NORTHLAND CORRIDOR – BRYNDERWYN HILLS SECTION TO THE ALTERNATIVE TO THE BRYNDERWYN HILLS – PROPOSED REGIONAL RESOURCE CONSENT CONDITIONS

Draft as at 13 July 2026

These resource consents authorise the Consent Holder to undertake the following activities for the purposes of the construction, operation, maintenance and improvement of the Brynderwyn Hills section of the Alternative to the Brynderwyn Hills project.

The resource consents granted authorise the following activities:

(a) Land disturbing activities (including earthworks, vegetation clearance, vegetation planting, roading, tracking, stockpiling and disposal of fill) under section 9 of the Resource Management Act 1991 (RMA) and associated discharges of contaminants to land and into water and air under section 15 of the RMA (RC01).

(b) Works in, on, under or over Watercourses under section 13 of the RMA (RC02). including:

(i) The use, placement and erection of structures (including bridges, culverts, discharge outlets and associated erosion control structures);

(ii) Reclamation of the beds of Watercourses; and

(iii) Any associated bed disturbance.

(c) The taking, damming and diversion of water under section 14 of the RMA (RC03).

(d) The discharge of stormwater under section 15 of the RMA during operation of the Project (RC04).

(e) Activities under the Resource Management (National Environmental Standards for Freshwater Management) Regulations 2020 (NES-FW) (RC01-RC05).

These activities may occur in, on or over land designated by the New Zealand Transport Agency for the construction, operation and maintenance of a State Highway near the intersection of SH1 and Baldrock Road, and through the Brynderwyn Hills to Waipū.

Review Comment:

Retain as proposed. The section appropriately identifies the activities authorised by the consents and limits the scope of the approvals to the Brynderwyn Hills to Waipū Project area only.

Definitions

Term	Definition	Comment
Consents	Consents RC01 – RC05 (unless otherwise specified).	Retain
Consent Holder	New Zealand Transport Agency Waka Kotahi.	Retain
Council	Northland Regional Council.	Retain
Designation(s)	The designation(s) for the Project included in the Kaipara District Plan and the Whangārei District Plan.	Retain
ESC	Erosion and Sediment Control.	Retain

Term	Definition	Comment
First Gas	First Gas Limited.	Retain
Gas Pipeline	First Gas Maungaturoto Gas Mainline.	Retain
GD05	Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region; June 2016; Guideline document 2016/005 (incorporating Amendment 3).	Retain
Hapū	Representatives authorised by Te Uri o Hau, Patuharakeke Te Iwi Trust Board and ~~Te Parawhau ki Tai~~	Amend as follows: Delete Te Parawhau ki Tai - Hapū means Te Parawhau Hapū, represented for the purposes of these conditions by Te Pouwhenua o Tiakiriri Kūkupa Trust and its authorised Te Parawhau Resource Management Unit.
Highly Sensitive Receptors	Locations where there are activities that are sensitive to dust effects, such as dwellings, schools, marae, hospitals, child-care and aged-care facilities.	Retain
Major Cut	The excavation or installation of a structure greater than 2m below the water table.	Retain
Management Plan(s)	The management plans and reports required by Conditions [RCX], [RCX].	Retain Clarify the RC conditions applicable to these.
National Grid Transmission Assets	Henderson to Marsden A (220kV high voltage transmission line) (HEN-MDN-A).	Retain
Existing Wetland(s)	Wetlands identified in **Appendix [A].**	Amend as follows: Existing Wetland(s) means the wetlands identified in Appendix A, including but not limited to any wetlands identified through the Te Parawhau Cultural Impact Assessment, independent ecological peer reviews, field verification, or subsequent wetland delineation undertaken for the Project.
NZTA STWS	NZ Transport Agency *Stormwater Treatment for Road Infrastructure* (May 2010).	Retain

Project	The construction, operation, maintenance and improvement of the Brynderywn Hills section of the Alternative to the Brynderwyn Hills project.	Retain
Project Works	Activities undertaken to construct the Project.	Retain
RMA	Resource Management Act 1991.	Retain
Site	The area defined by the boundary of the Designation(s).	Retain
Suitably Qualified Person	A person (or persons) who can provide sufficient evidence to demonstrate their suitability and competence in the relevant field of expertise.	Amend as follows: Suitably Qualified Person means a person (or persons) who can provide sufficient evidence to demonstrate their suitability and competence in the relevant field of expertise, including experts nominated by Te Parawhau Hapū where relevant to these conditions.
Transpower	Transpower New Zealand Limited.	Retain
TSS	Total Suspended Solids.	Retain

Term	Definition	Comment:
Trigger Event	An event in which there is (or is forecast to be) rainfall intensity of 25mm in any 24 hour period or 15mm in any 1 hour period.	Retain
Watercourse(s)	Perennial and intermittent rivers and streams but not overland flow paths, conveyance channels or Wetlands.	Amendment as follows: Watercourse(s) means perennial, intermittent and ephemeral rivers and streams but does not include overland flow paths, conveyance channels or Wetlands.
Wetland(s)	Includes permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions (excluding constructed wetlands).	Retain
Wildlife Approval	The approval issued by the Expert Panel under the Wildlife Act 1953 for the Project (Reference WA#).	Retain
Working Day(s)	Has the same meaning as s2 of the RMA.	Retain

GENERAL

Consent lapse and expiry

These conditions apply to all Consents, unless otherwise specified.

RC1 The Consents shall lapse 20 years from the date of their commencement unless they have been given effect, surrendered or been cancelled at an earlier date.

RC2 Consent RC01 shall expire 20 years from the date of its commencement.

RC3 Consents RC02-RC05 shall expire 35 years from the date of their commencement.

RC4 Following Completion of Construction, Conditions [RCX]-[RCX] cease to have effect and do not apply to any subsequent work associated with the ongoing operation and maintenance of the Project.

Review Comment:

Amend RC4 condition. The condition is incomplete and does not identify which conditions are intended to cease following completion of construction. Te Parawhau reserves its position pending confirmation of the conditions proposed to cease, particularly where ongoing ecological, freshwater, wetland, restoration or cultural outcomes may be affected. Applicable RC conditions are still to be completed. Details of these conditions should be provided to Te Parawhau.

RC5 RCX Management Plan Integration

All Management Plans required by these conditions shall identify any relevant interfaces with other certified Management Plans and demonstrate how the objectives, methods, timing, monitoring and implementation requirements of those plans have been integrated.

Where relevant, Management Plans shall address the management of habitat, ecological connectivity, breeding seasons, migration periods, species protection requirements, restoration outcomes and freshwater values to ensure adverse effects on taonga species and their habitats are avoided, remedied or mitigated.

MANAGEMENT PLANS

RC5 The Management Plans listed in **Table 1** shall be prepared in accordance with the relevant conditions of the Consents.

Review Comment:

Te Parawhau Hapū concerns are addressed under RC6-RC9 and the individual management plan requirements. Te Parawhau must be provided a copy of any management plan a minimum 40 working day prior to Establishment Works proceeding for review and comment.

Table 1

Management Plan	**Certification requirements**	**When to submit to Council for certification**	**Implementation period**
Dust Management Plan	RC6(d), RC[17]-RC[18]	~~20~~ 40 Working Days before the start of Establishment Works and Project Works	For the duration of Establishment Works and Project Works.

