conditions
	Discharge Permit s15(1)(b) Discharge permit to discharge sediment and chemical flocculant in treated stormwater runoff to water, and to land where it may enter water, in association with bulk earthworks for the MacKays to Peka Peka Expressway.	NSP 12/01.005	G.1 – G.44	E.2 – E.11
Resource Consents from GWRC	Whareroa Stream Catchment			
	Land Use Consent s13(1)(a) & s13(1)(e) Land use consent to undertake the following activities within Queen Elizabeth Park Drain: <ul style="list-style-type: none"> ■ To place structures (culverts, rip rap, and storm water outlets) and the associated diversion and reclamation of a section of the bed in this catchment; and ■ To remove an existing culvert; including the associated disturbance of, and deposition of material on, the bed of the watercourse in the vicinity of the MacKays to Peka Peka Expressway.	NSP 12/01.006	G.1 – G.44	WS.1 – WS.12 & SW.1 – SW.3
	Water Permit s14(1) Water permit to temporarily divert the flow of the Queen Elizabeth Park Drain during construction of the culvert and associated structures in the bed of the watercourse in the vicinity of the MacKays to Peka Peka Expressway.	NSP 12/01.007	G.1 – G.44	WS.1 – WS.12 & SW.1 – SW.3

Consent Type	Consent Description	Consent Number	General Conditions	Specific Conditions
	Water Permit s14(1) Water permit to permanently divert the full flow of the Queen Elizabeth Park Drain in the vicinity of the MacKays to Peka Peka Expressway.	NSP 12/01.008	G.1 – G.44	WS.1 – WS.12 & SW.1 – SW.3
Resource Consents from GWRC	Wharemauku Stream Catchment			
	Land Use Consent s13(1)(a) & s13(1)(e) Land use consent to undertake the following activities within and over Drain 7, an unnamed tributary of Drain 7 and the Wharemauku Stream: <ul style="list-style-type: none"> ■ To place structures (bridges, culverts, rip rap, and storm water outlets) and the associated diversion and reclamation of a section of the bed in this catchment; and ■ To remove an existing culvert; including the associated disturbance of, and deposition of material on, the bed of the watercourses in the vicinity of the MacKays to Peka Peka Expressway.	NSP 12/01.009	G.1 – G.44	WS.1 – WS.12 & SW.1 – SW.3
	Water Permit s14(1) Water permit to temporarily divert the flow of Drain 7, an unnamed tributary of Drain 7 and the Wharemauku Stream during construction of the culvert and bridges and associated structures in the bed of the watercourse in the	NSP 12/01.010	G.1 – G.44	WS.1 – WS.12 & SW.1 – SW.3

Consent Type	Consent Description	Consent Number	General Conditions	Specific Conditions
	vicinity of the MacKays to Peka Peka Expressway.			
	Water Permit s14(1) Water permit to permanently divert the full flow of Drain 7 and an unnamed tributary of Drain 7 in the vicinity of the MacKays to Peka Peka Expressway.	NSP 12/01.011	G.1 – G.44	WS.1 – WS.12 & SW.1 – SW.3
Resource Consents from GWRC	Waikanae River Catchment			
	Land Use Consent s13(1)(a) & s13(1)(e) Land use consent to undertake the following activities within and over Mazengarb Drain, Waste Water Treatment Pond Drain, Landfill Drain, Otaihanga Drain, an unnamed tributary of the Muaupoko Stream, Muaupoko Stream and the Waikanae River: <ul style="list-style-type: none"> ■ To place structures (bridges, culverts, rip rap, and storm water outlets) and the associated diversion and reclamation of a section of the bed in this catchment; and ■ To remove an existing culvert; including the associated disturbance of, and deposition of material on, the bed of the watercourses in the vicinity of the MacKays to Peka Peka Expressway.	NSP 12/01.012	G.1 – G.44	WS.1 – WS.12 & SW.1 – SW.3

Consent Type	Consent Description	Consent Number	General Conditions	Specific Conditions
	Water Permit s14(1) Water permit to temporarily divert the flow of Mazengarb Drain, Waste Water Treatment Pond Drain, Landfill Drain, Otaihanga Drain, an unnamed tributary of the Muaupoko Stream and the Waikanae River; during construction of the culvert and bridges and associated structures in the bed of the watercourse in the vicinity of the MacKays to Peka Peka Expressway.	NSP 12/01.013	G.1 – G.44	WS.1 – WS.12 & SW.1 – SW.3
	Water Permit s14(1) Water permit to permanently divert the full flow of the Mazengarb Drain, Waste Water Treatment Pond Drain, Landfill Drain, Otaihanga Drain, an unnamed tributary of the Muaupoko Stream, Muaupoko Stream and the Waikanae River in the vicinity of the MacKays to Peka Peka Expressway.	NSP 12/01.014	G.1 – G.44	WS.1 – WS.12 & SW.1 – SW.3
Resource Consents from GWRC	Waimeha Stream Catchment			
	Land Use Consent s13(1)(a) & s13(1)(e) Land use consent to place structures (bridges, culverts, rip rap, and storm water outlets) within and over Market Garden Drain and Waimeha Stream; and the diversion and reclamation of a section of the bed in this catchment, including the associated disturbance of, and	NSP 12/01.015	G.1 – G.44	WS.1 – WS.12 & SW.1 – SW.3

Consent Type	Consent Description	Consent Number	General Conditions	Specific Conditions
	deposition of material on, the bed of the watercourses in the vicinity of the MacKays to Peka Peka Expressway.			
	Water Permit s14(1) Water permit to temporarily divert the flow of the Market Garden Drain and Waimeha Stream during construction of the culvert and bridges and associated structures in the bed of the watercourse in the vicinity of the MacKays to Peka Peka Expressway.	NSP 12/01.016	G.1 – G.44	WS.1 – WS.12 & SW.1 – SW.3
	Water Permit s14(1) Water permit to permanently divert the full flow of the Market Garden Drain in the vicinity of the MacKays to Peka Peka Expressway.	NSP 12/01.017	G.1 – G.44	WS.1 – WS.12 & SW.1 – SW.3
Resource Consents from GWRC	Ngarara Creek Catchment			
	Land Use Consent s13(1)(a) & s13(1)(e) Land use consent to undertake the following activities within and over Ngarara Creek, Kakariki Stream, Smithfield Drain, unnamed tributary of Paetawa Drain and Paetawa Drain: <ul style="list-style-type: none"> ■ To place structures (bridges, culverts, rip rap, and storm water outlets) and the associated diversion and reclamation of a section of the bed in this catchment; and ■ To remove an existing culvert; 	NSP 12/01.018	G.1 – G.44	WS.1 – WS.12 & SW.1 – SW.3

Consent Type	Consent Description	Consent Number	General Conditions	Specific Conditions
	including the associated disturbance of, and deposition of material on, the bed of the watercourses in the vicinity of the MacKays to Peka Peka Expressway.			
	Water Permit s14(1) Water permit to temporarily divert the flow of the Ngarara Creek, Kakariki Stream (at the local road bridge), Smithfield Drain, an unnamed tributary of Paetawa Drain and the Paetawa Drain; during construction of the culvert and bridges and associated structures in the bed of the watercourse in the vicinity of the MacKays to Peka Peka Expressway.	NSP 12/01.019	G.1 – G.44	WS.1 – WS.12 & SW.1 – SW.3
	Water Permit s14(1) Water permit to permanently divert the full flow of the Ngarara Creek, Kakariki Stream (at local road and Expressway bridges), Smithfield Drain, an unnamed tributary of Paetawa Drain and the Paetawa Drain; in the vicinity of the MacKays to Peka Peka Expressway.	NSP 12/01.020	G.1 – G.44	WS.1 – WS.12 & SW.1 – SW.3
Resource Consents from GWRC	Hadfield/Te Kowhai Stream Catchment			
	Land Use Consent s13(1)(a) & s13(1)(e) Land use consent to undertake the following activities within Hadfield/Te Kowhai Stream: <ul style="list-style-type: none"> ■ To place structures (culverts, 	NSP 12/01.021	G.1 – G.44	WS.1 – WS.12 & SW.1 – SW.3

Consent Type	Consent Description	Consent Number	General Conditions	Specific Conditions
	<p>rip rap, and storm water outlets) and the associated diversion and reclamation of a section of the bed in this catchment; and</p> <ul style="list-style-type: none"> ■ To remove an existing culvert; <p>including the associated disturbance of, and deposition of material on, the bed of the watercourse in the vicinity of the MacKays to Peka Peka Expressway.</p>			
	<p>Water Permit s14(1) Water permit to temporarily divert the flow of the Hadfield/Te Kowhai Stream; during construction of the culvert and bridges and associated structures in the bed of the watercourse in the vicinity of the MacKays to Peka Peka Expressway.</p>	NSP 12/01.022	G.1 – G.44	WS.1 – WS.12 & SW.1 – SW.3
	<p>Water Permit s14(1) Water permit to permanently divert the full flow of the Hadfield/Te Kowhai Stream; in the vicinity of the MacKays to Peka Peka Expressway.</p>	NSP 12/01.023	G.1 – G.44	WS.1 – WS.12 & SW.1 – SW.3
Resource Consents from GWRC	General Consents			
	<p>Land Use Consent s9(2) Land use consent for the construction of boreholes for groundwater extraction, and for the formation of holes for bridge piles and other excavations where this may intercept groundwater.</p>	NSP 12/01.024	G.1 – G.44	BC.1 – BC.6, GT.1 – GT.6 & GD.1 – GD.8A

Consent Type	Consent Description	Consent Number	General Conditions	Specific Conditions
	Water Permit s14(2) Water permit to take and use groundwater for bore testing, dewatering of excavations, dust suppression and construction purposes.	NSP 12/01.025		BC.1 – BC.6, GT.1 – GT.6 & GD.1 – GD.8A
	Water Permit s14(2) Water permit to divert groundwater from wetlands adjacent to the MacKays to Peka Peka Expressway.	NSP 12/01.026		BC.1 – BC.6, GT.1 – GT.6 & GD.1 – GD.8A
	Land Use Consent s13(1)(e)L and use consent for the partial reclamation of wetlands (defined as lakes), being the Raumati Manuka Wetland, Otaihanga Southern and Northern Wetlands and El Rancho Wetland, in the vicinity of the MacKays to Peka Peka Expressway Project alignment, including the associated disturbance of the beds.	NSP 12/01.027	G.1 – G.40	WR.1
	Land Use Consent s13(1)(c) Land use consent to remove vegetation in the beds of various watercourses and wetlands (defined as lakes), being the Raumati Manuka Wetland, Otaihanga Southern and Northern Wetlands and El Rancho Wetland, including the associated disturbance of the beds.	NSP 12/01.028	G.1 – G.40	VC.1
	Discharge Permit s15(1)(a) Discharge permit to discharge treated cement contaminated water to water, and to land where it may enter water, associated with the construction of the MacKays	NSP 12/01.029	G.1 – G.44	E.2 – E.11

Consent Type	Consent Description	Consent Number	General Conditions	Specific Conditions
	to Peka Peka Expressway			
	Discharge Permit s15(1)(b) Discharge permit to discharge contaminants to land from the Otaihanga Construction Yard.	NSP 12/01.030	G.1 – G.44	E.2 – E.11
Archaeological Authorities				
	Te Moana Road	2011-85		
	In the M2PP expressway alignment between Kāpiti and Mazengarb Roads – test pits	2011/514		
	55 Rata Street, Raumati Beach and Kāpiti Road	2011/441		
	168 Te Moana Road	2013/386		
	In the M2PP expressway alignment between Kāpiti and Mazengarb Roads – earthworks	2013/222		
	MacKays to Peka Peka expressway between Kāpiti and Mazengarb Roads – earthworks	2013/435		
	MacKays to Peka Peka Expressway between Mazengarb Road & Waikanae River	2013/639		
	MacKays to Peka Peka Expressway between Mazengarb Road & Waikanae River	2013/385		
	MacKays to Peka Peka Expressway between Te Moana Road and Ngarara Road	2013/260		
	MacKays to Peka Peka Expressway between Ngarara Road and Peka Peka Road	2013/381		
	Corner of Otaihanga Road and SH1 – Roundabout construction	2013/374		

3 Objectives

3.1 Draft environmental policy and objectives

This policy has yet to be ratified by the Project Alliance Board and will be updated in due process.

The M2PP Alliance is committed to:

Respecting, preserving and enhancing our environment.

We will do this by:

- Protect the environment we work in
- Build a strong environmental culture
- Comply with environmental legislation and resource consent conditions
- Manage the project in a responsible manner and provide industry leadership
- Lessen waste and preserve resources
- Ensure buy-in across the team to ensure exceptional performance
- Measure, report and improve our performance.

3.2 Environmental key performance indicators

These are to be developed by the project prior to the main construction works starting. Feedback from both the GWRC and KCDC will be considered during the development process.

4 Organisation and accountabilities

This section details the project personnel and their responsibilities as it pertains to environmental management.

4.1 Project contact details

Contact details for the key Alliance personnel responsible for ensuring the implementation of the Environmental Management Plan can be found in Appendix 1 of this document.

Office details: (up to September 2013)

MacKays to Peka Peka Expressway Alliance

17 - 21 Whitmore Street

Wellington

Private Bag

Phone: 0508 M2PP INFO (0508 6277 4636)

Email info@m2pp.co.nz

4.2 Accountabilities

The proposed structure of the Alliance has not yet been finalised. Details of key project personnel including their contact numbers are included at Appendix F. It should be noted that at this stage, very few key positions have been confirmed and this will be updated prior to construction starting.

Alliance Project Manager

The Alliance Project Manager is responsible for:

- Demonstrating commitment to the highest standards of environmental management.
- Ensures all team members comply with specifications, designation and resource consent conditions.
- Reporting on environmental performance, incidents and issues to the Project Alliance Board (PAB).
- Reviews and approves Construction Environmental Management Plan prior to issue;
- Ensuring adequate resources are provided to staff to enable environmental issues to be appropriately managed.
- Approving training needs.

Design Manager

- Incorporates environmental requirements into design as required by consent conditions and environmental management plans; and
- Advises Environmental Manager of any design issues that may impact on environmental compliance.

Consents Manager

- Ensures all resource consents are gained prior to works starting.

Environmental Manager

- Provides leadership to ensure staff are motivated to achieve environmental standards, and comply with all consent conditions and environmental management plan requirements including SSMPs;
- Develops, implements and reviews environmental management systems and environmental management plans and strategies for the project;
- Coordinates environmental management interfaces with external agencies and stakeholders in conjunction with the Stakeholder Manager;
- Provides a liaison point between site staff, landscape contractors and aborists with respect to tree removal / relocation works;
- Manages and co-ordinates all environmental monitoring required by consent conditions and maintains and submits relevant reporting and records to the Greater Wellington Regional Council and Kāpiti Coast District Council as required;

- Coordinates all environmental auditing functions and ensures relevant records are maintained;
- Responds to and investigates all environmental complaints, issues or incidents;
- Investigates all environmental complaints and incidences;
- Reports on environmental performance, incidents and issues;
- Notifies Alliance Project Manager and Regulatory Authorities of any significant non compliances;
- Coordinates environmental emergency responses;
- Responsible for resolving issues of environmental non compliances; and
- Knowledge and understanding of consents and conditions.

Environmental Specialist/Officer

- Supports Environmental Manager and provides leadership to ensure all staff comply with environmental management systems, resource consent conditions and environmental legislation;
- Coordinates the preparation of Erosion and Sediment Control plans;
- Undertakes as-building of environmental controls and lodging required certification to GWRC;
- Undertakes regular site inspections and audits to ensure compliance with the CEMP and SSMPs, consent and designation conditions;
- Coordinates all site monitoring including but not limited to groundwater, settlement, water quality, ecological, dust, noise, and vibration monitoring;
- Manages maintenance and monitoring of Chemical Treatment Systems;
- Ensures spill kits are available and stocked and provides training on equipment use;
- Coordinates the development and lodgement for certification of site specific management plans;
- Co-ordinates construction vibration monitoring and preparation of building condition surveys;
- Undertakes environmental monitoring (following the completion of appropriate training) for groundwater, settlement, water quality, ecological, dust and noise monitoring.
- Coordinates site archaeological protection requirements and provides necessary training and advice to site staff;
- Conducts regular site inspections of erosion and sediment control devices and co-ordinates maintenance where necessary;
- Coordinates as-built information for erosion and sediment control devices;
- Monitors site controls during rain storms;
- Input all environmental monitoring results to a CS-VUE database;
- Ensures staff on-site are aware of environmental requirements at all times; and
- Trains staff in site specific environmental procedures.

Community Liaison Person

- Helps co-ordinate environmental testing and monitoring on neighbouring properties;
- Advocates community and stakeholder environmental aspirations to construction team; and
- Primary contact for stakeholder complaints and enquiries.

Construction Manager

- Provides leadership to the site team to achieve Project environmental objectives and targets to ensure a high level of performance is achieved;
- Ensures adequate resources are provided to ensure environmental issues are appropriately managed;
- Reports all environmental incidents, and complaints to the Environmental Manager
- Responsible for ensuring erosion and sediment control systems are designed, installed and modified as appropriate for each stage of construction;
- Reviews, develops, implements and monitors construction methods ensuring compliance with consents; and
- Assists in the development, implementation and review of Project environmental objectives.

Site Superintendents/Supervisors

- Provides leadership to the site construction team to achieve project environmental objectives and targets to ensure high performance is consistently achieved;
- Ensures environmental controls including erosion and sediment control works are protected and maintained on a day to day basis;
- Ensures that the CEMP and the Site Specific Management Plans are implemented appropriately by the construction team;
- Leads the emergency response crew;
- Reports all environmental incidents, and complaints to the Environmental Manager; and
- Reviews the need to use a water cart or sprinklers to control dust.

Project Engineers

- Provides leadership to the site construction team to achieve project environmental objectives and targets to ensure a high level of performance is achieved;
- Responsible for ensuring environmental controls and erosion and sediment control works are installed and modified as appropriate for each stage of construction.
- Assist in the development, implementation and review of project environmental objectives;
- Develops, implements and monitors construction methods and environmental protection measures to ensure compliance with consents, designations, the CEMP and SSMPs;

- Demonstrates understanding of major environmental and community issues and environmentally sensitive areas;
- Coordinates environmental interfaces with subcontractors and suppliers;
- Reports all environmental incidents and complaints to the Environmental Manager
- Ensures staff on-site are aware of environmental requirements community relation protocols at all times.

Foreman

- Manages the construction of critical erosion and sediment control devices, temporary stormwater ponds, stream works including temporary diversions and removal of vegetation;
- Co-ordinates daily site inspections of environmental controls including erosion and sediment control devices and co-ordinates maintenance where necessary;
- Monitors the site during rainfall events and high wind events; and
- Ensures staff on site are aware of environmental requirements at all times.

All Staff and Contractors

- Understand resource consent conditions and requirements and how they relate to the specific activities being undertaken;
- Attend and actively participate in toolbox talks and environmental training including Site Specific Management Plan briefings;
- Responsible for reporting incidents, defects and other problem areas to senior site staff as they arise on site;
- Ensure that required processes and procedures for environmental management are followed;
- Carry out routine maintenance and emergency work when directed;
- Care for all environmental works and controls; and
- Ensure the site is kept tidy and all waste is placed in appropriate bins.

5 Training requirements

5.1 Site induction

A comprehensive environmental induction will be provided to all staff and subcontractors prior to starting work on site. The induction will include information on:

- An overview of the designation and consent conditions;
- The environmental responsibilities for all staff;
- Detail on the ecology of the area and an overview of sensitive areas;
- Heritage issues including procedures in the case of unexpected finds;
- Spill response and incident reporting procedures;

- Stakeholder procedures; and
- Information on environmental controls such as sediment control devices, noise and dust mitigation measures and waste management.

5.2 Environmental awareness training

In addition to the environmental induction which all staff members will be required to undertake, all foremen, supervisors and managers (including engineers) responsible for managing earthworks site staff shall participate in environmental awareness training prior to the commencement of work in any stage as required by Condition G.11. This training is to be led by the Alliance Environmental Manager and will help drive a strong environmental culture on site.

The training may include (as relevant) but not be limited to:

- Design details for the erosion and sediment control measures and associated methodologies;
- Details of any stream diversions or other in-stream work and works in wetlands;
- Briefing on the values of the streams and wetlands;
- The objectives for the stream and culvert design;
- The requirements of native fish for fish passage;
- Construction of the required erosion and sediment control measures; and
- The sensitivity of the receiving environment to sediment discharges.
- For supervisory and management personnel likely to be involved in any work involving vegetation clearance, a briefing on the values of any significant areas of vegetation that are to be retained, and the methods that shall be used to identify and protect them during construction;
- Briefing on the requirements of Te Āti Awa ki Whakarongotai and Takamore Trust for cultural ceremonies to occur before the commencement of Work; and
- Discussion on the process for identifying training requirements for new staff joining the project and the process for briefing staff on relevant Site Specific Management Plans (SSMP) prior to works starting at location covered by an SSMP (as identified by the Staging Programme located at Appendix C).

Engineers responsible for writing Work Plans and Job Safety Environmental Analysis (JSEA's) will also be given guidance on how to assess and plan for environmental issues using the CEMP and SSMPs as the key reference documents.

Site staff will be made aware of the restrictions in operations when working near designation boundaries, sensitive receiving environments, specific areas of vegetation, fernbirdgrey duck and New Zealand Pipit habitat that are required to be protected as part of the Work plan communication process.

5.3 Toolbox talks

Environmental issues will form a part of weekly toolbox meetings to ensure all workers are aware of the key issues. Although toolbox meetings focus on safety and staff welfare issues, they are an excellent vehicle for delivering environmental messages and providing feedback from all disciplines to the team. Toolbox talks are coordinated by the Health and Safety team and foremen and all staff including subcontractors are required to attend.

5.4 Industry and specific training

Opportunities will also be made available for selected staff e.g. foremen, engineers and environmental team members to attend the GWRC Muddy Waters Industry Education programme.

In addition, where it is identified that staff members require specific upskilling in areas such as erosion and sediment control implementation and spill response, these training courses will be organised by the Environmental Manager and led by industry professionals.

5.5 Refresher training

An annual Environmental Awareness Refresher session will be held for all staff when the project staff returns after the Christmas shutdown period each year.

5.6 Other resources

This CEMP is supported by the Fletcher Environmental Toolkit which gives practical advice on typical construction site environmental management. Training resources such as awareness posters support and provide on-going education for site staff in regard to environmental matters. These resources will be used to increase environmental awareness and drive a strong environmental culture amongst all staff.

5.7 Iwi monitoring training

All iwi monitors will be required to be fully inducted prior to working on the site. This will include the complete project induction that all staff working on the project will undertake. In addition, targeted training around the specific aspect of monitoring that they will be participating in, will be undertaken such as ecological monitoring or erosion and sediment control monitoring. All iwi monitoring will be undertaken in an observational capacity only.

5.8 Iwi educational and training opportunities

Iwi training and educational opportunities are to be developed by the Alliance Management Team (AMT) and ratified by the Project Alliance Board (PAB). However, it is anticipated that any opportunities will be developed within the proponent companies existing training programmes such as national certificate programmes in drain laying or concrete construction, surveying cadetships, Operator Competency Assessment

programme (OCA) for machine operators eg excavator operator and numeracy and literacy programmes.

Existing policies for acceptance on to these programmes include working as a labourer for six months within the workforce and demonstrating a commitment to work attendance and an undertaking to participate in theory lessons and homework in addition to work commitments.

5.9 Training records

Training records in regard to environmental training will be maintained on site by the Environmental Manager. Records will include:

- Names of the trainees;
- Date of training;
- Training provider;
- General description of training content; and
- Comment on the level of competence of the trainee upon completion of the training.

5.10 Summary of Training

Training	Management Staff	Project Engineers	Site Engineers	Superintendents/ Foremen	Labourers	Designers	Support Staff	Frequency
Site Induction	✓	✓	✓	✓	✓	✓	✓	Once prior to starting work on site
Environmental Awareness Training	✓	✓	✓	✓				Prior to commencement of works in any stage
Muddy Waters Industry Awareness Programme		✓		✓				Once
Archaeological Awareness (History in Action)	✓	✓	✓	✓	✓	✓	✓	Once
How to use the CEMP for Work Plan/JSEA development		✓	✓					Once
Toolbox Talks	✓	✓	✓	✓	✓	✓	✓	Weekly
Erosion & Sediment Control Training		✓	✓	✓	✓			As required
Spill Response Training		✓	✓	✓	✓			As required
Environmental Refresher Training	✓	✓	✓	✓	✓	✓	✓	Annually (January)

6 Emergency management

The procedures detailed below identify the response procedures which will be enacted in the event of resource consent non-compliance, a spill or other incident resulting in significant adverse environmental effects.

6.1 Consent condition non-compliance

In the event that non-compliance with consent conditions is identified, the Environmental Manager shall be informed. It is the responsibility of the Environmental Manager to inform the relevant regulatory authority as soon as practicable. The Environmental Manager shall identify a series of actions to be implemented to resolve the situation and return the site to full compliance.

The timeframe for implementation will depend on the issue but every effort will be made to ensure that the site is returned to full compliance within 24 hours. When contact is made with the relevant regulatory authority, discussion regarding the situation, the response to be undertaken and the timeframe for completing the response will be discussed. An investigation will be undertaken and incident report prepared as detailed below.

The initial incident report shall be forwarded to the GWRC and KCDC as appropriate within 48 hours of the non-compliance occurring. The finalised investigation report will be forwarded once completed. The timeframe for this finalised report will be dictated by the level of investigation into the non-compliance e.g. internal investigation compared with an ICAM (Incident Cause Analysis Method) investigation undertaken by specialised investigators.

6.2 Environmental incidents

An environmental incident is an occurrence which has (or potentially could have) a negative or adverse effect on the environment. An adverse effect is something that causes (or could have caused) environmental harm.

Environmental incidents include but are not restricted to:

- Fuel, oil or chemical spills;
- Unexpected archaeological discoveries;
- Unforeseen impact on areas of high environmental value such as protected flora or fauna;
- Construction nuisance issues such as dust, noise or vibration resulting in an impact beyond the site boundary or a valid complaint to the project;
- Consent condition non-compliance.

6.3 Environmental incident response

The Alliance Environmental Manager will inform GWRC and/or the KCDC within 1 working day by either phone or email, after identifying any contaminants (including sediment) or materials which have been released into any water body as a result of any of the following incidents:

- Discharges from non-stabilised areas that are not treated by erosion and sediment control measures as required under consent requirements;
- Failure of any erosion and sediment control measures;
- Discharge of a hazardous substances, including cement, to a water body; Failure of any temporary stream diversion;
- Any other incident which either directly or indirectly causes, or is likely to cause, adverse ecological effects in any water body that is not authorised by a resource consent held by the Consent Holder.

All other environmental incidents resulting in discharges to land but contained within the site boundaries will be reported to the GWRC and/or the KCDC in the monthly summary of environmental incidents.

In the event of a spill which results in an unauthorised discharge to the environment (land or water), immediate action will be taken to stabilise the situation e.g. upright spilled drum, deploy spill equipment, turn off pump, stop discharge, or establish additional control measures. Spill response and recovery shall be enacted in accordance with Environmental Procedure ENV-02: Fuel, Oil and Chemical Spills attached as Appendix G.

For other incidents resulting in an unauthorised discharge to the environment such as noise, vibration or dust nuisances, works in the immediate vicinity will be ceased until appropriate response measures have been agreed upon between the engineer responsible for the works, the Construction Manager and the Environmental Manager.

Once the situation has been controlled and cleaned up, an environmental incident report will be completed by the engineer responsible for the works. Additional investigation and reporting will be coordinated by the Environmental Manager depending on the extent of the incident.

All initial incident reports are to be forwarded to the Environmental Manager on the day of the incident. Finalised investigation reports are to be completed and closed out as soon as practicable following the incident. The timeframe for this will vary depending on the level of investigation undertaken.

The incident report (Appendix T) will include the following details:

- Description and location of incident including date and time;
- Description of work being carried out at the time of the incident and how the incident occurred;

- Corrective actions taken to rectify the situation and mitigation measures to be taken to minimise the adverse effects on the environment;
- Causes of the incident;
- Environmental controls in place at the time of the incident; and
- Preventative actions to prevent a repeat of the situation including actions to report findings back to the wider workforce.

All incident reports will be closed out and filed on site. An incident register will be maintained by the Environmental Manager.

The Environmental Manager will liaise with the relevant regulatory Manager to establish what remediation or rehabilitation is required as a result of the incident and whether any such remediation is practical to implement. Once agreed on the remediation, this is to be implemented within agreed timeframes.

In response to a complaint, incident or other reasonable request that relates to managing an adverse effect related to the construction of the Project, the relevant regulatory Manager may request the Environmental Manager to undertake a review of the relevant Management Plan or Site Specific Management Plan. This request shall be actioned by the Environmental Manager within five working days of that request. The revised Management Plan will then be submitted for certification (if necessary – i.e. minor changes may not require re-certification) by the relevant regulatory authority, clearly identifying that the reasons for requiring the review have been adequately addressed and that appropriate actions and a programme for implementation are provided for if required. Any changes to the Management Plan or Site Specific Management Plan are not to be implemented until certified or otherwise agreed with the relevant Regulatory Manager.

6.4 Environmental risk register

An Environmental Risk Register (Impacts and Aspects) is attached as Appendix E. The Risk Register is a live document which will be referred to by staff in the preparation of work plans and Job Safety Environment Analysis (JSEA). As construction progresses the risk register will be reviewed and updated appropriately. In addition, following significant environmental incidents, the risk register will be reviewed and updated accordingly.

Construction aspects and impacts have been identified and a hazard ranking assigned along with the intention to eliminate, isolate or minimise the impact. Mitigation measures are also identified for each aspect.

7 Communication and interface procedures

An 0508 phone line which will be manned 24 hours a day will be available for all stakeholders to communicate complaints and enquiries to the project. During the day, this phone will be manned by the Construction Liaison Person. After hours the phone will rotate amongst Alliance Management Team Members on a weekly basis.

In addition, an email address and project social media page will permit communications with the project. Further detail on this is provided at Appendix R (Communication and Stakeholder Management Plan).

7.1 Environmental complaints

A complaints register is to be held by the Stakeholder Manager and updated regularly as new complaints are received.

All complaints are to be entered onto a Complaint Record (Appendix U) by the team member who has the initial contact with the complainant.

Information which is to be sought at the initial interaction with the complainant will include:

- Name, address and contact details of the complainant (if provided);
- The nature of the complaint;
- Location, date, and time of the complaint and the alleged event;
- Weather conditions at the time of the complaint including wind direction and approximate wind speed if the complaint relates to dust or noise issues.

The complaint will then be forwarded to the Environmental Manager within one hour of receiving it (during working hours) and as soon as practicable if received after hours. The Environmental Manager will then coordinate an investigation into the complaint. The investigation will include consideration of other activities such as outdoor burning or unusually dusty conditions which may be occurring in the vicinity which are not project related but may have contributed to the complaint.

Measures taken to respond and close out the complaint will be reported back to the complainant and recorded on the complaint record form prior to close out.

An initial response to the complainant will be made within 24 hours of the complaint being received. This initial response will detail the immediate investigations and measures taken to resolve the issue. The complaint is to be closed out with a finalised response to the complainant within 10 working days of receiving the complaint as detailed in condition DC.14.

A copy of the complaints register will be provided to The Manager and KCDC each month as required by Condition DC.14(d).

This project complaint procedure is to continue for six months following the commissioning of the Project to traffic.

8 Construction activities and effects

8.1 Overview

This CEMP addresses both the actual and potential effects on the environment of the construction activities during the Expressway project. More detail on managing these risks are detailed in the specific activity Management Plans which form part of the CEMP and are attached as Appendices.

The Environmental Risk (Impacts and Aspects) Register is detailed in Appendix E and identifies potential environmental aspects or risks associated with the Project construction activities and how the associated impacts or hazards will be avoided, remedied or mitigated.

8.2 Construction duration

The Project is anticipated to take approximately five years to construct with work being undertaken on a number of concurrent work faces at any one time. A Staging programme (to meet the requirements of Resource Consent Condition G.12) is attached at Appendix C. This identifies the main areas of work, approximate start dates, approximate lodgement dates of associated Site Specific Management Plans and general activities to be undertaken. The construction works have been divided into three zones – Southern, Central and Northern with each zone further broken down into sections and sub sections.

A breakdown of the three zones and the associated construction activities are detailed below:

Zone	Construction Activities
South	<ul style="list-style-type: none">■ Fill delivery for preload construction■ Excavation and fill■ Off-road earthworks transport■ Road base course and sealing works■ Bridge construction, including piling & vibro-replacement■ Local road realignment and resurfacing■ Landscaping
Central	<ul style="list-style-type: none">■ Excavation and fill■ Off-road earthworks transport■ Road base course and sealing works■ Bridge construction, including piling & vibro-replacement■ Construction of permanent traffic noise barriers■ Local road realignment and resurfacing

Zone	Construction Activities
North	<ul style="list-style-type: none"> ■ Fill delivery for preload construction ■ Excavation and fill ■ Off-road earthworks transport ■ Road base course and sealing works ■ Bridge construction, including piling & vibro-replacement ■ Local road realignment and resurfacing

8.3 Night works

Night works will be required at times throughout the construction phase of the Project. It is not anticipated that this will be a regular occurrence and will be used to facilitate the placement of bridge beams over busy roads and other activities in an effort to minimise traffic disruption and nuisance to residents.

Locations for the placement of bridge beams include:

- Raumati Road
- Kāpiti Road
- Mazengarb Road
- Otaihanga Road
- Te Moana Road
- Ngarara Road
- East and West ends of Kāpiti Road Intersection.

During night works, temporary lighting using mobile lighting towers will be erected. Once erected, the site engineer will be responsible for ensuring that no adverse light spill effects are created on adjacent neighbouring properties ie lights not directly shining into bedroom windows.

General traffic management set up and changes and removal throughout the life of the project may also be undertaken at night to minimise disruption to road users.

8.4 Construction controls

To ensure that the various construction activities are undertaken in accordance with consent conditions, a number of specific plans provide the framework by which the construction activities will be undertaken in order to minimise the potential adverse environmental effects. These are attached as Appendices to this CEMP.

The plans have been developed in accordance with the resource consent and designation conditions, and address the following issues:

- Erosion and Sediment Control – Appendix J
- Construction Noise and Vibration– Appendix H

- Construction Air Quality (Dust) – Appendix I
- Contaminated Soils (Human Health) – Appendix V
- Contaminated Soils and Groundwater – Appendix M
- Ecological Management including avifauna, lizard, and fish management – Appendix O
- Hazardous substances management – Appendix N
- Waste management – Appendix Q
- Accidental Discovery Protocol – Appendix X
- Settlement effects – Appendix L
- Groundwater (Level) Management Plan – Appendix K
- Stakeholder and Communications – Appendix R.

In order to address site specific issues in a more detailed manner, the consent conditions allow for the development of a number of site specific management plans.

Site specific management plans will be developed primarily to address:

- Erosion and sediment control;
- Construction noise and vibration;
- Landscape Management;
- Urban Design;
- Traffic Management;
- Ecological Management;
- Hard landscape (street furniture, bridge columns, gabion baskets); and
- Planting.

The construction sections for which these site specific management will be developed are identified in the Staging Programme attached at Appendix C.

8.5 Nuisance issues

A number of drawings identifying the key impact areas for construction nuisance issues are attached at Appendix D. These drawings overlay the noise exceedance risk, construction vibration hot spots, known archaeological sites and air quality sensitivities of receivers with the construction alignment and neighbouring residents.

These drawings will be used by the Environmental, Stakeholder and Construction Teams to identify areas where additional communication and care will be required to address potential construction issues.

8.6 Key receptors

A number of key receptors have been identified along the length of the Expressway and can be identified in the drawings attached at Appendix D. These receptors have been identified due to their proximity to the alignment. Specific mitigation will be required to

address construction nuisance issues at these locations. More detail can be found in the specific nuisance management plan e.g. Construction Noise and Vibration Management Plan or the Construction Air Quality Management Plan.

A summary of these receptors and the potential nuisance issues associated with them are detailed below:

Zone	Nuisance	Receiver
South Zone	Day time Construction Noise	Identified Leinster Ave residents
		Identified Matai Road and Finchham Road residents
		Identified Quadrant Heights Road and Bearing West Court residents
	Day and night time construction noise	Identified Matai Road and Finchham Road residents
	Night time Construction Noise	Identified Matai Road and Finchham Road residents
	Construction Vibration	Identified Leinster Ave residents
		Identified Fincham Road and Conifer Court residents
		Identified Quadrant Heights Road and Bearing West Court residents
	Air quality (dust) – high sensitivity	Identified Conifer Court, Rata Road, Wedgewood Grove, Konini Grove residents
		Identified Rata Road residents
Identified Quadrant Heights Road and Bearing West Court residents		
Central Zone	Day time Construction Noise	Identified Makarini, Street, Cypress Grove, Spackman Crescent, Chilton Drive, Fytfield Place residents
		Identified Cheltenham Drive, Oxford Court residents
	Day and night time construction noise	Identified Kāpiti Road Residents
		Identified Te Moana Road residents
	Night time Construction Noise	Identified Chilton Drive and Mazengarb Road Residents

Zone	Nuisance	Receiver
	Construction Vibration	Identified Kāpiti Road, Greenwood Place, Makarini, Street, Cypress Grove, Spackman Crescent, Chilton Drive residents
		Identified Mazengarb Road, Killalea Place and Otaihanga Road residents
		El Rancho and identified Kauri Road, Puriri Road and Te Moana Road residents
	Air quality (dust) – high sensitivity	Identified Kāpiti Road, Arawhata Road, Greenwood Place, Makarini, Street, Cypress Grove, Spackman Crescent, Chilton Drive, Fytfield Place residents
		Identified Malvern Way, Cheltenham Drive, Oxford Court residents
		El Rancho and identified Kauri Road, Puriri Road and Park Avenue and Te Moana Road residents
North Zone	Night time Construction Noise	Identified Peka Peka Road residents
	Construction Vibration	Identified Peka Peka and Te Kowhai Road residents
	Air quality (dust) – high sensitivity	Identified Peka Peka Road residents

8.7 Sensitive receiving environments

A number of sensitive aquatic and marine receiving environments have been identified across the project. These include the:

- Whareroa Stream
- Whareroa Estuary
- Wharemauku Stream
- Wharemauku Estuary
- Mazengarb Stream
- Muaupoko Stream
- Waikanae River
- Waimeha Stream
- Waimeha Estuary
- Kakariki Stream
- Ngarara Stream

- Paetawa Stream
- Te Harakeke / Kawakahia Wetland.

