Chapter 32

Part H

VOLUME 2

Proposed Resource Consent Conditions

32 Proposed Resource Consent Conditions

32.1 Guide to Reading the Conditions

The proposed suite of conditions to manage effects of the Project has been numbered as idetifned in Table 32-1 below:

Table 32-1: Resource Consent Reference Used in Conditions

NZTA regional resource consents	
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 a wetland, including the associated disturbance of their beds
WR	Conditions applying to consents for the partial reclamation of the wetland relating to the Peka Peka to North Ōtaki Project alignment (the 'Railway wetland'), including the associated disturbance of its bed.
SW	Conditions applying to operational stormwater discharge.

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

Table 32-2: Abbreviations, Acronyms and Terms Used in the Conditions

Definitions	
AEE	Means the Peka Peka to North Ōtaki Project Assessment of Effects on the Environment Volumes 1 to 5 dated 18 March 2013
BECLMP	Means the Bulk Earthworks Contaminated Land Management Plan
CEMP	Means the Construction Environmental Management Plan
Commencement of Work	Means the time when the work that is the subject of these resource consents commences
EMP	Means the Ecological Management Plan

ESCP	Means the Erosion and Sediment Control 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
Operational	Means when construction is complete and the Project is open to traffic (be it road traffic on the Expressway or associated local roads, or rail traffic in relation to the realigned NIMT)
Project	Means the construction, maintenance and operation of the Peka Peka to North Ōtaki Project, comprising an Expressway, local road connections, a realigned section of the NIMT, and all associated works
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
Section	Means a section of the Project as nominated by the consent holder and shown in technical report 5 (a Section may include several Stages).
SSEMP	Means a Site Specific Environmental Management Plan
Stage	Means a stage of the Project as identified by the consent holder in the staging programme submitted to GWRC in accordance with condition [G.13].
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 fresh water 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 activity or activities undertaken in relation to the Project
Working Day	Has the same meaning as under section 2 of the Resource Management Act 1991

32.2 Table of Contents

Table 32-3: Table of Contents for the Resource Consent Conditions

Page No.	Proposed Condition No.	Proposed Condition Content
Proposed application of conditions * Except as specified otherwise, the General Conditions shall apply to all resource consents as relevant. In addition, a number of resource consents are proposed to have specific conditions apply.		
	G.1-G.2	General
	G.3-G.4	Pre-construction Administration
	G.5-G.6	Consent Lapse and Expiry
	G.7	Review of Consents
	G.8-G.9	Complaints
	G.10-G.11	Incidents
	G.12	Staff Training
	G.13-G.14	Staging and Programme Conditions
	G.15	Annual Monitoring
	G.16-G.22	Management Plans - General
	G.23-G.27	Construction Environmental Management Plan
	G.28-G.30	Site Specific Environmental Management Plans
	G.31-G.37	Ecological Management Plan
	G.38-G.45	Ecological Monitoring
	G.46	Ecological Mitigation
	G.47	Revegetation Monitoring
Proposed consent conditions for works in watercourses		
	WS.1-WS.9	General
	WS.10-WS.11	Conditions During Construction
	WS.12-WS.14	Temporary Culverts
Proposed consent conditions for earthworks and erosion and sediment control		
	E.1-E.2	Erosion and Sediment Control Plan
	E.3-E.5	Erosion and Sediment Control Monitoring
	E.6-E.8	Erosion and Sediment Control
	E.9	Chemical Treatment (Flocculation)
	E.10	Bulk Earthworks Contaminated Land Management Plan

Page No.	Proposed Condition No.	Proposed Condition Content
Proposed consent conditions for borehole construction		
	BC.1-BC.4	General Conditions
Proposed consent conditions for taking and using groundwater		
	GT.1-GT.3	Groundwater Monitoring
	GT.4-GT.6	Groundwater Take and Use
Proposed consent conditions for wetland reclamations and vegetation clearance		
	WR.1	General Conditions – Wetland Reclamation
	VC.1	General Conditions – Vegetation Clearance
Proposed consent conditions for stormwater discharges		
	SW.1-SW.2	Stormwater Conditions

32.3 Proposed Resource Consent Conditions

Table 32-4: Proposed Resource Consent Conditions

Except as specified otherwise, the General Conditions shall apply to all resource consents as relevant.

Cond no.	Proposed Condition – NZTA
	General Conditions Applying to All Consents
	General Conditions and Administration
G.1	a) The Project shall be undertaken in general accordance with the plans and information submitted with the application as documented as consent numbers [to insert], subject to such amendments as may be required by the following conditions of consent. The plans and information include: i) Assessment of Environmental Effects report, dated 18 March 2013 ii) Plan sets: [to insert] b) Where there is conflict between the documents lodged and the conditions, the conditions shall prevail.
G.2	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 GWRC