Management Plan	Certification requirements	When to submit to Council for certification	Implementation period
Erosion and Sediment Control Plan	RC6(d) and RC[20]- RC[22]	40 Working Days before the start of Establishment Works and Project Works.	For the duration of Establishment Works and Project Works or the duration of erosion and sediment effects cease whichever is the greater.
Construction Erosion and Sediment Control Plans (CESCP)	RC[27]	At least ~~10~~ 40 Working Days before starting land disturbing activities in a specific area of the Site. See comment above, Te Parawhau review.	For the duration of Project Works in the area of the Site subject to the CESCP
Stormwater Detailed Design Report	RC6(d), RC[50] and [51]	40 Working Days before construction of the permanent stormwater management system.	For the duration of construction of the permanent stormwater management system.
Wetland Management Plan (WMP)	RC6(d), RC[40]-[47]	40 Working Days before the start of Establishment Works and Project Works.	~~Until 2 months following Completion of Construction.~~ Amendment as follows: Until all wetland establishment, monitoring, maintenance and performance criteria required by the consent conditions have been achieved to the satisfaction of Council and Te Parawhau Hapū.
Fish Management Plan	RC10, RC11, RC13, RC32-RC38 and any conditions relating to fish salvage, fish passage, ecological connectivity and indigenous freshwater species.	At least 40 Working Days prior to Establishment Works and Project Works.	For the duration of Establishment Works and Project Works and until all fish salvage, fish passage,

	Demonstrates Complex Freshwater Fisheries approval under section 42(4)(j) and Schedule 9 of the Fast-track Approvals Act 2024.		monitoring, reporting and adaptive management requirements have been completed.
Freshwater Management Plan	RC32-RC49 and any conditions relating to freshwater ecology, wetlands, stream realignments, groundwater effects and freshwater offsetting.	At least 40 Working Days prior to Establishment Works and Project Works.	Until all freshwater restoration, monitoring, maintenance, adaptive management and performance criteria have been achieved.
Herpetofauna Management Plan	RC10, RC11, RC13, RC32-RC49 and all conditions relating to Hochstetter's frogs, indigenous lizards (mokomoko), herpetofauna habitat, salvage, relocation, release sites, ecological connectivity and freshwater habitat.	At least 40 Working Days prior to Establishment Works and Project Works.	For the duration of Establishment Works and Project Works and until all herpetofauna salvage, relocation, monitoring, adaptive management and performance criteria have been achieved.

Review Comments

The proposed conditions rely on fish salvage, fish passage, freshwater ecology management, stream realignments, wetland management, ecological connectivity and management of Hochstetter's frogs, mokomoko/lizards and other indigenous freshwater species. However, no Fish Management Plan, Freshwater Management Plan or Herpetofauna or Invertebrate Management Plan framework has been included within Table 1. These are necessary to provide certainty regarding freshwater ecological outcomes, fish passage, fish salvage, herpetofauna habitat management, relocation and release-site management, ecological connectivity, monitoring, reporting, adaptive management and contingency measures where required.

RC6 A Management Plan(s) shall be:

(a) Prepared by a Suitably Qualified Person(s);

Review Comment

RC6(a) should require Management Plans to be prepared by suitably qualified and experienced specialists relevant to the subject matter of the Management Plan. Several of the proposed Management Plans relate to specialist ecological matters including

freshwater ecology, wetlands, indigenous freshwater fish, herpetofauna, bats, avifauna and species managed under Wildlife Approvals. Technical reviews undertaken by Rebecca Lodge, Jacqui Wairepo and the Department of Conservation identify the need for specialist expertise, species-specific management, monitoring, adaptive management and ecological outcome reporting. Requiring preparation by appropriately qualified and experienced specialists, including persons holding any relevant Department of Conservation authorisations where required, will provide greater certainty that Management Plans are fit for purpose and capable of achieving the ecological outcomes anticipated by the conditions.

Amendment

(a) Prepared by a Suitably Qualified and Experienced Person(s) with expertise relevant to the subject matter of the Management Plan. Where a Management Plan relates to indigenous fauna managed under a Wildlife Approval, preparation shall involve a person holding any relevant Department of Conservation authorisations and demonstrated experience in the management of the relevant species.

(b) Submitted to Council for certification that the Management Plan(s) satisfies the requirements of the conditions identified in **Table 1**;

Review comment

Management Plans should not be submitted directly for certification without Te Parawhau first receiving the final draft and having a reasonable opportunity to review whether comments and recommendations have been addressed. This amendment provides transparency and ensures the collaborative framework provided for under RC6(d) is meaningfully implemented prior to certification.

The applicant should obtain, or expressly seek within the Fast-track approval process, the relevant Complex Freshwater Fisheries approval under section 42(4)(j) and Schedule 9 of the *Fast-track Approvals Act 2024*. This is particularly necessary given the extent of proposed in-stream works and the foreseeable requirement for fish salvage and fish-passage management. The absence of the relevant approval framework creates uncertainty regarding the lawful implementation of fish salvage, fish passage and associated freshwater works. These matters should be resolved through an enforceable approval and supporting Fish Management Plan before works commence, rather than being deferred to subsequent consenting or construction-stage management.

Amendment

(b) Submitted to DOC and Council for certification that the Management Plan(s) satisfies the requirements of the conditions identified in Table 1 and the requirements of Condition RC6(d).

(c) Implemented for the period in **Table 1**, for the specific activities and / or stage to which it relates; and

~~(d) Prepared in consultation with relevant Hapū. Where a Management Plan(s) is provided for certification, it shall:~~

~~(i) include a summary of consultation undertaken with Hapū in the preparation of the Management Plan(s); and~~

~~(ii) outline either how feedback has been incorporated, or if not, the reasons for that.~~

Review comment

The proposed wording requiring consultation with Hapū should be replaced with a stronger collaboration framework consistent with the Designation Conditions. Consultation does not provide certainty that Te Parawhau input will be meaningfully considered or responded to.

Given the significance of the freshwater, wetland, ecological and cultural matters addressed by the Management Plans, Te Parawhau seeks a collaborative process requiring all matters raised by Te Parawhau and the Department of Conservation to be documented, considered and responded to in writing, including reasons where recommendations are not adopted.

In addition, technical reviews undertaken by Rebecca Lodge, Jacqui Wairepo and the Department of Conservation consistently identify the need for measurable ecological outcomes, monitoring, reporting and adaptive management. Accordingly, all Management Plans should include objectives, success criteria, monitoring, reporting, adaptive management triggers and contingency measures.

Amendment

RC6(d) shall be reworded as follows:

(d) Prepared in collaboration with Te Parawhau Hapū. Where a Management Plan(s) is provided for certification, it shall:

i. include a summary of engagement undertaken with Te Parawhau during preparation of the Management Plan(s);
ii. identify matters raised by Te Parawhau;
iii. outline how Te Parawhau feedback and recommendations have been addressed, or where recommendations have not been adopted, the reasons why;

(e) All Management Plans shall include, where relevant:

(i) management objectives and intended outcomes;
(ii) success criteria and performance measures;
(iii) monitoring requirements, monitoring frequency and reporting requirements including of environmental incidents and/or exceedance of triggers;
(iv) adaptive management in the event of environmental incidents and/or triggers;
(v) corrective actions and contingency measures where success criteria are not achieved; and

(vi) implementation, monitoring, review and reporting timeframes.

RC7 ~~A Management Plan(s) may be updated at any time by submitting the amendment to the Management Plan to Council for information. However, where an update to a Management Plan shall result in more than minor adverse effects, the amendment to the Management Plan must be submitted to Council for certification prior to implementation of the amendment.~~

Review Comment:

Changes to management plans must require certification by the administering agency not simply provided for information and therefore self-regulation, as the agency determines whether a change will result in more than minor effects, not the Applicant.

Management Plan amendments have the potential to alter ecological, freshwater, wetland, cultural and restoration outcomes. Any amendments relating to matters of relevance to Te Parawhau should be provided to Te Parawhau for review and input prior to certification or implementation. Consistent with the collaboration framework in RC6, any amendment should identify matters raised by Te Parawhau and record how those matters have been addressed. This provides transparency and ensures amendments do not inadvertently undermine agreed cultural, freshwater or ecological outcomes.

Amendment

RC7 Any amendment to a Management Plan must:

(a) be provided to Te Parawhau for review and input no less than 40 Working Days prior to submission to Council and prior to implementation;

(b) identify matters raised by Te Parawhau; and

(c) outline how Te Parawhau feedback and recommendations have been addressed, or where recommendations have not been adopted, the reasons why.

(d) be submitted to Council for certification prior to implementation, notwithstanding submission to DoC in the same capacity regarding ecological matters.

~~RC8 If a Management Plan(s) (or amendment) has been submitted to Council for certification, and the number of Working Days specified in the "When to submit for certification column in Table 1 has passed and Council has not provided certification~~

~~or advised that and why the Management Plan or amendment does not meet the requirements in the "Certification requirements" column in Table 1, the Management Plan shall be deemed to have been certified.~~

Review Comment

Te Parawhau does not support deemed certification provisions for Management Plans that may affect ngā uara ahurea o Te Parawhau, freshwater environments, wetlands, Watercourses, indigenous biodiversity, taonga species, ecological restoration, offsetting, compensation or cultural outcomes.

Management Plans should only be certified following confirmation that all relevant consent requirements have been satisfied. The proposed condition provides insufficient assurance that concerns raised by Council, Te Parawhau, technical specialists or statutory agencies have been adequately addressed prior to implementation.