An extensive suite of pre, during and post construction monitoring is required under the consent conditions to ensure that any potential construction impacts on these receiving environments are identified and appropriately avoided or mitigated. The monitoring programme is detailed in the Ecological Management Plan (Appendix O).

An adaptive management regime is a key part of the monitoring programme where the extent or scale of adverse effects are unknown, found to be greater than anticipated, or where agreed mitigation methods do not achieve the objectives that have been set.

Adaptive management involves decision making based on monitoring results throughout the course of the project. As a result, an extensive suite of baseline monitoring has been undertaken for 12 months prior to construction starting. Baseline monitoring of groundwater, settlement, vegetation, wetlands, freshwater and marine ecology and fernbird habitat has been undertaken.

From this monitoring, initial management trigger levels have been identified. A summary of these trigger levels is provided below. Further detail can be located in the Ecological Management Plan.

8.8 Erosion and sediment control

During construction of the Expressway, there is the potential for sediment laden discharges to occur from exposed surfaces. While these discharges can have a negative impact on receiving environments, the proposed controls as detailed in the Erosion and Sediment Control Plan (Appendix J) will avoid, remedy or mitigate these construction effects.

The ESCP provides for an overview of the erosion and sediment management techniques and measures that will be used within the Project, provides specific examples throughout and also outlines methodologies and management techniques that will apply and will achieve the necessary environmental objectives. Site monitoring and auditing functions are also detailed.

The measures proposed in the Erosion and Sediment Control Plan are based on the Greater Wellington Regional Council's Erosion and Sediment Control Guidelines for the Wellington Region, September 2002 (Wellington Guidelines). These are considered to be more stringent than the draft NZTA Erosion and Sediment Control Standard for State Highway Infrastructure dated August 2010 (NZTA Draft Standard).

Detailed erosion and sediment control plans known as Construction Erosion and Sediment Control Plans (CESCPs) will be prepared for specific areas and activities as identified by the Staging Plan at Appendix C. These will be the key documents used by the construction team to implement erosion and sediment control measures on site.

Key erosion and sediment control measures outlined in the ESCP at Appendix J include:

- The site is generally flat topography consisting of peat soils with overlying sand layers and areas of sand soils;
- The peat layers generally have high water tables;
- Due to the soils, topography and high water table, traditional erosion and sediment controls may always not be appropriate;
- Erosion control will be a key priority to reduce the sediment loads requiring subsequent treatment;
- Chemical treatment using polyacrylamide socks will be utilised only where discharge quality cannot be achieved naturally;
- Progressive stabilisation including seeding, mulching and geotextiles will occur throughout the course of the project to minimise erosion and dust generation;
- The main erosion and sediment control risks associated with earthworks include:
 - exposure of bare land (potential dust generation);
 - receiving environments and their associated values;
 - works within and adjacent to watercourses and wetlands (stream diversions, bridge works, culvert placement);
 - stockpiling of spoil materials; and
 - pumping of sediment laden water from excavations.
- Key structural measures for sediment control include:
 - diversion channels;
 - decanting earth bunds;
 - silt fences and super silt fences; and
 - sediment retention ponds.
- Informal monitoring of controls will be undertaken by foremen with notes for repairs noted in their daily diaries;
- Formal weekly inspections will be undertaken by the Environmental Specialist, checking the controls for compliance and maintenance requirements;
- Monitoring during construction will include continuous turbidity loggers and triggered grab samples;
- Daily weather reports including the five day look ahead will be sent to the construction team by the Environmental Specialist;
- A heavy rainfall event is considered to be 15mm or more in one 24 hour period
- A Permit to Pump system is to be enacted with all pumping activities to be recorded and authorised by the Environmental Manager prior to pumping commencing;
- Sediment retention ponds are to be sized to the 2% volume criterion as detailed below.

Sediment Retention Pond	Maximum Catchment Area (ha)	Minimum Pond Volume (m ³)	Forebay Volume (m ³)	Top Dimension (m) 1.0m depth – all based on 3:1 length to width ratio except SRP # 4	Number of Decants	Side Slopes	Inlet Slope
SRP # 1	2.92	584	55	46.0 by 17.0	2	2:1	3:1
SRP # 2	2.12	424	45	39.5 by 15.0	2	2:1	3:1
SRP # 3	1.01	202	20	28.5 by 11.5	1	2:1	3:1
SRP # 4 – L:W = 5:1	3.35	670	70	62.0 by 14.0	3	2:1	3:1
SRP # 5 To utilise proposed perm S.Water Wetland	1.36	272	25	32.5 by 13.0	1	2:1	3:1
SRP # 6 To utilise proposed perm S.Water Wetland	1.89	378	40	37.5 by 14.5	2	2:1	3:1
SRP # 7	0.84	168	15	26.5 by 10.5	1	2:1	3:1
SRP # 8 To utilise proposed perm S.Water Wetland	2.43	486	50	42.0 by 16.0	2	2:1	3:1
SRP # 9 To utilise proposed perm S.Water Wetland	2.34	468	45	41.5 by 15.5	2	2:1	3:1
SRP # 10 To utilise proposed perm S.Water Wetland	2.72	544	55	44.5 by 16.5	2	2:1	3:1
SRP # 11 To utilise proposed perm S.Water Wetland	4.15	830	80	54.0 by 20.0	3	2:1	3:1
SRP # 12 To utilise proposed perm S.Water Wetland	0.38	76	10	19.0 by 8.5	1	2:1	3:1
SRP # 13 To utilise proposed perm S.Water Wetland	3.92	784	80	52.5 by 19.5	3	2:1	3:1

Dirty water diversion channel sizing will be as per the table below:

Catchment Areas	100yr ARI Q (m ³ /s)	100yr ARI Site slope 5% Depth (m)	100yr ARI Site slope 5% Bund Height (m) (D+300mm)
0.50	0.1124	0.1520	0.4520
1.00	0.2248	0.1971	0.4971
1.50	0.3372	0.2295	0.5295
2.00	0.4496	0.2556	0.5556
2.50	0.5620	0.2779	0.5779
3.00	0.6744	0.2976	0.5976
3.50	0.7867	0.3153	0.6153
4.00	0.8991	0.3315	0.6315
4.50	1.0115	0.3465	0.6465
5.00	1.1239	0.3604	0.6604
5.50	1.2363	0.3736	0.6736
6.00	1.3487	0.3860	0.6860
6.50	1.4611	0.3977	0.6977
7.00	1.5735	0.4089	0.7089
7.50	1.6859	0.4196	0.7196
8.00	1.7983	0.4299	0.7299
8.50	1.9107	0.4398	0.7398
9.00	2.0231	0.4493	0.7493
9.50	2.1354	0.4585	0.7585
10.00	2.2478	0.4674	0.7674

Additional detail can be found in the ESCP and the CESCPS.

8.9 Dust

Dust can create a nuisance effect for local residents by impacting on washing hung out to dry, leaving dust on house roofs, windows and water tanks. In the case of extremely sensitive human receivers, dust can cause a health issue. Dust can also be deposited on paddocks, crops and vegetable gardens leaving the grass or crops less palatable for animals and humans.

Rainfall and wind speed are the two key meteorological conditions which can have the greatest effect on dust mobilisation along with the extent of construction area which is 'open' at any one stage. The spring equinox in September traditionally produces strong winds on the Kāpiti Coast and the construction programme will take this into account when addressing this effect.

Key methods for managing and mitigating the effects of dust will include

- Minimising areas of exposed earthworks and by stabilising completed areas as soon as practicable;

- Maintaining stabilised entrance and exit points;
- Using compactors and rollers to seal the surface;
- Using water carts or sprinklers to apply water to areas generating dust;
- Reducing the speed of earthmoving plant in localised areas if appropriate;
- Use of commercial dust suppressants if required.

More detailed methods regarding dust control are detailed in the Construction Air Quality Management Plan (CAQMP) attached at Appendix I.

8.10 Construction noise and vibration

Construction noise and vibration issues can be very emotive issues for stakeholders located close to construction projects. The key to managing these two construction nuisance issues is to ensure residents are well informed of what can be expected and to mitigate the effects of construction noise activities as far as practicable.

A number of key construction areas have been highlighted which require Site Specific Construction Noise and/or Vibration Management Plans to be prepared prior to construction works starting in that area. Mitigation and procedures for addressing construction noise and vibration issues are detailed in the Construction Noise Vibration Management Plan attached at Appendix H.

8.11 Construction machinery and vehicle emissions

Excessive smoke and odour from diesel-fuelled trucks, generators and other machinery is primarily caused by poor engine maintenance. Failure to maintain air filters, fuel filters, and fuel injectors to manufacturers' specifications may cause excessive black smoke and objectionable odour.

These discharges are very unlikely due to the use of modern machinery as far as practicable and regular servicing of vehicles. Additional detail can be found in the CAQMP attached at Appendix I.

8.12 Temporary stormwater management

Stormwater generated within the construction footprint will be managed in accordance with the ESCP and CESCPS. This plan covers the management of earthworked areas during the construction phase. The construction related sediment controls must remain in place until all earthworks in the catchment are stabilised, and permanent stormwater devices are operational. In addition, sign off from the Environmental Manager will be obtained before any controls are removed.

8.13 Groundwater

Construction of the Expressway will result in temporary and long term changes in groundwater levels locally which may result in the:

- Changes in ground water levels in some wetlands;
- Altered groundwater contributions to surface water bodies (rivers and wetlands);
- Possible ground settlement and potential damage to existing structures; and
- Altered groundwater levels in shallow private wells.

Extensive base line monitoring has been undertaken prior to construction so that any future changes in groundwater levels can be assessed as to whether they are attributable to the Project.

Detailed monitoring and procedures to minimise the impact of construction activities on Groundwater Levels are included in the Groundwater (Level) Management Plan (GMP) attached at Appendix K.

8.14 Settlement

Construction activities on the Expressway may result in settlement effects. Potential settlement sources may include:

- consolidation settlement due to embankment construction;
- consolidation settlement due to groundwater drawdown; and
- mechanical settlement due to vibrations from construction activities.

The Settlement Effects Management Plan (SEMP) attached at Appendix L details the monitoring and mitigation to be implemented to avoid, remedy or mitigate these potential effects.

8.15 Contaminated land

The Contaminated Soils and Groundwater Management Plan (CSGMP) attached at Appendix M outlines the procedures for handling known contaminated soil and groundwater identified at selected locations along the Expressway. The plan also includes procedures for the Project team to follow in the event of the discovery of unexpected contaminated soil or groundwater, and examples of visual and odour indicators of contamination.

8.16 Hazardous substances and spills

The Project will involve the use of a variety of construction plant and machinery. The majority of this plant will be motorised and will require a regular supply of fuels and oils. These can become a pollutant if discharged to ground or water.

Other materials used in the construction process including concrete, bonding agents, sealants, flocculants and degreasers can result in environmental impacts if they are not managed carefully and are discharged to the environment in an uncontrolled manner.

The Hazardous Substances Management Plan (HSMP) attached at Appendix N outlines the requirements for correct storage, handling, transport and disposal of hazardous substances during construction. It also details procedures in the event of a spill.

Spills will be contained within the site boundary as far as practicable. Key points to note include:

- Fuel for all construction plant will be delivered by mini-tanker and refuelling of construction plant will only be carried out in areas separated from environmentally sensitive areas e.g. water courses.
- Spill kits will be located throughout the construction site and immediately adjacent to high risk activities. In the event of a spill, procedure ENV-02 Fuel Oil Chemical Spill Procedure will be followed (Appendix 13).
- All Foreman will be provided with a small spill kit for their vehicles.
- Hydraulic oils, greases and other construction materials including small quantities of fuel required for hand tools and pumps may be stored at the site compound, in a secure, covered and bunded area, away from water courses.
- Specific concrete and grout wash-down areas shall be provided.
- Major plant maintenance will not be carried out onsite unless absolutely necessary. Minor repairs will be undertaken away from the edge of watercourses.
- Emergency response procedures and incident management are further discussed in Section 6 of the CEMP.

8.17 Archaeology

A number of recorded archaeological sites have been identified along the Expressway alignment and are identified in the drawings attached at Appendix D.

An extensive archaeological investigation is to be undertaken prior to the start of works along the alignment. It is expected that most of the unrecorded archaeological features along the Expressway will be identified at this time.

Nevertheless, an Accidental Discovery Protocol (Appendix X) has been prepared for the project.

As part of the site induction, all staff will view the *History on Action* DVD which provides an overview of what an archaeological site is, typical indicators and responsibilities associated with finding archaeological sites.

The key actions site staff uncovering unexpected finds are:

- Stop work;
- Tell the boss;
- Don't touch!

8.18 Ecological management

The Ecological Management Plan (EMP) and its associated appendices identify the key ecological sensitivities and receiving environment of the project. The plan identifies areas of terrestrial vegetation to be retained, procedures for the clearance of fernbird, NZ Pipit

and grey duck habitat, procedures for managing lizard habitat in areas of vegetation to be cleared and values associated with receiving environments.

Extensive monitoring is required throughout the course of the project and this is detailed in the EMP with a summary provided in Section 9.7 of this CEMP.

Extensive ecological and landscape mitigation will be undertaken as part of the project including 40.7 ha restoration plantings.

Site Specific Ecological Management Plans (SSEMP's) and Site Specific Landscape Management Plans (SSLMP's) will be prepared for a number of areas as identified in the Staging Plan attached at Appendix C.

8.19 Resource Efficiency and Waste Management

The Resource Efficiency and Waste Management Plan (REWMP) attached at Appendix Q identifies opportunities to be considered during the design of the project and identifies how the Alliance will manage the construction waste generated by the project.

Construction sites have a variety of waste streams including:

- officer paper;
- lunch wastes;
- cans and bottles from smoko sheds;
- concrete;
- wood (treated and untreated);
- steel;
- plastics;
- packaging; and
- general waste.

With construction and demolition wastes accounting for 30% of all landfill waste, opportunities for re-using and recycling construction materials will be investigated and implemented where practicable. Opportunities for reusing and recycling waste within the local community through the Waste Exchange will also be investigated.

Large skip bins will be located throughout the site to ensure waste materials and recyclable materials are stored and disposed of appropriately. These will be well sign posted to clearly identify what materials go in which bins.

Officer paper, cardboard and bottles, cans and plastic will be recycled.

Opportunities for recycling concrete, plastics and wood into other value added products and possible reuse back on site, for example, wood to woodchip for site landscaping will be investigated.

8.20 Traffic management

Construction of the Expressway will involve increased truck movements for the delivery of materials, transportation of cut to waste materials off site and other associated vehicle movements. While the majority of haulage vehicle movements will be contained within the construction alignment, local roads may be impacted with additional vehicle movements associated with the project.

Additional traffic impacts due to construction may include localised traffic restrictions, temporary road closures and diversions and reduced speed areas. Prior warning will be given to affected parties and stakeholders prior to temporary restrictions being implemented.

The Construction Traffic Management Plan (CTMP) attached at Appendix S provides methodologies and procedures for addressing the construction impacts on pedestrians, cyclists, horse riders, residents, businesses, public transport and general traffic.

Three key areas of Traffic Management (TM) have been identified. These are:

- Level Of Service (traffic capacity) – The Alliance intention is to maintain existing traffic flows and provide TM that has negligible perceived impact as far as practicable. This will involve designing long-term setups that maintain, as closely as possible, existing levels of connectivity and travel times.
- Safety – Safety standards will be maintained by designing CTMPs that follow KCDC standards, by managing Site Access Points and construction vehicle operations, through STMS monitoring, inductions and training, and close maintenance of the site.
- Road Condition – Pre-construction surveys will be carried out to identify existing defects. A Construction Zone will then be authorised and construction vehicle routes will be determined (and modified as work progresses). Road sweeping, cleaning, repair and maintenance will be carried out as required to maintain acceptable road conditions.

9 Compliance monitoring and reporting

The designation and resource consent conditions require an extensive suite of monitoring requirements which have been summarised below in Section 9.6. More detailed information on the monitoring can be found in the relevant Management Plans.

Reporting against the environmental KPI's and consent compliance will be undertaken on a monthly basis to the Project Alliance Board

9.1 Regular environmental compliance updates

The Alliance proposes that a regular (monthly) environmental compliance meeting be held with KCDC and GWRC.

It is envisaged that the two regulatory authorities will meet separately to start with. However, there may be opportunities as the project progresses to combine these meetings into one regulatory compliance meeting.

9.2 Annual monitoring report

An annual monitoring report shall be prepared by the Alliance Environmental Manager and provided to the Regulatory Manager at GWRC by the 30th September each year.

The purpose of the Annual Monitoring Report is to provide an overview of the monitoring and reporting undertaken in the previous 12 months and the discussion of any environmental issues which may have been flagged by the monitoring undertaken.

The Annual Monitoring Report shall include:

- All monitoring data and a summarised interpretation of this data;
- Any reasons for non-compliance or difficulties in achieving compliance with the conditions of consent
- Any work which has been undertaken to improve the environmental performance on the site or that is proposed in the upcoming year
- Recommendations on alterations to the monitoring required and how and when these will be implemented through changes to the relevant management plans; and
- Any other issues considered important by the Alliance.

9.3 CS-Vue

CS-Vue™ is a legal compliance system adopted by the NZTA to manage environmental statutory requirements. The M2PP Alliance is tasked with tracking and recording compliance with legal obligations such as resource consents, designation conditions, Department of Conservation concessions, Historic Places Trust authorities and any other agreements or obligations with compliance conditions in CS-VUE™.

CS-Vue™ is a secure database which matches each consent (or other legal obligation) with a consent manager and condition manager and automatically sends an email notifying them of compliance requirements. All entries on CS-VUE are annotated with the person's name and date who undertook the changes.

During construction, the Alliance Environmental Manager will be responsible for ensuring that CS-VUE is kept up to date as the Project progresses. This will include ensuring that all monitoring reports and other evidence of compliance with consent conditions are uploaded in a timely manner.

9.4 Environmental auditing

Six monthly project environmental audits are required to:

- Determine conformance with the Alliance Environmental Management System;

- Ensure the EMS is properly implemented and maintained; and
- Determine the extent to which the requirements defined in consent conditions, management plans and environmental procedures have been met.

These audits will be undertaken by an external environmental manager from one of the Alliance's participant companies. This will allow a 'new pair of eyes' to view the Project and identify issues which may be overlooked by those who are working on the Project on a daily basis.

Internal audits will be undertaken by the Environmental Team on a weekly basis. These audits will focus on site and task specific activities such as erosion and sediment controls, refuelling procedures and high risk construction activities to ensure all controls and methodologies are being implemented as detailed in the CEMP.

On site pre-construction meetings with GWRC will occur prior to works starting in each stage. These meetings will involve key members of the construction and environmental team and will be an opportunity to discuss proposed methodologies and plans for the section of work ahead.

External audits will predominantly be undertaken by regulatory authorities such as GWRC and KCDC to confirm compliance with resource consent conditions. The Environmental Manager along with the site Superintendent, Zone Managers, Project Engineers and/or Site Engineers will attend these compliance visits as required. The Environmental Manager will be responsible for ensuring that all non-conformances identified in an audit are closed out in a timely fashion as per the auditor's recommendations.

Results of the audits will be reported back to the Project team through a variety of mechanisms including site toolbox meetings, construction meetings, Alliance Management Team meetings and the Project Alliance Board.

9.5 Corrective Actions

Corrective actions are required as a result of audit findings, environmental incidents, complaints or consent non-compliance.

Actions to address the issue will be identified and closed out. Incidents, complaints and non-compliance will be closed out via completed incident forms.

Audit findings will be closed out and noted against the audit.

9.6 CEMP management review

The CEMP is a living document and will be reviewed regularly throughout the course of the project. Key aspects to be considered in the review process will include:

- Changes in construction methodology and subsequent environmental effects;
- Changes in mitigation measures for construction nuisance issues;

- Following changes in construction methodology or changes in mitigation measures; and
- Issues of non-compliance and process changes required to address these issues.

Reasons for making changes to the CEMP will be documented. A copy of the original CEMP document and subsequent versions will be kept for the Project records, and marked as obsolete. Each updated version of the CEMP documentation will be issued with a version number and date to eliminate obsolete CEMP documentation being used.

9.7 Compliance Monitoring Summary

Frequency	Monitoring	Notes
Pre Construction	Condition survey of existing carriageways	
	Building condition surveys at identified high risk buildings	
	Settlement monitoring pins	To be measured throughout construction at varying intervals. Refer Groundwater and Settlement Management Plan.
	Settlement surveys of identified high risk buildings	
	CCTV survey of high risk of settlement services	Monitoring to continue through out construction as required
	Groundwater Monitoring bores	To be continued through out construction at varying intervals. Refer Groundwater Level Management Plan
	Baseline monitoring for 12 months prior to construction for vegetation, wetlands, freshwater and marine	On-going throughout construction
	Groundwater and surface water monitoring at Otaihanga Landfill	Refer Contaminated Soils and Groundwater Management Plan
Prior to construction in specific areas	Fernbird calling prior to vegetation clearance outside breeding season	Refer Avifauna Management Plan in EMP
	Lizard relocation prior to vegetation clearance in identified areas	Refer Lizard Management Plan in EMP

Frequency	Monitoring	Notes
	Mudfish surveys prior to diversion works in key streams	Detailed in EMP
	Flow monitoring of the Wharemauku and Drain 5, 12 months prior to construction starting on flood storage area 2, 3A and wetland 3	
Daily	Informal inspection of environmental controls	Undertaken by site foreman
	Automated TSP measurements for dust at identified highly sensitive receivers	Automated but alarms to be responded to and operating system checked weekly
	Monitoring of weather conditions including wind speed, direction and rainfall	Automated system. Alarms to be responded to
	Informal visual of dust and odour beyond the boundary	All staff. Issues to be reported to Environmental Manager immediately
	Continuous turbidity loggers in key receiving environments	Data to be reviewed regularly and maintenance visits undertaken. Refer Ecological Management Plan
	Flow monitoring of the Wharemauku and Drain 5, 12 months prior to construction starting on flood storage area 2, 3A and wetland 3	
	Water meter installed on all groundwater take bores	
One-off	Stepped rate pumping test for each groundwater take bore. Followed by a constant rate pumping test for 8 hours.	
Weekly	Formal inspection of erosion and sediment controls	Undertaken by Environmental Specialist
Monthly	Settlement surveys of key high risk buildings	Refer Groundwater and Settlement Management Plan
	Surface water sampling at Otaihanga Landfill	Refer Contaminated Soils and Groundwater Management Plan

Frequency	Monitoring	Notes
Three monthly	Send groundwater level records from groundwater monitoring bores to GWRC	
Six monthly	Groundwater monitoring at Otaihangā Landfill	Refer Contaminated Soils and Groundwater Management Plan
Regularly	Road surveys of network affected by construction traffic to identify potholes and other damage	
	Noise monitoring to confirm compliance with limits and SSCNMPs	
	Vibration monitoring of construction activities near high risk receivers to confirm compliance with standards	
Annual	Monitoring report summarising all monitoring undertaken by the project	Submitted by 30th September each year to GWRC
	Wetland Condition monitoring at identified wetlands	Detailed in Ecological Management Plan
Triggered	Grab samples in receiving environments when site monitoring thresholds are exceeded; when NTU levels are elevated (>20% difference between upstream and downstream loggers)	Detailed in Ecological Management Plan
	Macro invertebrate sampling if elevated NTU levels remain for more than 48 hours	Detailed in Ecological Management Plan
	Inspections of receiving environment if design storm is exceeded or sediment control fails and discharge enters water body or wetland	

Frequency	Monitoring	Notes
Post Construction	Condition survey of existing carriageways	
	Operational noise monitoring	
	QA monitoring of landscaping to ensure required survival rates have been achieved	
	Settlement monitoring pins	At various intervals for two years. Refer Groundwater and Settlement Management Plan.
	Settlement surveys of identified high risk buildings	
	Vegetation, wetlands, freshwater and marine for between two and five years	Refer Ecological Management Plan
	Monitoring of culvert installation for fish passage following culvert installation at identified time intervals	Refer Ecological Management Plan
	Flow monitoring of the Wharemauku and Drain 5	12 months post construction of these areas of flood storage area 2, 3A and wetland 3
	Groundwater Monitoring bores	To continue at identified intervals for up to 36 months post construction
	Groundwater and surface water monitoring at Otaihanga Landfill at various rates	Refer Contaminated Soils and Groundwater Management Plan

Appendix A

Designation Conditions

DESIGNATION CONDITIONS

Ref	Wording of Conditions
	General Conditions and Administration
DC.1	<p>a) Except as modified by the conditions below, and subject to final design, the Project shall be undertaken in general accordance with the information provided by the Requiring Authority in the Notice of Requirement dated 3 April 2012 and supporting documents (as updated by information provided by the Requiring Authority with the Board's approval prior to the issuance of the Board's draft decision) being:</p> <ul style="list-style-type: none"> i) Assessment of Environmental Effects report, dated April 2012 ii) Plan sets: <ul style="list-style-type: none"> 1. CV-SP -100 – 160: Scheme plans (including updated Scheme Plans CV-SP-110 (revision 2), CV-SP-119a (revision 4), CV-SP-120 (revision 2)); 2. CV-GP-101-136: Geometric plans; 3. CV-SC-001-004: Cross sections; 4. CV-EW-100-232: Earthwork; 5. CV-BR-100-970: Bridges; 6. CV-GE-100-140: Structural - General; 7. GI-PR-01-18: Land Requirement Plans (including amended plans GI-PR-01, GI-PR-10, GI-PR-11, GI-PR-19); 8. CV-MF-100-132: Lighting, Marking and Signage (including Plan CV-MF-108 attached to the evidence of Keith Murray Gibson, dated 4 September 2012); 9. CV-CM-101-412: Construction Methodology; 10. EV-NV-001 to EV-NV-016: Preferred noise mitigation options; 11. Urban & Landscape Design Framework (Technical Report 5); 12. Landscape & Visual (Technical Report 7) - Appendix A & B; 13. Stormwater & Hydrology (Technical Report 22) – Appendix 22.A; 14. Erosion & Sediment Control (CEMP Appendix H) – Appendix H.B, H.C, H.D, H.E, H.F, H.H, H.I, H.R. 15. Proposed Ecological Mitigation Sites (dated 29 November 2012), Annexure 3 to the supplementary evidence of Robert John Schofield, dated 10 December 2012. iii) Changes to or replacements of any of the plans and information presented specified in paragraph (a) of this condition in support of the requirement at the Board of Inquiry hearing. <p>Where there is conflict between the documents lodged and the conditions, the conditions shall prevail. Where there is inconsistency between the information and plans lodged with the requirement and at the Board of Inquiry hearing, the most recent plans and information shall prevail.</p> <ul style="list-style-type: none"> b) This row is intentionally left blank. c) For the avoidance of doubt, none of the conditions of this designation (except where explicitly provided for) prevent or apply to work required for the ongoing operation or maintenance of the Project following construction such as changes to street furniture or signage over time. Depending upon the nature of such work, outline plans or outline plan waivers may be required. d) The relevant section of any technical report referred to in these conditions shall be regarded as part of these conditions, and a copy of each shall be appended to these conditions. e) The Project website shall provide online access to these conditions and the plans and reports referred to in these conditions throughout the construction of the Project, and a hard copy

Ref	Wording of Conditions
	shall be available at the Project site office.
DC.2	<p>As soon as practicable following completion of construction of the Project, the Requiring Authority shall:</p> <ul style="list-style-type: none"> a) Review the width of the area designated for the Project; b) Identify any areas of designated land that are no longer necessary for the on-going operation or maintenance of the State Highway or for on-going mitigation measures, provided that the designation fully retains the areas of offset storage, ecological mitigation (set out in resource consent condition G.42) and wetland treatment (with the exception of offset storage area 6A and the Kakariki Stream as covered by resource consent condition G.43), to ensure that these treatment and mitigation works are able to continue to function and be maintained on an on-going basis by the Requiring Authority; and c) Give notice to the Council in accordance with Section 182 of the RMA seeking the removal of those parts of the designation identified in D.2 (b) above.
DC.2A	<p>In relation to that part of the designation located in the northeastern corner of Queen Elizabeth Park, sited next to the Poplar Avenue Interchange, the Requiring Authority shall at the completion of construction activities and in consultation with GWRC restore any land thereof that is used for Project construction purposes (for example, as a laydown area) to at least its previous condition to the satisfaction of the Manager within 6 months of the completion of the interchange, or to a better condition if agreed with the GWRC.</p>
DC.3	<p>The designation shall lapse if not given effect to within 15 years from the date on which it is included in the District Plan under Section 175 of the RMA.</p>
DC.4	<p>The Requiring Authority shall reimburse the Council for its actual and reasonable costs incurred in carrying out its functions pursuant to Section 36(1)(d) of the Act.</p>
DC.4A	<p>No work for the Project may be undertaken on the property at 23 Kauri Road, Waikanae (with certificate of title reference WN865/99) other than work for the mitigation of effects on any owner or occupier of the subject land permitted by the Kāpiti Coast District Plan.</p>
Pedestrian /Cycle bridges	
DC.5	<p>The two pedestrian/cycle bridges and associated accesses referred to in condition DC.59A (in the Leinster Avenue and Makarini Street localities) shall be constructed and completed by the time the Expressway is operational.</p>
DC.6	<p>This row is intentionally left blank.</p>
Management Plans - General	
DC.7	<ul style="list-style-type: none"> a) All work shall be carried out in accordance with the applicable management plan(s) and other plans required by these conditions. b) The following management plans must be submitted to the Manager for certification: <ul style="list-style-type: none"> i) Construction Noise and Vibration Management Plan and any Site Specific Construction Noise or Vibration Management Plan; ii) Noise Monitoring Plan; iii) Construction Air Quality Management Plan; iv) Construction Traffic Management Plan and any Site Specific Construction Traffic Management Plan; v) Landscape Management Plan and any Site Specific Landscape Management Plan; vi) Settlement Effects Management Plan; vii) Hazardous Substances Management Plan; viii) Network Integration Plan; and

Ref	Wording of Conditions
	<ul style="list-style-type: none"> ix) Site Specific Urban Design Plans c) The following Management Plans do not require certification by the Council (and are not required to be independently peer reviewed): <ul style="list-style-type: none"> i) Network Utility Management Plan; and ii) Stakeholders and Communication Management Plan. d) The Management Plans shall be prepared in general accordance with the draft Management Plans lodged in support of the Notice of Requirement, except as modified during the hearing with the Board's approval, and by these conditions. e) Management plans that are not site specific management plans provide the overarching principles, methodologies and procedures for managing the effects of construction of the Expressway to achieve the environmental outcomes and performance standards required by these conditions. f) The purpose of a SSMP (where a SSMP is required by these conditions) is to assist the implementation of the applicable Management Plans listed in paragraph (b) of this condition by providing site specific detailed design and construction responses to address the specific context and environmental conditions and circumstances of each applicable sector of the route and in accordance with the staging identified in the programme required under DC.10C. Each SSMP must be consistent with, and be implemented in accordance with, the respective Management Plan.
DC.7A	<ul style="list-style-type: none"> a) Where condition DC.7 requires that a SSMP be submitted to the Manager for certification, the Requiring Authority shall lodge the SSMP with the Manager for certification in accordance with the timeframe outlined in the relevant conditions, prior to construction work commencing within that Stage of Work. Work within that Stage shall not commence until the Requiring Authority has received the Manager's written certification of the relevant SSMPs. b) SSMPs are to be prepared in accordance with the purpose, objectives and methodology outlined in the relevant Management Plan. c) The Requiring Authority may make minor changes to a SSMP if the request to make the change is made at least two working days prior to implementing the change and the Manager certifies that change. For the purpose of this condition, 'minor change' shall be defined in the relevant Management Plan and shall generally refer to either physical work of less than one day duration or a small change to design detail or construction methodology that the Manager considers will result in an improved environmental outcome. The Requiring Authority shall maintain a record of minor changes to SSMPs and provide a copy of this record to the Manager within 2 working days of each update. d) If the proposed change to a SSMP is more than minor, the Requiring Authority shall submit the change for certification to the Manager 5 working days prior to the Work commencing. e) The SSMPs shall be consistent with the methodologies and procedures outlined in the respective Management Plan, other than the Site Specific Urban Design Plans which must be consistent with the Urban and Landscape Design Framework.
DC.7B	<p>Where a management plan is required to be prepared in consultation with any third party, the management plan shall demonstrate how the views of that party (or parties) have been incorporated, and, where they have not, the reasons why.</p>
DC.8	<ul style="list-style-type: none"> a) In the event of any dispute, disagreement or inaction arising as to any certification required by the designation conditions, or as to the implementation of, or monitoring required by the conditions, matters shall be referred in the first instance to the Manager and to the NZTA's

Ref	Wording of Conditions
	<p>Regional State Highway Manager to determine a process of resolution.</p> <p>b) If a resolution cannot be agreed within 3 months of lodging the particular management plan, the matter may be referred to an independent appropriately qualified expert, acceptable to both parties, setting out the details of the matter to be referred for determination and the reasons the parties do not agree.</p> <p>c) The qualified expert shall be appointed within 10 working days of the NZTA or the Council giving notice of their intention to seek expert determination. The expert shall, as soon as possible, issue a decision on the matter.</p> <p>d) The decision of the qualified expert is binding on the Requiring Authority and shall be implemented by the Requiring Authority.</p> <p>e) The dispute resolution process above will be applied before any formal enforcement action is taken by the Council, except in urgent situations.</p>
DC.9	<p>The Requiring Authority may request amendments to any of the Management Plans required by these conditions by submitting the amendments in writing to the Manager for certification at least 10 working days prior to any changes taking effect. Any changes to management plans shall remain consistent with the overall intent of the relevant management plan and shall be consistent with the requirements of the relevant conditions attached to this designation.</p>
DC.10	<p>The Requiring Authority shall ensure that all Management Plans (including SSMPs) shall be made available for public viewing on the Project's website.</p>
DC.10A	<p>Where any condition requires that a Management Plan or other plan be certified, if the Plan has not been certified within 3 months of lodgement, or with the agreement of the Council, the Requiring Authority may elect as an alternative to submit the Management Plan to the Council as an Outline Plan in accordance with section 176A of the RMA, and compliance with section 176A will be deemed to satisfy the certification requirement.</p>
DC.10B	<p>a) The Requiring Authority shall submit a Construction Environmental Management Plan (CEMP) to the Manager for information at least 15 working days prior to commencement of Work. The CEMP shall include, as appendices, the suite of Management Plans required under condition DC.7 (other than SSMPs).</p> <p>b) Prior to submission of the CEMP to the Council and GWRC, the Requiring Authority shall organise a workshop with the Council and GWRC representatives to enable comments on the draft CEMP to be provided, focusing on the reporting procedures and timing and other interactions with the Councils during the construction of the Project. The Requiring Authority shall invite the Council and GWRC to the workshop at least 10 working days prior to the date of the workshop. A copy of the draft CEMP shall be provided to the Council and GWRC at least 5 working days prior to the date of the workshop. Any comments received from the Council representatives shall be supplied to the Manager when the CEMP is submitted, along with a clear explanation of where any comments have not been incorporated and the reasons why.</p>
DC.10C	<p>a) The Requiring Authority shall submit to the Manager 2 months prior to the start of the anticipated construction Work a detailed programme outlining:</p> <ul style="list-style-type: none"> i) The proposed staging of the construction Work; ii) The anticipated dates that management plans required to be submitted for certification by DC.7 and any other plans will be submitted to the Manager; iii) The anticipated dates by which site specific management plans will be submitted to the Manager for certification in accordance with the requirements of applicable conditions of

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	<p>this designation.</p> <p>b) The purpose of this programme is to assist the Council in planning for resources to certify these management plans within the appropriate timeframes.</p> <p>c) The Requiring Authority will provide the Manager with an updated programme of construction sequencing and/or SSMPs if changes occur in the programme. The updated programme shall be submitted at least 20 working days before any changes in sequencing occurs.</p>
Community Communications and Impact Monitoring – Construction	
DC.11	<p>A Community Liaison person shall be appointed by the Requiring Authority for the duration of the construction phase of the Project and for 12 months following completion of the Project to be the main and readily accessible point of contact at all times for persons affected by the construction and operation of the Project. The Requiring Authority shall take appropriate steps to advise all affected parties of the Community Liaison person's name and contact details. If the Community Liaison person will not be available for any reason, an alternative contact person shall be nominated, to ensure that a Project contact person is reasonably available by telephone during the construction phase of the Project and for 12 months following completion of the Project.</p>
DC.12	<p>a) Prior to the commencement of construction and/or enabling Work, the Requiring Authority shall prepare and implement, a Stakeholder and Communications Management Plan (SCMP) that sets out procedures detailing how the public and stakeholders will be communicated with throughout the construction period. The stakeholders comprise the Kāpiti Coast communities, road users and the residents affected by construction activities.</p> <p>b) The purpose of the SCMP is to provide a framework to:</p> <ul style="list-style-type: none"> i) Inform the community of construction progress; ii) Engage with the community in order to foster good relationships and to provide opportunities for learning about the Project; iii) Provide early information on key Project milestones; and iv) Respond to queries and complaints. <p>c) As a minimum, the SCMP shall include:</p> <ul style="list-style-type: none"> i) Details of a contact person available on site at all times during work. Contact details shall be prominently displayed at the entrance to the site(s) so that they are clearly visible to the public at all times. ii) Methods to consult on and to communicate the proposed hours of construction activities outside of normal working hours and on weekends and public holidays, to surrounding residential communities, and methods to deal with concerns raised about such hours. iii) Methods to record concerns raised about hours of construction activities and, where practicable, methods that, insofar as it is practicable, avoid particular times of day which have been identified as being particularly sensitive for neighbours. iv) Any stakeholder specific communication plans required. v) Monitoring and review procedures for the SCMP. vi) Details of communications activities proposed including: <ul style="list-style-type: none"> 1. Publication of a newsletter, or similar, and its proposed delivery area. 2. Newspaper advertising. 3. Notification and consultation with individual property owners and occupiers with dwellings within 20 metres of construction activities.