	to have access to relevant parts of the respective properties at all reasonable times for the purpose of carrying out inspections, surveys, investigations, tests, measurements and/or to take samples to enable GWRC to undertake its monitoring functions in relation to the Project.
Pre-construction Administration	
G.3	a) The consent holder shall arrange a pre-construction site meeting between GWRC and any other relevant party nominated by GWRC, including the primary contractor, at least 10 working days prior to Commencement of Work in any Stage (as identified in the staging programme plan submitted under condition [G.13]). 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. c) The consent holder shall ensure that additional site meetings are arranged 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.
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 GWRC officer on request.
Consent Lapse and Expiry	
G.5	Pursuant to section 125(1) of the Act, the consents referenced [to insert – GWRC reference numbers] shall lapse 15 years from the date of commencement of this consent in accordance with section 116 of the Act, unless they have been given effect, surrendered or cancelled at an earlier date.
G.6	Pursuant to section 123(c) of the Act, the consents referenced [to insert – GWRC references for discharge and water permits] shall expire 35 years from the date of commencement in accordance with section 116(5) of the Act.
Review of Consents	
G.7	The Manager 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 seventh anniversaries of the date of commencement of the works authorised by this consent for any of the following purposes: a) To address any adverse effects on the environment, which may arise from the exercise of this consent, and which it is appropriate to address at that time; and b) To review the adequacy of the construction, operational, maintenance, and monitoring requirements for this consent, and incorporate any modifications necessary to address any adverse effects on the environment arising from the exercise of this consent.
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: 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, which may have contributed to the complaint (such as non-Project construction, fires, or unusually dusty conditions generally). b) The consent holder shall respond to any complaint within 10 working days of receiving 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 with a copy of the complaints register every month.
G.9	The complaints process under condition [G.8] shall continue for 6 months following the Project becoming Operational. Any complaints received after this period shall be managed by the consent holder in accordance with its standard complaints procedures.
Incidents	
G.10	a) The consent holder shall follow the relevant incident requirements as specified in this condition. b) The consent holder shall notify the Manager and KCDC within 1 working day after identifying that any contaminants (including sediment) have been released in the undertaking of the Work and enter any Water Body due to any of the following: i) Discharges from non-stabilised areas that are not treated by erosion and sediment control measures required under this consent; ii) Failure of any erosion and sediment control measures; iii) Discharge of a hazardous substances, including cement, to a Water Body; iv) Failure of any temporary stream diversion; v) Unconsented removal, loss, or damage to vegetation or other habitats; vi) Any other incident which either directly or indirectly causes, or is likely to cause, adverse ecological effects in any Water Body that are not authorised by a resource consent held by the consent holder; or vii) Any other incident which either directly or indirectly causes, or is likely to cause, adverse ecological effects in any Water Body that are not authorised by a resource consent held by the consent holder. c) If any of the incidents specified in b) occur, the consent holder shall: 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, weather conditions at the time of the incident, the steps taken to contain any further release, and the steps to remedy any adverse ecological effects on the Water Body.

	d) The notification in c) shall be either by telephone or email, or via an alternative method as agreed with the Manager.
G.11	The consent holder shall, if requested by the Manager in response to a complaint or 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. The consent holder shall submit the revised management plan to the Manager for certification that: a) The reason(s) for requiring the review have been appropriately addressed; and b) Appropriate actions and a programme for implementation are provided for if required.
Staff Training	
G.12	a) 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 any earthworks or earthworks Stage and shall be given by a suitably qualified and experienced person certified by the Manager to deliver practical on-site training. b) Specifically, training may include (as relevant): i) Design details for the erosion and sediment control measures and associated methodologies; ii) 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; iii) 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 iv) Briefing on the requirements for cultural ceremonies to occur before the Commencement of Work. c) 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 Environmental Management Plan (SSEMP) area within the Project. This obligation to provide environmental awareness training shall continue for the duration of the earthworks.
Staging and Programme Conditions	
G.13	The consent holder shall submit to the Manager 2 months prior to the commencement of the anticipated construction Work a detailed programme outlining: a) The proposed staging of the construction Work; b) The anticipated submission dates of the CEMP and management plans as required by conditions [G.18 and G.23] and any other plans; c) The anticipated submission dates of SSEMPs, which will be submitted for certification in accordance with the conditions [G.28] prior to the Commencement of Work at each applicable Stage of construction.
G.14	The consent holder shall provide the Manager with an updated schedule of construction activities and timing of management plans 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 plan programme required by condition [G.13].
Annual Report	

G.15	The consent holder shall provide an annual monitoring report to the Manager by the [to insert day] of [to insert month] each year (or on an alternative date as agreed to by the Manager), an annual monitoring report. 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: a) All monitoring data required in accordance with the conditions of these resource consents and a summarised interpretation of this data; b) Any reasons for non-compliance or difficulties in achieving compliance with the conditions; c) Any work that has been undertaken to improve the environmental performance of the site or that is proposed to be undertaken in the up-coming year; d) Recommendations on alterations to the monitoring required and how and when these will be implemented through changes to the relevant management plans; and e) Any other issues considered important by the consent holder.
Management Plans – General	
G.16	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. b) The management plans provide the overarching principles, methodologies and procedures for managing the effects of construction of the Project to achieve the environmental outcomes and performance standards required by these conditions. c) The management plans apply to the entire Project and, for some matters, are sufficient to address construction management without the need for more specific plans. For other matters, there is a need for Site Specific Environmental Management Plans (SSEMPs) to provide the necessary level of detail to address requirements within each of the construction Stages. d) The management plans provide the basis for which SSEMPs will be prepared. The SSEMPs shall, collectively, set out the detailed design and construction responses to address the specific context and circumstances of all aspects of the Project. Each SSEMP must be consistent with, and be implemented in accordance with, any relevant management plan.
G.17	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 have been incorporated and, where they have not, the reasons why.
G.18	The consent holder shall submit draft copies of all management plans (as required by conditions [G.23, G.31, E.1, and E.10]) to the Manager for comment at least 30 Working Days prior to Commencement of Work.
G.19	a) A Construction Environmental Management Plan (CEMP) will be submitted for information in accordance with condition [G.23] below. b) Management plans that will be appended to the CEMP, and submitted for certification by GWRC, are: i) Erosion and Sediment Control Plan (ESCP); ii) Bulk Earthworks Contaminated Land Management Plan (BECLMP); and iii) Ecological Management Plan (EMP). c) These management plans shall be prepared in general accordance with the draft management plans included with the documents and information provided in support of the application, except as modified by the conditions and information provided during the hearing and approved by the Board of Inquiry. The management plans listed in b) shall be submitted to the Manager for certification at least 20 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.