Given the complexity of the Project and the reliance placed on future Management Plans to address ecological, freshwater, wetland, fish, herpetofauna and restoration outcomes, deemed certification could result in plans being implemented without adequate review of monitoring requirements, success criteria, adaptive management measures or contingency actions.

Amendment

Delete RC8 in its entirety.

RC9 A Management Plan(s) may be prepared in stages to reflect any proposed staging (i.e. activity, location or timing) of the Project Works, and if submitted in stages, the scope is to be commensurate with the nature, scale and effects of that stage of the Project Works.

Review Comment:

Retain RC9 in principle. However, the following comments are made;

Preparation of Management Plans in stages is appropriate given the scale, duration and complexity of the Project. However, staging should not result in the effects leakage to connected ecosystems or mobile species or result in fragmentation of the overall freshwater, wetland, ecological, restoration, cultural or adaptive management framework.

Any staged Management Plan should identify how the relevant stage will interact with connected ecosystems and contribute to the overall objectives, outcomes, monitoring requirements and adaptive management framework applicable to the Project.

Amendment

RC9 A Management Plan(s) may be prepared in stages to reflect any proposed staging (i.e. activity, location or timing) of the Project Works, and if submitted in stages, the scope is to be commensurate with the nature, scale and effects of that stage of the Project Works.

Where a Management Plan is prepared in stages, each stage shall identify how it contributes to the overall objectives, outcomes, monitoring requirements and adaptive management framework of the relevant Management Plan including temporary or permanent effects on connected ecosystems or mobile species.

CULTURAL CONDITION

Condition RC9A is an Augier condition.

RC9A If a Cultural Values Management Plan (CVMP) has been prepared in accordance with the conditions of the Designations, the Consent Holder must implement the CVMP for the duration of the Project Works as it relates to activities authorised by the Consents.

Review Comment:

The proposed Augier condition only requires implementation of a Cultural Values Management Plan (CVMP) if one has been prepared. It does not provide Te Parawhau with the certainty that a CVMP will in fact be prepared prior to the commencement of Project Works.

Given the scale of the Project and the potential effects on ngā uara ahurea o Te Parawhau, freshwater environments, wetlands, taonga species, wāhi tapu, archaeological values, ecological restoration activities and cultural monitoring, a CVMP should be a mandatory management document rather than an optional outcome.

It is also not appropriate for the Requiring Authority to prepare a CVMP on behalf of Te Parawhau. The CVMP is intended to identify, protect and provide for ngā uara ahurea o Te Parawhau. Those values, tikanga, relationships, tirohanga and management responses are matters for Te Parawhau to define and articulate. While the Requiring Authority may provide information relevant to Project design and implementation, the content and preparation of the CVMP should remain the responsibility of Te Parawhau.

The CVMP is a key mechanism through which Te Parawhau participation, cultural monitoring, cultural protocols, accidental discovery procedures, ecological restoration aspirations, freshwater values and adaptive management measures can be integrated across the Project. Requiring preparation and implementation of a CVMP prior to the commencement of Project Works provides greater certainty that cultural outcomes will be recognised and provided for throughout the duration of the Project.

Amend RC9A as follows:

A CVMP shall be prepared by Te Parawhau in accordance with the Designation Conditions and finalised at least 40 working days prior to commencement of Establishment Works.

The Consent Holder shall implement the CVMP for the duration of Establishment Works and Project Works in relation to all activities authorised by these Consents.

CONSTRUCTION METHODOLOGY

Conditions RC10-RC15 apply to Consent RC01-RC03 and RC05.

RC10 Where a haul road crosses:

(a) The following Watercourses shown on **Appendix [B]:** Waihoihoi main stem, Piroa main stem, Mayflower tributary main stem, Wairau north tributary and Pine north main tributary, a temporary bridge shall be installed ~~if practicable, or otherwise a temporary culvert~~; or

(b) In all other Watercourses, a temporary culvert shall be installed.

All temporary bridges and culverts shall be removed as soon as practicable following completion of Project Works. ~~The morphology of the Watercourse (including depth, width, gradient pattern, substrate and bank form) shall be reinstated as far as practicable to what it was prior to installation of the temporary bridge or culvert.~~

Review Comment

Te Parawhau has an interest in the wider taiao, ngā wai and interconnected ecological systems affected by the Project. Te Parawhau acknowledges that the Piroa Awa, Mayflower tributary, Wairau north tributary and Pine north main tributary are also located within the rohe and interests of Te Uri o Hau. Te Parawhau therefore limits its detailed comments on those awa and leaves matters specific to those catchments to be addressed by our whanaunga at Te Uri o Hau.

Te Parawhau's primary concern in relation to this condition is the protection of the Waihoihoi Awa, including maintaining ecological integrity, ecological connectivity, fish and frog passage, aquatic habitat values, habitats supporting taonga species, and the mauri of the waterway.

Te Parawhau is also concerned that Appendix B and the Freshwater Ecology Assessment do not accurately identify the full extent of waterways, wetlands, headwater streams, intermittent streams, ephemeral waterways and associated freshwater habitats potentially affected by the Project. It its current form Appendix B implies other waterways require no avoidance. Technical reviews undertaken by Rebecca Lodge and the Department of Conservation identify significant deficiencies in the mapping and assessment of freshwater environments. Prior to Establishment Works and Project Works, all waterways, wetlands and associated freshwater habitats potentially affected by the Project should be identified, mapped and reassessed by a Suitably Qualified and Experienced Freshwater Ecologist with review by DoC and Te Parawhau.

No mention is made of spawning areas or works in proximity to these areas. Under the Conservation Act, the disturbance of freshwater fish spawning areas includes disturbing the spawning of freshwater fish in the area or making the area less suitable for the spawning of freshwater fish in the area.

Temporary culverts have the potential to adversely affect stream function, ecological connectivity, fish and frog passage, aquatic habitat quality, habitats supporting taonga species, and the mauri of freshwater systems. Te Parawhau does not support the use of temporary culverts in the Waihoihoi Awa where a bridge can be used to avoid or minimise those adverse effects.

Greater certainty is also required regarding temporary crossing structures, fish and frog passage requirements, and reinstatement outcomes following removal of temporary structures to ensure the morphology, ecological function, ecological connectivity and mauri of affected waterways are restored.

Amend RC10 as follows:

(a) The Waihoihoi main stem Watercourse shown on Appendix [B], a temporary bridge shall be installed.

(b) In all other Watercourses, adverse effects on ecological integrity, ecological connectivity, fish and frog passage, habitat values, habitats supporting taonga species, natural character and the mauri of the watercourse shall be avoided. Where a temporary culvert is installed, it shall be designed, installed, maintained and removed in a manner that maintains ecological integrity, ecological connectivity, fish and frog passage in accordance with the Resource Management (National Environmental Standards for Freshwater Management) Regulations 2020 and the New Zealand Fish Passage Guidelines (2024).

(c) All temporary bridges and culverts shall be removed following completion of Project Works. The morphology, ecological function and mauri of the Watercourse (including depth, width, gradient pattern, substrate, bank form, habitat complexity, ecological connectivity, fish and frog passage) shall be reinstated to its pre-construction condition as far as practicable following removal of the temporary bridge or culvert.

(d) All instream works will be undertaken in accordance with the certified Fish Management Plan.

RC11 All temporary culverts in a Watercourse in place for more than two weeks during the period ~~November to December~~ shall provide fish passage in accordance with best practice, unless ~~a Suitably Qualified Person deems it unnecessary to do so because:~~

(a) There is no ~~viable~~ upstream fish habitat ~~at the time the culvert is installed; or~~

~~(b) There are existing barriers to fish passage; or~~

~~(c) There is no (or expected to be no) flow of water sufficient to allow a fish to pass within the Watercourse while the temporary culvert is in place.~~

Review Comment:

Te Parawhau is concerned that Appendix B and the Freshwater Ecology Assessment do not accurately identify the full extent of waterways, wetlands, headwater streams, intermittent streams, ephemeral waterways and associated freshwater habitats potentially affected by the Project. Technical reviews undertaken by Rebecca Lodge (Bay Ecological) and the Department of Conservation identify significant deficiencies in the mapping, characterisation and assessment of freshwater environments Such that there is not currently sufficient information to fully draft conditions relating to temporary instream structures, fish salvage and relocation.