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	<p>4. The use of the Project website for public information.</p> <p>d) The SCMP shall include linkages and cross-references to methods set out in other management plans where relevant. The SCMP shall be provided at least 15 working days prior to construction commencing, to the Manager and Community Liaison Group.</p>
DC.13	<p>a) The NZTA shall, in consultation with the Manager, establish at least two Community Liaison Groups (CLG) at least 30 working days prior to construction commencing in each of the following key construction areas:</p> <ul style="list-style-type: none"> i) Northern Project Area (including the communities of Waikanae Beach and Peka Peka); ii) Southern Project Area (including the communities of Raumati South, Raumati Beach, Paraparaumu and Otaihanga). <p>The number of CLGs shall be confirmed in consultation with the Council, and shall be sufficient for the purposes of effective facilitation of the ongoing dissemination of information and communication to and from the Requiring Authority from and to communities (including the Requiring Authority's responses to issues arising).</p> <p>b) The CLGs shall continue for the duration of the construction phase of the Project and for 12 months following completion of the Project.</p> <p>c) The Requiring Authority will in consultation with the Council, appoint one or more persons appropriately qualified in community consultation and social assessment as Community Consultation Advisor(s) (<i>Community Consultation Advisor</i>) to provide advice to the Groups as or if required, to ensure the Groups are working effectively (including the development of a Code of Conduct) and appropriate procedures for each group and to act as a community consultation advisor to the Group.</p> <p>d) The purpose of the CLGs shall be to provide a means for monitoring the effects of constructing the Project on the community by providing a regular forum through which information about the Project can be provided to the community. The CLGs will also enable opportunities for concerns and issues to be reported to and responded by the Requiring Authority. Matters to be addressed by the CLGs may include, but not are limited to, the following matters:</p> <ul style="list-style-type: none"> i) Effects of construction on schools and other educational and community facilities, including effects on traffic; ii) Effects of construction on housing supply and accommodation costs; iii) Arrangements for adequate provision of health and social services to the construction workforce; iv) Provision of information about the expected construction workforce at all times throughout construction; v) Extent of generation of local training and employment; and vi) Response to issues raised by the Neighbourhood Impact Forums (under DC.13A) and complaints received. <p>e) In addition to representative(s) of the Requiring Authority, membership of the Community Liaison Group shall be open to all interested organisations within the Project area including, but not limited to the following groups:</p> <ul style="list-style-type: none"> i) the Council; ii) Educational facilities within the project area (including schools, kindergartens, childcare facilities); iii) Community / environmental groups; iv) Business groups; and

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	<p>v) Community Boards.</p> <p>f) The Requiring Authority shall arrange that the Project's Community Liaison person and, as required, the Community Consultation Adviser (as required to be appointed under c)) attends meetings of the CLG, and that the meetings are held at least once every three months throughout the construction period so that the intentions of this condition are fulfilled. The role of the Community Liaison person at these meetings shall be to hear and convey information received from the Groups to the Requiring Authority and the construction contractors, and to provide the Groups with updates on construction, including any remedial responses to issues raised by the Groups.</p> <p>g) The Requiring Authority shall arrange that the Chairperson of each CLG (or other person appointed by the Group) writes a report summarising the main points arising from each meeting of the CLGs reporting on any social impacts of the Project, along with recommendations on the measures to mitigate those effects. The Requiring Authority shall ensure that a copy of the report is provided to the Council and to meeting attendees within 10 working days of the meeting. The Requiring Authority shall be responsible for all reasonable costs associated with the resourcing of the CLGs.</p> <p>h) The Requiring Authority shall consider the recommendations and shall take reasonable steps to implement any recommendations that are within its statutory powers to execute under this designation.</p>
DC.13A	<p>a) The Requiring Authority shall establish and coordinate at least two Neighbourhood Impact Fora (NIFs) and appoint an independent community development facilitator ('Facilitator') for the NIFs in consultation with the Council. A NIF shall be established for each of the following neighbourhoods:</p> <ul style="list-style-type: none"> i) Leinster Avenue neighbourhood; and ii) Makarini Street neighbourhood. <p>The extent of the neighbourhood shall be defined by the Facilitator.</p> <p>b) Additional NIF(s) shall be established in relation to any other neighbourhood which the Council considers requires special attention; for example, following a recommendation of the relevant CLG or on receipt of a substantial number of complaints from a neighbourhood;</p> <p>c) Each NIF shall include the Community Liaison person, the Facilitator, one representative from the Council's social wellbeing team, and one representative from the relevant Community Board. The Requiring Authority shall also invite all residents from the relevant neighbourhood to participate in the NIF. If required, Project expert(s) shall attend NIF meetings to respond to any issues raised by the NIF as relevant on behalf of the Requiring Authority.</p> <p>d) The purpose of the NIF is to provide a forum for the neighbourhood to inform the CLG and the Requiring Authority about concerns in relation to the construction and for one year after completion of construction of the Project in that neighbourhood so that the Requiring Authority can respond to those concerns.</p> <p>e) Each NIF shall be formed within one month of the commencement of construction of the Project within the relevant sector and shall have their first meetings within one month of being formed. Meetings shall be convened once every three month thereafter for the duration of construction affecting the locality, unless otherwise sought by the majority of its members. The NIFs shall continue for the duration of the construction of that sector of the Project in proximity to the relevant neighbourhood and for twelve months subsequent to the completion of works in that sector;</p>

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	<p>f) Each NIF may formulate its own Terms of Reference and procedures as it sees fit, including the frequency, times and locations of meetings.</p> <p>g) The NIF Facilitator shall write a report summarising the main points arising from each meeting of the NIFs, which shall be forwarded to the Council, the Requiring Authority, the CLG and to attendees within 5 working days of the meeting.</p> <p>h) The Requiring Authority shall not be in breach of this condition if any one or more of the parties specified in this condition do not wish to be members of the NIF or do not attend particular meetings or do not perform tasks and roles specified in this condition.</p>
DC.13B	<p>a) The Requiring Authority shall provide the attendees of each CLG and NIF at least 5 working days before their first meetings the construction programme relevant to their area of interest, which shall include the staging of construction, the anticipated number of construction staff, and other facets that may impact on residents and community facilities;</p> <p>b) The Requiring Authority shall ensure it provides further meetings of the CLGs and NIFs with updates about the Project construction so the attendees can understand changes in the nature and scale of the works, including the numbers of construction staff, their accommodation, and other facets that may impact on residents and community facilities.</p> <p>c) The Requiring Authority shall ensure that appropriate personnel attend meetings of the NIFs and CLGs to explain how the effects of construction are proposed to be managed and to respond to any questions.</p>
Complaints	
DC.14	<p>a) At all times during construction work, the Requiring Authority shall maintain a permanent register of any complaints received alleging adverse effects from, or related to, the exercise of this designation. The register shall include:</p> <ul style="list-style-type: none"> i) the name and address (as far as practicable) of the complainant; ii) identification of the nature of the complaint; iii) location, date and time of the complaint and of the alleged event; iv) weather conditions at the time of the complaint (as far as practicable), and including wind direction and approximate wind speed if the complaint relates to air quality; v) the outcome of the Requiring Authority's investigation into the complaint; vi) measures taken to respond to the complaint; and vii) any other activities in the area, unrelated to the Project that may have contributed to the complaint, such as non-Project construction, fires, traffic accidents or unusually dusty conditions generally. <p>b) The Requiring Authority shall provide a response to any complainant within 10 working days of receiving the complaint.</p> <p>c) The Requiring Authority shall also maintain a record of its responses and any remedial actions undertaken.</p> <p>d) A copy of the Complaints Register shall be provided to the Manager every month.</p>
DC.15	<p>The obligations in DC.14 shall continue for 6 months following the commissioning of the Project. Any complaints received after this period shall be managed by the Requiring Authority in accordance with its standard complaints procedures.</p>
Independent Monitoring and Auditing	
DC.16	<p>This row is intentionally left blank.</p>
Construction Traffic Management	
DC.16A	<p>a) In managing construction traffic, the Requiring Authority shall achieve the following</p>

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	<p>outcomes:</p> <ul style="list-style-type: none"> i) Minimise the disruption to road users using the local road network and footpaths; ii) Maintain a safe passage for all road and footpath users affected by construction; <p>b) The Requiring Authority shall:</p> <ul style="list-style-type: none"> i) Identify local road delay triggers on local travel routes; ii) Monitor the travel times on local travel route to determine if the delay triggers have been exceeded; and iii) Investigate additional mitigation measures to remedy any adverse effects on local traffic arising from the delay triggers being exceeded. <p>c) In achieving the outcomes in Condition DC.16A(a), the Requiring Authority shall adopt the following standards and guidelines insofar as they are relevant:</p> <ul style="list-style-type: none"> i) NZTA Traffic Control Devices Manual; and ii) NZTA Code of Practice for Temporary Traffic Management. <p>d) In managing construction activities, the Requiring Authority shall comply with the following standards:</p> <ul style="list-style-type: none"> i) Local traffic shall not be held up by construction activities by any longer than 2 minutes, except in regard to bridge construction when the structural components are being put in place, when the maximum delay shall not exceed 5 minutes; and ii) Emergency services shall be provided with unimpeded access along all local roads 24 hours per day, unless bridge or wall construction requires the temporary closure of a road, in which case, as part of the relevant SSTMP, an Emergency Action Plan must be developed and agreed with emergency services prior to any temporary closure so that an alternative access via a detour route is available for the duration of that temporary closure.
DC.17	<ul style="list-style-type: none"> a) The Requiring Authority shall submit the Construction Traffic Management Plan (CTMP) to the Manager for certification, at least 15 working days prior to commencement of construction of the Project. The purpose of the CTMP is to outline the proposed procedures, requirements and standards necessary for managing the traffic effects of construction to achieve the outcomes and standards required under Condition DC.16A. b) The certified CTMP shall confirm the procedures, requirements and standards necessary for managing the traffic effects during construction of the Project so that safe, adequate and convenient facilities for local movements by all transport modes are maintained throughout the construction period. c) Work shall not commence until the Requiring Authority has received the Manager's written certification of the CTMP.
DC.17A	<ul style="list-style-type: none"> a) The Requiring Authority shall submit Site Specific Traffic Management Plans (SSTMP) to the Manager for certification, in the case of a "Minor SSTMP" at least 5 working days prior to the commencement of construction work in that area to which that "minor" SSTMP applies, and in the case of a "Major SSTMP" at least 10 working days prior to the commencement of construction work in that area to which that "Major SSTMP" applies. For the purposes of this condition, a "Minor SSTMP" means a SSTMP in relation to construction work of 5 or fewer days in duration, and a "Major SSTMP" means a SSTMP in relation to construction work of more than 5 days in duration. b) A SSTMP shall describe the measures that will be taken to manage the traffic effects associated with the construction of specific parts of the Project prior to construction of the

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	<p>relevant part(s) of the Project commencing. The purpose of a SSTMP shall be to identify the specific construction traffic management methods proposed to address the particular circumstances, local traffic and community travel demands, and environmental context of each sector or stage of the Project in order to comply with the outcomes and standards required under Condition DC.16A(a) and (d). In particular, SSTMPs shall describe, where appropriate:</p> <ul style="list-style-type: none"> i) Temporary traffic management measures required to manage impacts on road users during proposed working hours; ii) Assessment of delays associated with the proposed closure/s and detour routes; iii) The capacity of any proposed detour route(s) and their ability to carry the additional traffic volumes likely to be generated as a result of the construction of the Project and any known safety issues associated with the detour route, including any mitigation measures the Requiring Authority proposes to put in place to address any identified safety issues; iv) Measures to maintain existing vehicle access to adjacent properties and businesses; v) Measures to maintain safe and clearly identified pedestrian and cyclist access on roads and footpaths adjacent to the construction work. Where detours are necessary to provide such access the Requiring Authority shall provide for the shortest and most convenient detours which it is reasonably practicable to provide, having regard to safety; vi) Measures to maintain passenger transport services and facilities; vii) Any proposed temporary changes in speed limit; viii) Provision for safe and efficient access of construction vehicles to and from construction site(s); ix) Measures that will be undertaken by the Requiring Authority to communicate traffic management measures to affected road users and stakeholders. <p>c) Work in the relevant part(s) of the Project shall not commence until the Requiring Authority has received the Manager's written certification for the SSTMP for that part of the Project.</p>
DC.17B	<p>a) SSTMP(s) shall be prepared in consultation with the Council and following consultation with the following key stakeholders:</p> <ul style="list-style-type: none"> i) Emergency services (police, fire and ambulance); ii) Public health services; iii) Schools, childcare centres and other educational activities with frontage or access to roads where construction work in relation to the Project will take place; iv) GWRC in respect of public transport services; v) Arthur Bills Resettlement Trust and Harrison's Country Gardenworld Ltd; and vi) Raumati South Residents' Association in respect of Construction Work on and in the vicinity of Poplar Avenue and Leinster Avenue. <p>b) Results of this consultation and responses from key stakeholders to any matters must be specified in the relevant SSTMP.</p>
DC.18	<p>The CTMP and SSTMP(s) shall be consistent with the version of the NZ Transport Agency Code of Practice for Temporary Traffic Management (COPTTM) which applies at the time the CTMP or the relevant SSTMP is prepared. Where it is not possible to adhere to this standard, the COPTTM's prescribed Engineering Exception Decision (EED) process will be followed, which will include appropriate mitigation measures agreed with the Road Asset Manager.</p>
DC.19	<p>The CTMP shall be reviewed by a suitably qualified independent person, prior to being submitted to the Council for certification. Any comments and inputs received from the independent reviewer shall be clearly documented, along with clear explanation of where any comments have</p>

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	not been incorporated and the reasons why. For the purpose of this condition “independent person” shall be a suitably qualified and experienced person who is not an employee of the Requiring Authority or does not work for any of the companies contracted to design and/or construct the Project.
DC.20	The Requiring Authority shall appoint an independent party to carry out random auditing of temporary road closure/s in accordance with COPTTM at regular intervals throughout the construction of the Project. The intervals shall be stated in the CTMP. A copy of the findings of each audit shall be provided to the Manager.
DC.21	<p>a) Prior to the commencement of the Project, or any enabling Work, the Requiring Authority shall undertake a pre-construction condition survey of the carriageway/s along those local roads affected by the Project for which the Council is the road controlling authority and submit it to the Manager and the Roading Asset Manager. The condition survey shall consist of a photographic or video record of the carriageway, and shall include roughness, rutting defects and surface condition.</p> <p>b) As soon as practicable following completion of construction of the Project the Requiring Authority shall, at its expense, conduct a post-construction condition survey of the road network affected by the Project.</p> <p>c) The results of the pre and post construction surveys will be compared and where necessary, the Requiring Authority shall at its expense arrange for repair of any damage to the carriageways and footpaths (and associated road components), for which the Council is the road controlling authority, where that damage has resulted from the impacts of construction of the Project.</p>
DC.22	The Requiring Authority shall contribute fair and reasonable costs toward the maintenance of Otaihanga Road caused by the increased heavy vehicle movements related to the construction of the Project.
DC.23	<p>a) The Requiring Authority shall carry out regular inspections of the road network affected by the Project during construction to ensure that all potholes and other damage resulting from the construction of the Project are identified as soon as practicable.</p> <p>b) The Requiring Authority shall contribute fair and reasonable costs towards repair and maintenance of potholes and other damage resulting from the construction of the Project.</p> <p>c) Prior to construction commencing the Requiring Authority will agree with the Council Road Asset Manager the nature, extent and frequency of the inspections.</p>
DC.24	The Requiring Authority shall ensure that the Otaihanga construction yard is designed and laid out, including any fencing, so that it does not impede reasonable access or the efficient operation of any existing activities on the Otaihanga landfill site including waste management, dog training and car club activities.
Construction Dust Management	
DC.25	<p>a) In managing dust arising from construction activities, the Requiring Authority shall achieve the following outcome:</p> <p style="padding-left: 20px;">i) Earthworks are managed to minimise the amount of dust received offsite.</p> <p>b) In achieving this outcome, the Requiring Authority shall comply with the following standard:</p> <p style="padding-left: 20px;">i) The 24-hour average concentration, measured midnight to midnight, of Total Suspended Particulate (TSP) at any point within 100 m of the designation boundary that adjoins a highly sensitive air pollution land use does not exceed 80 micrograms per cubic metre ($\mu\text{g}/\text{m}^3$).</p>

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	For the purpose of these conditions, 'highly sensitive air pollution land uses' shall be as defined in Table 6.2 of the Good Practice Guide for Assessing Discharges to Air from Land Transport, Ministry for Environment, 2008 which includes hospitals, schools, childcare facilities, rest homes, residential properties, open space used for recreation as well land used for tourist, cultural and conservation land uses;
DC.25A	<p>Monitoring of Total Suspended Particulate (TSP) shall be undertaken:</p> <ul style="list-style-type: none"> a) Using a continuous or gravimetric monitor with a maximum measurement time resolution of 24 hours; b) In general accordance with the Good Practice Guide for Air Quality Monitoring and Data Management, Ministry for Environment, 2009; and c) At a minimum of one site in Sector 1, two sites in Sector 2 and one site in Sector 3 while construction activities are being undertaken within 100 m of the designation boundary that adjoins an appropriate number of highly sensitive air pollution land uses as defined in condition DC.25 and that, so far as practicable, comply with the requirements of AS/NZ 3580.1.1:2007 Method for sampling and analysis of ambient air – guide to siting air monitoring equipment for a minimum of one week at each monitoring site, between October and April inclusive during the construction phase of the Project.
DC.25B	<p>Monitoring of wind speed, wind direction, air temperature and rainfall shall be undertaken:</p> <ul style="list-style-type: none"> a) In general accordance with the Good Practice Guide for Air Quality Monitoring and Data Management, Ministry for Environment, 2009; and b) Continuously for the duration of the construction phase of the Project, at a site or (sites) that is (are) representative of the local weather conditions across the construction site.
DC.26	<ul style="list-style-type: none"> a) At least 15 working days prior to Work being undertaken, the Requiring Authority shall submit a Construction Air Quality Management Plan (CAQMP) to the Manager, for certification. The purpose of the CAQMP shall be to establish procedures for monitoring the discharge of particulates into the air during construction, methods to be used to limit dust and odour nuisance, and procedures for responding to any complaints and events in order to comply with the outcomes and standards required under Condition DC.25A. b) The CAQMP shall include the following details: <ul style="list-style-type: none"> i) Identification of the sensitive locations where dust monitoring is proposed, and the specific methods for that monitoring, including trigger limits to determine when further action is required; ii) Identification of contingency measures to address identified and verified adverse effects on sensitive receptors. Contingency measures may include options such as: <ul style="list-style-type: none"> A. Cleaning of water tanks and replenishment of water supplies; B. Cleaning of houses; C. Cleaning of other buildings and infrastructure; and D. Cleaning of local roads in agreement with the Council's Road Asset Manager. iii) Visual monitoring of dust emissions; iv) Methods to be used to limit dust and odour nuisance; v) Procedures for responding to process malfunctions and accidental dust discharges; vi) Criteria, including consideration of weather conditions and procedures for use of water sprays on stockpiles and operational areas of the site; vii) Continuous Monitoring of Total Suspended Particulate (TSP) concentrations and meteorology;

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	<ul style="list-style-type: none"> viii) Monitoring of the times of offensive odour emissions from the ground; ix) Procedures for responding to discharges of odour (including in the event of excavation of contaminated sites); x) Monitoring of construction vehicle maintenance; xi) Process equipment inspection, maintenance, monitoring and recording; xii) Complaints investigation, monitoring and reporting; and xiii) The identification of staff and contractors' responsibilities. <p>c) Work shall not commence until the Requiring Authority has received the Manager's written certification of the CAQMP.</p>
DC.26A	<p>The CAQMP shall be reviewed by a suitably qualified independent person, prior to being submitted to the Council for certification. Any comments and inputs received from the independent reviewer shall be clearly documented, along with clear explanation of where any comments have not been incorporated and the reasons why. For the purpose of this condition "independent person" shall be a suitably qualified and experienced person who is not an employee of the Requiring Authority or does not work for any of the companies contracted to design and/or construct the Project.</p>
DC.27	<p>The Requiring Authority shall review the CAQMP at least annually and as a result of any material change to the Project. Any consequential changes will be undertaken in accordance with Condition DC.9.</p>
DC.28	<p>Unless expressly provided for by conditions of this designation, there shall be no odour, dust or fumes beyond the designation boundary caused by discharges from the site which, in the opinion of an enforcement officer, is noxious, offensive or objectionable.</p>
DC.29	<p>Beyond the designation boundary, there shall be no hazardous air pollutant caused by discharges from the site that causes, or is likely to cause, adverse effects on human health, environment or property.</p>
Noise and Vibration Management – Construction	
DC.29A	<ul style="list-style-type: none"> a) In managing noise and vibration arising from construction activities, the Requiring Authority shall achieve the following outcomes: <ul style="list-style-type: none"> i) A general construction noise and vibration management methodology, that is independently verified, is developed and implemented to achieve compliance with identified noise and vibration limits (specified in conditions DC.31 and DC.32); ii) Site specific construction noise and/or vibration management is undertaken to address any noise or vibration issues for specific locations where compliance with these limits cannot be practicably achieved; iii) To undertake monitoring in locations where possible exceedance of the noise and/or vibration limits may occur; iv) Wherever practicable and necessary, to erect permanent traffic noise barriers prior to noise generating construction activity occurring in the area - otherwise, temporary noise mitigation measures shall be implemented; v) To undertake a pre-construction building condition survey of buildings at risk from construction vibration; and vi) To communicate and consult with affected residents regarding construction noise and vibration effects. b) In achieving these outcomes, the Requiring Authority shall apply the following standards: <ul style="list-style-type: none"> i) Construction noise is assessed and managed in accordance with NZS6803:1999 Acoustics – Construction Noise; and

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	<ul style="list-style-type: none"> ii) Construction vibration is assessed and managed in accordance with German Standard <i>DIN 4150-3:1999 Structural Vibration Part 3: Effects of Vibration on Structures</i>. iii) All machinery used in the construction of the expressway, for which there is a regression curve set out either in Appendix 18.C of TR18: Assessment of Vibration Effects or in Annexure B of James Whitlock's Rebuttal Evidence, shall only operate within its safe distance from any residential receiver, subject to monitoring undertaken in accordance with the CNVMP (refer Condition DC.30(c)) and Condition DC.32(d). c) The performance standards which shall apply in relation to construction noise and vibration shall be those specified in conditions DC.31(noise limits) and DC.32 (vibration limits).
DC.30	<ul style="list-style-type: none"> a) The Requiring Authority shall submit a Construction Noise and Vibration Management Plan (CNVMP) to the Manager for certification at least 15 working days prior to construction work commencing. The purpose of the CNVMP shall be to provide a framework to manage construction noise/vibration appropriately for the variety of circumstances along the route by outlining the methods, procedures and standards for mitigating the effects of noise and vibration during construction of the Project in order to achieve the outcomes and standards required under Condition DC.29A. b) The CNVMP shall be reviewed by a suitably qualified independent acoustic specialist prior to being submitted to the Council for certification. Any comments and inputs received from the independent reviewer shall be clearly documented, along with clear explanation of where any comments have not been incorporated and the reasons why. For the purpose of this condition, "independent person" shall be a suitably qualified and experienced acoustic specialist who is not an employee of the Requiring Authority or does not work for any of the companies contracted to design and construct the Project. c) The CNVMP shall, as a minimum, set out its objectives and intended outcome and address the following: <ul style="list-style-type: none"> i) Description of the work, anticipated equipment/processes and their scheduled durations; ii) Hours of operation, including times and days when construction activities causing noise and/or vibration would occur; iii) The construction noise and vibration criteria for the Project; iv) Identification of affected houses and other sensitive locations where noise and vibration criteria apply and where exceedances of the standards may occur; v) Monitoring requirements, including relevant times (i.e. critical phases of construction, e.g. at the first use of high-noise or high-vibration machinery,) when possible exceedance of the Project criteria is anticipated (e.g. night work etc.), or in response to complaints; vi) Methods for communicating and consulting with affected residents. d) Work shall not commence until the Requiring Authority has received the Manager's written certification for the CNVMP. e) The Requiring Authority shall implement the certified CNVMP throughout the entire construction period of the Project.

DC.31	<p>a) Construction noise shall comply with the following criteria in accordance with NZS6803:1999:</p> <p>Residential receivers</p> <table border="1" data-bbox="384 353 1267 920"> <thead> <tr> <th>Time of week</th> <th>Time period</th> <th>dB LAeq(T)</th> <th>dB LAmax</th> </tr> </thead> <tbody> <tr> <td rowspan="4">Weekdays</td> <td>0630-0730</td> <td>55</td> <td>75</td> </tr> <tr> <td>0730-1800</td> <td>70</td> <td>85</td> </tr> <tr> <td>1800-2000</td> <td>65</td> <td>80</td> </tr> <tr> <td>2000-0630</td> <td>45</td> <td>75</td> </tr> <tr> <td rowspan="4">Saturdays</td> <td>0630-0730</td> <td>45</td> <td>75</td> </tr> <tr> <td>0730-1800</td> <td>70</td> <td>85</td> </tr> <tr> <td>1800-2000</td> <td>45</td> <td>75</td> </tr> <tr> <td>2000-0630</td> <td>45</td> <td>75</td> </tr> <tr> <td rowspan="4">Sundays and public holidays</td> <td>0630-0730</td> <td>45</td> <td>75</td> </tr> <tr> <td>0730-1800</td> <td>55</td> <td>85</td> </tr> <tr> <td>1800-2000</td> <td>45</td> <td>75</td> </tr> <tr> <td>2000-0630</td> <td>45</td> <td>75</td> </tr> </tbody> </table> <p>Industrial and commercial receivers</p> <table border="1" data-bbox="384 1003 815 1126"> <thead> <tr> <th>Time period</th> <th>dB LAeq(T)</th> </tr> </thead> <tbody> <tr> <td>0730-1800</td> <td>70</td> </tr> <tr> <td>1800-0730</td> <td>75</td> </tr> </tbody> </table> <p>Measurement and assessment of construction noise shall be undertaken in accordance with NZS:6803:1999. (T) means a duration between 15 minutes and 60 minutes, in accordance with NZS6803:1999.</p> <p>b) Where the criteria set out above cannot be practicably met, the process of Condition DC.33 shall be followed.</p>	Time of week	Time period	dB LAeq(T)	dB LAmax	Weekdays	0630-0730	55	75	0730-1800	70	85	1800-2000	65	80	2000-0630	45	75	Saturdays	0630-0730	45	75	0730-1800	70	85	1800-2000	45	75	2000-0630	45	75	Sundays and public holidays	0630-0730	45	75	0730-1800	55	85	1800-2000	45	75	2000-0630	45	75	Time period	dB LAeq(T)	0730-1800	70	1800-0730	75
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DC.32	<p>a) The Requiring Authority shall implement the vibration management and mitigation measures identified in the certified CVNMP. Construction vibration shall be made to comply with the following criteria:</p> <table border="1" data-bbox="277 1503 1426 1845"> <thead> <tr> <th>Receiver</th> <th>Details</th> <th>Category A</th> <th>Category B</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Occupied dwellings</td> <td>Night-time 2000h - 0630h</td> <td>0.3 mm/s PPV</td> <td>1 mm/s PPV</td> </tr> <tr> <td>Daytime 0630h - 2000h</td> <td>1 mm/s PPV</td> <td>5 mm/s PPV</td> </tr> <tr> <td>Other occupied buildings*</td> <td>Daytime 0630h - 2000h</td> <td>2 mm/s PPV</td> <td>5 mm/s PPV</td> </tr> <tr> <td>All other buildings</td> <td>Vibration – continuous**</td> <td>5 mm/s PPV</td> <td>50% of Line 2 values in Table B.2 of BS 5228-2:2009</td> </tr> </tbody> </table> <p>* 'Other occupied buildings' is intended to include daytime workplaces such as offices, community centres etc., and not industrial buildings. Schools, hospitals, rest homes etc. would fall under the occupied dwellings category.</p> <p>** This line addresses 'continuous' or 'long-term' vibration as there is no construction machinery proposed which produces transient vibration.</p>	Receiver	Details	Category A	Category B	Occupied dwellings	Night-time 2000h - 0630h	0.3 mm/s PPV	1 mm/s PPV	Daytime 0630h - 2000h	1 mm/s PPV	5 mm/s PPV	Other occupied buildings*	Daytime 0630h - 2000h	2 mm/s PPV	5 mm/s PPV	All other buildings	Vibration – continuous**	5 mm/s PPV	50% of Line 2 values in Table B.2 of BS 5228-2:2009																														
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	<p>b) Measurements of construction vibration shall be undertaken in accordance with German Standard DIN 4150-3:1999 "Structural Vibration Part 3: Effects of vibration on structures".</p> <p>c) If measured or predicted vibration levels exceed the Category A criteria then a suitably qualified expert shall be engaged to assess and manage construction vibration to comply with the Category A criteria, and the Manager shall be notified. If the Category A criteria cannot be practicably achieved, the Category B criteria shall be applied.</p> <p>d) If measured or predicted vibration levels exceed Category B criteria, then construction activity shall only proceed if there is continuous monitoring of vibration levels and effects on buildings at risk of exceeding the Category B criteria, by suitably qualified experts.</p> <p>e) Where the Category B criteria set out above cannot practicably be met, the process of Condition DC.34 shall be followed.</p>
DC.33	<p>a) Where the criteria of Condition DC.31 cannot practicably be met, the Requiring Authority shall prepare Site Specific Construction Noise Management Plans (SSCNMPs) in accordance with the CNVMP. The purpose of a SSCNMP is to provide targeted management and mitigation measures for specific circumstances where noise exceeds the construction noise limits of DC.31. The SSCNMP shall describe site specific noise management and mitigation measures required to address the specific circumstances and environmental conditions of the affected area, which shall be in addition to the general mitigation measures noted in the CNVMP. The Requiring Authority shall be required to consult with those persons who are affected by the exceedance of the criteria of condition DC.31 in preparing the SSCNMP. The SSCNMP shall contain the following information:</p> <ul style="list-style-type: none"> i) The activity and location of proposed works; ii) The timing and duration of the activity; iii) The equipment to be used; iv) Predicted noise levels; v) Identified dwellings at which compliance cannot be achieved with conventional mitigation measures; and vi) Alternative management and mitigation measures proposed. <p>b) Each SSCNMP shall be submitted to the Manager for certification at least 5 working days prior to the relevant construction activity commencing.</p> <p>c) The Requiring Authority shall implement the certified SSCNMP throughout the relevant construction period.</p>
DC.34	<p>a) Where the Category B criteria of Condition DC.32 cannot practicably be met, the Requiring Authority shall prepare Site Specific Construction Vibration Management Plans (SSCVMPs) in accordance with the certified CNVMP. The purpose of a SSCVMP is to provide targeted management and mitigation measures for specific circumstances where vibration exceeds the construction vibration limits of DC.32. The SSCVMP shall describe site specific vibration risks and mitigation measures required to address the specific circumstances and environmental conditions of the affected area, which shall be in addition to the general mitigation measures specified in the certified CNVMP. The Requiring Authority shall be required to consult with those persons who are affected by the exceedance of the Category B criteria of condition DC.32 in preparing the SSCVMP.</p> <p>b) The SSCVMP shall contain the following information:</p> <ul style="list-style-type: none"> i) The activity and location of proposed works; ii) The timing and duration of the activity; iii) The equipment to be used; iv) Predicted vibration levels;

	<ul style="list-style-type: none"> v) Identified dwellings at which compliance cannot be achieved with conventional mitigation measures; vi) How affected persons are to be consulted; and vii) Alternative management and mitigation measures proposed. <p>c) Each SSCVMP shall be submitted to the Manager for certification at least 5 working days prior to the relevant construction activity commencing.</p> <p>d) The Requiring Authority shall implement the certified SSCVMP throughout the relevant construction period.</p>
DC.34A	Prior to the commencement of Project construction operations, the Requiring Authority shall engage a suitably qualified engineer to conduct a detailed pre-construction building condition survey of at-risk buildings, services and structures (as identified in the certified CNVMP). A report of each survey shall be forwarded to the Manager within one week of the assessment.
DC.35	<p>a) At least 5 working days prior to commencement of work within any construction area, the Requiring Authority shall seek to ensure that:</p> <ul style="list-style-type: none"> i) If night work (work between the hours of 2000h and 0630h) is proposed to be undertaken, the occupiers of properties within 200m of the construction area are provided with written notification of the scheduled work, including any advice for reducing internal noise levels; ii) the occupiers of properties within 100m of the construction area are provided written notification of the scheduled work; iii) the occupiers of properties within 50m of the construction area are provided individual written notification of the scheduled work with the opportunity offered for discussions, if requested. iv) it makes reasonable attempts to directly engage with the occupiers of properties within 20m of the construction area to discuss the proposed construction Work.
DC.36	The detailed design of any structural construction noise or vibration mitigation measures (e.g. temporary construction noise barriers) as identified in the certified CVNMP shall be undertaken by a suitably qualified acoustics specialist, and shall be implemented prior to commencement of construction within 100m of such mitigation.
DC.37	Where practicable, permanent (traffic) operational noise barriers required by these conditions following completion of the Project (in accordance with Conditions DC.37A – DC.46), shall be erected prior to noise generating construction work commencing within 100 metres of the relevant PPFs (as defined in Condition DC.37B). Where this is not practicable, temporary noise mitigation measures shall be implemented in accordance with the CNVMP as set out in Condition DC.30 above.
Noise and Vibration Management – Operation	
DC.37A	<p>a) In managing noise and vibration arising from the operation of the Project, the Requiring Authority shall achieve the following outcomes:</p> <ul style="list-style-type: none"> i) To use low noise road surface material (Open Graded Porous Asphalt or equivalent) on those parts of the Expressway that are adjacent to residential neighbourhoods; ii) To design and build noise attenuation structures (including earth bunds), in conjunction with the retention of natural dunes, to provide further noise mitigation; iii) To ensure noise mitigation measures are designed and maintained with reference to the specific character and context of residential neighbourhoods and other areas along the route to protect individual, and groups of, houses; iv) To provide landscape planting wherever practicable to visually screen or soften noise reducing structures;

	<ul style="list-style-type: none"> v) To maintain noise mitigation measures, including low noise road surface material, to ensure their noise reducing capabilities are retained over time; and vi) To maintain the road pavement to avoid vibration effects on adjacent buildings. <p>b) In achieving these outcomes, the Requiring Authority shall apply the following standards:</p> <ul style="list-style-type: none"> i) Achieve the relevant noise criteria categories for noise sensitive activities in accordance with <i>NZS 6806:2010 Acoustics – Road Traffic Noise – New and Altered Roads</i>. ii) Achieve Class C of Norwegian Standard NS8176.E:2005 (Vibration and Shock – Measurement of vibration in buildings from land-based transport and guidance to evaluation of its effects on human beings) in relation to any expert report prepared pursuant to DC.48 below.
DC.37B	<p>For the purposes of Conditions DC.37C – DC.49, the following terms will have the following meanings:</p> <ul style="list-style-type: none"> a) BPO – means Best Practicable Option b) Building-modification Mitigation – has the same meaning as in NZS6806:2010 c) Habitable space – has the same meaning as in NZS6806:2010 d) Noise Criteria Categories – means groups of preference for time-averaged sound levels established in accordance with NZS6806:2010 when determining the selected mitigation option considered to be the BPO; i.e. Category A – primary noise criterion, Category B – secondary noise criterion, Category C – internal noise criterion. e) NZS6806:2010 – means NZS 6806:2010 Acoustics – Road-traffic noise – New and altered roads. f) PPFs – means Protected Premises and Facilities, and has the same meaning as in NZS6806:2010, and are generally identified in green, yellow or red in Appendix B of Technical Report 15. g) Sector – means Sectors 1 to 4 of the Project as set out in the AEE. h) Structural Mitigation – has the same meaning as in NZS6806:2010, which includes bunds, barriers and low noise road surfaces; i) Traffic Noise Assessment – means Technical Report 15 submitted as part of the AEE for this Designation.
DC.37C	<p>The detailed design of any structural mitigation measures (detailed mitigation measures) shall be undertaken by a suitably qualified acoustics specialist prior to construction of the Project, in consultation with an urban designer and landscape architect, and, subject to Condition DC.38, shall include, as a minimum, the following:</p> <ul style="list-style-type: none"> a) This row is intentionally left blank. b) The location, length and height of noise barriers in general accordance with Appendix B of the Traffic Noise Assessment; and c) A requirement that Open Graded Porous Asphalt ("OGPA") or equivalent low-noise generating road surface be used in general accordance with Appendix B of the Traffic Noise Assessment.
DC.38	<ul style="list-style-type: none"> a) Following detailed design, and as required during construction, where a need is identified to revise any structural mitigation measure as identified in Appendix B of the Traffic Noise Assessment (for example, because it is either not practicable to implement a particular mitigation in the same location, length, or height, or because of changes arising from residents' feedback in preparing the SSLMPs under Condition DC.57 or SSUDPs under DC.59A):

	<ul style="list-style-type: none"> i) If the changed design of the structural mitigation measure would still achieve the same Noise Criteria Category at all relevant PPFs, and a suitably qualified acoustic specialist certifies to the Council that the changed structural mitigation measure would be consistent with adopting the BPO in accordance with NZS6806:2010, the detailed mitigation measures may be amended to include the changed structural mitigation measure, or ii) If the changed design of the structural mitigation measure would change the Noise Criteria Category at any PPF to a less stringent Noise Criteria Category, but a suitably qualified acoustic specialist confirms that the changed structural mitigation measure would be consistent with adopting the BPO in accordance with NZS6806:2010, the detailed mitigation measure may be amended to include the changed structural mitigation measure. The Requiring Authority shall consult with affected property owners prior to amending the detailed mitigation measures to include the changed structural mitigation measure. <p>b) The information submitted with the Detailed Mitigation Measures shall include information to demonstrate that:</p> <ul style="list-style-type: none"> i) The BPO process was followed, involving acoustic, landscape, urban design, and other relevant expertise; and ii) The principles of the Landscape and Urban Design Framework have been applied through the SSUDPs under condition DC.59A. <p>c) The Detailed Mitigation Measures shall include a Noise Mitigation Plan Set, which shall include the location and details of the structural measures, including any potential changes to the preferred mitigation.</p>
DC.39	<ul style="list-style-type: none"> a) The Requiring Authority shall implement the structural noise mitigation measures identified as the “Selected Mitigation Options” in Appendix B of the Traffic Noise Assessment as part of the Project, in order to achieve the Noise Criteria Categories indicated in Appendix B (“Identified Categories”), where practicable and subject to Conditions DC.37C to DC.38 above. b) The Detailed Mitigation options shall be implemented prior to completion of construction of the Project. c) Prior to the Project becoming open for traffic, the Requiring Authority shall engage a suitably experienced independent acoustics specialist to inspect the “as built” structural noise mitigation measures and issue a signed certificate to the Manager that the noise mitigation measures identified within DC.37C and DC.38 have been properly installed and constructed. The certificate is to be provided at least 15 working days before the opening of the Project for traffic. For the purpose of this condition, “independent person” shall be a suitably qualified and experienced acoustic specialist who is not an employee of the Requiring Authority and does not work for any of the companies contracted to design and construct the Project.
DC.40	<p>Prior to construction of the Project, the Requiring Authority shall engage a suitably qualified acoustic specialist to identify those PPFs which, following implementation of all the Structural Mitigation measures included in the Detailed Mitigation Options, are not in Noise Criteria Categories A or B in accordance with NZS6806:2010 and where Building-modification Mitigation may be required to achieve 40 dB $L_{Aeq(24h)}$ inside habitable spaces (“Category C Buildings”).</p>
DC.41	<ul style="list-style-type: none"> a) Prior to commencement of construction of the Project in the vicinity of a Category C Building, the Requiring Authority shall write to the owner of each Category C Building seeking access to such building for the purpose of measuring internal noise levels and assessing the existing building envelope in relation to noise reduction performance.