	d) SSEMPs will be submitted for certification in accordance with condition [G.28]. e) A copy of the certified management plans (including the SSEMPs) will be made publicly accessible on the Project website.
G.20	The management plans are not required to include all details for every Stage of Work at the time the plan is submitted for certification to the Manager. If further details are to be provided for later Stages of construction, the management plan shall specify which Stages require further certification at a later date. Further details shall be submitted to the Manager prior to Work commencing in the relevant construction Stage.
G.21	The consent holder may request amendments to any of the management plans required to be certified by these conditions, including SSEMPs, by submitting the amendments in writing to the Manager for certification at least 5 working days prior to those amendments being intended to be implemented. 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.22	a) In the event of any dispute, disagreement or inaction arising as to any certification, implementation, or monitoring required by the conditions, matters shall be referred in the first instance to the Manager and to the consent holder to determine a process of resolution. b) If a resolution cannot be agreed within: i) 3 months of lodging the particular management plan (including an SSEMP); or ii) 1 month of submitting a request for an amendment to a management plan (including an SSEMP); 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. c) The expert shall be appointed within 10 working days of the consent holder or GWRC giving notice of their intention to seek expert determination. The expert shall, as soon as possible, issue a decision on the matter. d) The decision of the expert is binding and shall be implemented by the consent holder. e) The dispute resolution process above will be applied before any formal enforcement action is taken by GWRC, except in urgent situations.
Construction Environmental Management Plan	
G.23	The consent holder shall submit a CEMP to the Manager for information at least 20 working days prior to Commencement of Work. The CEMP shall be in general accordance with the draft CEMP submitted with the application. The CEMP shall include, as appendices, the management plans required under conditions [G.31, E.1, and E.10], which must be certified prior to Commencement of Work.
G.24	The CEMP (and its appendices) shall include details of: 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.10]); 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; and k) Stakeholder and Communication Management Plan. The CEMP shall also confirm construction methodologies and construction timeframes, including staging.
G.25	The CEMP shall be implemented and maintained throughout the entire construction period, and updated if further design information is provided.
G.26	A copy of the CEMP shall be held at one or more of the construction site offices at all times and be available for inspection by GWRC.
G.27	If the CEMP (excluding any certifiable management plans) is required to be revised as a result of any updated or new design information, the revisions shall be submitted to the Manager for information.
Site Specific Environmental Management Plans	
	Advice Note: *The SSEMPs are not part of the CEMP as they will be lodged in a staged manner throughout the course of the Project. The SSEMPs are required to be certified by GWRC (under these consents) and KCDC (under the Project designations) in respect of their statutory functions.*
G.28	a) The objective of each SSEMP is to integrate design elements with environmental management and monitoring methods, and reflect this in a set of plans for each Stage or location, in order to define how the Project will be practically implemented on site. Not less than 20 working days prior to the commencement of any Stage or location of construction works, the consent holder shall prepare and submit an SSEMP to the Manager for certification that: i) The SSEMP has been prepared with inputs from suitably qualified specialists; ii) The SSEMP has been prepared in accordance with the certified management plans appended to the CEMP; and iii) As a minimum, the SSEMP meets the information requirements set out in condition [G.30] unless alternative arrangements have been agreed in writing with the Manager and KCDC (in respect of their statutory functions). b) Work shall not commence until the consent holder has received the Manager's written certification of the SSEMP. c) The management plans required to be certified under these conditions must have been certified prior to the consent holder submitting the first SSEMP, unless otherwise agreed in writing with the Manager.
G.29	a) The SSEMP 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 appropriately avoid, remedy, or mitigate adverse effects on the environment in accordance with the conditions of this consent. b) The consent holder shall adhere to the requirements of each SSEMP at all times during the relevant construction stage of the Project.
G.30	Each SSEMP shall include, but need not be limited to: a) A detailed design and construction methodology for all works within the area covered by the SSEMP; b) A detailed schedule of construction activities including the expected commencement date and duration of works in each location within the area covered

	by the SSEMP, and demonstrating that the area of disturbance will be kept to the minimum practicable; c) Detailed design specifications of all earthworks within the SSEMP area including disposal sites; d) Detailed design specifications for all erosion and sediment control measures, including supporting calculations (where appropriate, such as contributing catchment area and retention volume of structure); position of inlets/outlets; Stabilisation measures proposed for structures, and any maintenance requirements; e) Detailed design of chemical treatment (if any) for each of the proposed sediment retention devices; f) Identification of the location of all discharge points to watercourses; g) Confirmation that temporary stockpiles of excavated material will be located at least 50 metres away from any flowing watercourse unless there is appropriate treatment of stormwater (which may include discharging to vegetated land); h) In respect of vegetation clearance and rehabilitation activities: i) Identification of valued habitats identified under condition [G.33a)i)] which are to be protected and retained; ii) Management of measures to minimise effects of vegetation clearance; iii) Identification of soil resource to be used for rehabilitation within the SSEMP area; and iv) The plan for implementing any relevant revegetation or restoration included within the EMP or the Landscape Plan (LP) to be lodged under the designation conditions; i) In respect of stream realignment and culverting: i) Measures/methods to maintain fish passage during and following completion of construction works along the stretches of stream affected by the exercise of this consent; ii) Specific consideration of seasonal migration of native fish; iii) Details of culvert inlet/outlet protection structures e.g. pre-cast wing walls or rock rip-rap; iv) Confirmation of appropriate sizing of culverts and allowances for secondary flow paths during high flows; v) Detailed diversion plans and any other measures or details as appropriate to achieve compliance with all conditions of this consent and the objectives of the relevant management plans; vi) Confirmation that placement of excavated material in the wetted channel will be avoided, and the time spent by machinery in the wetted channel, including the number of vehicle crossings, will be minimised; and vii) Confirmation that any excess material from the bed and banks of the stream will be removed immediately on completion of the work; j) A drawing that clearly shows the location of key areas or features that are required to be avoided or otherwise protected during construction, including (but not be limited to) notable areas of bush or vegetation and heritage features; k) The identification of appropriately qualified and experienced staff to manage environmental issues onsite; l) The identification of staff who have clearly defined roles and responsibilities to monitor compliance with the SSEMP; m) Details of a chain of responsibility for managing environmental issues and details of responsible personnel; n) Details of the site access for all Work associated with construction of the Project; o) Measures to be adopted to maintain the site in a tidy condition in terms of disposal/storage of rubbish, storage and unloading of building materials and similar construction activities; p) Location of workers' conveniences (e.g. portaloos); q) Details of the storage of fuels and lubricants (which shall require that storage be bunded or contained in such a manner so as to prevent the discharge of