Currently Condition RC11 contains undefined and uncertain terminology, including the terms "temporary" and "viable" and “expected to”, providing no clear or objective basis for determining when fish passage is considered unnecessary. The condition should not limit the requirement for fish passage to temporary culverts installed during November and December. Freshwater fish migration occurs across different periods depending on species and life stage, and November–December does not

represent a period when fish movement can generally be assumed to be absent or negligible. The condition should therefore require all temporary culverts to provide effective fish passage for the duration of their installation, consistent with the New Zealand Fish Passage Guidelines and relevant species-specific migration requirements. Any exception should be supported by site-specific assessment by a Suitably Qualified Person demonstrating that fish passage is not required for the species and life stages present, rather than being based solely on the time of year.

Prior to Establishment Works and Project Works, all waterways, wetlands and associated freshwater habitats potentially affected by the Project should be identified, mapped and assessed by a Suitably Qualified and Experienced Freshwater Ecologist.

Fish passage, frog passage and ecological connectivity are fundamental components of freshwater ecosystem health, the protection of taonga species and the maintenance of the mauri of waterways. Temporary culverts have the potential to significantly affect stream function, habitat quality, fish and frog passage, ecological connectivity and water quality during installation, operation, maintenance and removal. Temporary culverts may also require removal of riparian vegetation and disturbance of stream beds and banks, resulting in additional adverse effects on freshwater values.

Te Parawhau does not support broad exemptions that allow fish passage, frog passage and ecological connectivity requirements to be avoided based on assumptions regarding habitat quality, existing barriers or perceived absence of flow. Te Parawhau has concerns regarding clause (c), including how it is determined that insufficient flow exists to support fish passage. Noting the flaws identified by Bay Ecological and the Department of Conservation in NZTA's freshwater ecology assessment, stream mapping and associated technical reports, further technical justification is required.

For the avoidance of doubt, the existence of upstream or downstream barriers to fish passage should not remove the requirement to maintain fish passage through a temporary culvert. Temporary structures should maintain continuous flow, fish passage, frog passage and ecological connectivity for the duration of their installation and should not compromise the ecological integrity or mauri of the affected waterway.

Amendment

RC11 All works within a Watercourse shall:

(a) will be undertaken in accordance with the certified Fish and Frog Management Plans.

(b) Maintain fish & frog passage and hydrological connectivity in accordance with the Resource Management (National Environmental Standards for Freshwater Management) Regulations 2020 and the New Zealand Fish Passage Guidelines;

(c) Disturbance to the bed, banks, riparian vegetation and aquatic habitat shall be limited to the minimum area necessary for installation, operation, maintenance and removal of the temporary culvert;

(d) Be removed within 10 Working Days of completion of the activity for which it was installed; and

(e) Following removal, the bed, banks, riparian margins, ecological function, habitat values, fish passage, frog passage, ecological connectivity and mauri of the Watercourse shall be reinstated to its pre-construction condition as far as practicable.

RC12 All machinery that is used in the designation in or near freshwater environments shall be checked and cleaned for freshwater pests (in accordance with the Check, Clean, Dry' method and the National Pest Control Agencies A series, best practice guidelines 'A16 Keep it Clean – Machinery and Vehicle Hygiene Guidelines and Logbook to Prevent the Spread of Pests and Weeds' (2015 (minor revisions April 2020) before it is brought onto the Site

Review Comment:

The condition is currently limited to machinery entering the Site. However, the primary freshwater biosecurity risk arises from movement of machinery, vehicles and equipment between waterways, wetlands, freshwater habitats and catchments during Establishment Works and Project Works.

Te Parawhau is concerned that Appendix B and the Freshwater Ecology Assessment do not accurately identify all waterways, wetlands and freshwater habitats potentially affected by the Project. Freshwater biosecurity measures should therefore apply across all freshwater environments affected by Project activities.

The condition should also recognise the risk of spreading freshwater pests, aquatic weeds, pathogens and other biosecurity hazards that may adversely affect fish, frogs, taonga species and freshwater ecosystems.

Amendment

RC 12 Prior to the commencement of Establishment Works, a Biosecurity Protocol shall be prepared by a suitably qualified and experienced Freshwater Ecologist, or other suitably qualified biosecurity specialist with demonstrated expertise in aquatic pest and pathogen management, in consultation with Te Parawhau and in accordance with RC6.

The Biosecurity Protocol shall be implemented for the duration of Establishment Works and Project Works.

The Biosecurity Protocol shall be integrated with the Freshwater Management Plan, Fish Management Plan, Herpetofauna Management Plan, Wetland Management Plan, ESCP and relevant CESCPs and shall be implemented in a manner that supports the ecological outcomes, performance standards and management objectives of those plans.

The Biosecurity Protocol shall apply to all machinery, vehicles, equipment and materials prior to arrival at the Designation and prior to movement between, within or near waterways, wetlands, freshwater environments, puna or associated habitats affected by the Project.

The Biosecurity Protocol shall include measures to prevent the introduction and spread of freshwater pests, aquatic weeds, pathogens and other biosecurity hazards that may adversely affect freshwater ecosystems, indigenous freshwater fish, Hochstetter's frogs, taonga species, wetlands, waterways and associated habitats.

The Biosecurity Protocol shall be prepared in accordance with the Check, Clean, Dry method and the National Pest Control Agencies A Series best practice guidelines 'A16 Keep it Clean – Machinery and Vehicle Hygiene Guidelines and Logbook to Prevent the Spread of Pests and Weeds' (2015, minor revisions April 2020).

All machinery, vehicles, equipment and materials shall be inspected, checked and cleaned in accordance with the Biosecurity Protocol prior to entering the Designation and prior to movement between freshwater environments affected by the Project.

The Biosecurity Protocol shall include monitoring, reporting, corrective actions and adaptive management measures where freshwater pests, aquatic weeds, pathogens or other biosecurity hazards are detected.

Records of inspections, cleaning procedures, biosecurity incidents and corrective actions undertaken pursuant to the Biosecurity Protocol shall be maintained and provided to Council and Te Parawhau in accordance with RC6.

RC13 Prior to any dewatering or diversion in a section of Watercourse deemed by a Suitably Qualified Person to support a viable population of indigenous freshwater fish, a Suitably Qualified Person shall salvage and transfer such fish to a suitable Watercourse.

Review Comment

Freshwater fish are defined under the Conservation Act 1983 as including *Echyridella* (freshwater mussels) detected in the Designation waterways. It also includes *Paranephrops*- kōura and kēwai.

Te Parawhau is concerned that the Freshwater Ecology Assessment does not adequately identify or assess the full extent of freshwater values potentially affected by the Project, including fish habitat, Hochstetter's frog habitat, aquatic habitat values, ecological connectivity and taonga species. Technical reviews undertaken by Bay Ecological and the Department of Conservation identify significant deficiencies in NZTA's freshwater ecology assessment, fish survey methodology, species detection, freshwater habitat assessment, stream mapping and effects assessment.

Currently the NZTA Freshwater Ecology Report does not contain accurate or sufficient description of populations; habitats; flows or required intersection with waterways or wetlands to inform a Complex Freshwater Fisheries Approval application or a Freshwater Fish Management Plan

The term "viable" is undefined and provides no objective basis for determining whether freshwater fish salvage is required. The condition should not rely on such a determination that a population is "viable" before management measures are

required. The term “suitable” is also undefined to a level to provide confidence that fish will not experience post transfer mortality. With no monitoring allocated there is unlikely to be any recourse.

Dewatering and diversion activities have the potential to adversely affect the realm of Maru and his uri, including indigenous freshwater fish, Hochstetter's frogs and other taonga species, aquatic species passage, freshwater habitats, ecological integrity, ecological connectivity and the mauri of waterways.

The emphasis on fish savage where works interact with waterways including any wetland should not be limited to the discretionary *viable population* criteria. The proposed waterway works have the potential to result in the unintentional *taking* of indigenous freshwater fish through dewatering, isolation, diversion and excavation. The Conservation Act 1987 establishes specific controls over the *taking* of indigenous freshwater fish under s 26ZHB. Accordingly, where fish are reasonably likely to be present, the potential for fish to be taken, injured or killed during the works requires explicit management.

Te Parawhau considers that dewatering and diversion activities should be managed to ensure that water continues to flow, the mauri of the water is maintained, and conditions necessary to support taonga species and their habitats are protected.