	<p>b) If the owner(s) of the Category C Building approve the Requiring Authority's access to the property within 12 months of the date of the Requiring Authority's letter (sent pursuant to Condition DC.41(a), then no more than six months prior to commencement of construction of the Project in any Sector, the Requiring Authority shall instruct a suitably qualified acoustic specialist to visit the building to measure internal noise levels and assess the existing building envelope in relation to noise reduction performance.</p>
DC.42	<p>a) Where a Category C Building is identified, the Requiring Authority shall be deemed to have complied with Condition DC.41 above where:</p> <ul style="list-style-type: none"> i) The Requiring Authority (through its acoustic specialist) has visited the building and has carried out the assessment specified in DC.41; or ii) The owner of the Category C Building consented to the Requiring Authority's request for access, but the Requiring Authority could not gain entry for some reason (such as entry being denied by a tenant); or iii) The owner of the Category C Building did not approve the Requiring Authority's access to the property within the time period set out in Conditions DC.41(b) (including where the owner(s) did not respond to the Requiring Authority's letter (sent pursuant to Condition DC.41(a) within that period)); or iv) The owner of the Category C Building cannot, after reasonable enquiry, be found prior to completion of construction of the Project. <p>b) If any of (ii) to (iv) above apply to a particular Category C Building, the Requiring Authority shall not be required to implement any Building-modification Mitigation at that Category C Building.</p>
DC.43	<p>Subject to Condition DC.44, within six months of the assessment required under Condition DC.41(b), the Requiring Authority shall give notice to the owner of each Category C Building identified under Condition DC.40:</p> <ul style="list-style-type: none"> a) Advising of the options available for Building-modification Mitigation to the building; and b) Advising that the owner has three months within which to decide and advise the Requiring Authority whether to accept Building-modification Mitigation for the building, and if the Requiring Authority has advised the owner that more than one option for Building-modification Mitigation is available, to advise the Requiring Authority which of those options the owner prefers.
DC.44	<p>Once an agreement on Building-modification Mitigation is made between the Requiring Authority and the owner of an affected building, the mitigation shall be implemented by the Requiring Authority in a reasonable and practical timeframe agreed between the Requiring Authority and the owner.</p>
DC.45	<p>Subject to Condition DC.44, where Building-modification Mitigation is required, the Requiring Authority shall be deemed to have complied with DC.41(b) above where:</p> <ul style="list-style-type: none"> a) The Requiring Authority has completed Building-modification Mitigation to the Category C Building; or b) The owner(s) of the Category C Building did not accept the Requiring Authority's offer to implement Building-modification Mitigation prior to the expiry of the timeframe stated in Condition DC.41(b) above (including where the owner(s) did not respond to the Requiring Authority within that period).
DC.46	<p>The Requiring Authority shall manage and maintain the Detailed Mitigation Options to ensure that those mitigation measures retain their noise reduction capabilities and performance (as required by these conditions) for the life of the Project.</p>

DC.47	The NZTA system for monitoring and maintaining the condition of State Highway pavements and road surfaces shall be applied in order to minimise the risk of operation vibration issues.
DC.48	<p>a) The Requiring Authority shall keep a register of all vibration complaints received in the first two years of operation and the Requiring Authority's response to the complaints.</p> <p>b) The register will be available to the Manager (the Council compliance) upon request. If the Manager considers that the Requiring Authority's response to a complaint has been unreasonable and that the complaint is a result of discernible vibration attributable to traffic on the Expressway, the Manager may require in writing the Requiring Authority to engage a suitably qualified expert to measure and assess traffic vibration levels for compliance with the Class C criteria of Norwegian Standard NS 8176.E:2005 "Vibration and shock – Measurement of vibration in buildings from land-based transport and guidance to evaluation of its effect on human beings". A report describing the findings shall be provided to the Manager within one month of the assessment being completed, including whether there is vibration exceeding Class C criteria caused by the operation of the Expressway and, if so, the remedial measures the Requiring Authority is proposing to implement.</p> <p>c) For the purpose of this condition "unreasonable" means the vibration can be attributed to traffic on the Expressway and the complaint has not been satisfactorily addressed or remedied.</p>
DC.49	<p>a) The Requiring Authority shall arrange for a suitably qualified and experienced acoustic specialist to prepare a Noise Monitoring Plan to be submitted to the Manager for certification at least 15 Working Days before the commencement of construction. The Requiring Authority shall implement the certified Plan, and monitoring shall not commence until the Requiring Authority has received the Manager's written certification of the Noise Monitoring Plan. The purpose of the Noise Monitoring Plan is to confirm where, when and how operational noise monitoring shall occur to ensure that the survey results are suitable for calibration and verification of the computer noise model, which is used to check compliance with the noise criteria categories for the PPFs. The Noise Monitoring Plan shall address the following:</p> <p>i) The number and location of monitoring sites, including requirements that:</p> <p>A. no more than 40% of monitoring sites shall be sites currently experiencing a moderate to high ambient sound level (i.e. more than 50 dB $L_{Aeq(24h)}$) from existing sources; and</p> <p>B. at least 40% of monitoring sites shall be sites currently experiencing a low ambient sound level (≤ 50 dB $L_{Aeq(24h)}$) but with a predicted significant increase in noise level due to the operation of the Project, and where mitigation of this noise relies on proposed barriers or bunds as identified in the Structural Noise Mitigation plans in the Traffic Noise Assessment, Technical Report 15;</p> <p>ii) The timing and frequency of surveys. This will include a requirement that ambient sound level data from Technical Report 17 "Pre-Construction Sound Level Survey" shall only be used where the data has been collected not more than 24 months prior to the preparation of the Monitoring Plan, and shall only be data collected at "long term" sites;</p> <p>iii) Methods and standards to be followed. This will include methods used to identify and remove measurement results for time periods affected by sound associated with any temporary events or activities (such as noise from construction activities), and during periods where wind speeds exceed 5 m/s or the rainfall rate exceeds 6 mm/hour; and</p> <p>iv) Timeframes for reporting to the Council.</p>

	<p>b) The results of the Post-Construction operational noise level monitoring undertaken in accordance with Condition DC.49(a) above shall be used to verify the computer noise model of the Detailed Mitigation Options and to make any necessary alterations required to the structural mitigation measures required by Condition 37C. A report describing the findings of the verification and the work associated with any necessary alterations to the structural mitigation measures shall be provided to the Manager within one month of the final monitoring being completed.</p>
Hazardous Substances Management	
DC.50	<p>a) In managing the storage and use of hazardous substances during the construction of the Project, the Requiring Authority shall achieve the following outcome:</p> <p>i) Develop and implement methodologies and processes for minimising potential environmental risks arising from the use and storage of hazardous substances during the construction of the Project, in accordance with best practice and national standards and regulations.</p> <p>b) In achieving this outcome, the Requiring Authority shall be consistent with the following standards and guidelines:</p> <p>i) Hazardous Substances (Tank Wagons and Transportable Containers) Regulations 2004 and the Land Transport Rule 45001/1 and 45001/2: Dangerous Goods 2005; and</p> <p>ii) NZTA - Standard Operating Procedure for Response to Spills Arising from Transport Incidents on the State highway Network, March 2010.</p>
DC.51	<p>a) The Requiring Authority shall submit a Hazardous Substances Management Plan (HSMP) to the Manager for certification at least 15 working days prior to work commencing.</p> <p>b) The purpose of HSMP is:</p> <p>i) to provide information to the contractor in regard to acceptable management methodologies to incorporate during construction; and</p> <p>ii) to outline the methodologies and processes that will be adopted to ensure that the risks of storing and using hazardous substances within the Project area will be appropriately managed by the Requiring Authority</p> <p>in order to achieve the outcomes and standards required under Condition DC.50.</p> <p>c) The HSMP shall include information relating to:</p> <p>i) implementation and operating procedures including the keeping of a hazardous substances register and preparation of a spill response plan;</p> <p>ii) monitoring requirements; and</p> <p>iii) review procedures.</p> <p>d) Work shall not commence until the Requiring Authority has received the Manager's written certification of the HSMP.</p>
DC.52	<p>The HSMP shall be reviewed by a suitably qualified independent person, prior to being submitted to the Council for certification. Any comments and inputs received from the independent reviewer shall be clearly documented, along with clear explanation of where any comments have not been incorporated and the reasons why. For the purpose of this condition "independent person" shall be a suitably qualified and experienced person who is not an employee of the Requiring Authority or does not work for any of the companies contracted to design and/or construct the Project.</p>
DC.52A	This row is intentionally left blank.
Network Utilities	
DC.52B	The Requiring Authority shall prepare and implement a Network Utilities Management Plan

	<p>(NUMP), the purpose of which shall be to outline the methodologies that will be adopted to ensure enabling work, design and construction of the Project adequately takes account of (and includes measures to address), the safety, integrity, protection (or, where necessary, relocation of) existing network utilities.</p>
DC.53	<p>a) The NUMP shall be prepared in consultation with the relevant infrastructure providers who have existing network utilities that are directly affected by the Project and shall be implemented during the construction of the Project. The NUMP shall include:</p> <ul style="list-style-type: none"> i) Measures to be used to accurately identify the location of existing network utilities, ii) Measures for the protection, relocation and/or reinstatement of existing network utilities; iii) Measures to seek to ensure the continued operation and supply of infrastructure services which may include, but not be limited to, any new or relocated gas pipes being made operational prior to the termination of existing gas lines; iv) Measures to provide for the safe operation of plant and equipment, and the safety of workers, in proximity to live existing network utilities; v) Measures to manage potential induction hazards to existing network utilities; vi) Earthwork management (including depth and extent of earthwork), for earthwork in close proximity to existing network utility; vii) Vibration management for work in close proximity to existing network utility; and viii) Emergency management procedures in the event of any emergency involving existing network utilities. <p>b) The Requiring Authority shall ensure that the construction Work does not adversely impact on the safe and efficient operation and planned upgrade of network utilities. This includes sufficient provision within the proposed utilities service corridor easement for the Council's future water and wastewater infrastructure and common service corridor for all other network utilities.</p>
DC.53A	<p>The NUMP shall include specific consideration of means to avoid or mitigate effects on Transpower's high voltage infrastructure, including:</p> <ul style="list-style-type: none"> a) methods and measures to ensure that the existing high voltage infrastructure can be accessed for maintenance at all reasonable times, or emergency work at all times, during and after construction activities. b) methods and measures to ensure that changes to the drainage patterns and runoff characteristics do not result in adverse effects from stormwater on the foundations for any high voltage transmission line support structure. c) confirmation that the vertical separation between the overhead conductors and the finished road surface will be equal to, or greater than, the following distances: <ul style="list-style-type: none"> i) 10.5 metres for the expressway; and, ii) 7.5 metres for any new local road. d) confirmation that new planting and maintenance of vegetation will: <ul style="list-style-type: none"> i) comply with the New Zealand Electricity (Hazard from Trees) Regulations 2003, including, but not limited to, the provisions of the Schedule (Growth Limit Zones) to those regulations; ii) be setback by a horizontal distance of at least 12 metres either side (total of 24 metres) from the centre line of the high voltage transmission lines where it is able to grow higher than two metres; and, iii) not be able to fall within 5 metres of the said transmission lines. e) Sufficient detail to confirm that the work will comply with the New Zealand Electrical Code of Practice for Electrical Safe Distances (NZECP 34:2001), including, but not limited to, the

	<p>provisions of:</p> <ul style="list-style-type: none"> i) Clause 2.2 with respect to excavations near overhead support structures; ii) Clause 2.4 with respect to buildings near overhead support structures; iii) Section 3 with respect to minimum separation between buildings and conductors; iv) Section 5 with respect to minimum safe distances for the operation of mobile plant; and, v) Table 4 with respect to minimum safe separation distances between the ground and the overhead conductors. <p>Advice Note: <i>Alterations or modification to the high voltage infrastructure that may be required to comply with Condition DC.53A(b) and Conditions DC.53A(c) and DC.53A(e)(v). This work may require additional consent and as the work will relate to an existing transmission line owned and operated by Transpower the required activity must be assessed with reference to the National Environmental Standards for Electricity Transmission Activities.</i></p> <p><i>With respect to DC.53A(e)(iii) specific consideration must be given to the height and location of temporary structures (such as project offices and other construction site facilities) and permanent structures (such as lighting poles, signage, gantries and acoustic barriers). This may require a specific electrical engineering assessment as provided for by Section 3.4 of NZECP34:2001.</i></p>
DC.53B	<ul style="list-style-type: none"> a) The Requiring Authority shall ensure that the construction and operation of the Project and any enabling works do not adversely impact on the safe and efficient operation of any the Council's water supply and wastewater services. b) The Requiring Authority shall ensure that any planned upgrading of the Council water supply and wastewater services can be accommodated within the proposed common services corridor, subject to receiving notification of the Council's future plans prior to completion of the Expressway design so that integration with other network utilities can be achieved efficiently.
Landscape and Vegetation Management	
DC.53C	<ul style="list-style-type: none"> a) In managing the detailed design, siting, implementation and maintenance of landscape planting and restorative work (including the protection of existing vegetation), the Requiring Authority shall achieve the following outcomes: <ul style="list-style-type: none"> i) The integration of the Project's permanent Works (including earthworked areas, structures and noise attenuation measures), into the surrounding landscape and topography, (including the rehabilitation of dune landforms, the protection and restoration of wetlands), having regard to the local landscape character and contexts along the route of the Expressway; ii) The mitigation of the visual effects of the Project on properties in the immediate vicinity through detailed and site specific landscape design work, focusing on screening where this is practicably achievable; iii) Wherever practicable, the retention of areas of indigenous vegetation, and the retention of significant existing trees; iv) The avoidance of adverse effects on the North Island Fernbird ('Fernbird') habitat arising from vegetation clearance; v) The undertaking and maintenance of plantings are in accordance with best practice for landscape or ecological mitigation; vi) The maintenance of plantings to ensure the satisfactory establishment of retained, relocated and new vegetation and the effectiveness of visual screening, and ecological mitigation; vii) A net long-term ecological benefit through the planting and ecological restoration, including restoration of indigenous ecosystems and processes , consistent with

	<p>ecological mitigation requirements under the relevant resource consent conditions; and</p> <p>viii) The rehabilitation of all areas used for temporary work and construction yards.</p> <p>b) In achieving these outcomes, the Requiring Authority shall have regard to the following guidelines:</p> <p>i) Transit NZ [NZTA] Guidelines for Highway Landscaping (2006);</p> <p>ii) TP10 Design of Stormwater Management Devices (Auckland Council).</p> <p>c) In relation to planting, the following performance standards shall apply:</p> <p>i) Subject to achieving the success standards in paragraphs (ii) to (iv) below, there shall be a three year Defects Liability and Maintenance Period for all terrestrial planting and a four year Defects Liability and Maintenance Period for wetland and riparian planting (including that at Waikanae River). These periods may be shorter if the success measures below are achieved earlier;</p> <p>ii) In relation to mass planting, successful planting shall be defined as 80% canopy closure at the time of Final Completion whereby a sustainable plant community has been established and where plants have grown to create a canopy that shades the ground and suppresses weed growth.</p> <p>iii) In relation to shelter belts and amenity rural tree planting, successful planting shall be defined as 100% plant survival, with 100% of trees in full leaf at the time of Final Completion.</p> <p>iv) In relation to the planting of specimen trees, successful planting shall be defined as 100% plant survival, with 100% of trees in full leaf at the time of Final Completion, with the trees to have a habit of growth that is normal to the species and are to be sound, healthy and vigorous with normal and well-developed branch systems at the time of Final Completion.</p> <p>d) For the purposes of Conditions DC.53C to DC.58, the following definitions shall apply:</p> <p>i) Practical completion means where the planting is complete for all intents and purposes and the site can be used;</p> <p>ii) Defects liability and maintenance period means the period immediately following practical completion in which any defects in planting is remedied as per the time frames set out in DC.53C(c);</p> <p>iii) Final completion means when the site is handed over from the contractor for the Requiring Authority to maintain the planting at the end of the Defects Liability and Maintenance Period; and</p> <p>iv) Planting Management means the on-going, long-term management and maintenance of vegetation.</p>
DC.54	<p>a) The Requiring Authority shall submit a Landscape Management Plan (LMP) for the Project to the Manager for certification at least 15 working days prior to work commencing.</p> <p>b) The purpose of the LMP is to outline the methods and measures to be implemented during the construction phase and for a defined period thereafter to avoid, remedy and mitigate adverse effects of the permanent work on landscape and visual amenity and to manage all planting and restorative work associated with the Project in order to achieve the outcomes and standards required under Condition DC.53C. The LMP shall document the permanent mitigation measures, as well as the necessary monitoring and management required to successfully implement those measures during the construction phase and the transition to the Operational phase of the Project.</p> <p>c) The LMP shall be prepared in consultation with:</p> <p>i) Te Āti Awa ki Whakarongotai and Takamore Trust;</p>

	<ul style="list-style-type: none"> ii) Te Rūnanga O Toa Rangātira Inc, where the works are within or directly affect Queen Elizabeth Park; iii) The GWRC where works are within or directly adjacent to Queen Elizabeth Park, Waikanae River corridor and the Waimeha Stream; iv) As relevant, Friends of Queen Elizabeth Park, Friends of Wharemauku Stream, Friends of Waikanae River; and v) The Council. <p>This consultation shall commence at least 60 working days prior to submission of the finalised LMP to the Council. Any comments and inputs received from the parties listed above shall be clearly documented, along with clear explanation of where any comments have not been incorporated and the reasons why.</p> <ul style="list-style-type: none"> d) The LMP shall provide information as to how the outcomes in Condition DC.53C will be achieved, including specific information on the following aspects: <ul style="list-style-type: none"> i) The integration of the Project's permanent Work, including earthworked areas, structures and noise attenuation measures, into the surrounding landscape and topography, including (but not necessarily limited to) the rehabilitation of dune landforms, the restoration of areas used for temporary work and construction yards, and reinstatement with an appropriate vegetation type. ii) The mitigation of the visual effects of the Expressway on properties in the immediate vicinity through landscape work (particularly on those identified neighbourhoods in Condition DC.57A(a)). iii) The retention of significant existing trees, or their replacement if their retention or relocation is not practicable; iv) The retention of areas of indigenous vegetation as far as can be achieved, including minimising effects of the Cycleway/Walkway/Bridleway (CWB) through the Raumati Manuka Wetland, Otaihanga Southern Wetland, Otaihanga Northern Wetland and the Otaihanga Kanuka Forest (for example, through the use of boardwalks); v) The proposed maintenance of plantings, including the replacement of unsuccessful plantings; and vi) The integration of landscape work with ecological restoration, including those required for stream diversion and permanent stormwater control ponds, and wetland planting and restoration to maximise the ecological benefits of mitigation planting and restoration. e) The LMP shall identify key points at which the Council should be included with meetings of the Project's principal landscape architect and civil engineer at critical phases in the final shaping of the earthworks through and on the edges of dune landscapes. f) Work shall not commence until the Requiring Authority has received the Manager's written certification of the LMP.
DC.55	<ul style="list-style-type: none"> a) The LMP shall be prepared by suitably qualified and experienced landscape architect (with input as required by other suitably qualified experts, including an ecologist, acoustic and lighting specialists), and shall implement: <ul style="list-style-type: none"> i) the principles and outcome sought by the Landscape and Urban Design Framework (Technical Report 5); and ii) in general accordance, the landscape plans submitted as part of the Visual And Landscape Assessment (Technical Report 7); <p>and shall be prepared in accordance with:</p> <ul style="list-style-type: none"> iii) Transit New Zealand's Guidelines for Highway Landscaping (dated December 2006); iv) Transit New Zealand's "Urban Design Implementation Principles (2006)"; and

	<p>v) AUSTRROADS standards where these are relevant to pedestrian and cycle paths.</p> <p>b) The LMP shall be consistent with the Ecological Management Plan (EMP) that is required to be certified under the regional consent conditions.</p> <p>c) In order to confirm that the LMP is consistent with the ecological mitigation management measures in the EMP, a copy of the EMP to be submitted to GWRC for certification under the regional resource consents shall be provided to the Council at the same time it is submitted to the GWRC for certification so that Council can consider it prior to receiving the LMP for certification.</p>
DC.55A	<p>The LMP shall be reviewed by a suitably qualified independent person, prior to being submitted to the Council for certification. Any comments and inputs received from the independent reviewer shall be clearly documented, along with clear explanation of where any comments have not been incorporated and the reasons why. For the purpose of this condition “independent person” shall be a suitably qualified and experienced person who is not an employee of the Requiring Authority or does not work for any of the companies contracted to design and/or construct the Project.</p>
DC.56	<p>The Requiring Authority shall submit a copy of the draft LMP required by Condition DC.54 to the GWRC for comment at least 15 working days before it is submitted to the Manager for certification. Any comments received shall be supplied to the Manager when the LMP is submitted, along with a clear explanation of where any comments have not been incorporated and the reasons why.</p>
DC.57	<p>a) The Requiring Authority shall prepare Site Specific Landscape Management Plans (SSLMPs) for the Project according to the staging identified in the programme required under DC.10C. The Requiring Authority shall submit each SSLMP to the Manager for certification at least 5 working days prior to Work commencing within sector or stage to which the SSLMP shall be applied.</p> <p>b) The purpose of each SSLMP shall be to help ensure detailed landscape design of the Project accords with the principles set out in the Urban and Landscape Design Framework (Technical Report 5) in order to achieve the outcomes and standards required under Condition DC.53C, having regard to the local character and context and ecological conditions within each sector or stage of the route. SSLMPs are required for all sectors/stages of the Expressway.</p> <p>c) The SSLMPs shall be consistent with the Landscape Management Plan, the Urban and Landscape Design Framework (Technical Report 5), the Ecological Management Plan, the relevant Site Specific Urban Design Plan, and the Network Integration Plan as relevant.</p> <p>d) The SSLMPs shall be prepared by a suitably qualified landscape architect, with appropriate inputs from other experts.</p> <p>e) The SSLMPs shall be prepared in consultation with:</p> <ol style="list-style-type: none"> i) Te Āti Awa ki Whakarongotai; ii) Takamore Trust, where the works are within or directly affect the area between Te Moana Road and Waikanae River; iii) Te Rūnanga O Toa Rangātira Inc, where the works are within or directly affect Queen Elizabeth Park; iv) the GWRC where works are within or directly adjacent to Queen Elizabeth Park, or Waikanae River corridor and the Waimeha Stream; v) As relevant, Friends of Queen Elizabeth Park, Friends of Wharemauku Stream, Friends of Waikanae River; vi) As relevant, local residents’ associations such as the Raumati South Residents’

	<p>Association; and vii) the Council.</p> <p>This consultation shall commence at least 20 working days prior to submission of the finalised SSLMP to the Council. Any comments and inputs received from the parties listed above shall be clearly documented, along with clear explanation of where any comments have not been incorporated and the reasons why.</p> <p>f) Each SSLMP shall include details of landscape design, including the following matters:</p> <ul style="list-style-type: none"> i) Identification of vegetation to be retained, including retention of as many as practicable significant trees and areas of regenerating indigenous vegetation; ii) Protection measures for vegetation to be retained, and make good planting along cleared edges; iii) Proposed planting including plant species, plant/grass mixes, spacing/densities, sizes (at the time of planting) and layout and planting methods; iv) Planting programme – the staging of planting in relation to the construction programme which shall, as far as practicable, include provision for planting within each planting season following completion of work in each stage of the Project; v) Specific Fernbird habitat to be created as part of the development of vegetation planting, as mitigation for the loss of Fernbird habitat; vi) Standards to be met at the end of the maintenance period to demonstrate that the mitigation planting has been successful in accordance with condition DC.53C(c). vii) Detailed specifications relating to (but not limited to) the following: <ul style="list-style-type: none"> A. Vegetation protection (for desirable vegetation to be retained); B. Weed control and clearance; C. Pest animal management; D. Ground preparation; E. Mulching; and F. Plant supply and planting, including hydroseeding and grassing - which shall require: <ul style="list-style-type: none"> 1. Any planting to reflect the natural plant associations of the area; 2. Where practicable, the use of mixes of plant which are of a suitable richness and diversity to encourage self-sustainability once established; and 3. Any native plants to, so far as practicable, be genetically sourced from the Manawatu Ecological Region; 4. Mitigation planting and associated habitat restorative works. viii) In accordance with condition DC.53C(c), a maintenance regime. This will include the control of pest animals (including possums, rabbits and hares) and pest plants and monitoring and reporting requirements. The maintenance regime must include a three-year defects liability and maintenance period for terrestrial planting areas, and include a four-year defects liability and maintenance period for wetland and riparian vegetation (including the Waikanae River); ix) The types and extent of noise barriers to be established, and their landscape treatment for these barriers; x) Landscape treatment for pedestrian and cycle facilities; xi) Consideration of: <ul style="list-style-type: none"> A. The landforms and character, including streams; and B. <i>Crime Prevention Through Environmental Design (CPTED)</i> principles in urban areas.
DC.57A	a) When developing landscape design solutions as part of preparing the SSLMP's, the Requiring Authority shall undertake consultation with residents whose properties are located

	<p>close to the Expressway in the following Landscape Focus Areas (identified for their sensitivity to visual effects):</p> <ul style="list-style-type: none"> i) Conifer Court; ii) Eastern side of the designation between Kāpiti Road and Mazengarb Road including Greenwood Place, Elder Grove, Cypress Grove, Spackman Crescent, Makarini Street, Palmer Court, St James Court and Chilton Drive; iii) Western side of the designation between Kāpiti Road and Mazengarb Road including Cheltenham Drive and Lincoln Court; iv) Leinster Avenue; v) Milne Drive through to Quadrant Heights; and vi) Puriri and Kauri Roads (including El Rancho). <p>b) Prior to the lodgement of each SSLMP for Landscape Focus Areas under DC.57A(a), the Requiring Authority shall send a copy of the draft SSLMP to the owners of properties immediately adjoining the designation in that sector of the route to which the SSLMP relates, and the property-owners shall be provided with an opportunity to provide feedback to the Requiring Authority over a period of no less than a 10 working days. The Requiring Authority shall make available a landscape architect to meet and explain the draft SSLMP. The feedback received to the draft SSLMP, and the Requiring Authority's response to such feedback, shall be submitted with the SSLMP at the time the SSLMP is lodged for certification.</p>
DC.58	<p>a) The Requiring Authority shall prepare Planting Management Plans (PMPs) for each of the following terrestrial planting locations:</p> <ul style="list-style-type: none"> i) Public spaces that reflect the Kāpiti Coast's identity, popular recreational areas, or are on well used roads; these areas are Waikanae River; Wharemauku Stream; Poplar Avenue interchange; Kāpiti Road interchange; Te Moana Road interchange; Peka Peka interchange; and Mazengarb Road bridge; ii) Sensitive Landscape Focus Areas (as identified in DC.57A(a)); and iii) The CWB interface, where planting abuts the edges of the CWB. <p>b) The purpose of the PMPs shall be to outline the terrestrial planting maintenance following Final Completion (when the site is handed over from the contractor to the Requiring Authority to maintain the planting) to manage all planting and restorative work associated with the Project in order to maintain the outcomes and standards required under Condition DC.53C. The PMPs shall be based on the NZTA 'Guidelines for Highway Landscaping' dated 1 December 2006, Version 2 Section 5.6, adapted as necessary.</p> <p>c) The PMPs shall detail the long-term management regime (up to ten years) for these areas.</p> <p>d) The Requiring Authority shall submit the draft PMPs to the Manager for review and comment at least 20 working days before the Final Completion of planting occurs.</p> <p>e) The Requiring Authority shall submit the final PMPs to the Manager at the time of Final Completion of the relevant planting.</p>
Urban Design	
DC.59	<p>a) In managing the detailed design, construction and maintenance of bridges, the CWB, and other structural elements of the Project (including noise mitigation structures, abatements and other built elements), the Requiring Authority shall achieve the following outcomes:</p> <ul style="list-style-type: none"> i) A safe public environment; ii) A well functioning street and public environment for the benefit of pedestrians, cyclists and other non-vehicular modes using the local road network, as well as local vehicular traffic;

	<ul style="list-style-type: none"> iii) Structures (bridges, noise mitigation structures, abutments and other built elements) are designed in reference to their landscape setting and in relation to adjoining land uses: and iv) A well connected and safe CWB. <p>b) In achieving these outcomes, the Requiring Authority shall comply or be consistent with the following standards and guidelines:</p> <ul style="list-style-type: none"> i) Ministry of Justice [2005] National Guidelines for Crime Prevention through Environmental Design in New Zealand; ii) AUSTROADS Part 6 and 6A Pedestrian and Cyclist Paths and New Zealand Supplement [2008] to the AUSTROADS Guide to Traffic Engineering Practice: Part 14 Bicycles; and iii) NZTA Bridge Manual.
DC.59A	<ul style="list-style-type: none"> a) The Requiring Authority shall prepare Site Specific Urban Design Plans (SSUDPs) for the Project according to the programming required under DC.10C. b) The purpose of SSUDPs shall be to outline the measures adopted to achieve good quality detailed design of the Project in locations where the Expressway interacts with local vehicular and non-vehicular movement, including all bridges over or under the Expressway and the CWB, in order to achieve the outcomes and standards under Condition DC.59. c) The SSUDPs shall be prepared in accordance with the principles set out in the Urban and Landscape Design Framework (Technical Report 5). d) The SSUDPs shall be consistent with the LMP and the Network Integration Plan. e) The SSUDPs shall be prepared by a suitably qualified and experienced urban designer and with inputs from other appropriate experts. SSUDPs will be prepared for the locations specified below where the Expressway interacts with local vehicular and non-vehicular pedestrian/cyclist movement: <ul style="list-style-type: none"> i) Poplar Avenue ii) Leinster Ave pedestrian bridge iii) Raumati Road iv) Ihakara extension/Wharemauku Stream v) Kāpiti Road vi) Makarini Street area pedestrian bridge vii) Mazengarb Road viii) Otaihanga Road ix) Te Moana Road x) Ngarara Road xi) Smithfield Road. xii) Waikanae River; and xiii) Peka Peka Interchange. f) The SSUDPs will specifically address the detailed design of the Project in these locations for the benefit of pedestrians, cyclists and others using the local road network, including: <ul style="list-style-type: none"> i) Lighting, for the benefit of pedestrian and cyclists; ii) Footpath and on-road cycle lane design on road (provision for minimum dimensions of 1.5m on road cycle lanes, and 2m footpaths); iii) Intersection of the CWB and the local roads to provide safe crossings; iv) Retaining wall structures, in terms of their scale and materials and noise mitigation structures and landforms in terms of their fit in the landscape and visual treatment; v) Local property access to provide for existing and future needs; vi) Landscape treatment, in conjunction with the LMP and SSLMPs;

- vii) Bridge piers and abutments design to address the location of piers and the treatment of abutments to address their scale and materials;
- viii) Location of highway directional signage, so as to avoid obstructing pedestrian and cycling movement and coordinate the provision of signage to avoid visual clutter.
- g) A SSUDP will also be prepared for the CWB, having regard to the Cycle Network and Route Planning Guide (Land Transport 2005). This SSUDP will include:
 - i) The final alignment and form of the CWB;
 - ii) A design that will achieve a minimum 3m wide two-way path that is generally parallel with Expressway;
 - iii) Locations for connections (immediate and future potential connections);
 - iv) Locations of boardwalks to address ecological values;
 - v) Lighting, safety provisions for crossings of local roads; and
 - vi) A CPTED review, as described in (h) below.
- h) The SSUDP process will also include a CPTED review by a suitably qualified independent expert. This includes a preliminary review (at the outset of the SSUDP process) and a review of the draft SSUDPs.
- i) The following site specific matters shall be considered as part of the development of the SSUDPs for the relevant locations:
 - i) Poplar Avenue Interchange:
 1. Legibility of the cycle and walking network, recognising the location adjacent to Queen Elizabeth Park and the start of the Expressway CWB
 2. Signage locations to recognise the likely scale and number of signs necessary to identify and regulate movement around the intersection
 - ii) Leinster Ave pedestrian bridge:
 1. Integration with the CWB and its link to the southern connection to Queen Elizabeth Park, to SH1 and any future connection to Matai Road
 2. Location and design of bridge to use landforms to minimise the need for structural ramps and address any potential future vehicle bridge connection
 - iii) Raumati Road:
 1. Pier locations that protect pedestrian safety, recognising the bridge skew to Raumati Road
 - iv) Ihakara extension/Wharemauku Stream:
 1. Safety of pedestrian and cycle crossing at the future local road Ihakara Street Extension
 2. Provision for future road connection in relation to the Wharemauku Stream and CWB
 3. Gradient and direction of CWB in relation to the slope up to Milne Drive
 - v) Kāpiti Road Interchange:
 1. Development of a distinctive gateway in terms of the bridge form, and legibility of connections to the future town centre development
 2. Wetland and designated land on Kāpiti Road being integrated with this gateway design as a transitional space between the Expressway and town centre
 3. Future upgrades to Kāpiti Road and the safety and convenience of the walking and cycling crossings for the upgraded Kāpiti Road
 4. Provision of a safe and convenient walking link between Kāpiti Road and Makarini Street (via Makarini Street Reserve)
 - vi) Makarini Street area pedestrian bridge:

	<ol style="list-style-type: none"> 1. Location and design to use landforms to minimise need for structural ramps 2. Location of connections to Te Roto Drive and Makarini Street. <p>vii) Mazengarb Road:</p> <ol style="list-style-type: none"> 1. Design of retaining walls to reduce dominance and maintain openness of approach <p>viii) Otaihanga Road:</p> <ol style="list-style-type: none"> 1. Safety and convenience of pedestrian and cycle crossing at the local road, including for horse riders <p>ix) Waikanae River:</p> <ol style="list-style-type: none"> 1. Detailed alignment of pedestrian walkways on both sides of the River 2. Connection of walkway with CWB on both sides of the River <p>x) Te Moana Road Interchange:</p> <ol style="list-style-type: none"> 1. Safety and convenience of pedestrian and cycle crossing at the local road, including for horse riders 2. Any additional network analysis required to consider the implications of the changes to the intersection design 3. Future connection points to the Ngarara development areas 4. Potential utilisation of the Waimeha Stream as an alternative (optional) route to crossings at Te Moana Road <p>xi) Ngarara Road and Smithfield Road:</p> <ol style="list-style-type: none"> 1. Horse use, including appropriate footpath widths and surfacing and dismounting area <p>xii) Peka Peka Interchange:</p> <ol style="list-style-type: none"> 1. Legibility of the cycle and walking network and the start of the Expressway CWB 2. Signage locations to recognise the likely scale and number of signs necessary to identify and regulate movement around the intersection. <p>j) The SSUDPs shall be prepared in consultation with:</p> <ol style="list-style-type: none"> i) Te Ati Awa ki Whakarongotai; ii) Takamore Trust, where the works are within or directly affect the area between Te Moana Road and the Waikanae River; iii) Te Rūnanga O Toa Rangātira Inc, where the works are within or directly affect Queen Elizabeth Park; iv) The GWRC where works are within or directly adjacent to Queen Elizabeth Park or Waikanae River corridor; v) Where the site relates to the open spaces of Queen Elizabeth Park, Wharemauku Stream or Waikanae River, consultation is to be undertaken with Friends of Queen Elizabeth Park, Friends of Wharemauku Stream, Friends of Waikanae River respectively; vi) the Council; vii) Residents' associations for the affected area; viii) Kāpiti Cycling Incorporated and the Implementation Group of the Kāpiti Coast District Council Advisory on Cycleways, Walkways and Bridleways in respect of the CWB and any cycle or pedestrian connections; ix) Residents of the Leinster Avenue neighbourhood in respect of the Leinster Avenue area pedestrian bridge under DC.59A(i)(ii);_and x) Makarini Street residents in respect of the Makarini Street area pedestrian bridge under DC.59A(i)(vi). <p>k) This consultation shall commence at least 30 working days prior to submission of the finalised SSUDP to the Council. Any comments and inputs received from the parties listed</p>
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	<p>above shall be clearly documented, along with clear explanation of where any comments have not been incorporated and the reasons why.</p> <p>l) The Requiring Authority shall submit each SSUDP to the Manager for certification at least 15 working days before the commencement of construction of that section of the Project.</p>
DC.59B	<p>The Requiring Authority shall establish directional signage to the Paraparaumu and Waikanae town centres, key tourist attractions and major destination points (such as Kāpiti Coast Airport) at suitable locations near the interchanges. The Requiring Authority shall consult with the Council at least 60 working days before the Expressway is open to traffic in regard to the design, wording and location of these signs, which shall comply with NZTA State highway signage standards.</p>
DC.59C	<p>a) The Requiring Authority shall prepare a Hard Landscape Management Plan (HLMP) for each of the following locations:</p> <ul style="list-style-type: none"> i) Public spaces that reflect the Kāpiti Coast's identity, popular recreational areas, or are on well used roads; these areas are Waikanae River; Wharemauku Stream; Poplar Avenue interchange; Kāpiti Road interchange; Te Moana Road interchange; Peka Peka interchange; and Mazengarb Road bridge; and ii) Sensitive landscape focus areas (as identified in DC.57A(a)). <p>b) The purpose of the HLMP shall be to outline the long-term programme of maintenance for hard landscape areas, including but not limited to fences, noise walls, under bridge walls and piers, gabion walls, paths, paving and signs. The purpose of the HLMP is to establish an ongoing maintenance regime to manage all hard landscape work associated with the Project in order to maintain the outcomes and standards required under Condition DC.53C.</p> <p>c) The Requiring Authority shall submit the draft HLMPs to the Manager for review and comment at least 20 working days before the Final Completion of Work occurs.</p> <p>d) The Requiring Authority shall submit the final HLMPs to the Manager at the time of Final Completion of the relevant Work.</p>
Archaeology and Built Heritage	
DC.59D	<p>a) In managing the construction of the Project and its effects on archaeology and built heritage, the Requiring Authority shall achieve the following outcomes:</p> <ul style="list-style-type: none"> i) The use of appropriate training, methods, protocols, and procedures in relation to the possible presence of cultural or archaeological sites or material that may be discovered during construction; ii) The investigation and recording of any archaeological resources discovered during the construction of the Expressway and the use of the information gained to facilitate a greater general understanding of the history and cultural heritage of the Kāpiti Coast; and iii) The protection of the built heritage values of the Greenaway Homestead (Puriri Rd), St Lukes Church Waikanae Christian Holiday Camp (Waikanae) and the Stringer Wind Rain House (224 Main Rd Raumati) from significant adverse effects created by noise, vibration and visual effects of the Expressway. <p>b) In achieving these outcomes, the Requiring Authority shall comply or be consistent with the following standards and guidelines:</p> <ul style="list-style-type: none"> i) ICOMOS New Zealand Charter for the Conservation of Places of Cultural Heritage Value 2010; ii) Conditions contained in any archaeological authorities granted by the New Zealand Historic Places Trust Pouhere Taonga in relation to Part 1 of the Historic Places Act 1993; and iii) The research strategy contained in Technical Report 9 prepared for the Project.