	contaminants from spillages); r) Details of the proposed maintenance of machinery and plant to minimise the potential for leakage of fuels and lubricants; s) Location of vehicle and construction machinery access and storage during the period of site works; t) Procedures for thoroughly cleaning all machinery of unwanted vegetation (e.g. weeds), seeds or contaminants prior to entering the site and any other methods to avoid the introduction or spread of unwanted weeds or pests; u) Methods for the clear identification and marking of the construction zones including those which extend into watercourses; v) A methodology that prescribes the extent to which machinery can operate in the vicinity of watercourses so as to minimise disruption and damage to the watercourses and associated vegetation; w) Methods to manage public health and safety during the construction works, and notification to the public of temporary access restrictions to the immediate works area during the staged construction; x) Confirmation that no equipment or machinery will be cleaned, or refuelled in any part of any watercourses/streams, except as otherwise specifically provided for in the CEMP or an SSEMP; and y) Procedures for removing all contaminants (e.g. fuel, hydraulic oils, lubricants etc) from the site at the end of the construction period, except for those required for on-going maintenance of the network and operational activities.
Ecological Management Plan	
G.31	The consent holder shall submit the EMP to the Manager for certification at least 20 working days prior to Work commencing. The EMP shall be in general accordance with the draft EMP submitted with the application. The EMP shall be submitted as an appendix to the CEMP.
G.32	a) The purpose of the EMP is to: i) Detail the ecological management programme that will be implemented to appropriately manage effects of the Project on the environment during the construction phase and once the Project is operational; ii) 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; iii) Ensure that mitigation has been successful by establishing post-construction monitoring and response procedures; and iv) Ensure that any long-term effects are appropriately managed through monitoring, adaptive management and implementation of appropriate responses. b) The EMP shall be prepared by a suitably qualified ecologist and finalised in consultation with Nga Hapū o Ōtaki. Work shall not commence until the consent holder has received the Manager's written certification of the EMP.
G.33	The EMP shall include, but not be limited to, the following: a) Information on how the following outcomes will be achieved: i) Minimise loss of valued vegetation and habitats; ii) Minimise construction effects on freshwater bodies; iii) Minimise effects on identified wetlands resulting from hydrological changes to water tables; and iv) Minimise effects on fish and fish habitat during stream work;

	b) Details of habitat offset mitigation proposed; c) A Fish Rescue and Relocation Plan; d) Details of the monitoring to be undertaken pre-construction, during construction, and post-construction as required by condition [G.38] below; e) Details of the remedial/response actions proposed; f) A Revegetation and Mitigation Strategy; g) The salvage of elements of any valued habitat of indigenous flora and fauna (including felled logs) identified in [a)i)] that has been lost as a result of the Project, where practicable, including provision for transfer of elements of the affected habitat to ecological mitigation sites; and h) Details of each new waterway diversion channel. If full details are not available at the time the EMP is submitted, full details shall be provided in the relevant SSEMPs.
G.34	a) The EMP shall include a Revegetation and Mitigation Strategy (which shall be included as part of the relevant SSEMP (as required by condition [G.28])). The Revegetation and Mitigation Strategy shall cover all revegetation, other proposed mitigation, maintenance and monitoring requirements as set out in the EMP for the following areas: i) the exposed edges of Hautere Bush F, Cottle's Bush and bush to south of Te Hapua Road; ii) the restored remnant of the Ōtaki Railway Wetland; iii) the two new wetland areas – the Kennedy Wetland and the wetland at Mary Crest; iv) the area of bush identified for protection and enhancement if this offset option is adopted; v) the area identified for bush habitat creation at Mary Crest if this option is adopted; and vi) riparian planting along the Mangaone, Settlement Heights, Jewell and Mary Crest streams, b) All revegetation mitigation as set out in the EMP (including fencing and pest/weed control) shall be subject to a minimum 3-year maintenance period (except for the area of bush created at Mary Crest (if that option is chosen) which shall be maintained for a period of 5 years) which shall commence from the time planting is undertaken in each area. c) At the completion of the maintenance period for each revegetation area, the consent holder shall engage a suitably qualified ecologist to carry out a full review of the success of the revegetation in that area. The results of the review shall be provided to the Manager for certification: i) that the revegetation has met the requirements of the EMP; and/or ii) to identify any remedial actions that need to be carried out. d) Where any remedial actions are required, the consent holder shall provide a programme and description of remedial actions to the Manager for certification. These actions shall be carried out as soon as practicable having regard to weather and appropriate planting seasons.
G.35	Areas to be specifically identified within the EMP include: a) Any area to be subject to a QEII covenant, including reasons why and any specific measures required to protect and enhance that area; and b) Specific techniques to manage effects on peripatus in the area of bush on Steven's property.
G.36	The EMP shall be consistent with the Landscape Plan (LP) that is required to be submitted to KCDC under the designation conditions.
G.37	At least 10 working days before submitting the EMP to GWRC for certification, the consent holder shall submit a copy of the draft EMP to KCDC for comment. Any comments received shall be supplied to the Manager when the EMP is submitted, along with a clear indication of any comments that have not been incorporated and an explanation of the reasons why.