The applicant should obtain, or expressly seek within the Fast-track approval process, the relevant Complex Freshwater Fisheries approval under section 42(4)(j) and Schedule 9 of the Fast-track Approvals Act 2024. This is particularly necessary given the extent of proposed in-stream works and the foreseeable requirement for fish salvage and fish-passage management. The absence of the relevant approval framework creates uncertainty regarding the lawful implementation of fish salvage, fish passage and associated freshwater works. These matters should be resolved through an enforceable approval and supporting Freshwater Fish Management Plan prepared by appropriately qualified and experienced specialists in collaboration with Te Parawhau before Establishment works commence, rather than being deferred to subsequent consenting or construction-stage management. Any Freshwater Fish Management Plan should demonstrate alignment with the Herpetofauna Management Plan.

Management of freshwater species should not be limited to salvage and relocation. The conditions should require measures to avoid, minimise and remedy adverse effects on freshwater habitats, ecological connectivity and integrity, taonga species and together with monitoring, reporting, adaptive management and contingency measures where outcomes are not achieved.

Te Parawhau does not support the use of electrofishing as a fish salvage methodology. Electrofishing has the potential to adversely affect indigenous freshwater species, taonga species and the mauri of waterways. Alternative fish capture and relocation methods should be identified through the Fish Management Plan.

Te Parawhau does not support qualifying obligations using terms such as "practicable" where this creates uncertainty around implementation of measures intended to protect freshwater values, taonga species and the mauri of waterways. The condition should provide clear and certain requirements.

Amendment

RC13 Prior to any dewatering or diversion of a Watercourse including puna:

a) Continuous flow, ecological integrity, ecological connectivity, fish passage, frog passage, freshwater habitat values, habitats supporting taonga species and the mauri of the Watercourse shall be maintained for the duration of the works.

b) A Complex Freshwater Fish Fisheries approval will be obtained for all works in the Designation.

c) A Fish Management Plan shall be prepared by a Suitably Qualified and Experienced Freshwater Ecologist in collaboration with Te Parawhau and in accordance with RC6. The plan will include design details & drawings of the location and type of structures allocated to each interaction point within Designation waterways including of Establishment Works.

d) The Fish Management Plan shall identify measures to avoid, minimise and remedy adverse effects on indigenous freshwater fish, fish habitat, ecological integrity, ecological connectivity and fish passage.

e) A Herpetofauna Management Plan shall be prepared by a Suitably Qualified and Experienced Herpetologist holding any relevant Department of Conservation authorisations and in collaboration with Te Parawhau and in accordance with RC6 and Designation Condition D9(h).

f) The Herpetofauna Management Plan shall identify measures to avoid, minimise and remedy adverse effects on Hochstetter's frogs, herpetofauna habitat, ecological integrity, ecological connectivity and frog passage.

g) The Fish Management Plan and Herpetofauna Management Plan shall each include but not be limited to:

(i) Details of all applicable approvals, authorisations, permits and certifications obtained;

(ii) Monitoring and reporting requirements, including requirements for salvage, transfer, relocation and post-transfer monitoring;

(iii) Performance standards and success criteria;

(iv) Adaptive management triggers and response measures;

(v) Contingency measures where performance standards or success criteria are not achieved; and

(vi) Timeframes for implementation and monitoring.

h) The Fish Management Plan and Herpetofauna Management Plan shall be implemented for the duration of Establishment Works and Project Works.

i) Fish and frog salvage requirements, methodologies and performance measures shall be identified within the relevant Management Plan and implemented in accordance with that Management Plan.

j) Electrofishing shall not be undertaken.

RC14 Procedures must be implemented:

(a) To avoid concrete leachate discharges to Watercourses or Existing Wetlands, including:

(i) No concrete batching or preparation within 50m of any Watercourse or Existing Wetland;

(ii) That pouring concrete occurs only in dry areas outside running water;

(iii) That new concrete surfaces are covered for a sufficient period after pour to prevent run off; and

(iv) Using prefabricated concrete pipes and structures ~~where practicable~~).

(v) Using quick cure where appropriate to minimize impact duration to watercourses associated with temporary damming and in-stream/near stream works

(vi) Ecological oversight of first 'flush' of water over cured concrete to test pH neutrality to prevent harm to aquatic life.

Review Comment:

As identified by Bay Ecological and the Department of Conservation, the Freshwater Ecology Assessment and associated mapping do not accurately identify the full extent of waterways, wetlands, headwater streams, intermittent streams and associated freshwater habitats potentially affected by the Project. The effectiveness of this condition is therefore dependent on accurate identification and protection of all affected freshwater environments.

Te Parawhau supports RC14(a)(i)-(iii). Concrete batching, preparation and pouring activities have the potential to adversely affect freshwater environments, aquatic habitat, taonga species and the mauri of waterways and wetlands.

Te Parawhau does not support the qualifier "where practicable" in RC14(a)(iv). The use of prefabricated concrete pipes and structures provides a more certain method of avoiding or minimising concrete leachate discharges to freshwater environments and should be required.

Amendment

Retain RC14(a)(i)-(iii)

Amend RC14 (a)(iv) as follows:

(iv) Use prefabricated concrete pipes and structures.

(b) For the storage of fuels, lubricants, hazardous and/or dangerous materials to avoid discharges to, or to land in circumstances that could lead to, Watercourses and Existing Wetlands; and

Review Comment:

As above, and as identified by Bay Ecological and the Department of Conservation, the Freshwater Ecology Assessment and associated mapping do not accurately identify the full extent of waterways, wetlands, headwater streams, intermittent streams and associated freshwater habitats potentially affected by the Project.

Te Parawhau supports strengthening this condition to require a clear outcome rather than reliance on procedures alone. Fuels, lubricants, hazardous substances and dangerous goods have the potential to adversely affect freshwater habitats, wetlands, taonga species, aquatic ecosystems and the mauri of waterways if released to the taiao, whether accidentally or otherwise. The condition should require the storage, handling and use of such materials in a manner that avoids discharges to freshwater environments.

Amend RC14(b) as follows:

All fuels, lubricants, hazardous and/or dangerous materials shall be stored, handled and used in a manner that avoids discharges to Watercourses, wetlands and freshwater environments, or to land in circumstances that may result in contaminants entering any Watercourse, wetland or freshwater environment.

(c) For operating machinery to ensure spillages of fuel, oil and similar contaminants are prevented, particularly during refuelling and machinery services and maintenance (which shall be carried out away from any surface water).

Review Comment

Te Parawhau recognises that waterways, wetlands and freshwater environments are interconnected components of te taiao and support the mauri of ngā wai and the habitats of taonga species. Fuel, oil and other contaminant spills have the potential to adversely affect freshwater habitats, aquatic ecosystems, taonga species and the mauri of waterways and wetlands.

Technical reviews undertaken by Bay Ecological and the Department of Conservation identify concerns regarding the identification, mapping and assessment of freshwater environments potentially affected by the Project. Te Parawhau therefore considers that contamination prevention measures should apply broadly across freshwater environments and should focus on preventing contaminants from

entering waterways, wetlands and associated habitats rather than relying solely on procedural requirements.

The condition should provide certainty that contaminants are prevented from entering freshwater environments and that appropriate response measures are available should a spill occur.

Amend RC14(c) as follows:

a. All machinery shall be operated & maintained in a manner that prevents spillages of fuel, oil and other contaminants.

b. Refuelling, servicing and maintenance of machinery shall be undertaken at defined hazardous substance storage or handling areas with a stormwater collection system designed and operated to prevent hazardous substances entering watercourses, wetlands, freshwater environments or associated habitats.

c. Spill response equipment shall be available at all times during operation; refuelling, servicing and maintenance activities.

d. Any spill of fuel, oil or other contaminants shall be immediately contained and prevented from entering any Watercourse, wetland or freshwater environment. Where there is residual discharge, it is contained on-site and does not enter surface waterbodies, groundwater or stormwater systems.

e. Council is notified immediately following accidental spill of a hazardous substance and reporting is undertaken that demonstrates that the level of residual contamination is not reasonably likely to result in an unacceptable risk to human health or the environment. The use of best practice contaminated land management, including the preparation and

f. Consideration of preliminary and detailed site investigations, remedial action plans, site validation reports and site management plans for the identification, monitoring and remediation of contaminated land.

RC15 ~~Where practicable~~, ~~no instream crossing devices (i.e. Bridges or culverts) shall be placed in the [X] Watercourse identified on the map in~~ **Appendix [B]**~~.~~

Review Comment:

Te Parawhau supports avoiding instream crossing devices within waterways as they can adversely affect ecological integrity, ecological connectivity, fish passage, frog passage, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai.