DC.59E	<p>The Requiring Authority, in consultation with, Te Ati Awa ki Whakarongotai Charitable Trust, Takamore Trust, the New Zealand Historic Places Trust, and, in respect of Queen Elizabeth Park, Te Rūnanga O Toa Rangātira, shall prepare an Accidental Discovery Protocol to be implemented in the event of accidental discovery of cultural or archaeological artefacts or features during the construction of the Project in areas not covered by archaeological authorities obtained under Part 1 of the Historic Places Act 1993. This protocol shall be submitted to the Manager at least 15 working days prior to any construction or enabling Work commencing on the Project. The protocol shall include, but need not be limited to:</p> <ul style="list-style-type: none"> a) Training procedures for all contractors regarding the possible presence of cultural or archaeological sites or material, what these sites or material may look like, and the relevant provisions of the Historic Places Act 1993 if any sites or material are discovered; b) Parties to be notified in the event of an accidental discovery shall include, but need not be limited to Te Ati Awa ki Whakarongotai Charitable Trust, Takamore Trust, Te Rūnanga O Toa Rangātira (in respect of Queen Elizabeth Park), the New Zealand Historic Places Trust, GWRC, the Council and, if koiwi are discovered, the New Zealand Police; c) Procedures to be undertaken in the event of an accidental discovery (these shall include immediate ceasing of all physical work in the vicinity of the discovery); and d) Procedures to be undertaken before work under this designation may recommence in the vicinity of the discovery. These shall include allowance for appropriate tikanga (protocols), recording of sites and material, recovery of any artefacts, and consulting with Te Ati Awa ki Whakarongotai Charitable Trust, Takamore Trust, Te Rūnanga O Toa Rangātira (in respect of Queen Elizabeth Park) and the New Zealand Historic Places Trust prior to recommencing work in the vicinity of the discovery. <p>Advice Note: <i>The Requiring Authority will be seeking separate archaeological authorities from the New Zealand Historic Places Trust under section 12 of the Historic Places Act 1993, prior to the commencement of construction. The authorities are likely to include requirements for detailed investigations and monitoring effects and are also likely to require the preparation of an HMP (or an Archaeological Management Plan). The Requiring Authority shall actively promote the inclusion of conditions on the archaeological authorities to secure these requirements at the time of making application for these authorities.</i></p>
DC.59F	<ul style="list-style-type: none"> a) During archaeological investigations, the Requiring Authority shall hold a series of open days associated with the archaeological field investigations. b) Following completion of construction work the Requiring Authority shall, in consultation with Te Ati Awa ki Whakarongotai Charitable Trust, the Takamore Trust, the Council and the New Zealand Historic Places Trust and for the purpose of public information and education; <ul style="list-style-type: none"> i) Prepare a series of fixed interpretive signs and the placement of those signs at culturally and/or archaeologically significant or strategic locations adjacent to the combined pedestrian footpath/cycleway; ii) Prepare a complementary set of portable interpretive panels to be supplied to the Council for use and distribution, incorporating and based on information obtained as part of any investigations undertaken in accordance with any archaeological authorities granted under Part 1 of the Historic Places Act. iii) Prepare and publish material (for example, a booklet or series of booklets, and publication in academic journal) suitable for a general audience that provides a summary of the archaeological findings and cultural heritage along the route. iv) Prepare a cultural landscape map of the route, drawing on the archaeological and cultural information obtained for the Project.

DC.60	<p>a) Prior to the commencement of construction in the Raumati South section of the Project (or at a later stage as approved in writing by the Manager), the Requiring Authority shall relocate the 'Wind Rain House' at 224 Main Road (State Highway 1), Raumati, to a suitable location, in accordance with a conservation report that shall be prepared by a suitably qualified and experienced conservation architect, and in consultation with the NZHPT. The report shall include the selection criteria for an appropriate location and an assessment of how the moving and re-establishment of the structure is to be achieved to minimise the potential for adverse effects on it.</p> <p>b) The Requiring Authority shall use its best endeavours to procure the Crown entering into appropriate covenants and/or encumbrances (or similar legal mechanism) on the property onto which the Wind Rain House is relocated to ensure the architectural values of the building are protected in perpetuity. The Requiring Authority shall, upon request from the Council, report progress on these best endeavours.</p>
Cultural Heritage	
DC.61	<p>a) In managing the construction of the Project and its effects on cultural heritage, the Requiring Authority shall:</p> <ul style="list-style-type: none"> i) Use appropriate training and protocols in relation to the presence of cultural sites of significance along the route; ii) In the final design and construction of the Project, avoid recorded archaeological sites where it is possible to do so or, where avoidance is not possible, undertake accurate mapping and site recording, and include that information in the New Zealand Archaeological Association's database; iii) Subject to and in accordance with arrangements as may be agreed with iwi – <ul style="list-style-type: none"> A. Involve iwi in the development of ecological mitigation; B. Actively engage with iwi in the development of construction management plans; C. Actively engage iwi representatives in aspects of the ecological, archaeological, and water quality monitoring required under the designation and resource consent conditions; D. Implement agreed protocols for the management and restoration of sites of mahinga kai significance along the Expressway corridor; E. Implement agreed protocols for management of works affecting wāhi tapu/wāhi taonga; and F. Offer and provide educational or training opportunities (such as scholarships) and/or positions within the labour force for Te Ati Awa ki Whakarongotai in the construction of the Expressway and associated mitigation work. iv) Actively protect and, in accordance with any agreement reached with the Takamore Trust, enhance cultural heritage values associated with the area shown in Scheme Plan CV-SP-119a (the Land) by: <ul style="list-style-type: none"> A. Not undertaking any excavation or land use disturbance activities in relation to the Land as may adversely affect cultural heritage values except as provided by the designation and associated resource consents, or any other statutory authorisation as may be obtained in accordance with Condition DC.26B; B. Exercising powers under section 176 of the Act in regard to any proposals by any other person for the use, development or subdivision of the Land, in consultation with the Takamore Trust, so as to avoid any adverse effect on cultural heritage values associated with the Land; and C. Actively engaging with Takamore Trust, and implementing such other measures as may be agreed with the Takamore Trust as will assist to protect and enhance cultural

	<p>heritage values associated with the Land including establishing a Historic Reserve within part of the Takamore wāhi tapu and implementing such other measures specified in the “Restoring the Mauri” and “Takamore Masterplan” documents that were presented at the Board of Inquiry hearing as may be agreed with the Trust.</p> <p>b) In achieving these outcomes, the Requiring Authority shall be consistent with the following guidance:</p> <ul style="list-style-type: none"> i) Te Aranga Design Principles – Maori Cultural\Landscape Strategy (Nga Aho, Network of Maori Design Professionals) ii) Wai 262 Waitangi Tribunal findings
DC.62	<p>Prior to the Expressway becoming operational, the Requiring Authority shall write to the Takamore Trust offering to commission a detailed geophysical survey of the extent of the Takamore urupā. If the Takamore Trust confirms to the Requiring Authority that it agrees to them undertaking the survey within 1 year of the Requiring Authority making the written offer to the Trust, the Requiring Authority shall undertake the survey and supply the Takamore Trust with a copy of the information derived from the survey as soon as reasonably practicable following completion of the survey.</p>
DC.62A	<p>a) The area shown in Scheme Plan CV-SP-119a (the Land) has been designated for the purpose of providing cultural heritage mitigation through the active protection of the Land and the implementation of those concepts which the Requiring Authority has proposed in the “Restoring the Mauri” and “Takamore Masterplan” documents, including the possible establishment of a Historic Reserve over the Land. The mitigation shall be developed in accordance with the principles contained within the in the “<i>Restoring the Mauri</i>” and “<i>Takamore Masterplan</i>” documents.</p> <p>b) The designation over the area described in DC.62A(a) above shall remain in place until either:</p> <ul style="list-style-type: none"> i) The purpose of the Cultural Liaison Group set out in Condition DC.62B(b) has been fulfilled; or ii) An Historic reserve has been established; or iii) The Takamore Trust agrees to the uplifting of the designation <p>c) No earthworks, construction, vegetation clearance or other work shall occur on the Land that could prejudice the capacity of the Land to achieve the purpose described in condition (a), without the prior written approval of the Takamore Trust</p> <p>d) Prior to commencement of construction in the vicinity of the Land, the Requiring Authority must prepare in consultation with the Trust and submit to the Manager a Site Specific Cultural Heritage Management Plan which specifies:</p> <ul style="list-style-type: none"> i) Measures to be undertaken for the ecological, mahinga kai, and landscape restoration as are specified in the Restoring the Mauri document and which can be implemented whether or not agreement has been reached with the Trust; and ii) Such other measures as are agreed with the Takamore Trust for the purposes of implementing the intentions of the Restoring the Mauri document.
DC.62B	<p>a) Prior to the commencement of construction, the Requiring Authority shall establish a Cultural Heritage Liaison Group.</p> <p>b) The purpose of the Cultural Heritage Liaison Group shall be to provide a regular forum between the Requiring Authority and the Takamore Trust for the purposes of assisting the Requiring Authority and the Trust to jointly identify and agree measures to be implemented by the Requiring Authority with respect to the Land in order to implement concepts which the Requiring Authority has proposed in the “<i>Restoring the Mauri</i>” and “<i>Takamore Masterplan</i>”</p>

	<p>documents or other measures identified and agreed to by the parties.</p> <p>c) The Cultural Heritage Liaison Group shall comprise representatives from the NZTA and trustees of Takamore Trust who shall be invited to join the Group pursuant to Condition DC.62C and 62D.</p> <p>d) The Requiring Authority will arrange for the Cultural Heritage Liaison Group to meet at least once every three months throughout the Project's construction period and once every six months after the completion of the construction of the Project (subject to arrangements the members of the Group may otherwise make) until one of the conditions in DC62D apply.</p> <p>e) The Requiring Authority shall be responsible for funding, obtaining statutory approvals required for and carrying out any works as may be agreed by the Group pursuant to this condition.</p> <p>f) The Requiring Authority shall maintain a record of the Group's proceedings and agreements.</p> <p>g) The Requiring Authority shall provide the Manager with a report if the Manager so requests (at intervals no more frequent than 6 monthly) confirming the occurrence of meetings of the Cultural Heritage Liaison Group and reporting on developments agreed by the Group.</p>
DC.62C	The Requiring Authority's obligations in Conditions DC.62A and DC.62B shall be deemed to be met if, to the satisfaction of the Manager, the Requiring Authority has invited the Takamore Trust in writing to join the Cultural Heritage Liaison Group and the Manager is satisfied that the Takamore Trust has not joined the Group before the finalisation of site specific management plans for this sector of construction.
DC.62D	<p>a) The Requiring Authority's obligations in Conditions DC.62A and DC.62B shall cease to apply upon the occurrence of any of the following circumstances (whichever occurs first):</p> <p>i) The Takamore Trust terminates its membership of the Cultural Heritage Liaison Group; or</p> <p>ii) The Land is set aside as a Historic Reserve under the Reserves Act 1977, or</p> <p>iii) The fifth anniversary of the completion of construction of the Project occurs.</p> <p>b) This condition shall not derogate from the Requiring Authority's requirement to undertake mitigation as required under other conditions (for example, landscape, noise, and ecology).</p> <p>c) This condition shall not derogate from the construction of a new access road into the Takamore wāhi tapu area, with a parking area to service the Takamore Urupā.</p>
DC.62E	The Requiring Authority shall involve the New Zealand Historic Places Trust (NZHPT) in the preparation of the cultural mitigation measures set out in Condition DC.61 in order to enable the NZHPT to provide the Requiring Authority with comments and advice.
	Lighting
DC.63	<p>a) All motorway lighting shall be designed in accordance with "Road lighting Standard AS/NZS1158"; and</p> <p>b) All other lighting shall be designed in accordance with the CPTED provisions in condition DC.59A; and</p> <p>c) All lighting shall be designed and screened to minimise the amount of lighting overspill and illumination of residential areas in accordance with Technical Report 8 Assessment of Lighting Effects.</p>
	Transport – Operational
DC.64	a) The Requiring Authority shall prepare in collaboration with the Council, and GWRC for the public transport elements, a Network Integration Plan (NIP) for the Project, or relevant Project stages, to demonstrate how the Project integrates with the existing local road network and with future improvements planned by the Council and GWRC (in relation to public transport).

	<p>The NIP shall include details of proposed physical work at the interface between the State highway and the local road and public transport network, and shall address such matters as pedestrian/ cycleway design detail (including lighting), lane configuration, traffic signal co-ordination and operational strategies, signage and provision for bus stops. The Requiring Authority shall submit the NIP to the Manager for certification at least 15 working days prior to commencement of construction of the Project, or relevant Project stages.</p> <p>b) In addition, the NIP will address:</p> <ul style="list-style-type: none"> i) How the work required for the Project at the Kāpiti Interchange will interface with the upgrades to intersections on Kāpiti Road at Milne Drive, Te Roto Drive and Arawhata Road proposed by the Council (in particular lane configurations to two continuous traffic lanes in each direction between the Expressway intersection and Milne Drive). ii) Design details of where the shared pedestrian/cycleway proposed as part of the Project will interact with the local network, especially where it uses parts of the local road network at Mazengarb Road, Otaihanga Road, Kauri Road, Ngarara Road, and the realigned Smithfield Road. This shall include the details of the form and dimensions of the facility. iii) Details of the agreed protocols for operating the traffic signals on Kāpiti Road at and immediately adjacent to the Expressway interchange. This shall include priorities for queue management and targets for pedestrian crossing times. iv) Details of work (including design details) to be carried out to provide for alternative access to properties on Kāpiti Road whose existing access is affected by the Project. v) Details of work (including design details) to be carried out to replace bus stops on Kāpiti Road and at Peka Peka. vi) Details of work (including design details) to be carried out to provide for provision of the pedestrian and traffic calming facilities referred to in condition DC.65 and DC.66. vii) Arrangements for a design workshop with the Council to confirm the preferred intersection control and concept design for the Te Moana Interchange. <p>c) Works identified in the NIP which are the responsibility of the NZTA, including any work associated with the relocation of bus stops, will be undertaken at the same time as construction work for the Project.</p>
DC.65	<p>As part of the Project, a pedestrian crossing facility (a refuge island or similar) shall be provided to assist pedestrians to cross Park Avenue (near Number 87) where the existing footpaths swap sides of the road. This facility shall be constructed and completed by the time the Expressway is fully operational.</p>
DC.66	<p>The Requiring Authority shall undertake a post-construction survey of traffic volumes on Park Avenue within 12 months of the commissioning of the Expressway to determine if any further traffic calming measures are warranted to manage traffic speeds. This shall be based on an analysis of pre and post-construction surveys of vehicle speeds and volumes on Park Avenue. A report detailing the results of this analysis shall be provided to the Manager within one month of completion of the analysis. If the analysis determines that further traffic mitigation calming measures are necessary, then these shall be implemented by the Requiring Authority.</p>
Settlement Management	
DC.67	<p>a) In managing the construction of the Project and its potential effects on ground settlement, the Requiring Authority shall achieve the following outcomes:</p> <ul style="list-style-type: none"> i) The monitoring of ground settlement in the vicinity of the Expressway during and immediately after construction to identify whether any effects on adjacent buildings are occurring; ii) The establishment and implementation of actions to rectify any more than negligible

	<p>adverse effects on buildings created by ground settlement from the Project.</p> <p>b) In achieving these outcomes, the Requiring Authority shall be consistent with the following guidelines for assessing the effects of ground settlement on buildings:</p> <p>i) Burland, J.B. (1997), "Assessment of Risk of Damage to Buildings Due to Tunnelling and Excavation", Earthquake Geotechnical Engineering, Ishihara (Ed.), Balkema, Rotterdam, 1997.</p>
DC.68	<p>a) The Requiring Authority shall submit the Settlement Effects Management Plan (SEMP) to the Manager for certification at least 15 working days prior to work commencing. The purpose of the SEMP is to outline the measures to be adopted to manage potential ground settlements (settlements) associated with construction and operation of the Expressway on existing buildings, services and transport infrastructure in order to achieve the outcomes required under condition DC.67.</p> <p>b) The SEMP shall include, but need not be limited to, information required in other conditions of this consent and details of the following:</p> <p>i) implementation and operational procedures to manage the adverse effects of ground settlement;</p> <p>ii) estimated total settlements at end of construction;</p> <p>iii) methods to monitor settlement;</p> <p>iv) monitoring locations set out on a plan;</p> <p>v) monitoring frequency;</p> <p>vi) reporting requirements;</p> <p>vii) alert and action programmes; and</p> <p>viii) process for reviewing the settlement implementation and operational procedures where necessary.</p>
DC.69	<p>The SEMP shall be reviewed by a suitably qualified independent person, prior to being submitted to the Council for certification. Any comments and inputs received from the independent reviewer shall be clearly documented, along with clear explanation of where any comments have not been incorporated and the reasons why. For the purpose of this condition "independent person" shall be a suitably qualified and experienced person who is not an employee of the Requiring Authority or does not work for any of the companies contracted to design and/or construct the Project.</p>
DC.70	<p>The Requiring Authority shall establish a series of ground settlement monitoring marks to monitor potential settlement that might occur as a result of construction of embankments and drawdown of the groundwater table. The survey marks will be generally located as follows:</p> <p>a) 2 to 4 marks, established in cross-sections along the length of the Expressway as set out in Appendix D of the draft SEMP;</p> <p>b) Adjacent to stormwater features where groundwater drawdown of more than 0.1 m has been predicted;</p> <p>c) At the Council wastewater treatment plant; and</p> <p>d) At structures identified close to the Expressway where settlement of more than 12.5 mm is predicted.</p> <p>The locations of each type of settlement monitoring marks shall be confirmed in the SEMP.</p>
DC.71	<p>The Requiring Authority shall survey the settlement monitoring marks at the following frequency:</p> <p>a) Pre-construction - vertical at monthly intervals starting at least 12 months prior to construction commencing in the area of active construction;</p> <p>b) During construction:</p>

	<ul style="list-style-type: none"> i) Except as specified in (ii) and (iii) vertical at 3 monthly intervals; ii) within 500 m of active construction – vertical at monthly intervals; iii) within 50 m of excavation in front of retaining walls – vertical at monthly intervals. <p>c) Post-construction:</p> <ul style="list-style-type: none"> i) Vertical at 3 monthly intervals for 6 months; and ii) Vertical at 6 monthly intervals for a further period of at least 2 years.
DC.72	<ul style="list-style-type: none"> a) Immediately following each monitoring round, the Requiring Authority shall use the settlement monitoring results (together with the results of groundwater monitoring where they may provide an earlier indication of future settlements) to reassess the building damage categories and compare them to those estimated in Technical Report 35 - Assessment of Ground Settlement Effects. b) If the reassessment indicates that a building or structure has increased its damage category, this shall be considered to be an Alert Level and additional specific assessment of the structure shall be carried out by the Requiring Authority to confirm this reassessment within 72 hours of the reassessment being completed. c) If the additional assessment confirms the increase in damage category, this shall be considered an Action Level and the owner and occupier of the structure shall be notified within 72 hours of the additional assessment being completed. d) Following consultation with the property owner and occupier, subsequent actions may include increased frequency and/or extent of monitoring, modification to the construction approach with a road embankment settlement contingency measure (or measures) in accordance with section 7.2 of Technical Report 35 or mitigation work to the affected structure.
DC.73	<p>The Requiring Authority may reduce the frequency of settlement monitoring required at a monitoring mark by Condition DC.71:</p> <ul style="list-style-type: none"> a) Once the active construction Stage has passed; and b) 3-monthly monitoring has been carried out for a minimum of 6 months; and c) The monitoring indicates that any potential settlement effects are within a satisfactory range as specified in the SEMP; and d) The Council has provided written confirmation (on request from the Requiring Authority) that the criteria in DC.73(a)-(c) have been met.
DC.74	<p>The Requiring Authority shall collate the results of the settlement monitoring (undertaken pursuant to Conditions DC.70-DC.73) and prepare a report that shall be made available to the Council.</p> <p>A settlement monitoring report shall be prepared:</p> <ul style="list-style-type: none"> a) prior to the commencement of Work; and b) at 3-monthly intervals throughout the construction period; and c) following completion of construction following each round of settlement monitoring undertaken (i.e. 3 monthly and then 6 monthly). <p>The purpose of the reports is to highlight any Alerts or Actions (as outlined in DC.68 above) and provide a full interpretation and/or explanation as to why these occurred, the likely effects and any mitigation measures initiated as a result.</p>
DC.75	<p>The Requiring Authority shall review and update the schedule of buildings and structures considered to be at risk in accordance with the criteria of the SEMP and maintain this schedule for review by the Council. This schedule shall include but not be limited to, the following properties:</p>

	<ul style="list-style-type: none"> a) the Council wastewater treatment plant; b) The Waikanae Christian Holiday Park (El Rancho); and c) Specific buildings identified during the course of detailed design where the total end of construction settlements are estimated to be greater than 25 mm.
DC.76	The Requiring Authority shall consult with owners of buildings and structures identified in Condition DC.75 (a)-(c) and, subject to the owner's approval of terms acceptable to the Requiring Authority, shall undertake a pre-construction condition assessment of these structures in accordance with the SEMP.
DC.77	The Requiring Authority shall employ a suitably qualified person to undertake the building assessments required pursuant to Condition DC.76 and identify this person in the SEMP.
DC.78	<p>The Requiring Authority shall undertake monthly visual inspections of the following properties during active construction:</p> <ul style="list-style-type: none"> a) Dwellings where the total settlements are estimated to be greater than 25mm; b) Dwellings where the predicted Building Damage category is greater than 'negligible' as defined in Table 10 of Technical Report 35 (noting that there are none in this category at the time the designation was confirmed); c) The Council wastewater treatment plant; and d) All other specifically identified buildings in Condition DC.75.
DC.79	<ul style="list-style-type: none"> a) The Requiring Authority shall, subject to the approval of the owners identified in Condition DC.75, undertake a post-construction condition assessment of buildings and structures covering the matters identified in the SEMP and provide a copy to the owner. The assessment report shall include a determination of the cause of damage identified (if any) since the pre-construction condition assessment. b) The Requiring Authority shall agree with the owner appropriate remedial work (if any) in conjunction with arrangements for implementation and/ or compensation. The requirements of this condition need not be fulfilled for any particular building with the written approval of the current owner of a building or where the Requiring Authority can provide reasonable evidence to the Council that the current owner of the building has agreed they do not require such a survey.
DC.80	The Requiring Authority shall provide a copy of the pre, post-construction and any additional building condition assessment reports for each building to the respective property owner within 15 working days of completing the reports. The Requiring Authority shall notify the Council that the assessments have been completed.
DC.81	Prior to construction commencing, the Requiring Authority shall undertake CCTV or alternative surveys of services identified in the SEMP as being susceptible to damage or particularly critical. The Requiring Authority shall monitor these services by undertaking additional CCTV surveys throughout the construction period. If damage is determined in relation to the Project, the Requiring Authority shall undertake remedial action as required in consultation with the service provider.

Appendix B

Resource Consent Conditions

RESOURCE CONSENTS

GUIDE TO READING THE CONDITIONS

The proposed suite of conditions to manage effects of the Project has been numbered in order to eliminate confusion, specifically to avoid multiple 'Condition 1' and so forth. The numbering format is as follows:

NZTA regional resource consent conditions	
G	General conditions applying to all relevant consents and permits
WS	Conditions applying to consents and permits for work in watercourses
E	Conditions applying to consents and permits for earthwork and erosion and sediment control activities
BC	Conditions applying to consents and permits for the construction of boreholes
GT	Conditions applying to consents and permits for the taking of groundwater
VC	Conditions applying to consents for the removal of vegetation in the beds of watercourses and wetlands, including the associated disturbance of their beds
NES	Conditions applying to land use consents required by the National Environmental Standard For Assessing and Managing Contaminants in Soil to Protect Human Health 2011 for the disturbance of soil containing contaminants
SW	Conditions applying to operational stormwater discharge
WR	Conditions applying to consents for the partial reclamation of wetlands in the vicinity of the MacKays to Peka Peka Expressway alignment, including the associated disturbance of their beds.

The table below provides explanation to a number of the acronyms and terms used in the conditions.

Definitions	
AEE	Means the MacKays to Peka Peka Expressway Assessment of Effects on the Environment Volumes 1 to 5 dated April 2012
CEMP	Construction Environmental Management Plan
CESCP	Construction Erosion and Sediment Control Plan
Commencement of Work	Means the time when the first works that are the subject of these resource consents commences
Council	Means the Greater Wellington Regional Council
CSMP(HH)	Means the Contaminated Soils Management Plan (Human Health)
CSGMP	Means the Contaminated Soils and Groundwater Management Plan
Designation Footprint	Means the area of land contained within the designation boundary
EMP	Means the Ecological Management Plan
ESCP	Means the Erosion and Sediment Control Plan
Existing network utilities	Means all network utilities existing at 15 August 2011 (the date of notification of this Notice of Requirement). Network utility has the same meaning as in section 166 of the Resource Management Act 1991
Final Completion of Work	Means the time when the last construction works within an identified stage are completed
GMP	Means the Groundwater (Level) Management Plan
GWRC	Means the Greater Wellington Regional Council, including any officer of Greater Wellington Regional Council

KCDC	Means the Kāpiti Coast District Council, including any officer of Kāpiti Coast District Council
Manager	Means the Manager, Environmental Regulation, Greater Wellington Regional Council
NES	Means the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health.
Operational	Means when construction of the Project is complete and the Expressway is open to traffic
Project	Means the construction, maintenance and operation of the MacKays to Peka Peka Expressway
Project Environmental Manager	Means the person responsible for environmental management during construction, as nominated in the Construction Environmental Management Plan
Project Footprint	Means the extent of the earthworks required for the Project construction and associated cuts and fills
Sector	Means a sector of the Project as nominated by the Consent Holder and shown in the Sector plans (a Sector may include several 'stages').
SSEMP	Means a Site Specific Ecological Management Plan
SSMP	Means a Site Specific Management Plan
Stage	Means a stage of the Project as identified by the Consent Holder in the Staging programme submitted to the Council in accordance with condition G.12.
Stabilisation	Means making an area resistant to erosion. This may be achieved by using indurated rock or through the application of base course, grassing, or other method to the satisfaction of the Manager, on a surface that is not otherwise resistant to erosion. Where seeding or grassing is used on a surface that is not otherwise resistant to erosion, the surface is considered stabilised once 80% vegetative ground cover has been established over the entire area. "Non-stabilised" areas are those which do not meet the definition of "stabilised"
Water body	Means freshwater or geothermal water in a river, lake, stream, pond, wetland or aquifer, or any part thereof, that is not located within the coastal marine area
Work	Means any one or more of the various activities undertaken in relation to the Project
Working Day	Has the same meaning as under section 2 of the Resource Management Act 1991

RESOURCE CONSENT CONDITIONS

General conditions

Ref	Wording of Conditions
	General
G.1	<p>The Project shall be undertaken in general accordance with the plans and information submitted with the application as documented as consent numbers NPS12/01.003 – NPS12/01.023 (as updated by information provided by the Consent Holder with the Board’s approval prior to the issuance of the Board’s draft decision), subject to such amendments as may be required by the following conditions of consent.</p> <p>The plans and information include:</p> <ul style="list-style-type: none"> a) Assessment of Environmental Effects report, dated March 2012 b) Plan sets: <ul style="list-style-type: none"> i) CV-SP -100 – 160: Scheme plans (including updated Scheme Plans CV-SP-110 (revision 2), CV-SP-119a (revision 4), CV-SP-120 (revision 2)); ii) CV-GP-101-136: Geometric plans; iii) CV-SC-001-004: Cross sections; iv) CV-EW-100-232: Earthwork; v) CV-BR-100-970: Bridges; vi) CV-GE-100-140: Structural - General; vii) GI-PR-01-18: Land Requirement Plans (including amended plans GI-PR-01, GI-PR-10, GI-PR-11, GI-PR-19); viii) CV-MF-100-132: Lighting, Marking and Signage (including plan CV-MF-108 attached to the evidence of Keith Murray Gibson, dated 4 September 2012); ix) CV-CM-101-412: Construction Methodology; x) Urban & Landscape Design Framework (Technical Report 5); xi) Landscape & Visual (Technical Report 7)- Appendix A & B; xii) Stormwater & Hydrology (Technical Report 22) – Appendix 22.A; xiii) Erosion & Sediment Control (CEMP Appendix H) – Appendix H.B, H.C, H.D, H.E, H.F, H.H, H.I, H.R. xiv) Proposed Ecological Mitigation Sites (Plan Set dated 29 November 2012), Annexure 3 to the supplementary evidence of Robert John Schofield dated 10 December 2012. c) Changes to or replacement of any of the plans and information specified in paragraph (b) of this condition presented in support of the application at the Board of Inquiry hearing. <p>Where there is conflict between the documents lodged and the conditions, the conditions shall prevail. Where there is an inconsistency between the information and plans lodged with the application and at the Board of Inquiry hearing, the most recent plans and information shall prevail.</p> d) The relevant section of any technical report referred to in these conditions shall be regarded as part of these conditions, and a copy of each shall be appended to these conditions. e) The Project website shall provide online access to these conditions and the plans and reports referred to in these conditions throughout the construction of the Project, and hard copies shall be available at the Project site office.
G.2	<p>Subject to the Consent Holder holding or obtaining appropriate property rights to enable it to do so, the Consent Holder shall permit the agents of the Council to have access to relevant parts of the respective properties at all reasonable times for the purpose of carrying out inspections,</p>

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	surveys, investigations, tests, measurements and/or to take samples to enable the Council to undertake its monitoring functions in relation to the Project.
Pre-construction Administration	
G.3	<p>a) The Consent Holder shall arrange a pre-construction site meeting between the Council and any other relevant party nominated by the Council, including the primary contractor, at least 10 working days prior to commencement of Work in any Stage (as identified in the staging programme submitted under condition G.12).</p> <p>b) In the case that any of the invited parties, other than the representative of the Consent Holder, does not attend this meeting, the Consent Holder will have been deemed to have complied with this condition, provided the invitation requirement is met.</p> <p>c) The Consent Holder shall ensure that additional site meetings are held between the Consent Holder, the Manager and any other relevant party nominated by the Manager, at appropriate intervals, and not less than every 6 months following commencement of Work.</p>
G.4	The Consent Holder shall ensure that a copy of this consent and all documents and plans referred to in this consent, are kept on site at all times and presented to any Council officer on request.
Consent Lapse and Expiry	
G.5	Pursuant to section 125(1) of the Act, the consents referenced NPS12/01.003 – NPS12/01.023 shall lapse 15 years from the date of the commencement of this consent (in accordance with section 116 of the Act) unless they have been given effect, surrendered or been cancelled at an earlier date.
G.6	<p>Pursuant to section 123(c) of the Act, the consents referenced [NPS12/01.003; NPS12/01.004; 12/01.005; 12/01.007; NPS 12/01.010; NPS 12/01/0.13; NPS 12/01.016; NPS 12/01.019; NPS 12/01.022; NPS 12/01.024; NPS 12/01.025; NPS 12/01.026; NPS12/01/028; NPS 12/01.029; NPS 12/01.030] shall expire 25 years from the date of commencement.</p> <p>Pursuant to section 123(c) of the Act, the consents referenced [NPS12/01.002; NPS12/01.006; 12/01.008; 12/01.009; NPS 12/01.011; NPS 12/01/0.12; NPS 12/01.014; NPS 12/01.015; NPS 12/01.017; NPS 12/01.018; NPS 12/01.020; NPS 12/01.021; NPS12/01/023] shall expire 35 years from the date of commencement.</p>
Review of Consents	
G.7	<p>The Council may review any or all conditions of this consent by giving notice of their intention to do so pursuant to section 128 of the Act, at any time within six months of the first, third, fifth and tenth anniversaries of the date of commencement of the Work authorised by this consent for any of the following purposes:</p> <p>a) To deal with any adverse effects on the environment, which may arise from the exercise of this consent, and which it is appropriate to deal with at a later date; and</p> <p>b) To review the adequacy of any monitoring plans proposed and/or monitoring requirements and incorporate into the consent any monitoring or other requirements which may become necessary to deal with any adverse effects on the environment arising from the exercise of this consent.</p>
Complaints	
G.8	a) At all times during construction Work, the Consent Holder shall maintain a permanent register of any complaints received alleging adverse effects from, or related to, the exercise of this consent. The record shall include:

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	<ul style="list-style-type: none"> i) the name and address (where this has been provided) of the complainant; ii) identification of the nature of the complaint; iii) location, date and time of the complaint and of the alleged event; iv) weather conditions at the time of the complaint (as far as practicable), including wind direction and approximate wind speed if the complaint relates to air discharges; v) the outcome of the Consent Holder's investigation into the complaint; vi) measures taken to respond to the complaint; and vii) any other activities in the area, unrelated to the Project that may have contributed to the complaint, such as non-Project construction, fires, or unusually dusty conditions generally. <ul style="list-style-type: none"> b) The Consent Holder shall respond to any complaint within 10 working days of the complaint; c) The Consent Holder shall also maintain a record of its responses and any remedial actions undertaken; d) This record shall be maintained on site and shall be made available to the Manager and KCDC, upon request. The Consent Holder shall provide the Manager and KCDC with a copy of the complaints register every month.
G.8A	<p>The complaints process under condition G.8 shall continue for 6 months following the commissioning of the Project to traffic. Any complaints received after this period shall be managed by the Consent Holder in accordance with its standard complaints procedures.</p>
	<p>Incidents</p>
G.9	<ul style="list-style-type: none"> a) The Consent Holder shall follow the relevant incident procedures and requirements set out in these conditions. If an incident occurs for which there is no incident procedure set out in these conditions the process outlined below in b)-d) shall apply. b) The Consent Holder shall notify the Manager and KCDC within 1 working day after identifying that any contaminants (including sediment) or materials have been released in the undertaking of the Work and entered any water body due to any of the following incidents: <ul style="list-style-type: none"> i) discharges from non-stabilised areas that are not treated by erosion and sediment control measures as required under this consent; and/or ii) failure of any erosion and sediment control measures; and/or; iii) discharge of a hazardous substances, including cement, to a water body; and/or iv) failure of any temporary stream diversion; and/or v) un-consented removal, loss or damage to vegetation or other habitats; and/or vi) any other incident which either directly or indirectly causes, or is likely to cause, adverse ecological effects in any water body that is not authorised by a resource consent held by the Consent Holder. c) This notification shall be either by telephone or email, or via an alternative method as agreed with the Manager. d) If any of the incidents identified in (b) occur, the Consent Holder shall also: <ul style="list-style-type: none"> i) establish control measures where these have failed or have not been implemented in accordance with the relevant management plan as soon as practicable; ii) liaise with the Manager to establish what remediation or rehabilitation is required and whether such remediation or rehabilitation is practical to implement; iii) carry out any remedial action as required by and to the satisfaction of the Manager; and iv) maintain a permanent record of the incident at the site, which shall include the date and time of the incident, the nature, manner and cause of the release of the contaminants,

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	<p>weather conditions at the time of the incident and the steps taken to prevent any further incidents and to remedy any adverse effects.</p> <p>e) This notification shall be either by telephone or email, or via an alternative method as agreed with the Manager.</p>
G.10	<p>The Consent Holder shall, if requested by the Manager in response to a complaint, incident or other reasonable request that relates to managing an adverse effect that is directly related to the construction of the Project, carry out a review of any management plan required by these conditions within 5 working days of that request. The Consent Holder shall submit the revised management plan to the Manager for certification that:</p> <p>a) The reason(s) for requiring the review have been appropriately addressed; and</p> <p>b) Appropriate actions and a programme for implementation are provided for if required.</p>
Staff Training	
G.11	<p>The Consent Holder shall ensure that personnel responsible for supervising earthwork site staff (i.e. foremen, supervisors and managers) shall undergo environmental awareness training, required by the CEMP. This training shall occur prior to the commencement of Work in any Stage and shall be given by a suitably qualified and experienced person certified by the Manager to deliver practical on-site training. Specifically, training may include (as relevant) but not be limited to:</p> <p>a) Design details for the erosion and sediment control measures and associated methodologies;</p> <p>b) Details of any stream diversions or other in-stream work and works in wetlands, briefing on the values of the streams and wetlands, the objectives for stream and culvert design and construction erosion and sediment control measures, the requirements of native fish for fish passage, and the sensitivity of the receiving environment to sediment discharges;</p> <p>c) For supervisory and management personnel likely to be involved in any Work involving vegetation clearance, briefing on the values of any significant areas of vegetation that are to be retained, and the methods that shall be used to identify and protect them during construction; and</p> <p>d) Briefing on the requirements of Te Āti Awa ki Whakarongotai and Takamore Trust for cultural ceremonies to occur before the commencement of Work.</p> <p>The environmental awareness training shall include a process and programme for training of new staff members joining the Project team, and for any staff moving to a new Site Specific Management Plan (SSMP) area within the Project. This environmental awareness training shall continue for the duration of the earthworks.</p>
Staging and Programme Conditions	
G.12	<p>a) The Consent Holder shall submit to the Manager at least 2 months prior to commencement of Work a detailed programme outlining:</p> <p>i) The proposed staging of the construction Work;</p> <p>ii) The anticipated submission dates of the CEMP, including appended management plans as required by G.19, and any other plans;</p> <p>iii) The anticipated submission dates of Site Specific Management Plans that will be submitted for certification in accordance with the requirements of applicable conditions of this resource consent and prior to the commencement of Work at each applicable stage of construction.</p>