Ecological Monitoring	
G.38	Monitoring shall be carried out in accordance with the EMP as required by condition [G.33d)] in order to: a) Collect baseline information for 6 months prior to Commencement of Work on freshwater turbidity to enable management triggers to be developed; b) Monitor freshwater ecology during construction Work to identify changes in condition arising from the Project; c) Monitor vegetation and freshwater ecology following completion of construction of the Project to confirm mitigation requirements outlined in condition [G.46] are successfully achieved; and d) Undertake monitoring of fish passage as required by condition [WS.9].
G.39	The consent holder shall undertake pre-construction monitoring of water turbidity for 6 months at the Ōtaki River and Waitohu, Mangapouri and Mangaone Streams. This monitoring shall include the following: a) Telemetered turbidity sensors and loggers shall be installed, operated and maintained upstream and downstream of the proposed Construction Works; b) The locations of the monitoring sites shall be identified in the EMP. The locations of these sites shall be chosen to avoid other potential sources of sediment interfering with the results of monitoring; and c) The purpose of the continuous turbidity monitoring is to monitor turbidity levels at the upstream and downstream monitoring locations on a continuous basis for a duration of at least 6 months prior to the Commencement of Work to establish correlations between turbidity levels at the upstream and downstream monitoring sites.
G.40	a) Prior to the commencement of any stream diversion work in the waterways affected by the Project, surveys of brown mudfish within those areas directly affected by the Project will be carried out by a suitably qualified ecologist (who has prior experience with mudfish surveys): i) These surveys will include (subject to the length of affected waterway being long enough to contain the stated number of traps), 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. ii) Where site conditions preclude carrying out the method detailed above, suitable alternatives will be discussed with the Manager. iii) Mudfish that are located in the surveys shall be transferred to safe locations in the same waterway prior to commencement of work following the procedures set out in the Fish Rescue and Relocation Plan. iv) Results of the mudfish survey will be provided to the Manager within 10 working days following completion of the data collection and will inform the fish transfer requirements (as set out in the Fish Rescue Relocation Plan) for the diversion. v) 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. b) Results of mudfish surveys will be included in the EMP prior to the EMP being supplied to the Manager for certification.
G.41	The consent holder shall undertake the following monitoring during construction (in accordance with the methods, locations, frequency, reporting and all operation and maintenance procedures as outlined in the EMP): a) Turbidity monitoring in the Ōtaki River and Waitohu, Mangapouri and Mangaone Streams at the locations in condition [G.39] and at one of either Jewell, Kumutoto or Settlement Heights and at one of either Te Manuao or Cavallo waterways (during periods when flowing water is present). This monitoring shall be as set out in the EMP and include the following:

	i) The chosen waterway for additional monitoring (either Jewell, Kumutoto or Settlement Heights) will be identified in the EMP; ii) Continuous telemetered turbidity loggers shall be installed, operated and maintained at the sites used for pre-construction monitoring on the Ōtaki River and Waitohu, Mangapouri and Mangaone Streams, and at the chosen sites at either the Jewell, Kumutoto or Settlement Heights and either Te Manuao or Cavallo waterways (during periods when flowing water is present), upstream and downstream of the proposed Construction Works; and iii) The purpose of the continuous telemetered turbidity monitoring is to monitor discharges on a continuous basis (or for the intermittent waterway during periods when flowing water is present) until the relevant earthwork areas discharging to those waterways are stabilised; and b) Monitoring of the effects of the construction works on waterways, until all construction works affecting that waterway have been completed, by measuring fine sediment deposits, oil and grease, aquatic invertebrates and fish: i) As set out in the EMP; and ii) In the same 5 waterways as identified for turbidity construction monitoring. *Advice Note: The inclusion of turbidity monitoring at either Te Manuao or Cavallo waterways is not for ecological reasons but rather due to the sediment levels predicted in those catchments.*
G.42	The construction turbidity monitoring shall have a trigger level that is a 50% or greater increase in turbidity (as nephelometric turbidity units (NTU)) between upstream and downstream monitoring sites, when the downstream turbidity exceeds 5 NTU. During construction, until the relevant earthwork areas discharging to the monitored waterways are stabilised, should the turbidity monitoring trigger be exceeded the following responses will be implemented by the consent holder: a) Within 24 hours of the 50% 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 monitored waterway; b) Remedy any causes on site that may have contributed to the 50% threshold breach as soon as practicable, and record what remedial measures were undertaken; c) Notify the Manager by email within 1 working day of the 50% threshold breach, including providing details of the percentage change in turbidity and any remedial measures taken; d) If the NTU threshold remains generally elevated above 50% for more than 48hrs, then macro-invertebrate sampling (all laboratory analysis of these samples shall include a full macro-invertebrate count) 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 (known discharge points shall be specified in the EMP); e) 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: i) The results of the macro-invertebrate sampling; ii) The causes of the discharge, the response to remedy the cause and measures proposed to avoid a recurrence of this cause; and iii) An assessment undertaken by a suitably qualified and experienced aquatic ecologist which details whether the following thresholds have been exceeded: a. 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

	b. A decline of greater than 20% in sensitive invertebrate taxa (in this case taxa with a QMCI score of ≥ 5) compared to the upstream monitoring site or baseline monitoring scores; and f) Mitigation works will be undertaken, which may include raking or other sediment clearance procedure. As part of the report required above 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.
G.43	The consent holder shall undertake the following monitoring post-construction (in accordance with the methods, locations, frequency, reporting and all operation and maintenance procedures as outlined in the EMP): a) Monitoring the following areas of native bush and wetlands: i) Planted exposed edges of Hautere Bush F, Cottle's Bush and bush to south of Te Hapua Road; ii) The restored remnant of the Ōtaki Railway Wetland; iii) The two new wetland areas – the Kennedy Wetland and the wetland at Mary Crest; iv) The area of bush identified for protection and enhancement if this offset option is adopted; and v) The area identified for bush habitat creation at Mary Crest if this option is adopted; b) The monitoring in a) above shall occur for 3 years, except for the area of bush created at Mary Crest (if that option is chosen) which shall be monitored for a period of 5 years; and c) Aquatic ecology monitoring shall include: i) Monitoring, at the same 5 waterways and sites used for construction monitoring, for: a. Fine sediment, aquatic macroinvertebrates and fish for 2 years; b. Inspection of fish passage as set out in condition [WS.4]; ii) Monitoring of aquatic invertebrates in the newly established Kennedy and Mary Crest wetlands for 3 years; and iii) Riparian buffer monitoring in the areas proposed for offset waterway mitigation for a period of 3 years.
G.44	The consent holder shall ensure that: a) All ecological monitoring required under the EMP shall be undertaken by suitably qualified and experienced ecologists. b) The results of all monitoring carried out pursuant to the EMP shall be: i) Available for inspection during normal office hours where such data is available; ii) Submitted to the Manager at quarterly intervals; and iii) Summarised and submitted as part of the annual report required under condition [G.15].
G.45	Except for exceedence of the turbidity trigger level set out in condition [G.42] in the event of an exceedence of any limit set for monitoring in the EMP, or any management trigger level set in the EMP, during or post-construction, the consent holder shall: a) Notify the Manager of the exceedance within 1 working day of the exceedance being identified; b) Investigate a plausible cause-effect association with the Project. If the adaptive management trigger level exceedance is not assessed (by a suitably qualified and experienced ecologist) to be attributable either partially or fully to the Project, the consent holder shall not be held liable for any remediation or mitigation measures;