The phrase "where practicable" introduces uncertainty and creates a discretionary pathway that may undermine the purpose and effectiveness of the condition. If the intention of the condition is to avoid instream crossing devices within a particular Watercourse, that outcome should be clearly and unequivocally stated.

Technical reviews undertaken by Te Parawhau SMEs and the Department of Conservation identify significant deficiencies in the identification, mapping and assessment of waterways, wetlands and associated freshwater habitats potentially

affected by the Project. Te Parawhau considers that Appendix B does not provide a sufficiently complete or reliable representation of waterways, wetlands and associated freshwater habitats to support robust freshwater effects assessment and management.

The condition also fails to identify the Watercourse to which it applies. Until the relevant Watercourse is clearly identified, the condition cannot be properly interpreted, implemented or enforced.

Appendix B should be updated to ensure all waterways, wetlands and associated freshwater habitats potentially affected by the Project are identified, mapped and assessed by a Suitably Qualified and Experienced Freshwater Ecologist. Updated mapping and supporting information should be provided to Te Parawhau for review and input prior to finalisation and prior to commencement of Establishment Works and Project Works.

Amendment

RC15 does not contain adequate detail.

Delete RC15

LAND DISTURBING ACTIVITIES

Conditions RC16-RC27 apply to Consent RC01.

Dust management

RC16 A **Dust Management Plan (DMP)** shall be prepared**.** The purpose of the DMP is to outline measures so that Project Works shall not, ~~as far as practicable~~, cause objectionable or offensive dust effects beyond the Site.

Review Comment

The condition should apply to both Establishment Works and Project Works, as dust-generating activities may occur prior to the commencement of Project Works.

The purpose of the DMP is currently limited to managing objectionable or offensive dust effects beyond the Site. Te Parawhau is concerned that dust may also adversely affect freshwater environments, wetlands, indigenous vegetation, habitats supporting taonga species, ecological restoration areas and the mauri of te taiao within the Site.

Dust has the potential to adversely affect freshwater habitats, wetlands, indigenous vegetation, ecological restoration areas, habitats supporting taonga species and the mauri of te taiao through deposition on land, waterways and ecological restoration areas. These matters are of direct relevance to Te Parawhau and should be recognised within the DMP.

The DMP should therefore address adverse effects both within and beyond the Site and include measures to protect freshwater environments, wetlands, indigenous vegetation, habitats supporting taonga species and ecological restoration areas from dust deposition.

The DMP should also be provided to Te Parawhau for review and input prior to certification in accordance with RC6.

Amend RC16 as follows:

RC16 A Dust Management Plan (DMP) shall be prepared and provided to Te Parawhau for review and input in accordance with RC6.

The purpose of the DMP is to outline measures so that Establishment Works and Project Works do not cause objectionable or offensive dust effects beyond the Site and do not adversely affect dust sensitive areas within or beyond the Site including freshwater environments, wetlands, indigenous vegetation, habitats supporting taonga species, ecological restoration areas or the mauri of te taiao.

RC17 The DMP shall include:

(a) A description of the main potential sources of dust emissions from the Project Works and the proximity of Highly Sensitive Receptors to these sources;

(b) Measures to minimise dust emissions from Project Works, including any specific measures to manage dust-generating works in proximity to Highly Sensitive Receptors;

Review Comment

The DMP currently focuses on homocentric Highly Sensitive Receptors and does not adequately recognise ecological, cultural and taiao receptors that may be adversely affected by dust deposition.

Te Parawhau is concerned that dust may adversely affect waterways, wetlands, indigenous vegetation, habitats supporting taonga species, ecological restoration areas and sites of cultural significance, including ecological receptors defined as *Dust Sensitive Areas* under the Regional Plan. Dust controls should therefore recognise and provide for the protection of these values, not just human receptors.

The DMP should identify ecological, freshwater, cultural and taiao receptors potentially affected by dust emissions and include measures to avoid, minimise and remedy adverse effects on those values.

Amend RC17 as follows:

The DMP shall include:

(a) A description of the main potential sources of dust emissions from Establishment Works and Project Works and the proximity of Highly Sensitive Receptors, waterways, wetlands, indigenous vegetation, habitats supporting taonga species, ecological restoration areas and sites of significance identified by Te Parawhau that may be affected by dust emissions;

(b) Measures to minimise dust emissions from Establishment Works and Project Works, including specific measures to manage dust-generating works in proximity to

Highly Sensitive Receptors, waterways, wetlands, indigenous vegetation, habitats supporting taonga species, ecological restoration areas and sites of significance identified by Te Parawhau;

(c) Contingency methods for responding to any identified objectionable or offensive dust effects beyond the Site; and

Review Comment

The condition is currently limited to objectionable or offensive dust effects beyond the Site. Te Parawhau is concerned that dust may also adversely affect freshwater environments, wetlands, indigenous vegetation, habitats supporting taonga species, ecological restoration areas and the mauri of te taiao within the Site.

Contingency measures should respond not only to dust effects experienced by neighbouring properties but also to dust effects on ecological, freshwater, cultural and taiao values.

Amend RC17(c) as follows:

(c) Contingency methods for responding to any identified objectionable or offensive dust effects beyond the Site, and any adverse dust effects on freshwater environments, wetlands, indigenous vegetation, habitats supporting taonga species, ecological restoration areas, sites of significance identified by Te Parawhau and the mauri of te taiao; and

(d) Measures to manage dust adverse effects on National Grid Transmission Assets.

Review Comment

The condition requires measures to manage adverse dust effects on National Grid Transmission Assets but does not provide equivalent recognition of freshwater environments, wetlands, indigenous vegetation, habitats supporting taonga species, ecological restoration areas or sites of cultural significance. Te Parawhau considers that dust management measures should protect both infrastructure and the ecological and cultural values potentially affected by the Project.

Amend RC17(d) as follows:

(d) Measures to manage adverse dust effects on National Grid Transmission Assets, freshwater environments, wetlands, indigenous vegetation, habitats supporting taonga species, ecological restoration areas, sites of significance identified by Te Parawhau and the mauri of te taiao.

RC18 Transpower shall be consulted during preparation of the DMP regarding [RC17(d)]. The DMP shall include a summary of consultation undertaken with Transpower, and outline how feedback has been incorporated into the DMP, and if not, the reasons for that.

Review Comment

The condition requires consultation with Transpower regarding potential adverse effects on National Grid Transmission Assets. Te Parawhau considers that an equivalent process should apply where dust may affect freshwater environments, wetlands, indigenous vegetation, habitats supporting taonga species, ecological restoration areas, sites of significance identified by Te Parawhau and the mauri of te taiao.

Dust management measures should be informed by the values potentially affected by the Project and should recognise the direct relevance of these matters to Te Parawhau. The DMP should therefore be provided to Te Parawhau for review and input and include a record of how feedback has been addressed.

Amend RC18 as follows:

RC18 Transpower shall be consulted during preparation of the DMP regarding RC17(d).

Te Parawhau shall be provided with the DMP for review and input in accordance with RC6.

The DMP shall include:

(a) A summary of consultation undertaken with Transpower; and

(b) A summary of engagement undertaken with Te Parawhau; and

(c) Identify matters raised by Transpower and Te Parawhau and outline how those matters have been addressed within the DMP, or where recommendations have not been adopted, the reasons why.

Erosion and Sediment Control

Erosion and Sediment Control Plan

RC19 An **Erosion and Sediment Control Plan** (**ESCP**) shall be prepared. The purpose of the ESCP is to set out the measures to be implemented during construction to minimise erosion and the discharge of sediments from the Project Works.

Review Comment

RC19 does not include Establishment Works, despite Establishment Works having the potential to generate significant erosion and sediment discharges through activities such as vegetation clearance, haul road construction, access tracks, earthworks, stockpiling and establishment of work compounds.

Sediment discharges have the potential to adversely affect ngā wai, wetlands, freshwater habitats, habitats supporting taonga species, ecological connectivity and the mauri of te taiao. These effects may occur during both Establishment Works and Project Works.

Concern is also held around the use and discharge of coagulant/flocculation chemicals potentially used in stormwater and sediment controls. Within the ESCP we would expect a Chemical Erosion Sediment/ Stormwater Control Plan (CESCP) prepared by a suitably qualified and experienced person specifying the selected reagent, dosing methodology and dose rate, locations of dosing and treatment, bench-testing results, monitoring requirements, contingency measures and procedures for responding to changes in water quality or receiving-environment conditions.