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	<p>This programme is to assist the Council in planning for resources to certify these management plans within the appropriate timeframes.</p> <p>b) The Consent Holder will provide the Manager with an updated programme of construction sequencing and/or site specific management plans if changes occur in the programme. The updated programme shall be submitted at least 1 month before any changes in sequencing occurs.</p>
G.13	<p>The Consent Holder shall provide the Manager with an updated schedule of construction activities for the Project at monthly intervals throughout the construction phase of the Project. Each monthly update schedule shall demonstrate how it fits into the overall staging programme required by condition G.12.</p>
Annual Monitoring	
G.14	<p>The Consent Holder shall provide an annual monitoring report to the Manager by the 30th of September each year (or on an alternative date as otherwise agreed with the Manager). The purpose of this report is to provide an overview of the monitoring and reporting work undertaken, and any environmental issues that have arisen during the construction of the Project. As a minimum, this report shall include:</p> <p>a) All monitoring data required in accordance with the conditions of this consent and a summarised interpretation of this data;</p> <p>b) Any reasons for non-compliance or difficulties in achieving compliance with the conditions of this resource consent;</p> <p>c) any work that has been undertaken to improve the environmental performance on the site or that is proposed to be undertaken in the up-coming year;</p> <p>d) Recommendations on alterations to the monitoring required and how and when these will be implemented through changes to the relevant management plans; and</p> <p>e) Any other issues considered important by the Consent Holder.</p>
Management Plans - General	
G.15	<p>a) All Work and the operation of the Project shall be carried out in general accordance with the management plans and other documents and plans required by these conditions. These management plans provide the overarching principles, methodologies and procedures for managing the effects of construction of the Expressway to achieve the environmental outcomes and performance standards required by these conditions. These management plans provide the basis for which site specific management plans (SSMPs) will be prepared for each stage of the Expressway, which set out the detailed design and construction response to address the specific context and circumstances of each stage of the route.</p> <p>b) The management plans required by the conditions apply to the entire Expressway route and, for some matters, are sufficient to address construction management without the need for more specific plans (for example, contaminated soils and groundwater management). For other matters, there is a need for SSMPs to provide the necessary level of detail to address the specific design and construction requirements. There may be multiple SSMPs within each of the four sectors or the construction stages.</p>
G.16	<p>This row is intentionally blank.</p>
G.17	<p>The Consent Holder may request amendments to any of the management plans required by these conditions by submitting the amendments in writing to the Manager for certification at least</p>

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	10 working days prior to any changes taking effect. Any changes to management plans shall remain consistent with the overall intent of the management plan and relevant conditions in achieving the outcomes required by these conditions. The changes sought shall not be implemented until the Consent Holder has received the Manager's written certification for the relevant management plan(s).
G.18	Where a management plan is required to be prepared in consultation with any third party, the management plan shall demonstrate how the views of that party (or parties) have been incorporated, and where they have not, the reasons why.
G.18A	The Consent Holder shall submit draft copies of all management plans (as required by condition G.19) to the Manager for comment at least 30 Working Days prior to Commencement of Works.
G.19	<p>a) All work shall be carried out in general accordance with management plan(s) required by these conditions. The SSMPs must be consistent with and implemented in accordance with the respective Management Plan.</p> <p>b) Management plans that form part of the CEMP which are required to be certified by the Council are:</p> <ul style="list-style-type: none"> i) Erosion and Sediment Control Plan; ii) Groundwater (Level) Management Plan; iii) Contaminated Soils and Groundwater Management Plan; and iv) Ecological Management Plan. <p>c) These management plans shall be prepared in general accordance with the draft management plans provided with the documents and information provided in support of the application, except as modified by requirements of other conditions and information provided during the hearing and approved by the Board of Inquiry (this includes the draft Baseline Ecological Management Plan which replaces sections 4.4.1 and 4.4.2 of the draft Ecological Management Plan submitted with the application). Prior to being submitted to the Manager for certification, the management plans listed in G.19(b)(i)-(iv) above shall be reviewed by a suitably qualified independent person. Any comments and inputs received from the independent reviewer shall be clearly documented, along with clear explanation of where any comments have not been incorporated and the reasons why. For the purpose of this condition an "independent Person" shall be a suitably qualified and experienced person who is not an employee of the consent holder or does not work for any of the companies contracted to design and construct the Project. The final management plans listed in G.19 (b)(i) – (iv) above shall be submitted to the Manager for certification at least 15 working days before the commencement of Work. Work shall not commence until the Consent Holder has received the Manager's written certification for the management plans.</p> <p>d) A copy of the certified management plans listed in b) will be made publicly accessible on the Project website.</p>
G.19A	<p>a) The Consent Holder shall lodge SSMPs, in accordance with the timeframe outlined in the relevant conditions, for certification by the Manager. Work shall not commence until the Consent Holder has received the Manager's written certification of the relevant SSMPs.</p> <p>b) Site specific management plans shall be prepared for the following:</p> <ul style="list-style-type: none"> i) Erosion and Sediment Control; and ii) Ecological Management. <p>c) If the Consent Holder seeks to make a 'minor' change to a SSMP, the change shall be submitted to the Manager for certification at least 2 working days prior to the Work</p>

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	<p>commencing. For the purpose of this condition, 'minor change' is as defined in the relevant management plan. The Consent Holder shall maintain a record of minor changes to SSMPs which shall be forwarded to the Manager within 2 working days of each update.</p> <p>d) If the Consent Holder seeks to make a more than minor change to a SSMP, the change shall be submitted to the Manager for certification at least 5 working days prior to the Work commencing.</p> <p>e) The Consent Holder shall ensure that the CEMP and appended management plans have been provided to the Manager with or prior to submitting a SSMP.</p> <p>f) The SSMPs do not form part of the CEMP as they will be lodged in a staged manner throughout the construction phase of the Project.</p>
	Construction Environmental Management Plan
G.20	<p>The Consent Holder shall submit a Construction Environmental Management Plan (CEMP) to the Manager for information at least 15 working days prior to commencement of Work. The CEMP shall be in general accordance with the draft CEMP submitted with the application (dated 26 March 2012). The CEMP shall include, as appendices the suite of management plans required under condition G.19 which must be certified prior to commencement of Work.</p>
G.21	<p>The CEMP and the management plans required under condition G.19 shall include details of:</p> <ul style="list-style-type: none"> a) Staff and contractors' responsibilities; b) Training requirements for employees, sub-contractors and visitors; c) Environmental incident and emergency management (including the procedures required under condition G.9); d) Communication and interface procedures; e) Environmental complaints management (required under condition G.8); f) Compliance monitoring; g) Environmental reporting; h) Corrective action; i) Environmental auditing; j) Review procedures; k) Resource Efficiency and Waste Management Plan; and l) Stakeholder and Communication Management Plan. <p>The CEMP shall also confirm construction methodologies and construction timeframes, including staging.</p>
G.22	<p>The CEMP shall confirm final details, staging of Work, and sufficient engineering design information to ensure that the Project remains within the limits and standards approved under this consent and that the construction activities avoid, remedy or mitigate adverse effects on the environment in accordance with the conditions of this consent.</p>
G.23	<p>Prior to submission of the CEMP to the Manager and KCDC, the Consent Holder shall organise a workshop with representatives from KCDC and the Council to enable comments on the draft CEMP to be provided. This workshop shall focus on the reporting procedures, timing and other interactions between the Councils during the construction of the Project. The Consent Holder shall invite KCDC and the Council to the workshop at least 10 working days prior to the date of the workshop. A copy of the draft CEMP shall be provided to KCDC and the Council at least 5 working days prior to the date of the workshop. Any comments received from the KCDC and/or</p>

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	the Council representatives at the workshop shall be supplied to the Manager when the CEMP is submitted, along with a clear explanation of where any comments have not been incorporated and the reasons why.
G.24	The CEMP shall be implemented and maintained throughout the entire construction period and following construction as necessary, and updated if further design information is provided.
G.25	A copy of the CEMP shall be held on each construction site at all times and be available for inspection by the Council.
G.26	This row is intentionally left blank.
Erosion and Sediment Control	
G.26A	<p>a) In managing earthworks and the potential for erosion and sediment runoff during construction of the Project, the Consent Holder shall achieve the following outcomes:</p> <ul style="list-style-type: none"> i) To minimise the volume and area of the proposed earthworks required for the Project through the design of batter slopes and road alignments appropriate to expected soil types and geology; ii) To maximise the effectiveness of erosion and sediment control measures associated with earthworks by minimising potential for sediment generation and yield; iii) To ensure that earthworks authorised under this consent do not adversely affect surface and sub-surface waterbodies and wetlands within or beyond the Project site; iv) To ensure that earthworks authorised under this consent do not adversely affect any sensitive flora and fauna habitat; v) To ensure control and/or mitigation of adverse effects of any dust; and vi) To ensure that the earthworks are undertaken in a manner that provides for final surfaces that are stable and suitable for necessary rehabilitation. <p>b) In achieving these outcomes, the Consent Holder shall, at the least, comply or be consistent with whichever is the more stringent of the following standards and guidelines:</p> <ul style="list-style-type: none"> i) The Erosion and Sediment Control Guidelines for the Wellington Region; ii) NZTA's Draft Erosion and Sediment Control Standard for State Highway Infrastructure; iii) Draft Field Guide for Contractors.
G.27	<p>a) The Consent Holder shall submit a draft Erosion and Sediment Control Management Plan (ESCP) to the Manager at least 30 working days prior to Work commencing. The final ESCP will be submitted to the Manager for certification at least 15 working days prior to commencement of Work. The ESCP shall be submitted with the CEMP as an appendix. The purpose of the ESCP is to describe the methods and practices to be implemented to ensure the effects of sediment generation and yield on the aquatic receiving environments associated with the Project will be appropriately managed. In addition, the ESCP shall:</p> <ul style="list-style-type: none"> i) Outline the principles that the ESCP shall adhere to; ii) Identify areas susceptible to erosion and sediment deposition and implement erosion and sediment control measures appropriate to each situation with particular emphasis on high-risk areas, including El Rancho Wetland (Weggery), Raumati Manuka Wetland (between Poplar Avenue and Raumati Road), Southern Otaihanga Wetland, the Northern Otaihanga Wetland (adjacent to Otaihanga Landfill) Waikanae River, Wharemauku Stream and the Kakariki Stream; iii) Ensure construction and maintenance activities avoid, remedy or mitigate effects of soil erosion, sediment run-off and sediment deposition on valued ecological areas/habitat; iv) Use bio-engineering and low-impact design practices where practicable; and

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	<ul style="list-style-type: none"> v) Be prepared in general accordance with the draft ESCP provided with the application and subsequent information provided in support of the application, except as modified by requirements of other conditions and information provided during the hearing and approved by the Board of Inquiry. b) The ESCP shall include, but not be limited to, information required in other conditions of this consent and the following: <ul style="list-style-type: none"> i) Provision to ensure appropriate erosion and sediment control measures are installed prior to and during all construction Work; ii) The identification of appropriately qualified and experienced staff to manage the environmental issues onsite; iii) The identification of staff who have clearly defined roles and responsibilities to monitor compliance with the Consent conditions and ESCP; iv) Provision of details of a chain of responsibility for managing environmental issues and details of responsible personnel; v) Approach and procedures for monitoring and responding to requirements outlined in G.38A; vi) The site monitoring triggers for undertaking event based monitoring (grab samples) as required by condition G.38A vii) The responsibilities, procedures and response actions required to ensure that there is a rapid response on site should a continuous turbidity monitoring threshold set under condition G.38A be exceeded; viii) Details of the monitoring methodology that will be employed to confirm sediment control devices meet the outcomes and standards as specified in condition G.26A; ix) Changes to the ESCP and CESCOs that are considered to be 'minor' which would not require certification by the Manager prior to implementation, as required by conditions G.19A and E.2; and x) Methods and procedures to be undertaken for decommissioning of erosion and sediment control measures. c) Work shall not commence until the Consent Holder has received the Manager's written certification for the ESCP.
G.28	<ul style="list-style-type: none"> a) The Consent Holder shall submit specific Construction Erosion and Sediment Control Plans (CESCPs) for each area of Work to the Manager for certification at least 10 working days prior to commencement of Work in that area. There may be a number of CESCPs within each Stage or Sector, or CESCPs may cover the entire site for activities that are repeated throughout the site, such as peat replacement. The purpose of the CESCP is to detail how erosion and sediment control measures will be implemented, monitored and maintained for all areas of land disturbance, including stream works, during construction of the Project to address the specific characteristics of various Works areas. In addition, the CESCPs shall be consistent with the CEMP and management plans appended to the CEMP. The content of each CESCP shall be in accordance with condition E.3. b) Any changes to the CESCP that are more than 'minor', as defined in the ESCP and CESCP, shall be certified by the Manager prior to the amendment being implemented in accordance with condition E.2. c) Work shall not commence in each Stage until the Consent Holder has received the Manager's written certification of the CESCP for the relevant Stage of Work.
	Groundwater (Level) Management

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G.28A	<p>In managing the construction of the Project, and the potential for changes to the groundwater levels to occur, the Consent Holder shall achieve the following outcomes:</p> <ul style="list-style-type: none"> a) That there shall be no changes to the groundwater levels that shall result in a significant change to wetland hydrological conditions; and b) That there shall be no permanent changes to the ability of existing bore owners to abstract water from their existing water supply bores; and. c) That existing bore owners shall have priority to abstract water from their existing water supply bores unless adequate replacement water supply or other agreed arrangements can be provided.
G.29	<ul style="list-style-type: none"> a) At least 15 working days before submitting the Groundwater (Level) Management Plan (GMP) to the Manager for certification, the Consent Holder shall submit a copy of the draft GMP required by condition G.29 to KCDC for comment. Any comments received shall be supplied to the Manager when the GMP is submitted, along with a clear explanation of where any comments have not been incorporated and the reasons why. b) The Consent Holder shall submit a draft GMP to the Manager at least 30 working days prior to Work commencing. The final GMP will be submitted to the Manager for certification at least 15 working days prior to commencement of Work. The GMP shall be submitted with the CEMP as an appendix. The purpose of the GMP is to set out the best practicable options for groundwater monitoring and management, procedures to avoid, remedy or mitigate changes in groundwater levels and wetlands and to ensure that existing bore owners have priority to abstract water from their existing water supply bores and to protect the integrity of those supplies (in terms of both quality and quantity of supply). c) The GMP shall be finalised in consultation with Te Āti Awa ki Whakarongotai and Takamore Trust. d) The GMP shall include, but need not be limited to, information required in other conditions of this consent and the following information: <ul style="list-style-type: none"> i) The schedule of groundwater monitoring bores identifying piezometer depth, screen length and geological unit; ii) The locations of groundwater monitoring bores shown on plans, including within the vicinity of the bore supplying the Harrisons Country Gardenworld; iii) The locations of monitoring stations on the Wharemauku Stream and Drain 5; iv) A summary of understanding of the hydrological regime in each wetland (as identified in condition G.38B) at the time of preparation of the GMP; v) Details of how the monitoring and management, including the anticipated length of time temporary effects on existing water supply wells, may occur; vi) Monitoring frequency; vii) Monitoring methods including the role of Te Ati Awa ki Whakarongotai and Takamore Trust; viii) Reporting requirements; ix) Consultation procedures with the owners of affected existing groundwater bores, including owners of businesses reliant on bore water; x) Alert and action programmes, including the details of a range of mitigation options that can be implemented; xi) Response management; and

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	<p>xii) Review procedures.</p> <p>Work shall not commence until the Consent Holder has received the Manager's written certification for the GMP. The GMP shall be developed in parallel with the EMP (as required by condition G.34) to ensure that the monitoring and mitigation measures are appropriate for wetland management.</p>
G.30	This row is intentionally left blank.
Contaminated Soils and Groundwater Management	
G.31	<p>a) In managing earthworks and the potential for effects to occur due to the disturbance of contaminated soils during construction of the Project, the Consent Holder shall achieve the following outcomes:</p> <ul style="list-style-type: none"> i) Contaminated dust or sediment discharged beyond the boundary is minimised; ii) All excavated contaminated soils are appropriately handled and disposed of at facilities registered for taking contaminated material; and iii) All soil that is to remain on a site will be suitable for the proposed future use of that site. <p>b) In achieving these outcomes, the Consent Holder shall, at the least, comply or be consistent with the following standards and guidelines:</p> <ul style="list-style-type: none"> i) Contaminated Land Guidelines No.1 – Reporting on Contaminated Sites in New Zealand; ii) Contaminated Land Guidelines No. 5 – Site Investigation and Analysis of Soils; and iii) Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand.
G.32	<p>The Consent Holder shall submit a draft Contaminated Soils and Groundwater Management Plan (CSGMP) to the Manager at least 30 working days prior to Work commencing. The final CSGMP will be submitted for certification at least 15 working days prior to the commencement of Work. The CSGMP shall be submitted with the CEMP as an appendix. The purpose of the CSGMP is to identify contamination levels found during investigations, to detail the minimum standards for contamination management and to identify the best practicable options for management of contaminated soil and groundwater for the Project.</p> <p>The CSGMP shall be finalised in consultation with Te Āti Awa ki Whakarongotai and Takamore Trust.</p> <p>The CSGMP shall include, but need not be limited to, information required in other conditions of this consent and details of the following:</p> <ul style="list-style-type: none"> a) Implementation and operational procedures including: <ul style="list-style-type: none"> i) roles and responsibilities of the Contaminated Land Specialist; ii) management of as yet un-investigated potentially contaminated sites; iii) management of areas of known contamination; iv) risk register records; and v) a contingency action plan for unexpected contaminant discoveries. b) Soil, groundwater and surface water contamination monitoring requirements and testing and disposal procedures; c) Site validation reports; d) Consent monitoring requirements (including the role of Te Āti Awa ki Whakarongotai and Takamore Trust in monitoring stormwater treatment devices); and e) Review procedures.

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	Work shall not commence until the Consent Holder has received the Manager's written certification for the CSGMP.
G.33	The Consent Holder shall undertake appropriate investigations into the areas of potentially contaminated land located at 16 Leinster Ave, 150 Raumati Road, 58 Kiwi Road and 109 Kāpiti Road proposed to be used for stormwater to identify the level of any potential contamination. A report detailing the findings of this investigation, and the proposed remedial measures, shall be submitted with or as a revision to the CSGMP at least 15 Working Days prior to Work commencing in any of these areas. Once certified, Works shall be carried out in accordance with the revised CSGMP.
G.33A	This row is intentionally left blank.
Ecological Management	
G.33B	<p>a) In managing the construction of the Project and the potential for adverse effects on ecology, the Consent Holder shall achieve the following outcomes:</p> <ul style="list-style-type: none"> i) Minimise adverse effects on areas of indigenous vegetation and habitat, and indigenous ecological features within the Designation Footprint; ii) Minimise and monitor the potential for hydrological effects on wetlands outside the Designation Footprint and the potential effects of sediment on water bodies and freshwater systems; and iii) Monitor all ecological mitigation undertaken to ensure success is achieved and subsequent management actions are taken if mitigation is required. <p>b) In achieving these outcomes, the Consent Holder shall, at the least, comply or be consistent with the management triggers and thresholds established in the relevant conditions and within the Ecological Management Plan.</p>
G.34	<p>The Consent Holder shall submit a draft Ecological Management Plan (EMP) to the Manager at least 30 working days prior to Work commencing. The final EMP will be submitted for certification, and a copy provided to KCDC, at least 15 working days prior to Work commencing. The EMP shall be submitted with the CEMP as an appendix. The purpose of the EMP is to:</p> <ul style="list-style-type: none"> A. Detail the ecological management programme that will be implemented to appropriately manage impacts on the environment during and after the construction phase of the Project; B. Document the permanent mitigation measures, including the restoration, management and maintenance of ecological mitigation, as well as the mechanisms for developing relevant mitigation and restoration plans for terrestrial and freshwater habitat; C. Ensure that mitigation has been successful by establishing post-construction monitoring and response procedures; and D. Ensure that any long-term effects are appropriately managed through monitoring, adaptive management and implementation of appropriate responses. E. The EMP shall be finalised in consultation with Te Āti Awa ki Whakarongotai and Takamore Trust. <p>The EMP shall include, but need not be limited to, information required in other conditions of this consent and details of the following:</p> <ul style="list-style-type: none"> a) The monitoring to be undertaken pre-construction, during construction and post-construction as required below in conditions G.38-G.40, including the role that Te Āti Awa ki Whakarongotai and Takamore Trust will have in observing monitoring:

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	<ul style="list-style-type: none"> b) Information on how the following outcomes will be achieved: <ul style="list-style-type: none"> i) Minimise loss of valued vegetation and habitats identified in condition G.41; ii) Minimise construction effects on freshwater bodies and the marine environments; iii) Minimise effects on wetlands identified in condition G.38B resulting from hydrological changes to groundwater; iv) Minimise effects on fish and fish habitats during stream work; v) Avoid disturbance of nationally threatened or at-risk birds (as listed by the most up to date Department of Conservation threat classification lists) during breeding periods; c) A Lizard Management Plan that shall include: <ul style="list-style-type: none"> i) Details of searching methods to be implemented within the Project Footprint for identifying arboreal lizards prior to any construction in the vicinity of the El Rancho Wetland, ii) The mechanisms to capture and move lizards from the El Rancho Wetland area, including obtaining the necessary Wildlife Act 1953 permits, as well as mechanisms for re-establishing affected lizard habitat and minimising lizard mortality resulting from construction of the Project; d) The monitoring to be undertaken prior to the commencement of Work (in accordance with the monitoring conditions G.38 – G.40) to establish baseline data and to develop management trigger levels to measure effects against, and detail what actions will be taken in response to any exceedance of the trigger levels during Works; e) Full details of all remedial and mitigation measures proposed (including those detailed in condition G.42) the objectives of these measures and identification for each how the Consent Holder will determine whether mitigation has been successfully achieved; f) Full details of monitoring proposed to determine whether remedial and mitigation measures have been successfully achieved and have met objectives to ensure success; g) Full details of all monitoring to be undertaken post-construction Work in accordance with conditions G.38-G.40; h) Response measures should remedial and mitigation measures not have been successfully achieved; i) Detail on how adverse effects on the North Island Fernbird population will be avoided during construction and operation of the Project in conjunction with designation condition G.37B; j) Details of the involvement of Te Āti Awa ki Whakarongotai and Takamore Trust in observing the monitoring of culverts and fish passages during construction; k) Ensure that in the event that additional vegetation or habitat loss related to the Project occurs outside of the Project Footprint, including Project-related hydrological changes to wetlands, terrestrial and wetland mitigation calculations are consistent with the Environmental Compensation Ratios as outlined in Condition G.42; l) The indigenous species and communities where the adaptive management approach outlined in condition G.40 is to be applied; m) The salvage of elements of any valued habitat of indigenous flora and fauna identified in condition G.41 that is being lost as a result of the Project where practicable, including provision for transfer of elements of the affected habitat to ecological mitigation sites. This should include as a minimum: felled logs, Carex, Baumea and associated soils; n) A Fish Rescue and Relocation Plan in accordance with the following:

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	<ul style="list-style-type: none"> i) The Plan shall include details of fish and crayfish rescue and relocation techniques to be used, including (but not limited to): <ul style="list-style-type: none"> 1. Placement of appropriate screen to stop fish migrating back into the reach to be diverted while the rescue operation is being carried out; 2. The use of multiple fish capture methods over multiple nights days/nights (at least 2 days/nights and ceased only when no more fish and crayfish are caught, or through agreement with the Manager). Fish capture methods may include spotlighting, minnow traps, fyke nets and electric fishing, suitable to the habitat, post screen installation and prior to stream works; 3. The methods of transfer proposed for the species captured above in (2); 4. The location and use of holding (refuge) pools within the stream reach to be diverted prior to undertaking the stream diversion works; 5. The method of draining the water body to ensure maximum fish rescue; 6. The methods of rescue (and transfer) from the pool refugia created in (4) above, for any fish or crayfish remaining following fish capture outlined in (2) above; 7. The methods to record, count and measure all fish and crayfish species caught and transferred. ii) The Plan shall be prepared by a suitably qualified ecologist; iii) All fish capture shall be undertaken by a suitably qualified ecologist. iv) The Plan shall guide all works in any permanent or intermittent water body (including wetlands) that is to be diverted or reclaimed (including temporary diversion for culvert placement); and v) Details of the fish and crayfish rescue and relocation shall be reported to the Manager. <ul style="list-style-type: none"> 1. Results of the mudfish surveys (as required by condition G.38D) in the Smithfield Drain, Hadfield Stream, Paetawa Drain, Muaupoko Stream and Lower Drain 7; 2. Details of the Wetland condition Monitoring methodology required by condition G.38B; o) Details of each new diversion channel, including thresholds/targets to measure the success of each diversion reach (including timeframes) and management options to be implemented if these thresholds/targets are not met. If full details for each diversion are not available at the time the EMP is submitted, full details shall be provided in the SSEMP. <p>Work shall not commence until the Consent Holder has received the Manager's written certification of the EMP.</p>
G.35	<p>The EMP shall be prepared by suitably qualified and experienced ecologist, and shall implement the recommendations of the Ecological Impact Assessments (Technical Reports 26 – 31), except as superseded by conditions of this consent and subsequent information provided in support of the application and approved by the Board of Inquiry. The EMP shall be prepared in accordance with:</p> <ul style="list-style-type: none"> i) NZTA's Environmental Plan; ii) The Conservation Management Strategy for the Wellington Conservancy; and iii) The Greater Wellington Regional Pest Management Strategy (2002-2022).
G.36	<p>The EMP shall be consistent with the Landscape Management Plan (LMP) that is required to be certified by KCDC under the designation conditions.</p>
G.37	<p>At least 15 working days before submitting the EMP to the Manager for certification, the Consent Holder shall submit a copy of the draft EMP required by condition G.34 to KCDC for comment. Any comments received shall be supplied to the Manager when the EMP is submitted, along with</p>

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	a clear explanation of where any comments have not been incorporated and the reasons why.
	Ecological Monitoring – General
G.38	<p>The Consent Holder shall undertake monitoring in accordance with the EMP as required by condition G.34 and shall:</p> <ul style="list-style-type: none"> a) Collect baseline information for 1 year prior to commencement of Work on vegetation, wetlands, freshwater and marine ecology and fernbird to enable management triggers to be developed, to provide information to support the development of the EMP, and to allow Project-related ecological effects to be identified; b) Monitor vegetation, wetlands, freshwater and marine ecology and fernbird for the entire duration of construction Work in accordance with the pre-construction baseline management triggers to identify changes in condition arising from the Project; and c) Monitor ecological information on vegetation, freshwater and marine ecology in accordance with the pre-construction baseline management triggers for a minimum of 2 years and wetland hydrology for 5 years (in accordance with GD.7) following completion of construction of the Project to confirm mitigation requirements outlined in G.34 are successfully achieved; d) Undertake fernbird monitoring for a minimum of 2 years post-construction, and the results reviewed in consultation with the Director General of the Conservation; and e) Undertake monitoring of fish passage as required by condition G.40 for adaptive management. <p>In addition to the above, monitoring shall be undertaken in accordance with the provisions required by condition WS.3B in relation to new structures and works in streams.</p>
G.38A	<p>The Consent Holder shall undertake monitoring of water quality in permanently and intermittently flowing water bodies upstream and downstream of potential earthwork discharge areas in accordance with the methods, locations, frequency, reporting and all operation and maintenance procedures as outlined in the EMP. This monitoring shall include the following:</p> <ul style="list-style-type: none"> a) Continuous (telemetered) turbidity loggers shall be installed, operated and maintained in the Waikanae River, Wharemauku Stream and Kakariki Stream upstream and downstream of the proposed discharge points to these water bodies. In addition (to the Waikanae River, Wharemauku Stream and Kakariki Stream), continuous telemetered turbidity loggers shall be installed upstream and downstream of all water body diversions 48 hours prior to works to divert the waterway and for 1 week following completion of the diversion. The proposed locations of the monitoring shall be identified in the EMP this distance shall not exceed 20m downstream of the discharge point or diversion works (or other distance as approved in writing by the Manager). The locations of these sites shall be chosen to avoid other potential sources of sediment interfering with the results of monitoring. <p>The Consent Holder shall install, operate and maintain continuous (telemetered unless otherwise approved in writing by the manager) turbidity monitoring in the water bodies referenced in a) above to:</p> <ul style="list-style-type: none"> i) In the case of the Waikanae River, Wharemauku Stream and Kakariki Stream, monitor turbidity levels at upstream and downstream monitoring locations (to be specified in writing and approved by the Manager) above and below the area of Work on a continuous basis for a duration of at least 6 months prior to the Commencement of that Work upstream to establish a correlation between turbidity levels; ii) In the case of discharges from Works areas in the Waikanae River, Wharemauku Stream and Kakariki Stream, monitor discharges on a continuous basis until the relevant

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	<p>earthworks areas discharging to those water bodies are stabilised; and</p> <p>iii) In the case of stream diversions, monitor until turbidity thresholds specified below have not been exceeded for at least 1 week.</p> <p>The logs shall be monitored by the Consent Holder on a daily basis (including weekends and holidays). The continuous (telemetered) turbidity loggers shall have a rainfall induced alert (alerting a cell phone number) of 7mm/hr so as to ensure the logs are checked where rain events occur. The 7mm/hr alert may be revised as more specific information becomes available in consultation with the Manager.</p> <p>b) Triggered event monitoring (grab samples):</p> <p>i) In addition to the continuous telemetered turbidity monitoring, where there is an exceedance of any site monitoring thresholds detailed in the ESCP or EMP, or where any of the circumstances detailed under condition E.9 occur, and there is a discharge to any water body, the Consent Holder shall measure turbidity (NTU) levels at sites located no greater than 20m upstream and downstream of the relevant discharge point/s. The upstream and downstream locations shall be chosen to avoid other potential sources of sediment interfering with the results of monitoring.</p> <p>ii) This sampling will be carried out within 2 hours of the exceedance or event (as far as practicable);</p> <p>c) Thresholds and response actions - earthworks</p> <p>Except in the case of water body diversions, in the event that there is a 20% or greater increase in NTU between the downstream and corresponding upstream monitoring locations (only in those situations where NTU is above 5 NTU at the downstream monitoring location) for either continuous turbidity monitoring or triggered event monitoring (grab samples), the Consent Holder shall undertake the following:</p> <p>i) Within 24hrs of the 20% threshold breach, carry out and record in writing a full audit of the condition of all erosion and sediment control measures within the earthworks area discharging to the relevant stream,</p> <p>ii) Remedy any causes on site that may have contributed to the 20% threshold breach as soon as practicable, and record what remedial measures were undertaken,</p> <p>iii) Notify the Manager by email within 1 working day of the 20% threshold breach, including providing details of the percentage change in turbidity and any remedial measures taken,</p> <p>iv) If the NTU threshold remains generally elevated above 20% for more than 48hrs, then macro-invertebrate sampling shall be undertaken following Protocols C1 or C2, as set out in Protocols for Sampling Macro-invertebrates in Wadeable Streams, MfE 2001 (for hard and soft-bottomed streams, respectively) within 2 working days at upstream and downstream sites agreed to by the Manager. For known discharge points, these shall be specified in the EMP. All laboratory analysis of these samples shall be full macroinvertebrate count.</p> <p>v) Within 10 working days of the collection of the macro-invertebrate samples, a report shall be provided to the Manager which has been prepared by a suitably qualified and experienced aquatic ecologist and which includes the following:</p> <ol style="list-style-type: none"> 1. The results of the macro-invertebrate sampling, 2. The causes of the discharge, the response to remedy the cause and measures proposed to avoid a recurrence of this cause, 3. An assessment undertaken by a suitably qualified and experienced aquatic ecologist which details whether the following thresholds have been exceeded:

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	<ul style="list-style-type: none"> i. A decline in the Quantitative Macro-invertebrate Community Index (QMCI) score of 1.5 or greater from the corresponding upstream monitoring site or baseline monitoring scores; or ii. A decline of greater than 20% in sensitive invertebrate taxa (in this case taxa with an MCI score of ≥ 5) compared to the upstream monitoring site or baseline monitoring scores. <p>vi) If the thresholds in v) above have been exceeded, the Consent Holder shall carry out mitigation works, which may include raking or other sediment clearance procedure. As part of the report required under v), the Consent Holder shall, in consultation with the Manager, detail what mitigation measures are proposed and the timeframes for implementing these. The Consent Holder shall implement the mitigation measures approved by the Manager. These measures shall be implemented to the Manager's satisfaction and within the timeframe specified by the Manager.</p> <p>d) Thresholds and response actions – water body diversions</p> <p>In the case of water body diversions, in the event that there is a 20% or greater increase in NTU between the downstream and corresponding upstream monitoring locations (where the baseline monitoring NTU is above 5 NTU at the downstream monitoring location) for continuous turbidity monitoring, the Consent Holder shall undertake the following:</p> <ul style="list-style-type: none"> i) Within 24hrs of the 20% threshold breach, carry out and record in writing a full audit of the condition of the diversion works area, including all erosion and sediment control measures within that area, ii) Remedy any causes that may have contributed to the 20% threshold breach as soon as practicable, and record what remedial measures were undertaken, iii) Notify the Manager by email within one working day of the 20% threshold breach, including providing details of the percentage change in turbidity and any remedial measures taken, iv) If the NTU threshold remains elevated above 20% for more than 48hrs, then macro-invertebrate sampling shall be undertaken following Protocols C1 or C2, as set out in Protocols for Sampling Macroinvertebrates in Wadeable Streams, MfE 2001 (for hard and soft-bottomed streams, respectively) within 2 working days at upstream and downstream sites agreed to by the Manager. For Known discharge points these shall be specified in the EMP. All laboratory analysis of these samples shall be full macroinvertebrate count. v) Within 10 working days of the collection of the macro-invertebrate samples a report shall be provided to the Manager which has been prepared by a suitably qualified and experience aquatic ecologist and which includes the following: <ul style="list-style-type: none"> 1. The results of the macro-invertebrate sampling, 2. The causes of the discharge, the response to remedy the cause and measures proposed to avoid a recurrence of this cause, 3. An assessment undertaken by a suitably qualified and experienced aquatic ecologist which details whether the following thresholds have been exceeded: <ul style="list-style-type: none"> i. A decline in the Quantitative Macroinvertebrate Community Index (QMCI) score of 1.5 or greater from the corresponding upstream monitoring site or baseline monitoring scores; or ii. A decline of greater than 20% in sensitive invertebrate taxa (in this case taxa with an MCI score of ≥ 5) compared to the upstream monitoring site or baseline monitoring scores.