	c) Should the exceedance be linked either partially or fully to the Project, the following steps shall be undertaken by the consent holder: i) Notify the Manager of the causes of the exceedance within 5 working days of identifying the exceedance; ii) Within a timeframe approved by the Manager, identify the on-site practice that is generating the effect; iii) Implement measures necessary to prevent future exceedances and to alter the operational measure in consultation with the Manager; iv) Remedy or mitigate the effects of the exceedance which have been approved by the Manager; v) Obtain certification of any necessary amendments to management plans or other documents and obtaining any necessary resource consents; vi) 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 vii) 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; and d) 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.
Ecological Mitigation	
G.46	a) The consent holder shall ensure that land is dedicated to the restoration of vegetation, wetlands, and streams for the purposes of ecological mitigation as follows; i) A minimum of 1.5 ha of planted indigenous terrestrial habitat, or protection of a minimum of 1.0 ha of established indigenous terrestrial habitat, as mitigation for the loss of 0.5 ha of indigenous vegetation habitat; plus ii) A minimum of 1.1 ha of landscaped and planted indigenous wetland habitat, as mitigation for the loss of 0.5 ha of indigenous wetland; and iii) A minimum of 2,601 linear metres of stream mitigation including naturalisation of channels. b) Landscape and visual mitigation shall be comprised of approximately 17,700 m^2, comprising landscape treatments including grass, specimen trees, and visual screening at the Pare-o-Matangi reserve. c) These mitigation areas shall closely correspond to the maps entitled Plan Set [to insert]. “Landscape and Visual”; and Plan Set [to insert] “Proposed Ecological Mitigation Sites”, unless otherwise agreed with the Manager.
Revegetation Monitoring	
G.47	The ecological mitigation required in condition [G.46] for loss or modification of any wetland or terrestrial habitat shall comprise, as far as practicable, mitigation that reflects the indigenous habitat types and wetland classes lost, and the ecological functioning of those areas, and that is based on development of similar representative vegetation communities.
Proposed consent conditions for works in watercourses	
General Conditions	
WS.1	The consent holder shall use natural rock and soil material, where practicable, to reclaim the stream bed. All fill material shall be placed and compacted so as

	to minimise any erosion and/or instability.
WS.2	The consent holder shall seek to ensure that all construction works authorised by this consent are undertaken in the dry bed of the stream as far as practicable, and are completed before the flow of the stream is diverted into the stream bed.
WS.3	The consent holder shall design and construct all permanent diversions in a manner that seeks to maintain stream flows (both volume and velocity) in a similar state to its natural state at the time of Commencement of Work.
WS.4	Culverts and bridges on various watercourses (as specified in technical report 12) shall be designed to facilitate fish passage, in accordance with the GWRC publication Fish Friendly Culverts and Rock Ramps in Small Streams (or equivalent industry standard methods). Specific requirements to facilitate fish passage in respect of the Mangapouri and Mangaone Streams are as follows: a) The design of the Project crossings of the Mangapouri Stream shall be constructed from over-depth box culvert sections in order to incorporate a minimum 0.5m thick layer of cobbles along the invert with the cobble layer either cemented in place or sized large enough to be immobile under design flood conditions. b) The design of the Project (eastern) crossing of the Mangaone Stream shall be constructed from over-depth box culvert sections in order to incorporate a minimum 0.5m thick layer of existing gravel bed material along the invert.
WS.5	Within 20 working days of the completion of each permanent stream diversion, the consent holder shall provide evidence in writing to the Manager that an appropriately qualified engineer and an appropriately qualified ecologist have inspected the completed diversion works, and are satisfied that they have been constructed according to the SSEMP stream diversion plan(s) that was certified by the Manager.
WS.6	The design of the waterway crossings shall also meet the following performance criteria: a) Waterway crossings shall be designed in accordance with the NZTA Bridge Manual, with the following exceptions: i) Freeboard for the Ōtaki River Bridges above the modelled level for the 1% AEP flood, plus climate change to 2090 (mid range) estimated, shall be at least 1.7m. ii) Freeboard for the Waitohu Stream Bridge above the modelled level for the 1% AEP flood, plus climate change to 2090 (mid range) estimated, shall be at least 1.2m. iii) The design of the Expressway and relocated NIMT Railway Crossings of the Mangapouri Stream shall be designed to operate under free surface flow conditions for the 1% AEP flood plus climate change to 2090 (mid range) estimated with a freeboard of at least 0.3m. iv) To avoid doubt, freeboard for the Project (western) crossing of the Mangaone Stream above the modelled level for the 2% AEP flood, plus climate change to 2090 (mid range) estimated, shall be at least 0.6m. b) The Lucinsky Overflow Culvert on the local link road between Gear Road and Te Horo Beach Road shall be designed to pass between 80% and 120% of the total flow volume diverted by the existing Lucinsky Overflow in the 1% AEP flood, plus climate change to 2090 (mid range) estimated.
WS.7	For any Work that will occur within the wetted channel of any stream outside of the period from 1st March to 31st July, the consent holder shall, in consultation with GWRC, develop a specific programme and methodology to manage migration of native fish. The programme and methodology shall be developed with reference to the Freshwater Fish Spawning and Migration Calendar (Hamer 2007) and the programme shall be included as part of the SSEMP to be certified by GWRC prior to the relevant work occurring.