Dose rates shall not be prescribed generically but shall be established through site-specific bench testing of representative soils and sediment. Treatment shall be monitored to ensure that chemical addition does not result in unacceptable changes in pH or residual aluminium or other contaminants in the discharge. Spills or inappropriate dosing can have significant adverse effects on receiving environments

Te Parawhau considers that the ESCP should apply to all Establishment Works and Project Works and should include measures to protect freshwater environments, wetlands, taonga species and cultural values from discharges. The ESCP including a CESCP component should also be provided to Te Parawhau for review and input prior to certification in accordance with RC6.

Amendment

RC19 An Erosion and Sediment Control Plan (ESCP) shall be prepared and provided to Te Parawhau for review and input in accordance with RC6.

The purpose of the ESCP is to set out the measures to be implemented during Establishment Works and Project Works to minimise erosion and the discharge of sediment and sediment-laden water including the use of coagulant/flocculation chemicals arising from Establishment Works and Project Works and to protect freshwater environments, wetlands, habitats supporting taonga species and the mauri of te taiao.

RC20 The ESC outcomes that shall be achieved as far as practicable through implementation of the ESCP are:

(a) Minimising erosion and sediment discharges from earthwork and works within Watercourses to protect receiving environments;

(b) Maximising the use of non-structural ESC measures;

(c) Monitoring all ESC measures (both structural and non-structural) and associated sediment discharges to allow for ongoing continuous improvement of ESC implementation and effectiveness; and

(d) Minimising exposed earthworks through the implementation of progressive stabilisation.

Review Comment

The proposed ESC outcomes focus primarily on erosion and sediment management but do not explicitly recognise the protection of freshwater environments, wetlands, habitats supporting taonga species and the mauri of ngā wai.

Sediment discharges have the potential to adversely affect waterways, wetlands, freshwater habitats and habitats supporting taonga species. Te Parawhau considers that erosion and sediment controls should be directed toward protecting receiving environments and reducing adverse effects on the values they support.

The ESCP should also recognise the role of monitoring and adaptive management in responding to erosion and sediment control failures and should be provided to Te Parawhau for review and input in accordance with RC6.

Amendment

RC20 The ESCP shall include measures to:

(a) Avoid erosion and sediment discharges to waterways, wetlands, freshwater environments, habitats supporting taonga species and receiving environments arising from Establishment Works and Project Works;

(b) Protect the mauri of ngā wai, freshwater habitats, ecological connectivity and habitats supporting taonga species from erosion and sediment discharges;

(c) Maximise the use of non-chemical or structural erosion and sediment control measures;

(d) Monitor the effectiveness of all erosion and sediment control measures and associated sediment discharges including chemical coagulants/ flocculants;

(e) Implement adaptive management measures where monitoring demonstrates that erosion and sediment control measures are not achieving the required outcomes or adverse effects on freshwater habitats and/ or species are occurring; and

(f) Minimise the extent and duration of exposed earthworks through progressive stabilisation.

RC21 The ESCP shall be prepared:

(a) In accordance with GD05 (except as otherwise provided in these conditions); and

(b) To require all ESC measures to be designed, constructed and maintained to comply with the ESC Standards outlined in **Appendix [C]** (unless ESC Standards provide for alternatives in a certified CESCP).

Review Comment

Appendix C is undefined; it is unclear which document this refers to. Te Parawhau assumes the CESCP refers to a Chemical Erosion Sediment Control Plan.

Te Parawhau acknowledges the use of GD05 as a recognised erosion and sediment control guideline. However, GD05 was developed for Auckland environments and does not necessarily reflect the unique characteristics of Mano Hiwa Ariki and the surrounding taiao affected by this kaupapa, including the interconnected nature of te taiao, whenua, ngā wai, geomorphological processes, climatic conditions and the cultural values, relationships and kaitiakitanga responsibilities of tāngata whenua.

Te Parawhau considers that erosion and sediment control measures should be designed and implemented in a manner that is appropriate to the receiving environments, catchments, waterways, wetlands and wider taiao of Te Tai Tokerau, rather than relying solely on standards developed for a different region.

Technical reviews undertaken by Te Parawhau SMEs and the Department of Conservation identify concerns regarding waterways, wetlands, freshwater habitats, ecological connectivity and taonga species potentially affected by the Project. Compliance with GD05 alone does not necessarily ensure protection of these values, nor the mauri of ngā wai and receiving environments.

Sediment discharges have the potential to adversely affect waterways, wetlands, habitats supporting taonga species, ecological integrity and the mauri of te taiao. Te Parawhau therefore considers that the ESCP should be prepared and implemented to achieve outcomes that are appropriate to Te Tai Tokerau and capable of protecting freshwater environments, wetlands, habitats supporting taonga species and the mauri of ngā wai.

The ESCP including any auxiliary Chemical Erosion Sediment Control Plan (CESCP) should also be provided to Te Parawhau for review and input in accordance with RC6.

Amendment

Retain RC21(a) and RC21(b).

Add new RC21(c):

(c) To require erosion and sediment control measures to be designed, implemented and maintained in a manner that is appropriate to Te Mano Hiwa Ariki and the surrounding taiao affected by this kaupapa, and capable of protecting waterways, wetlands, habitats supporting taonga species and the mauri of ngā wai.

RC22 The ESCP shall include the following information:

(a) A description of structural and non-structural ESC measures to be installed prior to and during all Project Works for representative parts of the Project;

Review comment

The condition should apply to both Establishment Works and Project Works. Significant erosion and sediment generating activities may occur during Establishment Works, including vegetation clearance, haul road construction, establishment compounds and access tracks.

Te Parawhau considers that erosion and sediment control measures should be designed not only to manage sediment discharges, but also to protect waterways, wetlands, habitats supporting taonga species and the mauri of ngā wai. The ESCP should identify how proposed measures will achieve these outcomes.

Amendment

(a) A description of structural and non-structural ESC measures to be installed prior to and during all Establishment Works and Project Works, including how those measures will protect waterways, wetlands, habitats supporting taonga species and the mauri of ngā wai;

(b) Procedures for:

(i) Ensuring advance warning of a Trigger Event;

(ii) Decommissioning ESC measures;

(iii) Determining the staging and sequencing of earthworks; and

(iv) Establishing and defining minor changes to ESC measures, which would not require further certification by the Council prior to implementation.

Review Comment

Te Parawhau supports the inclusion of procedures relating to erosion and sediment control. However, the proposed condition focuses on operational processes and does not provide sufficient recognition of monitoring, adaptive management and protection of freshwater values.

Technical reviews undertaken by Te Parawhau SMEs and the Department of Conservation consistently identify the need for clearly defined responses when erosion and sediment control measures are not achieving the required outcomes. The ESCP should therefore identify monitoring requirements, adaptive management responses and notification procedures where Trigger Events occur or sediment controls fail.

Te Parawhau is also concerned that clause (iv) may allow changes to ESC measures without adequate oversight where those changes could affect waterways, wetlands, habitats supporting taonga species or the mauri of ngā wai.

Amendment

RC22(b) shall be amended as follows:

(b) Procedures for:

(i) Ensuring advance warning of a Trigger Event;

(ii) Monitoring ESC measures and sediment discharges;

(iii) Implementing adaptive management measures where monitoring demonstrates that ESC outcomes are not being achieved;

(iv) Decommissioning ESC measures;

(v) Determining the staging and sequencing of earthworks; and

(vi) Establishing and defining minor changes to ESC measures, provided that any change that may affect waterways, wetlands, habitats supporting taonga species or the mauri of ngā wai shall be provided to Te Parawhau for review and input prior to implementation.

(c) Incident management protocols;

Review Comment

Te Parawhau supports the inclusion of incident management protocols. However, the condition should recognise that incidents may adversely affect waterways, wetlands, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai.

The term "incident" is not defined and provides insufficient certainty regarding the circumstances that trigger the incident management protocols. Given the potential effects of Establishment Works and Project Works on waterways, wetlands, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai, the condition should clearly identify the types of incidents to which the protocols apply and the required response actions.

Incident management protocols should not be limited to sediment and contamination events. The Project has the potential to adversely affect taonga species, their habitats and indigenous fauna protected under the Wildlife Act 1953. Incident management procedures should therefore include responses to mortality, injury or adverse effects on taonga species and indigenous fauna protected under the Wildlife Act 1953.