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	<p>vi) If the thresholds specified in v) above have been exceeded, the Consent Holder shall carry out remedial and mitigation works, which may include closing the diversion and remedying any sediment sources. As part of the report required under d), the Consent Holder shall, in consultation with the Manager, detail what remedial and mitigation measures are proposed and the timeframes for implementing these. The Consent Holder shall implement the mitigation measures approved by the Manager. These measures shall be implemented to the Manager's satisfaction and within the timeframe specified by the Manager.</p> <p>e) Sediment monitoring of the Waikanae River in relation to the potential deposition of sediments associated with the opening of the diversion at the confluence of the Muaupoko Stream with the Waikanae River.</p>
G.38B	<p>a) In addition to the groundwater monitoring for wetlands (as outlined in condition GD.7), Wetland Condition Monitoring (undertaken in accordance with Clarkson et al, 2003. <i>Handbook for Monitoring Wetland Condition</i>. A Ministry for the Environment Sustainable Management Fund Project 5105), shall be undertaken in the following wetlands identified as potentially at risk of hydrological changes to water tables:</p> <ul style="list-style-type: none"> i) Raumatī Manuka Wetland; ii) Otaihanga Northern Wetland; iii) Otaihanga Southern Wetland; iv) El Rancho Wetland (Weggery); and v) Ngarara Wetland; <p>b) A wetland condition survey shall be undertaken within representative habitat in each of the wetlands listed above, including photo-points. One survey shall be undertaken in representative wet and dry seasons (as defined by the EMP) at those locations listed above and the results of each survey shall be submitted to the Manager for information;</p> <p>c) Wetland condition monitoring shall be undertaken for 5 years post-construction in accordance with a) above; and</p> <p>d) This condition is to be read in conjunction with monitoring outlined in conditions GD.7, G.34 and G.38.</p>
G.38C	This row is intentionally left blank.
G.38D	<p>a) Prior to the commencement of the diversion work, surveys targeting brown mudfish will be carried out by a suitably qualified ecologist (who has prior experience with mudfish surveys) in the following stream diversions:</p> <ul style="list-style-type: none"> i) Smithfield Drain; ii) Hadfield Stream; iii) Paetawa Drain; iv) Muaupoko Stream; and v) Lower Drain 7. <p>b) These surveys will include, at a minimum, the setting in appropriate mudfish habitat of 20 fine meshed (4mm) gee-minnow traps and six fine meshed (4 mm) fyke nets over 2 consecutive nights at each stream site to be surveyed. Fyke nets will contain a "large fish exclusion" compartment.</p> <p>c) Where site conditions preclude carrying out the method detailed above, suitable alternatives will be discussed with the Manager.</p> <p>d) Results of the mudfish survey will be provided to the Manager within 10 working days</p>

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	<p>following completion of the data collection and will inform the fish transfer requirements (as required by condition G.34 (n)) for the diversion. These results will be used to update the Stream Ecological Valuation (SEV) data held as a measure against which mitigation diversion success is to be measured against.</p> <p>e) Full details of the proposed mudfish survey methodology shall be submitted to the Manager for certification prior to undertaking the survey. The survey shall be carried out in accordance with the certified methodology.</p> <p>f) Results of mudfish surveys will be included in the EMP (so as to affect the mitigation targets) prior to the EMP being supplied to the Manager for certification.</p>
G.39	<p>a) All ecological monitoring required under the EMP shall be undertaken by suitably qualified and experienced ecologists.</p> <p>b) Notwithstanding the requirements of other conditions of this consent, the results of all monitoring carried out pursuant to the EMP shall be:</p> <ul style="list-style-type: none"> i) Available for inspection during normal office hours where such data is available; ii) Provided to Te Āti Awa ki Whakarongotai and Takamore Trust at quarterly intervals from the commencement of monitoring; iii) Submitted to the Manager at quarterly intervals from the commencement of monitoring for certification that the appropriate monitoring has been undertaken; iv) Submitted to the Director-General of Conservation and KCDC at quarterly intervals for information from the commencement of monitoring; and v) Summarised and submitted as part of the annual report required under condition G.12.
G.40	<p>a) The Consent Holder shall implement an Adaptive Management approach to respond to ecological effects as outlined in the EMP for those ecosystems identified in the EMP under condition G.34 (l) based on the following principles:</p> <ul style="list-style-type: none"> i) The ecosystems potentially at risk are not of such value that they cannot be mitigated; ii) There is potential for remediation to be done in time to prevent unacceptable impacts; iii) Clear management triggers can be developed to identify when action is needed; iv) The adaptive management outcomes are clearly defined; v) It is the best practicable means of dealing with the possibility of unanticipated adverse effects; and vi) There is a process to ensure full implementation of the adaptive management approach. <p>b) Adaptive Management monitoring shall:</p> <ul style="list-style-type: none"> i) Establish baseline information on the pre-construction ecological values of vegetation, wetlands hydrology, freshwater and marine habitats, and distribution of fernbird, in order to develop 'management trigger levels (where practicable) for each of these environments, which shall be included in the EMP; ii) Undertake monitoring during and following construction to observe whether adaptive management trigger levels are exceeded and to determine the effectiveness of the environmental management methods implemented to respond to any exceedances; and iii) In the event that any management trigger level is exceeded during or post-construction, implement in consultation with the Manager the following: <ul style="list-style-type: none"> 1. Notify the Manager of the exceedance within 1 working day of the exceedance being identified. 2. Investigate a plausible cause-effect association with the Project. If the adaptive management trigger level exceedance is not deemed to be attributable either

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	<p>partially or fully to the Project by a suitably qualified and experienced ecologist, the Consent Holder shall not be held liable for any remediation or mitigation measures.</p> <p>3. Should the exceedance be linked either partially or fully to the Project, the following steps shall be undertaken by the Consent Holder:</p> <ul style="list-style-type: none"> A. Notify the Manager of the causes of the exceedance within 5 working days of identifying the exceedance; B. Within a timeframe approved by the Manager, identify the on-site practice that is generating the effect; C. Implement measures necessary to prevent future exceedances and to alter the operational measure in consultation with the Manager; D. Remedy or mitigate the effects of the exceedance which have been approved by the Manager; E. Obtain certification of any necessary amendments to management plans or other documents and obtaining any necessary resource consents; F. Undertake further monitoring approved by the Manager to assess the effectiveness of the measures implemented to avoid, remedy or mitigate the exceedance and cause of the exceedance; and G. In the event that the measures implemented to avoid, remedy or mitigate the effects of the exceedance or cause of the exceedance actions are unsuccessful, in the opinion of the Manager, the Consent Holder will implement appropriate remedial actions and further monitoring within a timeframe and which have been approved by the Manager and obtain necessary resource consents for those measures. <p>4. Provide a written report to the Manager within 10 Working Days of each exceedance which includes details of the exceedance, reasons for the exceedance and measures implemented in responses to the exceedance.</p> <p>c) Full details of the proposed adaptive management approach as required by this condition, including construction monitoring details, shall be included in the EMP required under condition G.34.</p> <p>d) If there is an inconsistency between the adaptive management process and timeframes specified in this condition and that specified in other conditions of this consent, the process and timeframes specified in the other relevant condition(s) shall take precedence.</p>
	<p>Ecological Mitigation</p>
G.41	<ul style="list-style-type: none"> a) The Consent Holder shall engage a suitably qualified ecologist to prepare detailed maps identifying all those areas that contain indigenous vegetation or indigenous habitats, including those listed in (c) below, with information on their relative values and protection requirements. b) The maps shall be used as follows: <ul style="list-style-type: none"> i) During development of the EMP and other relevant management plans, to raise awareness of the ecological implications (including mitigation and consenting requirements) of any design changes; and ii) During construction and operational work to inform staff and contractors of the purpose and mechanisms for ensuring the protection of sites of ecological value. c) For the purposes of this condition, areas of indigenous vegetation and habitats of indigenous flora and fauna are:

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	<ul style="list-style-type: none"> i) Valued terrestrial vegetation and habitats: <ol style="list-style-type: none"> 1. Raumati Kanuka (comprising kanuka forest and mahoe on elevated dunes south of Raumati Road); 2. Mahoe vegetation along Drain 7; 3. Otaihanga Mahoe (comprising dry vegetation in Otaihanga); 4. Otaihanga Kanuka (Kanuka Forest west of Southern Otaihanga Wetland); 5. Waikanae River riparian vegetation; 6. Tuku Rakau Forest (regenerating broadleaved low forest east of Takamore Urupa); 7. Ngarara Mahoe (regenerating broadleaved low forest on Ngarara Farm between Te Moana Road and Ngarara Road); and 8. Kakariki Stream riparian vegetation. ii) Valued wetland vegetation and habitats: <ol style="list-style-type: none"> 1. Raumati Manuka Wetland; 2. Northern Otaihanga Wetland; 3. Southern Otaihanga Wetlands; 4. New wetland adjacent to Wastewater Treatment Plant Drain created to mitigate permanent loss of wetlands; 5. El Rancho Wetland (Weggery); 6. Tuku Rakau Wetland; and 7. Ngarara Wetland. d) The extent of adverse effects shall be minimised by, as a minimum: <ul style="list-style-type: none"> i) Developing detailed designs which avoid or minimise the extent of effect on areas identified under (c) above as far as practicable; ii) Developing mechanisms to ensure that the areas, or parts of areas beyond the Project Footprint, but within the designation, as identified under (c) above, to be avoided, are clearly marked on the ground (e.g. through fences) and that contractors are required to avoid them; and iii) For those areas which cannot be avoided, but where complete loss of the ecosystem, vegetation or habitat is not required, developing mechanisms to reduce the impact on the area as far as practicable. e) The Consent Holder shall, where practicable, avoid areas of fernbird habitat as confirmed by pre-construction habitat monitoring between the breeding period months of August and February. Where it is not practicable to avoid these areas, the Consent Holder shall submit a report to the Manager detailing why this is not practicable, propose measures to remedy or mitigate the effects on fernbird and fernbird habitat, and shall obtain the Manager's certification of any necessary amendments to the EMP prior to undertaking works in those areas.
G.41A	<p>In relation to vegetation clearance required to construct the Project, the Consent Holder shall avoid as far as practicable areas of Fernbird habitat as confirmed by pre-construction habitat monitoring. However, if any habitat is to be cleared within these areas, the following steps shall be undertaken:</p> <ul style="list-style-type: none"> a) Any Fernbird habitat to be removed must first be checked for the presence of Fernbird; b) If Fernbird are found in habitat proposed to be cleared outside the breeding season (i.e. from March to July inclusive), a trap and transfer programme must be initiated to remove the birds from the area and move them to a suitable habitat in consultation with the Director-General

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	<p>of Conservation;</p> <p>c) If Fernbird are found breeding (e.g. nest or juveniles observed) in habitat proposed to be cleared during breeding season (i.e., between August and February inclusive), vegetation removal is not to occur in that area of habitat until the end of the breeding season;</p> <p>d) If non-breeding Fernbird are found in habitat proposed to be cleared during breeding season (i.e., between August and February), a trap and transfer programme must be initiated to remove the birds from the area, and move them to a suitable habitat in consultation with the Department of Conservation.</p>
G.42	<p>a) The Consent Holder shall undertake a combined total of at least 40.7 ha of vegetation, wetlands, and streams planting and restoration for the purposes of landscape and ecological mitigation.</p> <p>b) In order to achieve the total mitigation outlined in a) above the Consent Holder shall undertake ecological mitigation in accordance with the Plan Set "Proposed Ecological Mitigation Sites" (dated 29 November 2012) unless otherwise approved by the Manager which shall comprise the following;</p> <p>i) A minimum of 7.6ha of planted indigenous terrestrial habitat (which should include provision for fernbird habitat), as mitigation for the loss of 3.8 ha of indigenous vegetation habitat; plus</p> <p>ii) A minimum of 5.4 ha of landscaped and planted indigenous wetland habitat; as mitigation for the loss of 1.8 ha of indigenous wetland; plus</p> <p>iii) At least 5,240 linear metres of stream mitigation, including naturalisation of channels and 17.7 ha of enrichment of riparian habitat and removal of any barriers to fish passage within these areas, with riparian planting to have a minimum width of 20m on each side of each water body, unless otherwise agreed by the Manager (for example, where the margin of a water body is close to a road or another property); plus</p> <p>iv) Within flood storage areas 2A and 3, the formation of at least 1.4km of new permanently flowing streams and 10ha of wetland and riparian planting..</p>
G.42A	<p>The ecological mitigation required in condition G.42 for loss or modification of any wetland or terrestrial habitat outlined in condition G.41, shall comprise, as far as practicable, mitigation that reflects the indigenous habitat types, wetland classes lost and ecological functioning and is based on development of similar representative vegetation communities.</p>
G.42B	<p>The consent holder shall implement the mitigation works required under condition G.42 on a staged basis (unless otherwise agreed to by the Manager) during construction to minimise as far as practicable the lag between the construction effects and works required to mitigate those effects.</p> <p>Mitigation which is not impacted by construction activities (that is the mitigation is located such that it is not affected by bulk earthworks, as defined) shall be completed within 1 year of commencing construction, unless an alternative timeframe is otherwise agreed to by the Manager. The consent holder shall ensure that all other mitigation required under condition G.42 for each stage of construction has been completed no later than 1 year following completion of bulk earthworks within that stage.</p> <p>For the purpose of this condition 'bulk earthworks' means the cut to fill, excavation and blading required to regrade an area, and does not include works associated with stabilisation of areas or maintenance works. Within 2 working days of completing bulk earthworks, the consent holder shall confirm in writing that date of completion to the Manager.</p>

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G.42C	<p>a) The Consent Holder shall prepare an SSEMP for each ecological mitigation area required under condition G.42 and other mitigation that is required following commencement of construction. The SSEMP for the commensurate mitigation required to compensate for the adverse effects in the relevant Stage shall be provided to the Manager according to the programming required under G.12.</p> <p>b) The purpose of SSEMPs shall be to ensure details of the mitigation works are consistent with the EMP and will achieve the outcomes and standards required under condition G.33B.</p> <p>c) The SSEMPs shall be prepared by a suitably qualified and experienced landscape architect (with input as required by other suitably qualified experts, including an ecologist) and shall include, but need not be limited to:</p> <ul style="list-style-type: none"> i) Identification of vegetation to be retained, including retention of as many as practicable significant trees and areas of regenerating indigenous vegetation, and how this vegetation will be protected; ii) The target Stream Ecological Valuation (SEV) scores for all areas of mitigation riparian planting; iii) Plans of the locations, areas and lengths of planting associated with mitigation for loss or disturbance of indigenous vegetation, water bodies and wetlands, including riparian planting along existing and new stream channels, all exposed areas of stream bank, dewatering channels and culvert fill slopes; iv) Full landscaping details for each of these areas, including planting plans, timing of planting, plant spacing, species schedules, planting preparation procedures, monitoring and methods of legal and physical protection details; v) Detailed specifications relating to (but not limited to) the following: <ul style="list-style-type: none"> A. Weed control and clearance; B. Pest animal management; C. Ground preparation; D. Mulching; and E. Plant supply and planting, including hydroseeding and grassing - which shall require: <ul style="list-style-type: none"> 1) Any planting to reflect the natural plant associations of the area; 2) Where practicable, the use of mixes of plant which are of a suitable richness and diversity to encourage self-sustainability once established; and 3) Any native plants to be genetically sourced from the relevant Ecological District; 4) All plants shall be at least PB6 at the time of planting unless otherwise approved in writing by the Manager. vi) Monitoring and maintenance processes, including the control of pest animals (including possums, rabbits and hares) and pest plants, and procedures for all mitigation works, including replacement of dead or diseased plants, for a minimum period of 3 years for terrestrial and 4 years for wetland and riparian vegetation from completion of each area of mitigation works; vii) Standards to be met at the end of the maintenance period to demonstrate that the mitigation planting has successfully achieved 80% canopy cover over 80% of massed planted areas. <p>d) The SSEMPs shall be prepared in consultation with, as relevant:</p> <ul style="list-style-type: none"> i) Te Āti Awa ki Whakarongotai; ii) Takamore Trust, where the works are within or directly affect the area between Te

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	<p>Moana Road and Waikanae River;</p> <p>iii) Te Rūnanga O Toa Rangātira Inc, where the works are within or directly affect Queen Elizabeth Park;</p> <p>iv) As relevant, Friends of Queen Elizabeth Park, Friends of Wharemauku Stream, Friends of Waikanae River, Ngā Manu Nature Reserve;</p> <p>v) KCDC; and</p> <p>vi) The Council.</p> <p>e) The Consent Holder shall provide an annual report to the Manager by 30th April each year for the duration of the monitoring and maintenance period and any extended monitoring and maintenance period required to meet the requirements of these conditions which confirms the success of the mitigation for that year, any remedial works undertaken and upcoming programme of maintenance for those areas.</p> <p>f) Work shall not commence in the subject Stage until the Manager has certified the SSEMP for that Stage.</p>
G.43	<p>a) The Consent Holder shall ensure, subject to (b) below, that the ecological mitigation works and areas required under condition G.42 and any other additional ecological mitigation that may be required are protected on an ongoing basis. The final operational designation area shall fully incorporate the areas of ecological mitigation required under condition G.42 (with the exception of the riparian mitigation in the Kakariki Stream, which is outside the designation and will be sought to be protected through other legal mechanisms attached to the Certificates of Title). The requirement for the ecological mitigation to be provided within the designation is to ensure that the ecological mitigation will continue to function and is able to be maintained on an on-going basis by the Consent Holder.</p> <p>b) The Consent Holder shall use its best endeavours to procure the Crown entering into appropriate covenants and/or encumbrances (or similar legal mechanism) to ensure that the area of riparian mitigation in the Kakariki Stream outside the designation, and any other area of land required for ecological mitigation under condition G.42 that may, in future, be considered for disposal, are protected on an ongoing basis. The Consent Holder shall, upon request from the Manager, report progress on these best endeavours.</p> <p>c) The Consent Holder shall not take active steps for the sale or disposal of any of the land required for land retirement and/or revegetation planting as identified in the Plan Set entitled "Proposed Ecological Mitigation Sites" dated 29 November 2012, until an appropriate covenant and/or encumbrance (or similar legal mechanism) is registered against each relevant title.</p> <p>d) The physical mechanisms to achieve ongoing protection of the above ecological mitigation areas shall be set out within the EMP and shall as a minimum:</p> <p>i) Prevent the felling, removal, burning or taking of any native trees, shrubs or plants or native fauna;</p> <p>ii) Require the planting of trees, shrubs or plants sourced from the Manawatu Ecological Region;</p> <p>iii) Minimise the risk of the introduction of any noxious substance or substance otherwise injurious to plant life except in the control of pests;</p> <p>iv) Require the installation and maintenance of fences and gates around the mitigation areas, except when the provisions of the Fencing Act 1978 apply;</p> <p>v) Require the control of herbivorous animal pests and invasive weeds to levels that are necessary to achieve the conditions imposed on the relevant designation and associated</p>

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	<p>consents, and to prevent loss of existing natural values;</p> <p>vi) Require compliance with the provisions of, and any notices given under, the Biosecurity Act 1993 and the Wild Animal Control Act 1977; and</p> <p>vii) Specify timing of inspections and reporting on requirements.</p>
G.43A	<p>a) Prior to the commencement of Work, the Consent Holder shall obtain any further necessary resource consents required to implement any remedial or mitigation measures associated with the effects of the Project known prior to commencement of Work. This may include, but need not be limited to, resource consents required (if any) for remediation or mitigation associated with the loss of wetlands under the Project Footprint.</p> <p>b) The Consent Holder shall apply for any resource consents necessary associated with ecological remediation or mitigation measures that are required and become apparent during detailed design and following the commencement of Work as soon as practicable and within 15 working days following the identification of the activity that may require mitigation. This may include, but need not be limited to, resource consents required for remediation or mitigation associated with:</p> <ul style="list-style-type: none"> i) The loss or adverse effects on wetlands identified in condition G.38B outside of the Project Footprint; ii) Discharge of sediment into water bodies and wetlands; and iii) Adverse effects on groundwater levels which require diversion, taking or use of groundwater as mitigation/remediation for ecological effects. <p>c) The Consent Holder shall undertake all necessary temporary measures required by the Manager to avoid, remedy or mitigate adverse effects that are occurring during or post construction while the necessary resource consents for the long term remedial or mitigation proposals are being processed.</p>
Archaeology and Heritage	
G.44	<p>The Consent Holder, (in consultation with, Te Āti Awa ki Whakarongotai Charitable Trust, Takamore Trust, the New Zealand Historic Places Trust, and, in respect of Queen Elizabeth Park, Te Rūnanga O Toa Rangātira), shall prepare an Accidental Discovery Protocol (ADP) to be implemented in the event of accidental discovery of cultural or archaeological artefacts or features during the construction of the Project in areas not covered by archaeological authorities obtained under Part 1 of the Historic Places Act 1993. This protocol shall be submitted to the Manager at least 15 working days prior to any construction or enabling Work commencing on the Project. The protocol shall include, but need not be limited to:</p> <ul style="list-style-type: none"> a) Training procedures for all contractors regarding the possible presence of cultural or archaeological sites or material, what these sites or material may look like, and the relevant provisions of the Historic Places Act 1993 if any sites or material are discovered; b) Parties to be notified in the event of an accidental discovery shall include, but need not be limited to Te Āti Awa ki Whakarongotai Charitable Trust, Takamore Trust, Te Rūnanga O Toa Rangātira (in respect of Queen Elizabeth Park), the New Zealand Historic Places Trust, the Council, KCDC and, if koiwi are discovered, the New Zealand Police; c) Procedures to be undertaken in the event of an accidental discovery (these shall include immediate ceasing of all physical work in the vicinity of the discovery); and d) Procedures to be undertaken before work under this designation may recommence in the vicinity of the discovery. These shall include allowance for appropriate tikanga (protocols), recording of sites and material, recovery of any artefacts, and consulting with Te Ati Awa ki

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	Whakarongotai Charitable Trust, Takamore Trust, Te Rūnanga O Toa Rangātira (in respect of Queen Elizabeth Park) and the New Zealand Historic Places Trust prior to recommencing work in the vicinity of the discovery.

Consent conditions for earthworks and discharges to land

- **Land Use Consent – Earthwork** (NSP 12/01.003) to disturb soil to construct roading and tracking for the MacKays to Peka Peka Expressway;
- **Land Use Consent – Earthwork** (NSP 12/01.004) to disturb soil in areas identified as being erosion prone, and undertake large scale vegetation clearance for the MacKays to Peka Peka Expressway.
- **Discharge Permit to land** (NSP 12/01.005) to discharge sediment and chemical flocculant in treated stormwater runoff to water, and to land where it may enter water, in association with bulk earthworks for the MacKays to Peka Peka Expressway.
- **Discharge Permit to land** (NSP 12/01.029) to discharge treated cement contaminated water to water, and to land where it may enter water, associated with the construction of the MacKays to Peka Peka Expressway.
- **Discharge Permit to land** (NSP 12/01.030) to discharge contaminants to land from the Otaihanga Construction Yard.

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	Earthwork Conditions
	Erosion and Sediment Control
E.1	This row is intentionally blank.
E.2	<p>a) As required by condition G.28, the Consent Holder shall submit site specific Construction Erosion and Sediment Control Plans (CESCPs) to the Manager for certification at least 10 working days prior to commencement of Work in each area.</p> <p>b) Where a more than minor change to the CESCP is required, the Consent Holder may request amendments to any CESCP by submitting the amendments in writing for the certification of the Manager. Any amendments to a given CESCP shall ensure that it will continue to meet the purpose and objectives as outlined in G.28 to the satisfaction of the Manager.</p> <p>c) Work shall not commence until the Consent Holder has received the Manager's written certification for the CESCP.</p>
E.3	<p>The CESCPs shall meet the purpose in condition G.28 and shall include, but need not be limited to:</p> <p>a) Contour information at suitable intervals;</p> <p>b) Erosion and sediment control measures (for example mulching and hydro-seeding), including specific design details and calculations;</p> <p>c) The criteria for determining the requirement for chemical treatment and, if required, the associated design and details;</p> <p>d) Catchment boundaries for the erosion and sediment control measures;</p> <p>e) Location of the Work, and cut and fill operations;</p> <p>f) Details of construction methods to be employed, including timing and duration;</p> <p>g) Contingency measures for all Work in water bodies to address how high flow events will be managed during Work, including early warning systems to be implemented and response measures following the high flow event;</p> <p>h) Design details including:</p> <p>i) Contributing catchment area;</p> <p>ii) Retention volume of structure (dead storage and live storage measured to the top of the</p>

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	<p>primary spillway);</p> <ul style="list-style-type: none"> iii) Shape of structure (dimensions of structure); iv) Location of flood waters; v) Safety and access; vi) Position of inlets/outlets and emergency spillways; vii) Stabilisation of the structure; and viii) Maintenance. <ul style="list-style-type: none"> i) A programme for managing non-stabilised areas of earthwork, including progressive stabilisation considerations; j) The identification of appropriately qualified and experienced staff who will manage the erosion and sediment control measures onsite; k) The identification of staff who have clearly defined roles and responsibilities to monitor compliance with the consent conditions and the CЕСCP; l) The role of Te Āti Awa ki Whakarongotai or the Takamore Trust in observing monitoring; m) Provision of details of a chain of responsibility for managing environmental issues and details of responsible personnel; n) Methods and procedures to be undertaken for decommissioning of erosion and sediment control measures including chemical treatment devices; and o) Methods, design details and procedures for managing the discharge of contaminants with a particular focus on that associated with cement contamination.
E.4	<p>Prior to any earthworks commencing within each area of Work, other than those required to establish erosion and sediment control measures and which have been firstly agreed to by the Manager, a certificate signed by an appropriately qualified and experienced sediment control practitioner shall be submitted to the Manager to certify that the erosion and sediment control measures (including clean and dirty water diversion channels, silt fences, decanting earth bunds, sediment retention ponds, rock filters and chemical treatment systems), for that area have been constructed in accordance with the relevant CЕСCP.</p> <p>The certificate is to be provided to the Manager at least 2 working days prior to the commencement of Work in that area.</p>
E.5	<p>A copy of the as-built plans and the certified CЕСCPs shall be kept on site at all times. All erosion and sediment control measures, including staging boundaries and particularly the extent of exposed areas, shall be updated in the as built plans as soon as practicable as changes are made. As-built plans shall be prepared by a suitably qualified person and shall be accompanied by text detailing the relevant earthwork methodology, constraints and likely progressions, and shall be revised as required to enable clear interpretation as to the day-to-day operation and management of erosion and sediment control measures, provided that such revisions are in general accordance with the CЕСCPs.</p>
E.6	<p>All necessary perimeter controls for a site or Stage shall be operational before earthworks or relevant Stage of earthworks within the site or Stage commence.</p>
E.6A	<p>This row is intentionally blank.</p>
E.6B	<p>This row is intentionally blank.</p>
E.6C	<p>Unless otherwise agreed with the Manager, the Consent Holder shall ensure that all earthworks areas shall be progressively stabilised as soon as practicable after completion of each area.</p>
E.6D	<p>If a heavy rainfall event is forecast (15mm or more of rainfall in one 24hr period), the Consent Holder</p>

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	shall undertake pre-event inspections and any maintenance and install any additional measures that are required to ensure erosion and sediment controls operate as effectively as possible during the rain event.
E.7	No erosion and sediment control measures shall be removed or decommissioned from a site, or Stage, before the entire area is stabilised unless such removal and decommissioning is in accordance with a CESC, and the Manager has been informed not less than 2 working days prior.
Erosion and Sediment Control Monitoring	
E.8	<p>The Consent Holder shall carry out monitoring of erosion and sediment control measures in accordance with the certified ESCP and CESC and shall ensure that:</p> <ul style="list-style-type: none"> a) The erosion and sediment control measures have been implemented and maintained in accordance with the certified ESCP and CESC; b) Construction methodologies are carried out in accordance with the CEMP, ESCP, CESC and any other relevant management plans; c) Erosion and sediment control measures are functioning and performing in accordance with the certified ESCP and CESC and the requirements of other conditions of this consent throughout the duration of construction of the Project; and d) The sediment discharge implications of any impeded drainage to ground, such as by deposition of fine sand, are a particular focus of site control monitoring, with appropriate remedial action taken as required.
E.9	<p>In the event of either:</p> <ul style="list-style-type: none"> a) a failure of an erosion or sediment control measure; or b) a storm event exceedance of the design volume of the device ; or c) an exceedance of a discharge water quality trigger level required by the ESCP, CESC or EMP; and <p>where the discharge reaches a permanently or intermittently flowing water body, wetland or estuarine/marine environment, the Consent Holder shall engage a suitably qualified ecologist(s) to inspect the relevant receiving environment within 2 working days of the event occurring, unless a longer timeframe is otherwise agreed by the Manager. The ecologist shall determine and prepare a written report on whether significant adverse effects have or are likely to have occurred.</p> <p>The Consent Holder shall, in consultation with Te Āti Awa ki Whakarongotai and the Takamore Trust, consider the ecologist's report on the effects of the failure and recommend in writing measures that are proposed be to remedy or mitigate the effects. The recommendations shall be submitted to the Manager for certification within 5 working days of the event occurring.</p> <p>The remedial and mitigation measures that are approved by the Manager shall be implemented within 10 working days of receiving the approval of the Manager, unless an extended timeframe is otherwise approved by the Manager.</p>
E.10	The Consent Holder shall carry out inspections at a minimum frequency of weekly, of all working areas of the site in order to ensure they are well maintained and that erosion and sediment control devices remain effective.
Chemical Treatment (Flocculation)	
E.11	a) Should it be determined that chemical treatment is or may be required (in accordance with condition E.3), at least 5 working days prior to the commencement of chemical treatments for sediment management purposes in a Stage or site, the Consent Holder shall submit to the Manager a Chemical Treatment Plan (CTP) for that site, or Stage of the Work, or in association

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	<p>with a CESC. Chemical treatment shall not commence until the written certification of the Manager for the CTP has been received.</p> <p>b) The CTP shall be submitted to the Manager for certification as required by condition E.3 and in accordance with the requirements of the ESCP, CESC and EMP.</p> <p>c) Each CTP shall include, but need not be limited to:</p> <ul style="list-style-type: none"> i) Specific design details of the chemical treatment system; ii) Monitoring, maintenance (including post-storm) and contingency programme (including a Record Sheet); iii) Details of optimum dosage (including catchment specific soil analysis and assumptions); iv) Procedures for carrying out an initial treatment trial; v) A spill contingency plan; vi) A performance monitoring plan; and vii) Details of the person or bodies that will hold responsibility for the maintenance of the chemical treatment system and the organisational structure which will support the system. <p>Any amendments to a CTP shall be submitted to the Manager at least 5 working days prior to implementation.</p>

Consent conditions for the crossing, occupation, realignment, reclamation and use of water bodies

- **Land use consent and water permits** for activities within the Whareroa Stream Catchment (NSP 12/01.006 – NSP 12/01.008);
- **Land use consent and water permits** for activities within the Wharemauku Stream Catchment (NSP 12/01.009 – NSP 12/01.011);
- **Land use consent and water permits** for activities within the Waikanae River Catchment (NSP 12/01.012 – NSP 12/01.014);
- **Land use consent and water permits** for activities within the Waimeha Stream Catchment (NSP 12/01.015 – NSP 12/01.017);
- **Land use consent and water permits** for activities within the Ngarara Creek Catchment (NSP 12/01.018 – NSP 12/01.020);
- **Land use consent and water permits** for activities within the Hadfield/Te Kowhai Stream (NSP 12/01.021 – NSP 12/01.023).

For each of the affected waterbodies in the above catchments the following consents and permits are sought:

- **Land Use Consent** – to remove an existing culvert and to divert and reclaim sections of, and place structures (culverts, rip rap and stormwater outlets) in, the bed of the waterbody, including the associated disturbance of, and deposit of material on, the waterbody bed.
- **Water Permit** – to temporarily divert the flow of the waterbody during construction of the culvert and associated structures in the bed of the watercourse.
- **Water Permit** – to permanently divert the full flow of the waterbody.

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	General Conditions
WS.1	The Consent Holder shall use natural rock and soil material to reclaim the stream bed. All fill material shall be placed and compacted so as to minimise any erosion and/or instability insofar as it is practicable.
WS.2	The Consent Holder shall ensure that all construction Work authorised by this consent is undertaken and completed in the dry bed of the stream as far as practicable.
WS.3	The Consent Holder shall design and construct all permanent diversions in a manner that maintains as far as practicable stream flows (both volume and velocity) in a similar state to its natural state at the time of commencement of Work.
WS.3A	<p>a) The Consent Holder shall design, construct and maintain all culverts and bridges, including temporary crossings, in or over permanently and intermittently flowing water bodies to ensure on-going fish passage through these structures in accordance with GWRC publication <i>Fish Friendly Culverts and Rock Ramps in Small Streams</i> or equivalent industry best practice methods.</p> <p>b) For the purposes of this condition, ephemeral water bodies do not require fish passage.</p>
WS.3B	a) The Consent Holder shall engage a suitably qualified and experienced aquatic ecologist to inspect and confirm in writing that each new permanent structure/area of works/scour

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	<p>protection works which must provide for fish passage in accordance with conditions of this consent has been constructed and installed in a manner that will provide for the passage of fish species present or likely to be present in that water body. The written confirmation shall be supplied to the Manager within 20 working days of the completion of the relevant area of works in the water body.</p> <p>b) Unless otherwise approved by the Manager, the Consent Holder shall engage an appropriately qualified aquatic ecologist to undertake the following:</p> <ul style="list-style-type: none"> i) A visual inspection of all structures and works where fish passage is required, 1 year after instalment; and ii) A visual inspection of all structures and works where fish passage is required, 4 years after instalment; and iii) If it is found that fish passage may be restricted, inspections and appropriate remedial actions shall be repeated (for the specific structure/area of works/scour protection where the restriction occurs) annually until the Manager is satisfied that fish passage is being appropriately provided for. <p>c) A visual inspection shall be carried out above in order to determine the following:</p> <ul style="list-style-type: none"> i) That the substrate bed of the water body is being retained within the culverts, pipes and new stream channels, or appropriate baffle or rock fixtures are in place; ii) Whether there are any signs of erosion or scour of the stream bed or banks around the structures/works/depositions; iii) The condition of the structures/works. iv) That stream flow velocities are not increased in any areas within the structures/works or upstream/downstream of the structures/works that could compromise fish passage (e.g. baffles and rock protection are adequate and in good condition); and v) Whether there is debris that could block the passage of fish or increase velocities. <p>d) For the Muaupoko Stream, a visual inspection (as detailed above) and a fish survey shall be undertaken (in accordance with the timeframes listed in a) – c) above. The fish survey shall be carried out:</p> <ul style="list-style-type: none"> i) In an appropriate area immediately upstream of the structures/works area; and ii) In an appropriate area immediately downstream of the structures/works area (for comparison with the upstream survey). <p>e) The Consent Holder shall submit a report from a suitably qualified ecologist to the Manager within 3 months of undertaking the inspections required above. The report shall include the following information:</p> <ul style="list-style-type: none"> i) The results of the fish survey undertaken for the Muaupoko Stream, the methods used to survey fish species, the location of the surveys and the dates that they were undertaken; ii) The results of the visual inspections undertaken pursuant to (c) above; iii) An assessment of effects on fish passage using the fish surveys and results of the visual inspections; and iv) Measures/works that will be implemented to address any actual or potential effects on fish passage as a result of the inspections, when these measures/works will be implemented by and further monitoring proposed (if any). <p>f) The Consent Holder shall implement the measures/works required to address any actual or potential effects on fish passage within 3 months of submitting the report to the Manager (where practicable).</p>

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WS.4	<p>The Work authorised by this consent shall be regularly inspected and maintained by the Consent Holder so that:</p> <ul style="list-style-type: none"> a) The waterway within the culverts remains substantively clear of debris; b) Any erosion of the stream banks or bed that is attributable to the stream Work authorised by this consent is remedied as soon as practicable by the Consent Holder; and c) Fish passage through the structure is not impeded. <p>Maintenance work does not include any Work outside the scope of the application. Any additional Work (including structures, reshaping or disturbance to the stream bed) following completion of the construction Work as proposed in the application may require further resource consents.</p>
WS.5	<p>The Consent Holder shall undertake flow monitoring in the Wharemauku Stream and Drain 5 in order to determine whether there are any changes in flow levels following the construction of the flood storage areas 2, 3A and wetland 3.</p> <p>The flow monitoring shall record in-stream flows at 15 minute intervals (unless a different interval is otherwise approved by the Manager) for a period of:</p> <ul style="list-style-type: none"> a) 12 months prior to commencement of excavation of flood offset storage areas 2, 3A and wetland 3; b) During construction of flood offset storage areas 2, 3A and wetland 3; and c) Up to 12 months following completion of flood offset storage areas 2, 3A and wetland 3, or a shorter period if no effects on base flows are recorded and it is agreed by the Manager. <p>Flow monitoring stations shall be established at the approximate locations on the Wharemauku Stream and Drain 5 identified in Appendix A of the draft Groundwater Management Plan (CEMP, Appendix I) provided with the application. The exact location of the gauges shall be determined based on stream bed conditions such that they record the full range of flows as far as practicable.</p> <p>The Consent Holder shall present the results of the flow monitoring as part of the groundwater monitoring reports required in condition GD.3. Details of the flow monitoring locations and methods, reporting procedures, and response procedures shall be included in the Groundwater Management Plan as set out in condition G.29.</p>
WS.6	This row is intentionally left blank.
WS.7	The Consent Holder shall, within 10 working days of completion of flood offset storage areas 2, 3A and wetland 3, advise the Manager in writing of the date of completion.
WS.7A	<ul style="list-style-type: none"> a) Prior to commencement of construction of the Waikanae River Bridge, the Consent Holder shall submit a Maintenance Plan to the Manager for certification. Construction of the bridge shall not commence until the maintenance plan has been certified by the Manager. The maintenance plan shall include details of what area and works will be handed over to GWRC and what areas and works will be retained by the Consent Holder, as well as (but not necessarily be limited to): <ul style="list-style-type: none"> i) For areas and works that will be handed over to GWRC: <ol style="list-style-type: none"> 1. Details of what areas and works will be handed over to GWRC; and 2. The standards and timing for handover of those areas and works. b) The Consent Holder will consult with GWRC about maintenance schedules for the Waikanae Bridge works.

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Pre-construction Conditions	
WS.8	<p>The Consent Holder shall prepare and implement revegetation and mitigation strategies for the stream modifications and structures authorised by this consent. The strategies shall be submitted to the Manager as part of the SSEMPs required by G.42C 15 working days prior to commencement of Work and shall include, but not be limited to:</p> <ul style="list-style-type: none"> a) Details of riparian planting required under condition G.42, including but not limited to: <ul style="list-style-type: none"> i) the target Stream Ecological Valuation (SEV) scores for all areas of mitigation riparian planting; ii) plans of the locations and lengths of riparian planting along water bodies, including along existing and new stream channels, all exposed areas of stream bank, dewatering channel and culvert fill slopes; and iii) full landscaping details for each of these areas, including planting plans, timing of planting, plant spacing, species schedules, planting preparation procedures, monitoring and methods of legal and physical protection details; b) Monitoring and maintenance processes and procedures for all areas of riparian planting, including for replacement of dead diseased plants, for a minimum period of 3 years terrestrial vegetation and 4 years for wetland and riparian vegetation from completion of each area of mitigation works.
Conditions During Construction	
WS.9	<p>Temporary stream crossings shall be constructed across the Waimeha Stream and the Wharemauku Stream in accordance with the Scheme Plans identified in condition G.1. Unless otherwise agreed in writing by the Manager, all temporary stream crossings shall be removed within two years of their installation.</p>
WS.10	<p>Unless otherwise agreed in writing with the Manager, upon removal of any temporary crossing, the Consent Holder shall reinstate the stream bed to, as far as practicable, a natural state to closely match the upstream and downstream riparian and instream habitats and visual appearance.</p>
WS.11	<p>The structures installed as part of the Work shall be regularly inspected and maintained by the Consent Holder so that:</p> <ul style="list-style-type: none"> a) The water body within or over the culverts remains substantively clear of debris; b) Any erosion of the stream banks or bed that is attributable to the stream work authorised by this consent is remedied as soon as practicable by the Consent Holder; and c) Fish passage through and past culverts and other structures is not impeded.
WS.12	<p>The Consent Holder shall, in consultation with GWRC, develop a specific programme and methodology to manage migration of native fishes for any Work that will occur within the wetted channel of any water body outside of the period from 1st March to 31st July. The programme and methodology shall be developed with reference to the Freshwater Fish Spawning and Migration Calendar (Hamer 2007), and shall particularly focus on the migration period of the <i>Galaxiids</i> species from August to December inclusive. The programme shall be included in the EMP and shall be certified by the Manager prior to the relevant Work occurring.</p>
Stormwater Conditions	
SW.1	<p>Operational stormwater discharge from the Expressway shall meet the following performance criteria:</p> <ul style="list-style-type: none"> a) Expressway stormwater shall be treated before discharge to the receiving environment in accordance with the NZTA publication Stormwater Treatment Standard for State Highway

Ref	Wording of Conditions
	<p>infrastructure, 2010, or equivalent industry standard methods;</p> <p>b) The peak rate of stormwater discharge from the Expressway at any point shall not exceed 80% (urban areas) or 100% (rural areas) of the pre Expressway peak discharge from the same footprint, in each of the 50%, 10% and 1% AEP critical duration storm events;</p> <p>c) Stormwater discharge structures shall be designed to avoid erosion of the waterway in the vicinity of the outfall; and</p> <p>d) Expressway stormwater runoff to the Kakariki Stream and the Ngarara Creek shall receive primary treatment using swales followed by secondary treatment using wetlands before discharge.</p>
SW.2	<p>The effects of the Expressway embankment, waterway crossings and stormwater discharge on flood risk shall be addressed in the following manner:</p> <p>a) Any loss of flood plain storage due to the fill embankment shall be offset by:</p> <ul style="list-style-type: none"> i) provision of equivalent alternative flood storage volume; or ii) attenuating runoff; or iii) removing downstream constraints; or iv) a combination of the above. <p>b) Flood risk shall be assessed against the 1% AEP storm, with climate change to 2115 (mid-range) estimated and shall provide a sensitivity evaluation against high range climate change scenarios (to 2115).</p> <p>c) Culvert and bridge waterway crossings shall be designed so that any increase in flood risk in the 1% AEP storm is either:</p> <ul style="list-style-type: none"> i) contained within the designation, or ii) Contained generally within the designated flood hazard area and is no more than 50mm above existing flood levels. The combined effects of filling, waterway crossings and Expressway stormwater discharge shall be assessed through the use of hydrological and hydraulic modelling. <p>d) The stormwater management design and flood risk modelling shall be independently peer reviewed by a suitably qualified and experienced engineer agreed with GWRC and KCDC (at the cost of the Consent Holder) to ensure that the hydraulic modelling is appropriate and that the stormwater design and flood risk management meets the performance criteria set out in SW.1, SW.2 and SW.3. The results of the peer review shall be provided to the Manager at least 15 working days prior to commencement of Works. The Consent Holder shall implement any recommendations in the peer review or an alternative design detail agreed with the peer reviewer and certified by the Manager.</p> <p>e) At least 15 working days prior to the Commencement of Work in each Stage, the consent holder shall provide a report to the Manager which confirms how the final design of the Expressway embankments, water crossings and stormwater discharges for each Stage meet the requirements of SW.1, SW.2 and SW.3. Works in the relevant Stage shall not commence until the Manager has certified the report.</p>
SW.3	<p>The design of waterway crossings shall also meet the following performance criteria:</p> <p>a) The design of the Waikanae River Bridge shall provide at least 5m clearance to the beam soffit across all parts of berm where required for operation of maintenance machinery. At least 4.5m minimum clearance shall be provided for the El Rancho access road.</p> <p>b) The top surface of berm riprap under the Waikanae River Bridge shall be no higher than the</p>

Ref	Wording of Conditions
	<p>existing berm level, and shall retain existing berm drainage patterns.</p> <p>c) Freeboard for Waikanae River Bridge above modelled level for the 1% AEP flood plus climate change to 2115 shall be at least 2.2m.</p> <p>d) The following allowance shall be made for future services to pass under the Waikanae River Bridge in between the Super Tee beams with oversize sleeves in the abutments and crosshead beams.</p> <p>i) 6-Ø100mm duct for telecommunications below northbound outer shoulder.</p> <p>ii) 5-Ø100mm ducts, 4 for telecommunications and 1 for gas below southbound outer shoulder.</p> <p>iii) 2-Ø450mm water/wastewater pipes.</p> <p>e) The Waikanae River Bridge configuration shall consist of 5 spans, with twin-column piers, and with all piers being clear of the permanent waterway. The main river channel shall have a clear span at berm level of no less than 35m.</p> <p>f) For the final design for all culverts, a culvert blockage risk assessment shall be undertaken by the Consent Holder and any blockage risk identified as a result of this assessment shall be appropriately managed, to the satisfaction of the Manager.</p>

Consent conditions for borehole construction and groundwater takes

- **Land Use Consent – Borehole Construction** (NSP 12/01.024) to construct boreholes for groundwater extraction and the formation of holes for bridge piles and other excavations that may intercept groundwater.
- **Water Permit – Groundwater Take and Use** (NSP 12/01.025) to take and use water for bore testing, dewatering of excavations, dust suppression and construction purposes associated with the MacKays to Peka Peka Expressway.
- **Water Permit – Groundwater Diversion** (NSP 12/01.026) to divert groundwater from wetlands adjacent to the MacKays to Peka Peka Expressway.