WS.8	The maximum extent of reclamation or diversion of all Water Bodies for the Project shall be 2,834 linear metres.
WS.9	a) Unless otherwise approved by the Manager, the consent holder shall engage an appropriately qualified aquatic ecologist to undertake the following: i) A visual inspection of all structures and works where fish passage is required, one year after instalment; and ii) A visual inspection of all structures and works where fish passage is required, four years after instalment. b) 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. c) A visual inspection shall be carried out (as above) in order to determine the following: 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. d) The consent holder shall implement the measures/works required to address any actual or potential effects on fish passage within three months of submitting the report to the Manager (where practicable).
Conditions During Construction	
WS.10	The works shall be regularly inspected and maintained by the consent holder so that: a) The waterway within the culverts remains substantively clear of debris; b) Any erosion of the stream banks or bed that is attributable to, and is within 20m up or downstream of, the stream works authorised by this consent is remedied as soon as practicable by the consent holder; and c) Fish passage through the structure is not impeded. ***Advice Note**: Maintenance does not include any works outside the scope of the application. Any additional works (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.*
WS.11	For construction works in the bed of the Ōtaki River, the SSEMP(s) submitted for certification under condition [G.28] shall include details of the following matters: a) Construction methods and sequencing, including how weather forecast information will be factored into timing of Works; b) A protocol for flood warnings and procedures for the safe and timely evacuation of plant and equipment from the riverbed in the event of a flood warning being received; c) Measures to ensure that all plant and equipment (except temporary staging equipment and formwork for pier construction) used for in-stream works are capable of being evacuated safely and quickly from the riverbed in the event of a flood warning being received;

	d) Measures to ensure that, where practicable, plant and equipment used for in stream works are operated away from and above flowing water; and e) Measures to ensure that all plant and equipment used for in-stream works incorporate features for preventing spills of fuel, oil, and other contaminants.
Temporary Culverts	
WS.12	All temporary culverts shall be designed to meet the following criteria unless otherwise agreed with the Manager: a) To pass a 2-year Annual Recurrence Interval (ARI) flood event without heading up (as assessed at the time of commencement of construction Work); b) Culverts to be installed 300mm below stream bed level in order to provide a continuous wetted perimeter to facilitate the passage of native fish species; and c) Minimum size of any temporary culvert shall be not less than 600mm in diameter.
WS.13	Unless otherwise agreed in writing with the Manager, upon removal of any temporary crossing, the consent holder shall reinstate the stream bed and margins to, as far as practicable, a natural state to closely match the upstream and downstream riparian and in-stream habitats and visual appearance.
WS.14	Unless otherwise agreed in writing with the Manager, all temporary stream crossings shall be removed within 2 years of their installation.
Conditions Applying to consents for earthworks and erosion and sediment control	
Erosion and Sediment Control Plan	
E.1	a) The consent holder shall submit an Erosion and Sediment Control Plan (ESCP) to the Manager for certification at least 20 working days prior to Work commencing in accordance with condition [G.18]. b) The purpose of the ESCP is to describe the methods and practices to be implemented to minimise the effects of sediment generation and yield on the aquatic receiving environments associated with the Project. In addition, the ESCP shall: i) Outline the principles to which the ESCP shall adhere; ii) Be developed in accordance with the objectives outlined in the NZTA's Environmental Plan; iii) Ensure construction and maintenance activities avoid, remedy or mitigate effects of soil erosion, sediment run-off and sediment deposition; iv) 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 the northern dunescape, Ōtaki River, and the Railway Wetland area; and v) Use bio-engineering and low-impact design practices where practicable. c) Work shall not commence until the consent holder has received the Manager's written certification for the ESCP.
E.2	The consent holder shall include site specific construction erosion and sediment control measures within the SSEMPs, for all land disturbing activities including in-stream work. The purpose of the erosion and sediment control detail in the SSEMP is to allow the consent holder and GWRC to further develop methodologies to be implemented throughout the duration of the Project to address the specific characteristics of various sites along the route. In addition, the SSEMPs shall: a) Be consistent with the CEMP (as relevant) and the ESCP. b) Ensure that any changes to the SSEMP shall be certified by the Manager prior to the amendment being implemented in accordance with condition

	[G.21]. ***Advice Note**: These SSEMPs will be developed within the context of the principles and practices of the ESCP and will allow for innovation, flexibility and practicality of approach to erosion and sediment control. The SSEMPs will also enable ongoing adaption (subject to certification by the Manager) to changing conditions throughout the Project lifetime.*
Erosion and Sediment Control Monitoring	
E.3	The consent holder shall carry out monitoring in accordance with the ESCP and the SSEMP, and which will seek to ensure that: a) The proposed erosion and sediment control measures have been installed in accordance with the ESCP; b) Methodologies are carried out properly; c) Erosion and sediment control measures are functioning in accordance with the ESCP throughout the duration of the 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.4	a) In the event of either a failure of erosion and sediment control devices or where a storm event exceeds the design volume of the device, and where the discharge is to a perennial or intermittent fresh Water Body, a suitably qualified ecologist shall be notified within 24 hours, who shall then inspect the relevant area to determine whether significant adverse effects on the affected area's ecological values have occurred. b) The consent holder shall prepare a report on the effects of the failure and any recommended measures that may be required to remedy the effects. The report shall be submitted to the Manager for approval within 5 working days of the event. c) The remedial measures shall be implemented within 10 working days of the approval of the Manager.
E.5	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.
Erosion and Sediment Control	
E.6	Prior to any earthwork commencing within each area of Work (other than those required to establish erosion and sediment control measures), 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, sediment retention ponds, rock filters and chemical treatment systems) for that area have been constructed in accordance with the relevant SSEMP. The certificate is to be provided to the Manager 2 working days prior to the commencement of construction in that area of Work.
E.7	A copy of the "as-built(s)" and the certified SSEMPs shall be kept on site, and all erosion and sediment control measures (including staging boundaries and particularly the extent of exposed areas) shall be updated 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 earthworks 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 SSEMPs.

E.8	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 the CEMP or a SSEMP, and the Manager has been informed not less than 2 working days prior.
Chemical Treatment (Flocculation)	
E.9	a) Should it be determined that chemical treatment is or may be required (in accordance with condition [E.6], the detail of this shall be included in the relevant SSEMP. b) Each SSEMP where chemical treatment is proposed shall include, but need not be limited to: 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.
Bulk Earthworks Contaminated Land Management Plan	
E.10	***Advice Note**: if necessary, depending on the results of detailed site investigations (once access to sites is readily available), the consent holder shall apply for additional regional consents and/or for district consents under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health.* a) The consent holder shall submit the BECLMP to the Manager for certification at least 20 working days prior to Work commencing. The BECLMP shall be in general accordance with the draft BECLMP submitted with the application. The BECLMP shall be submitted as an appendix to the CEMP. b) The purpose of the BECLMP is to provide a framework and general procedures for the management of contaminated soil and other contaminated materials/structures potentially present in ground that may be disturbed or require removal to complete the Project. c) The BECLMP shall include: i) A summary of previous contaminated land assessments undertaken within the Project footprint; ii) Indicative management procedures for handling and stockpiling of contaminated soils; iii) General procedures for site worker health and safety related to contaminated soil; iv) Indicative procedures should unexpected contaminated soil be encountered during the construction works; and v) A basis for assessing whether contaminated soils may remain or should be removed from the site.
Proposed consent conditions for Borehole Construction	

General Conditions	
BC.1	a) The location, design, implementation and operation of the monitoring bore shall be in general accordance with the resource consent application. b) 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. c) 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 log form as completed by the driller who constructed the bore) and details of the well installation. d) The bore shall be constructed and maintained in accordance with the New Zealand Environmental Standard for Drilling of Soil and Rock (NZS 4411:2011). e) In the event of the bore being decommissioned or abandoned, the bore will be backfilled in accordance with NZS 4411:2011.
BC.2	A stepped rate pumping test shall be carried out in the 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.
BC.3	Within 3 months of the completion of the pumping test, the consent holder shall submit a report to the Manager, which contains but need not be limited to, the following information: a) Presentation of and analysis of the collected pumping test data; b) Use results to simulate drawdown at any potentially affected neighbouring boreholes; c) An assessment of the potential effect on nearby streams / wetlands; and d) An assessment on the risk of saline intrusion.
BC.4	If so requested by the Manager, the consent holder shall make its bore available for monitoring of water levels and water quality.
Conditions applying to consents for taking and using groundwater	
Groundwater Monitoring	
GT.1	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: 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.
GT.2	The consent holder shall include measures to manage the groundwater level as part of any relevant SSEMP. The purpose of the measures to manage groundwater level in the SSEMP is to set out the best practicable options for groundwater monitoring and management and procedures to minimise changes in groundwater levels. The groundwater level detail in the SSEMP shall include information regarding: a) the schedule of groundwater monitoring bores identifying piezometer depth, screen length and geological unit; b) the locations of groundwater monitoring bores shown on plans; c) the locations of monitoring stations;

	d) a summary of understanding of the hydrological regime in each high-value wetland at the time of preparation of the SSEMP; e) monitoring frequency; f) monitoring methods; g) reporting requirements; h) alert and action programmes; i) response management; and j) review procedures.
GT.3	At 6 monthly intervals during construction, and for 12 months following completion of construction within each Stage, the consent holder shall review and report the results of monitoring as compared with expected 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: a) The groundwater monitoring that has been undertaken since the Commencement of Work; 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.
Groundwater take and use	
GT.4	Groundwater take and use a) The location, design, implementation and operation of the groundwater takes shall be in general accordance with the consent application. b) The rate at which water is taken from the water supply bores shall not exceed: i) 110,000 m^3/year at a maximum of 300 m^3/day (cumulatively, across all bores); and ii) a maximum pumping rate of 35 litres/sec.
GT.5	The consent holder shall undertake the following: a) Install and maintain a water meter on the 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 b) 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.
GT.6	The consent holder shall ensure that existing groundwater users (consented users) or those identified in condition [GT.1b)] who cannot use their own water supply as a result of the Project receive a replacement water supply. The consent holder shall 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.

Proposed consent conditions for wetland reclamations and vegetation clearance	
Conditions - Wetland Reclamation	
WR.1	The effects will be managed under the relevant General Conditions applicable to the proposed wetland reclamation.
Conditions - Vegetation Clearance	
VC.1	The effects will be managed under the relevant General Conditions applicable to the proposed clearance of vegetation.
Proposed consent conditions for stormwater discharge	
Stormwater Conditions	
SW.1	Operational stormwater discharge from the Expressway shall meet the following performance criteria: a) Expressway stormwater shall be treated before discharge to the receiving environment in accordance with the NZTA publication Stormwater Treatment Standard for State Highway Infrastructure 2010, or equivalent industry standard methods. b) The peak rate of stormwater discharge from the Expressway at any point shall not exceed 100% (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, except where stormwater from the Project discharges into the Ōtaki River or to ground, or where it has been shown through modelling set out in technical reports 9 and 10, or by similar modelling to the satisfaction of the Manager, that attenuation is not needed.
SW.2	The effects of the Project embankment, waterway crossings and stormwater discharge on flood risk shall be addressed in the following manner: a) Flood risk shall be assessed against the 1% AEP flood, with climate change to 2090 (mid-range) estimated. b) The effects of any loss of flood plain storage due to fill embankments shall be offset by: i) provision of equivalent alternative flood storage volume; ii) provision of additional flood containment; iii) attenuating runoff; iv) removing downstream constraints; or v) a combination of the above. c) Culvert and bridge waterway crossings shall be designed so that any increase in flood risk in the 1% AEP flood is contained within: i) the designation; ii) the landform of an existing watercourse; or iii) defined flood ponding areas (as described in d)). d) For the purposes of c), "defined flood ponding areas" means the inundation areas shown on Sheets 1 to 8 of Drawing 5/2664/1/6504, annexed to

	technical report 10. e) Notwithstanding a) to d) above, in respect of the Ōtaki River Floodplain, the residual effects of an over-design flood overtopping or causing breaching of the Chrystall's Bend extended stopbank (0.2% AEP flood with climate change to 2090 (mid range) estimated) shall be assessed for the purpose of of detailed design of the vertical alignment of the Expressway embankment across the floodplain, the Otaki Overflow Culvert and the secondary containment bund shown on Sheet 2 of Drawing 5/2864/1/8504. f) The combined effects of filling, waterway crossings and Project stormwater discharge shall be assessed through the use of hydrological and hydraulic modelling. g) The final 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 c). The results of the peer review shall be provided to the Manager.