Explanatory note: these are global consents relating to all bores and groundwater take that affect groundwater.

Ref	Wording of Conditions
	General Conditions – Borehole Construction
BC.1	The location, design, implementation and operation of the monitoring bore(s) shall be in general accordance with the resource consent application, including the plans contained in the draft Groundwater (Level) Management Plan (draft CEMP, Appendix I).
BC.2	Within one month after completion of all monitoring bore installations, the Consent Holder shall submit to the Manager a copy of the borehole logs and details of the piezometer installations.
BC.3	Within one month after completion of each water supply well, the Consent Holder shall submit to the Manager a copy of the driller's bore g form as completed by the driller who constructed the bore(s) and details of the well installation.
BC.4	The bore(s) shall be constructed and maintained in accordance with the New Zealand Environmental Standard for Drilling of Soil and Rock (NZS 4411:2011).
BC.5	In the event of a bore(s) being decommissioned or abandoned, the bore will be backfilled in accordance with NZS 4411:2011.
BC.6	If so requested by the Manager, the Consent Holder shall make its bores available for the monitoring of water levels and water quality.
	General Conditions – Groundwater Take and Use
GT.1	The location, design, implementation and operation of the groundwater takes shall be in general accordance with the consent application, including the plans contained in the draft Groundwater (Level) Management Plan (draft CEMP, Appendix I).
GT.2	The rate at which water is taken from each water supply bore shall not exceed 275,000 m ³ /year at a maximum of 750 m ³ /day and a maximum pumping rate of 35 litres/sec. The combined rate of pumping shall not exceed 1990 m ³ /day in total from all Project construction water supply bores pumping at any particular time.
GT.3	The Consent Holder shall undertake the following: <ol style="list-style-type: none"> Install and maintain a water meter on each water supply bore prior to the commencement of the take and for the duration of the abstraction from the point of take. The water meter shall measure both cumulative water abstraction and the instantaneous rate of take, and be capable of providing a pulse counter output; and The water meter shall be calibrated to ensure that the error does not exceed +/- 5%. The water meter shall be installed in accordance with manufacturer's specifications.

Ref	Wording of Conditions
GT.4	A stepped rate pumping test shall be carried out in each new water supply bore to determine the volume of water that can be abstracted from the bore. The stepped rate test shall be followed by a constant rate pumping test of at least 8 hours duration at the desired pumping rate. Monitoring of water levels in at least one observation bore shall be carried out during the constant rate test.
GT.5	<p>Within 3 months of the completion of each pumping test, the Consent Holder shall submit a report to the Manager, which contains but need not be limited to, the following information:</p> <ul style="list-style-type: none"> a) Details of the testing carried out; b) Presentation of and analysis of the collected pumping test data; c) Use results to simulate drawdown interference effects at any potentially affected neighbouring boreholes; d) An assessment of the potential effect on nearby streams / wetlands; e) An assessment on the risk of saline intrusion; and f) The mitigation measures to address any adverse effects identified in the analysis in items b), c) and d). <p>This report must be approved by the Manager before the bore can be utilised for construction water supply purposes.</p>
GT.6	If so requested by the Manager, the Consent Holder shall make its bores available for monitoring of water levels and water quality.
Conditions – Groundwater Diversion	
GD.1	The location, design, implementation and operation of the activity shall be in general accordance with the consent application and its associated plans.
GD.2	<p>The Consent Holder shall:</p> <ul style="list-style-type: none"> a) Install and maintain the groundwater monitoring boreholes shown in Appendix A of the draft Groundwater (Level) Management Plan (GMP) (draft CEMP, Appendix I) submitted with the application for the period of monitoring specified in condition GD. 7 in this consent; b) Monitor and record groundwater levels in the groundwater monitoring boreholes shown in Appendix A of the draft GMP (draft CEMP, Appendix I) and keep records of the water level measurement and corresponding date in accordance with the GMP and condition GD. 7 These records shall be compiled and submitted to the Manager at three monthly intervals, or upon request, for the duration of the monitoring. c) Monitor groundwater levels monthly in existing boreholes and in newly installed monitoring boreholes shown in Appendix A of the draft GMP (draft CEMP, Appendix I) for a period of at least 12 months (where practicable) before the commencement of construction that may affect groundwater levels in the area of monitoring. The Consent Holder will report the groundwater levels recorded over this period, together with the monitoring trends obtained during the investigation and detailed design phases, and use these to establish groundwater alert levels that will initiate actions to be undertaken when potentially adverse changes in groundwater levels occur. The proposed alert levels and supporting data shall be discussed with the KCDC and submitted to the Manager for certification 15 working days prior to submission of the GMP. d) Include in the GMP the proposed actions for remediation and mitigation should alert levels (as determined in the GMP) be exceeded. These actions shall include provision for the accidental interception of artesian or spring flows in the area immediately adjacent to Wetland 9 (located between the Waimeha Stream and Waikanae River) and the provision of sufficient drainage capacity to avoid land drainage or flooding problems on properties in the immediately vicinity

Ref	Wording of Conditions
	<p>caused by the operation of Wetland 9. The Consent Holder shall consult with property owners adjoining Wetland 9 prior to finalising proposed actions and shall include in the GMP the response to feedback obtained through the consultation.</p>
GD.3	<p>At 3 monthly intervals during construction, and for at least 12 months following completion of construction, the Consent Holder shall review and report the results of monitoring as compared with predicted effects on groundwater levels assessed from groundwater modelling and the established range of groundwater levels determined from groundwater monitoring prior to the Work. This review will consider the final construction methodology and progress at the time of the review. In addition, an annual report will be prepared and submitted to the Manager by 1 May each year that describes:</p> <ul style="list-style-type: none"> a) The groundwater monitoring that has been undertaken since the commencement of Works; b) The actual and potential effects arising from the groundwater level changes; c) Any remedial or mitigation measures that have been implemented; d) Any changes to proposed remedial and mitigation measures; and e) Any changes proposed for the future monitoring programme or to alert levels. <p>Any changes proposed to the future monitoring programme or to the alert levels and mitigation must be amended in the GMP and certified by the Manager before they can be implemented.</p> <p>The reporting must continue throughout the monitoring period, but the frequency of reporting may be extended to 6 monthly following completion of construction if approved in writing by the Manager. The monitoring at each site shall only be terminated when the following two criteria are met:</p> <ul style="list-style-type: none"> a) A final monitoring report is prepared that reviews all of the monitoring data at relevant sites, determines any groundwater level effects caused by the Project, considers the potential range of impacts related to these effects, and demonstrates that effective measures are in place to address any adverse effects. b) The Manager approves that this final monitoring report demonstrates that the potential adverse effects have been satisfactorily avoided, remedied or mitigated.
GD.4	<p>From the commencement of Work, the Consent Holder shall monitor groundwater levels in each borehole listed in Appendix A of the draft GMP at a minimum of monthly intervals and records shall be kept of each monitoring date and the corresponding water level in each borehole. In addition, all boreholes listed in Appendix A of the draft GMP located within 200 metres of the advancing construction face (i.e. area of excavation being opened in a site or stage as earthworks progress) shall be monitored twice weekly. These records shall be compiled and submitted to the Manager at 3 monthly intervals or upon request. In the event of an exceedance of the Alert levels specified in the GMP, the Consent Holder shall increase the frequency of monitoring to daily. If the exceedance continues for 3 consecutive days, the Consent Holder shall notify the Manager within 10 working days, advising of the exceedance, the risk of adverse effects on wetlands, surface waterways or ground settlement that might cause damage to structures, details of the actions undertaken and initiate mitigation measures approved by the Manager including, but not limited to, those actions set out in the GMP.</p>
GD.5	<p>Monitoring data from bores installed in or adjacent to wetlands defined in conditions G.38B shall be jointly reviewed by a suitably qualified hydrologist and a suitably qualified fresh water ecologist on a monthly basis from commencement of Works to determine if there is any change in water levels. The results of the review shall be included in the 3 monthly groundwater monitoring reports provided to the Manager under condition GD.3. In the event that water level changes occur that exceed alert levels for a wetland as specified in the GMP, the Consent Holder shall notify the</p>

Ref	Wording of Conditions
	<p>Manager within 2 working days of observing the exceedance and follow the procedures outlined in condition GD.4.</p>
GD.6	<p>The Consent Holder shall implement mitigation measures described in the GMP to ensure that existing groundwater users (consented users) or those identified in condition GD.2(c) who have a reduced ability to abstract their own water supply as a result of the Project receive a replacement water supply.</p> <p>The Consent Holder shall ensure that existing bore owners have priority to abstract water from their bores, that the integrity of those supplies (in terms of both quality and quantity of supply) is protected, and that no diminution of their ability to abstract bore water shall occur unless appropriate and adequate mitigation measures are implemented. The Consent Holder shall also avoid adversely affecting KCDC's public water supply bores and shall ensure access to those bores for maintenance and servicing is maintained throughout the Project.</p>
GD.7	<p>The Consent Holder shall continue to monitor groundwater levels in each borehole listed in Appendix A of the GMP at monthly intervals for a period of up to 12 months following completion of Expressway construction, and 3 monthly thereafter for a further 24 months, or a lesser period approved by the Manager (except in the case of piezometers in or adjacent to the wetlands identified in condition G.38B which shall continue to be monitored for 48 months following the initial 12 month period). If the alert levels are exceeded, the Consent Holder shall follow the procedures outlined in conditions GD.2 and GD.3.</p>
GD.8	<p>The Consent Holder shall, within 10 working days of completion of the Project construction, advise the Manager in writing, of the date of completion.</p>
GD.8A	<p>a) The Consent Holder shall undertake surface water and shallow groundwater monitoring in the vicinity of the Otaihangā Landfill as follows:</p> <ul style="list-style-type: none"> i) Surface water monitoring at one location upstream and three locations downstream of the Expressway alignment to check that construction Work does not materially alter overall surface water quality draining from the Otaihangā Landfill site; and ii) Shallow groundwater sampling from the existing two bores (BH306 and BH307 as listed in Appendix A of the draft GMP) located near the toe of the landfill and two additional boreholes (BH10 and BH11 as listed in Appendix A of the draft GMP) to determine representative effects on groundwater quality. <p>b) Monitoring shall commence at each of these monitoring locations at least 12 months (where practicable) in advance of construction Work commencing that has the potential to affect surface water and groundwater quality in this area in order to provide a baseline (additional to that of the routine monitoring undertaken on behalf of KCDC) to determine any post-construction effects. Monitoring at each of these locations shall continue for the duration of Works and shall continue for a period of 2 years following completion of construction Works, unless additional monitoring is required to measure the effectiveness of treatment measures as required later in this condition.</p> <p>c) Samples of both shallow groundwater and surface water shall be collected in each of these monitoring locations every 6 months pre, during and post construction (surface water sampling at one monthly intervals) and these shall be analysed for a representative range of cations, anions, nutrients and (dissolved) metals. The results of the monitoring shall be provided in reports to be submitted to the Manager within 30 working days.</p> <p>d) The details of the proposed baseline monitoring shall be provided in the CSGMP as required by conditions G.31-G.33. Details of the pre and post construction monitoring shall also be</p>

Ref	Wording of Conditions
	<p>included in the GMP.</p> <p>e) If monitoring indicates any significant departure from the baseline, which is not consistent with the results and trends of the baseline or historical monitoring and which can be attributed to Expressway construction, the Consent Holder shall undertake one of the following actions, depending on the significance of the departure:</p> <ul style="list-style-type: none"> i) If the concentration of the test parameters as set out in the GMP is confirmed (through repeat sampling) to be at least 3 times the maximum value recorded in the last 3 years for the Consent Holder monitoring or the routine KCDC monitoring, the Consent Holder shall increase the frequency of testing to once every 2 months. ii) If the concentration of the test parameters as set out in the GMP is confirmed (through repeat sampling) to be at least 10 times the maximum value recorded in the last 3 years for the Consent Holder monitoring, or the routine KCDC monitoring, the Consent Holder shall provide a report to the Manager and KCDC, within 30 working days, which will include (but not be limited to): <ul style="list-style-type: none"> 1. Analysis of the results of the monitoring; 2. Recommendations regarding the need for additional treatment to surface runoff or shallow groundwater through-flow before exiting the landfill site boundary; 3. Treatment options including a preferred treatment option, and timeframes for implementing this; and 4. Further monitoring proposed of this treatment measure and subsequent actions based on the results of this further monitoring. <p>f) The Consent Holder shall implement any treatment measures or other remedial or mitigation measures agreed with the Manager within a timeframe also agreed with the Manager. The Consent Holder shall undertake further monitoring of the effectiveness of the treatment option as agreed with the Manager and implement any subsequent actions agreed with the Manager.</p>

Consent conditions for wetland reclamation and vegetation clearance

- **Land Use Consent – Wetland Reclamation** (NSP 12/01.027) for the partial reclamation of wetlands in the vicinity of the MacKays to Peka Peka Expressway alignment, including the associated disturbance of their beds.
- **Land Use Consent – Vegetation Clearance** (NSP 12/01.028) to remove vegetation in the beds of various watercourses and wetlands, including the associated disturbance of their beds.

Ref	Wording of Conditions
Conditions – Wetland Reclamation	
G.1 – G.40	The effects will be managed under the relevant General Conditions applicable to the proposed wetland reclamation.
WR.1	The maximum area of wetland reclamation shall be 1.8ha (in accordance with Table 11, Technical Report 26).
Conditions – Vegetation Clearance	
G.1 – G.40	The effects will be managed under the relevant General Conditions applicable to the proposed clearance of vegetation.
VC.1	The total maximum area of vegetation removal from the beds of all water bodies shall be 3.8ha (in accordance with Table 11, Technical Report 26).

Consent condition for disturbing soil containing contaminants which may be a risk to human health

- **Land Use Consent – Disturbance of soil containing contaminants NSP 12/01.002:** The site to which the consent application relates is at 55 Rata Road, Paraparaumu. Land use consent for disturbing soil containing contaminants where there is a risk to human health and changing the use of land containing contaminants where there is a risk to human health pursuant to Regulation 10 of the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (SR 2011/361).

Reference	Wording of Conditions
	Conditions – Contaminated Soils Management Plan (Human Health)
NES.1	<p>a) In managing earthworks and the potential for the disturbance of contaminated soil to affect human health during and after construction of the Project, the Consent Holder shall achieve the following outcomes:</p> <ul style="list-style-type: none"> i) Contaminated dust or sediment discharged beyond the boundary is minimised; ii) All excavated soils are appropriately handled and disposed of at facilities registered for taking contaminated material; and iii) All soil that is to remain on a site will be suitable for the proposed future use of that site. <p>b) In achieving these outcomes, the Consent Holder shall, at the least, comply or be consistent with the following standards and guidelines:</p> <ul style="list-style-type: none"> i) Contaminated Land Guidelines No.1 – Reporting on Contaminated Sites in New Zealand; ii) Contaminated Land Guidelines No. 5 – Site Investigation and Analysis of Soils.
NES. 2	<p>The Consent Holder shall submit a draft Contaminated Soils Management Plan (Human Health) (CSMP(HH)) to the KCDC Regulatory Manager at least 30 working days prior to the Work commencing. The final CSMP(HH) will be submitted for certification at least 15 working days prior to the Work commencing. The CSMP(HH) shall be submitted with the CEMP as an appendix. The purpose of the CSMP (HH) is to identify the following:</p> <ul style="list-style-type: none"> a) The approach to the remediation or ongoing management of the land at 55 Rata Road, Paraparaumu, including: <ul style="list-style-type: none"> i) the remediation or management methods to address the risk posed by the contaminants to human health; ii) the timing of the remediation; iii) the standard of the remediation on completion; iv) the mitigation methods to address the risk posed by the contaminants to human health; v) the mitigation measures for the piece of land, including the frequency and location of monitoring of specified contaminants. b) The adequacy of the site management plan or the site validation report or both, as applicable; c) The transport, disposal, and tracking of soil and other materials taken away in the course of the activity; and d) Work shall not commence until the Consent Holder has received the KCDC Regulatory Manager's written certification of the CSMP(HH).

NES. 3	Should the further investigations required to be undertaken in accordance with condition G.33 record levels of contaminants that exceed the limits in the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health, then these sites will be included in the CSMP (HH) as required by NES.2.
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Appendix C

Staging Programme

STAGING PROGRAMME 2013

ZONE	SECTOR	SUB-SECTOR	WBS Reference	SITE SPECIFIC MANAGEMENT PLAN KEY	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	
NORTH	Peka Peka Interchange	CH. 17400-18050	570	<ul style="list-style-type: none"> Erosion & Sediment Control Plan Traffic Management Plan Noise Management Plan Vibration Management Plan Landscape Management Plan Urban Design Management Plan Planting Management Plan Ecological Management Plan Hard Landscape Management Plan 	Group 1 Management Plans submitted for certification	Group 2 & 3 Management Plans submitted for certification		SSCNMP, Stormwater	SSCESCP, SSTMP, Peer Review & Vegetation Certification	Preload 16600 - 17400				
		Peka Peka Road	560.2											
	CH.16600-18050	Preload - CH.16600-17400	560.1											
		Expressway Construction 16600-17400	560.2											
	15400 to Peka Peka	15400 to Peka Peka (CH.15400-16600)	550											
	Smithfield Road	Smithfield Road Expressway 13700-15400	540											
CENTRAL	Ngarara Road	CH.13500-13700	530											
		CH.12350-13500	520											
	Te Moana Road - Ngarara Road	Te Moana Road - Ngarara Road	520											
	CH.11500-12350	Interchange Construction	510											
	Waikanae River - Te Moana Road	Vector Gas Enabling Works (CH.10750-12350)	480.1											
	CH.10750-11500	Expressway Construction CH. 10750-11500	480.2											
	Waikanae Bridge	Waikanae Bridge	470											
	CH.10500-10750	CH.10500-10750												
	Otaihanga Road - Waikanae River	Otaihanga - Waikanae River	460											
	CH.9250-10500	CH.9250-10500												
Otaihanga Roundabout*	Otaihanga Roundabout	450												
Otaihanga Project Office/Yard	Otaihanga Project Office/Yard	130												
Otaihanga Road Bridge	Otaihanga Bridge	440												
CH.9150-9250	CH.9150-9250													
Mazengarb Road - Otaihanga Road	Mazengarb Road - Otaihanga Road	430												
CH.8000-9150	CH.8000-9150													
Mazengarb Road Bridge	Mazengarb Road Bridge	420												
CH.7900-8000	CH.7900-8001													
Kapiti Road - Mazengarb Road	Kapiti - Mazengarb Road (to include specific mitigation for residential areas to the east & west)	410												
CH.6500-7900														
Kapiti Road Interchange	Kapiti Road Interchange	380												
CH.6200-6500	CH.6200-6500													
SOUTH	Wharemauku Stream - Kapiti Road	Wharemauku Stream - Kapiti Road	370											
	CH.5500-6200	CH.5500-6200 (to include specific mitigation for Milne Drive through to Quadrant Heights)												
	Wharemauku Stream Bridge	Wharemauku Stream Bridge	360											
	CH.5350-5500	CH.5350-5500												
	Raumati Road - Wharemauku Stream	Raumati Road - Wharemauku Stream	350											
	CH.4550-5350	CH.4550-5350 (to include specific mitigation for Conifer Court)												
	Raumati Road Bridge	Raumati Road Bridge	340											
	CH. 4400-4550	CH. 4400-4550												
	Poplar Avenue - Raumati Road	Poplar Avenue - Raumati Road	330											
	CH. 3200-4400	CH. 3200-4400 (including new Leinster Avenue & specific mitigation)												
Poplar Avenue Interchange	CH.1900-3200	Preload & Ground Improvements, CH. 1900-3200	320.1											
		Poplar Avenue Realignment	320.2											
		Poplar Avenue Bridge	320.2											
		Raumati Straight*	Raumati Straight	310										

Under construction Settlement No construction Complete

* no certification required due to separate consents

STAGING PROGRAMME 2014

ZONE	SECTOR	SUB SECTOR	WBS Reference	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	
NORTH	Peka Peka Interchange CH.16600-18050	CH. 17400-18050	570													
		Peka Peka Road	560.2													
		Preload - CH.16600-17400	560.1	Preload continues												
	15400 to Peka Peka CH.15400-16600	Expressway Construction 1660-17400	560.2													
		15400 to Peka Peka (CH.15400-16600)	550	15400 to Peka Peka continues												
	Smithfield Road CH.13700-15400	Smithfield Road Expressway 13700-15400 Drainage works 14000-14600	540													
Drainage works 14000-14600																
Ngarara Road CH.13500-13700	Ngarara Road CH.13500-13700	530														
Te Moana Road - Ngarara Road CH.12350-13500	Te Moana Road - Ngarara Road CH.12350-13500	520														
Te Moana Interchange CH.11500-12350	Interchange Construction	510														
CENTRAL	Waikanae River - Te Moana Road CH.10750-11500	Vector Gas Enabling Works	480.1	Gas Main Diversion - Vector												
		Expressway Construction CH. 10750-11500	480.2													
	Waikanae Bridge CH.10500-10750	Waikanae Bridge CH.10500-10750	470	Waikanae River Bridge												
	Otaihanga Road - Waikanae River CH.9250-10500	Otaihanga - Waikanae River CH.9250-10500	460	Otaihanga - Waikanae River												
	Otaihanga Roundabout*	Otaihanga Roundabout	450													
	Otaihanga Project Office/Yard	Otaihanga Project Office/Yard	130													
	Otaihanga Road Bridge CH.9150-9250	Otaihanga Bridge CH.9150-9250	440													
	Mazengarb Road - Otaitanga Road CH.8000-9150	Mazengarb Road - Otaitanga Road CH.8000-9150	430	Mazengarb Road - Otaitanga Road												
	Mazengarb Road Bridge CH.7900-8000	Mazengarb Road Bridge CH.7900-8001	420													
	Kapiti Road - Mazengarb Road CH.6500-7900	Kapiti - Mazengarb Road (to include specific mitigation for residential areas to the east & west)	410													
	Kapiti Road Interchange CH.6200-6500	Kapiti Road Interchange CH.6200-6500	380													
	SOUTH	Wharemauku Stream - Kapiti Road CH.5500-6200	Wharemauku Stream - Kapiti Road CH.5500-6200 (to include specific mitigation for Milne Drive through to Quadrant Heights)	370												
Wharemauku Stream Bridge CH.5350-5500		Wharemauku Stream Bridge CH.5350-5500	360													
Raumati Road - Wharemauku Stream CH.4550-5350		Raumati Road - Wharemauku Stream CH.4550-5350 (to include specific mitigation for Conifer Court)	350													
Raumati Road Bridge CH. 4400-4550		Raumati Road Bridge CH. 4400-4550	340													
Poplar Avenue - Raumati Road CH. 3200-4400		Poplar Avenue - Raumati Road CH. 3200-4400 (including new Leinster Avenue & specific mitigation)	330													
Poplar Avenue Interchange CH.1900-3200	Preload & Ground Improvements, CH. 1900-3200	320.1	Preload Continues													
	Poplar Avenue Realignment	320.2	Poplar Ave Realignment													
	Poplar Avenue Bridge	320.2														
Raumati Straight*	Raumati Straight	310														

SITE SPECIFIC MANAGEMENT PLAN KEY	
Erosion & Sediment Control Plan	SSCESCP
Traffic Management Plan	SSTMP
Noise Management Plan	SSCNMP
Vibration Management Plan	SSCVMP
Landscape Management Plan	SSLMP
Urban Design Management Plan	SSUDMP
Planting Management Plan	SSPMP
Ecological Management Plan	SSEMP
Hard Landscape Management Plan	SSHLMMP

■ Under construction
 ■ Settlement
 ■ Complete
■ No construction

* no certification required due to separate consents

STAGING PROGRAMME 2015

ZONE	SECTOR	SUB-SECTOR	WBS Reference	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
NORTH	Peka Peka Interchange CH.16600-18050	CH. 17400-18050	570												
		Peka Peka Road	560.2												
		Preload - CH.16600-17400	560.1												
	15400 to Peka Peka CH.15400-16600	Expressway Construction 1660-17400	560.2												
		15400 to Peka Peka (CH.15400-16600)	550				SSPMP		Planting						
	Smithfield Road CH.13700-15400	Smithfield Road	540	Smithfield Road, including Bridge	SSPMP				Planting						
Expressway 13700-15400 Drainage works 14000-14600		SSPMP						Planting							
Ngarara Road CH.13500-13700	Ngarara Road CH.13500-13700	530									SSCESCP		Ngarara Road, including Bridge		
Te Moana Road - Ngarara Road CH.12350-13500	Te Moana Road - Ngarara Road CH.12350-13500	520													
Te Moana Interchange CH.11500-12350	Interchange Construction	510													
CENTRAL	Waikanae River - Te Moana Road CH.10750-11500	Vector Gas Enabling Works	480.1												
		Expressway Construction CH. 10750-11500	480.2						SSPMP	Planting					
	Waikanae Bridge CH.10500-10750	Waikanae Bridge CH.10500-10750	470												
	Otaihanga Road - Waikanae River CH.9250-10500	Otaihanga - Waikanae River CH.9250-10500	460												
	Otaihanga Roundabout*	Otaihanga Roundabout	450												
	Otaihanga Project Office/Yard	Otaihanga Project Office/Yard	130												
	Otaihanga Road Bridge CH.9150-9250	Otaihanga Bridge CH.9150-9250	440												
	Mazengarb Road - Otaitanga Road CH.8000-9150	Mazengarb Road - Otaitanga Road CH.8000-9150	430				SSPMP	Planting							
	Mazengarb Road Bridge CH.7900-8000	Mazengarb Road Bridge CH.7900-8001	420									SSPMP	Planting		
	Kapiti Road - Mazengarb Road CH.6500-7900	Kapiti - Mazengarb Road (to include specific mitigation for residential areas to the east & west)	410										SSPMP	Planting	
	Kapiti Road Interchange CH.6200-6500	Kapiti Road Interchange CH.6200-6500	380												
	SOUTH	Wharemauku Stream - Kapiti Road CH.5500-6200	Wharemauku Stream - Kapiti Road CH.5500-6200 (to include specific mitigation for Milne Drive through to Quadrant Heights)	370											
Wharemauku Stream Bridge CH.5350-5500			360							SSCESCP			Wharemauku Stream Bridge		
Raumati Road - Wharemauku Stream CH.4550-5350		Raumati Road - Wharemauku Stream CH.4550-5350 (to include specific mitigation for Conifer Court)	350									SSCESCP		Raumati Road - Wharemauku Stream	
Raumati Road Bridge CH. 4400-4550		Raumati Road Bridge CH. 4400-4550	340												
Poplar Avenue - Raumati Road CH. 3200-4400		Poplar Avenue - Raumati Road CH. 3200-4400 (including new Leinster Avenue & specific mitigation)	330												
Poplar Avenue Interchange CH.1900-3200		Preload & Ground Improvements, CH. 1900-3200	320.1												
		Poplar Avenue Realignment	320.2												
		Poplar Avenue Bridge	320.2												
Raumati Straight*	Raumati Straight	310													

SITE SPECIFIC MANAGEMENT PLAN KEY	
Erosion & Sediment Control Plan	SSCESCP
Traffic Management Plan	SSTMP
Noise Management Plan	SSCNMP
Vibration Management Plan	SSCVMP
Landscape Management Plan	SSLMP
Urban Design Management Plan	SSUDMP
Planting Management Plan	SSPMP
Ecological Management Plan	SSEMP
Hard Landscape Management Plan	SSHLMMP

* no certification required due to separate consents

STAGING PROGRAMME 2016

ZONE	SECTION	SUB-SECTION	WBS Reference	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	
NORTH	Peka Peka Interchange CH.16600-18050	CH. 17400-18050	570													
		Peka Peka Road	560.2	SSCESCP Peka Peka Road, including Bridge												
		Preload - CH.16600-17400	560.1	SSCNMP, SSCVMP, SSLMP, SSUDP, SSEMP												
		Expressway Construction 1660-17400	560.2													
	15400 to Peka Peka CH.15400-16600	15400 to Peka Peka (CH.15400-16600)	550													
CENTRAL	Smithfield Road CH.13700-15400	Smithfield Road Expressway 13700-15400 Drainage works 14000-14600	540													
	Ngarara Road CH.13500-13700	Ngarara Road CH.13500-13700	530				SSPMP	Planting								
	Te Moana Road - Ngarara Road CH.12350-13500	Te Moana Road - Ngarara Road CH.12350-13500	520				SSPMP	Planting								
	Te Moana Interchange CH.11500-12350	Interchange Construction	510				SSPMP	Planting								
	Waikanae River - Te Moana Road CH.10750-11500	Vector Gas Enabling Works	480.1													
		Expressway Construction CH. 10750-11500	480.2													
	Waikanae Bridge CH.10500-10750	Waikanae Bridge CH.10500-10750	470				SSPMP	Planting								
	Otaihanga Road - Waikanae River CH.9250-10500	Otaihanga - Waikanae River CH.9250-10500	460				SSPMP	Planting								
	Otaihanga Roundabout* Otaihanga Project Office/Yard	Otaihanga Roundabout Otaihanga Project Office/Yard	450 130													
	Otaihanga Road Bridge CH.9150-9250	Otaihanga Bridge CH.9150-9250	440				SSPMP	Planting								
SOUTH	Mazengarb Road - Otaitanga Road CH.8000-9150	Mazengarb Road - Otaitanga Road CH.8000-9150	430				SSPMP	Planting								
	Mazengarb Road Bridge CH.7900-8000	Mazengarb Road Bridge CH.7900-8001	420				SSPMP	Planting								
	Kapiti Road - Mazengarb Road CH.6500-7900	Kapiti - Mazengarb Road (to include specific mitigation for residential areas to the east & west)	410				SSPMP	Planting								
	Kapiti Road Interchange CH.6200-6500	Kapiti Road Interchange CH.6200-6500	380				SSPMP	Planting								
	Wharemauku Stream - Kapiti Road CH.5500-6200	Wharemauku Stream - Kapiti Road CH.5500-6200 (to include specific mitigation for Milne Drive through to Quadrant Heights)	370				SSPMP	Planting								
	Wharemauku Stream Bridge CH.5350-5500	Wharemauku Stream Bridge CH.5350-5500	360							Wharemauku Stream Bridge	SSPMP	Planting				
	Raumati Road - Wharemauku Stream CH.4550-5350	Raumati Road - Wharemauku Stream CH.4550-5350 (to include specific mitigation for Conifer Court)	350						Raumati Road - Wharemauku Stream	SSPMP	Planting					
Raumati Road Bridge CH. 4400-4550	Raumati Road Bridge CH. 4400-4550	340														
Poplar Avenue - Raumati Road CH. 3200-4400	Poplar Avenue - Raumati Road CH. 3200-4400 (including new Leinster Avenue & specific mitigation)	330														
Poplar Avenue Interchange CH.1900-3200	Preload & Ground Improvements, CH. 1900-3200	320.1														
	Poplar Avenue Realignment	320.2							SSCESCP, SSTMP, SSLMP, SSEMP SSCNMP							
	Poplar Avenue Bridge	320.2														
Raumati Straight* * no certification required due to separate consents	Raumati Straight	310														

SITE SPECIFIC MANAGEMENT PLAN KEY	
Erosion & Sediment Control Plan	SSCESCP
Traffic Management Plan	SSTMP
Noise Management Plan	SSCNMP
Vibration Management Plan	SSCVMP
Landscape Management Plan	SSLMP
Urban Design Management Plan	SSUDMP
Planting Management Plan	SSPMP
Ecological Management Plan	SSEMP
Hard Landscape Management Plan	SSLHMP

STAGING PROGRAMME 2017

ZONE	SECTOR	SUB-SECTOR	WBS Reference	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	
NORTH	Peka Peka Interchange CH.16600-18050	CH. 17400-18050	570	17400-18050	SSPMP	Planting										
		Peka Peka Road	560.2	SSHLM												
		Preload - CH.16600-17400 Expressway Construction 1660-17400	560.1 560.2													
	15400 to Peka Peka CH.15400-16600	15400 to Peka Peka (CH.15400-16600)	550													
	Smithfield Road CH.13700-15400	Smithfield Road Expressway 13700-15400 Drainage works 14000-14600	540	SSHLM												
	Ngarara Road CH.13500-13700	Ngarara Road CH.13500-13700	530													
	Te Moana Road - Ngarara Road CH.12350-13500	Te Moana Road - Ngarara Road CH.12350-13500	520	SSHLM												
Te Moana Interchange CH.11500-12350	Interchange Construction	510	SSHLM													
CENTRAL	Waikanae River - Te Moana Road CH.10750-11500	Vector Gas Enabling Works	480.1													
		Expressway Construction CH. 10750-11500	480.2													
	Waikanae Bridge CH.10500-10750	Waikanae Bridge CH.10500-10750	470	SSHLM												
	Otaihanga Road - Waikanae River CH.9250-10500	Otaihanga - Waikanae River CH.9250-10500	460													
	Otaihanga Roundabout*	Otaihanga Roundabout	450													
	Otaihanga Project Office/Yard	Otaihanga Project Office/Yard	130													
	Otaihanga Road Bridge CH.9150-9250	Otaihanga Bridge CH.9150-9250	440	SSHLM												
	Mazengarb Road - Otaitanga Road CH.8000-9150	Mazengarb Road - Otaitanga Road CH.8000-9150	430													
	Mazengarb Road Bridge CH.7900-8000	Mazengarb Road Bridge CH.7900-8001	420	SSHLM												
	Kapiti Road - Mazengarb Road CH.6500-7900	Kapiti - Mazengarb Road (to include specific mitigation for residential areas to the east & west)	410	SSHLM												
Kapiti Road Interchange CH.6200-6500	Kapiti Road Interchange CH.6200-6500	380	SSHLM													
SOUTH	Wharemauku Stream - Kapiti Road CH.5500-6200	Wharemauku Stream - Kapiti Road CH.5500-6200 (to include specific mitigation for Milne Drive through to Quadrant Heights)	370													
	Wharemauku Stream Bridge CH.5350-5500	Wharemauku Stream Bridge CH.5350-5500	360	SSHLM												
	Raumati Road - Wharemauku Stream CH.4550-5350	Raumati Road - Wharemauku Stream CH.4550-5350 (to include specific mitigation for Conifer Court)	350	SSHLM												
	Raumati Road Bridge CH. 4400-4550	Raumati Road Bridge CH. 4400-4550	340	SSHLM	SSPMP	Planting										
	Poplar Avenue - Raumati Road CH. 3200-4400	Poplar Avenue - Raumati Road CH. 3200-4400 (including new Leinster Avenue & specific mitigation)	330		SSPMP	Planting										
	Poplar Avenue Interchange CH.1900-3200	Preload & Ground Improvements, CH. 1900-3200	320.1													
		Poplar Avenue Realignment	320.2	SSHLM												
		Poplar Avenue Bridge	320.2	Poplar Av Bridge	SSPMP	Planting										
Raumati Straight*	Raumati Straight	310														

SITE SPECIFIC MANAGEMENT PLAN KEY

Erosion & Sediment Control Plan	SSCESCP
Traffic Management Plan	SSTMP
Noise Management Plan	SSCNMP
Vibration Management Plan	SSCVMP
Landscape Management Plan	SSLMP
Urban Design Management Plan	SSUDMP
Planting Management Plan	SSPMP
Ecological Management Plan	SSEMP
Hard Landscape Management Plan	SSHLM

* no certification required due to separate consents

AREA	SSEMP	SSESCP	SSCNMP
Peka Peka Interchange	✓	✓	✓
15400 - Pekapeka		✓	
Smithfield Road - 15400		✓	
Smithfield Road	✓	✓	
Ngarara Road	✓	✓	
Te Moana - Ngarara		✓	
Te Moana Road Interchange		✓	✓
Puriri & Kauri including El Rancho			
Waikanae River - Te Moana	✓	✓	
Waikanae River Bridge	✓	✓	
Otaitanga - Waikanae River		✓	
Mazengarb - Otaitanga	✓	✓	
Western side of Kapiti & Mazengarb including Cheltenham & Lincoln Court			
Eastern side of Kapiti & Mazengarb incl Greenwood, Elder, Cypress, Spackman, Makarini, Palmer, St James, Chilton			
Mazengarb Road Bridge		✓	✓
Kapiti - Mazengarb		✓	✓
Kapiti Road Interchange		✓	✓
Milne Drive through to Quadrant Heights			
Wharemauku - Kapiti	✓		✓
Wharemauku Stream	✓	✓	
Raumati - Wharemauku		✓	✓
Conifer Court		✓	
Raumati	✓	✓	✓
Raumati - Poplar		✓	✓
Leinster Ave			
Poplar Intersection		✓	
Raumati Straight		✓	
CWB			
Waikanae Oxidation Ponds	✓		