Technical reviews undertaken by Te Parawhau SMEs and the Department of Conservation also emphasise the importance of clearly defined response procedures, monitoring, corrective actions and adaptive management where environmental incidents occur or environmental outcomes are not being achieved.

Amendment

RC22(c) shall be amended as follows:

Incident management protocols shall be included and implemented for responding to:

(i) fuel spills;

(ii) hazardous substance spills;

(iii) sediment discharges;

(iv) concrete leachate discharges;

(v) failure of erosion and sediment control measures;

(vi) unauthorised discharges to waterways or wetlands;

(vii) fish mortality events;

(viii) Destruction of, or disturbance to, a freshwater fish spawning area, including activities that disturb freshwater fish spawning or make an area less suitable for spawning;

(ix) frog mortality events; and

(ix) mortality, injury or adverse effects on taonga species and indigenous fauna protected under the Wildlife Act 1953 including damage to or destruction of habitat supporting those species; and

(xi) Unauthorised entry of machinery into wetlands, waterways, riparian margins or freshwater habitats, or mechanical damage to wetlands, waterways, riparian vegetation or habitats supporting taonga species.

(d) Details of a Suitably Qualified Person who will be contactable at all times to manage the ESC measures and all other staff who have responsibilities and decision-making roles in relation to ESC measures (including chemical treatment systems) and associated works;

Review Comment

The condition should require a Suitably Qualified and Experienced Person rather than a Suitably Qualified Person. Erosion and sediment control failures have the potential to adversely affect waterways, wetlands, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai.

Te Parawhau considers that the person responsible for the implementation, monitoring and management of erosion and sediment control measures should have relevant experience and expertise in erosion and sediment control, freshwater management and environmental monitoring.

The condition should identify a Suitably Qualified and Experienced Person responsible for implementation, monitoring and management of ESC measures. The condition should also clearly identify responsibility, decision-making authority, contact details and lines of communication for the management of erosion and sediment control measures, Trigger Events, environmental incidents, corrective actions and notification requirements.

Amendment

RC22(d) shall be amended as follows:

(b) Details of a Suitably Qualified and Experienced Person responsible for the implementation, monitoring and management of ESC measures, including their contact details, and all other staff who have responsibilities and decision-making roles in relation to ESC measures (including chemical treatment systems), environmental incidents and associated works.

The ESCP shall identify lines of communication, responsibilities and decision-making authority for the implementation of ESC measures, response to Trigger Events, environmental incidents, corrective actions and notification procedures.

(e) A Chemical Treatment Management Plan (ChemTMP) which shall include the details outlined in **Appendix [C]**.

Review Comment

Chemical treatment systems have the potential to adversely affect waterways, wetlands, freshwater habitats, taonga species and the mauri of ngā wai if they are not appropriately selected, operated, monitored and maintained.

Te Parawhau considers that the ChemTMP should clearly identify the chemicals proposed for use, bench-testing results, application dose methodology and dosage rates, treatment triggers, description of receiving environments and potentially sensitive receptors , monitoring requirements and contingency measures for responding to changes in water quality or receiving-environment conditions as well as spills or inappropriate dosing.The ChemTMP should also demonstrate that the proposed chemicals and treatment methods will not result in adverse effects on waterways, wetlands, freshwater habitats, taonga species or the mauri of ngā wai.

Dose rates shall not be prescribed generically but shall be established through site-specific bench testing of representative soils and sediment. Treatment shall be monitored to ensure that chemical addition does not result in unacceptable changes in pH or residual aluminium or other contaminants in the discharge.

The ChemTMP must incorporate a procedural pathway to maintain consistency with any updated freshwater guideline values or guidance to protect freshwater ecosystems or NZ species during the extended lifetime of the project and/ or consent e.g. ANZECC DGVs

The ChemTMP should not be limited to compliance with Appendix [C] and should be provided to Te Parawhau for review and input in accordance with RC6.

Amendment

RC22(e) shall be amended to read as follows:

RC22(e) A Chemical Treatment Management Plan (ChemTMP), prepared in accordance with Appendix [C] and provided to Te Parawhau for review and input in accordance with RC6, which shall include:

(i) Details of all chemicals proposed for use;

(ii) Site-specific bench testing of representative soils and sediment to determine appropriate treatment methodologies, treatment triggers and dosage rates;

(iii) Application methods, dosage rates and treatment triggers based on the results of bench testing;

(iv) Identification of all waterways, wetlands, freshwater environments, receiving environments and sensitive receptors that may be directly or indirectly affected by chemical treatment activities;

(v) Measures to avoid adverse effects on waterways, wetlands, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai;

(vi) Monitoring and reporting requirements for chemical treatment systems and associated discharges, including monitoring of pH, residual aluminium and any other contaminants relevant to the treatment system;

(vii) Incident response procedures for treatment system failures, spills, inappropriate dosing, unauthorised discharges and exceedances of performance standards;

(viii) Adaptive management measures and corrective actions where monitoring demonstrates that treatment systems are not achieving the required outcomes or are resulting in adverse effects on receiving environments;

(ix) Evidence, supported by bench testing, monitoring and technical assessment, demonstrating that the proposed chemicals and treatment methodologies are suitable for use and capable of achieving the required treatment outcomes without causing adverse effects on freshwater environments, habitats supporting taonga species or identified sensitive receptors; and

(x) A process for review and amendment of the ChemTMP where updated guidance, standards or freshwater environmental guideline values become available during the life of the Project.

(f) A Continuous Improvement Programme (CIP) to plan for continuous improvement as to the effectiveness of the ESC measures employed on Site, which must include the requirements outlined in **Appendix [C]**.

Review Comment:

Te Parawhau supports the concept of continuous improvement in relation to erosion and sediment control measures. However, improvement should not be limited to the operational efficiency or performance of erosion and sediment control devices. It should also respond to monitoring of receiving environments, waterways, wetlands, habitats supporting taonga species and the effectiveness of measures implemented to protect the mauri of ngā wai and the wider taiao.

The purpose of the Continuous Improvement Programme should be to improve outcomes for waterways, wetlands, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai, ensuring the taiao is protected from adverse effects associated with Establishment Works and Project Works.

Technical reviews undertaken by Te Parawhau SMEs and the Department of Conservation identify the importance of monitoring, adaptive management, corrective actions and clearly defined response measures where erosion and sediment control measures are not achieving their intended outcomes. The CIP should therefore be linked to monitoring results, Trigger Events, ESC measure performance, incident management, receiving environment monitoring and adaptive management responses.

The CIP should also be provided to Te Parawhau for review and input in accordance with RC6.

Amendment

RC22(f) A Continuous Improvement Programme (CIP), provided to Te Parawhau for review and input in accordance with RC6, which shall include the requirements outlined in Appendix [C] and:

(i) identify performance measures for all ESC measures and environmental protection measures;

(ii) identify monitoring requirements and reporting procedures;

(iii) establish Trigger Events and response actions;

(iv) identify corrective actions where ESC measures or environmental protection measures are not achieving the required outcomes;

(v) identify adaptive management measures informed by any change in regulatory and best practice standards, monitoring results, incident reports, ESC performance and receiving environment monitoring; and

(vi) identify, implement and monitor corrective actions and improvement measures where monitoring, Trigger Events, incident reports or environmental monitoring demonstrate that the required outcomes are not being achieved.

Stabilisation

RC23 Earthworks shall be subject to stabilisation in a progressive manner as earthworks are completed. If an area is not subject to earthworks activities for a maximum 14-day period it shall be stabilised. This stabilisation shall include all earthworks activities, spoil sites and completed sections of vertical cut faces and fill batters.

Review Comment

Te Parawhau supports progressive stabilisation as an important measure to reduce erosion, sediment discharges and adverse effects on waterways, wetlands, freshwater habitats, habitats supporting taonga species and the mauri of te taiao.

The condition should recognise that exposed earthworks have the potential to adversely affect receiving environments well before the expiry of a 14-day period, particularly during periods of rainfall. Progressive stabilisation should therefore be undertaken as soon as practicable following completion of earthworks activities and

should be directed toward protecting waterways, wetlands, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai.

Technical reviews undertaken by Te Parawhau SMEs and the Department of Conservation emphasise the importance of avoiding sediment discharges at source and implementing proactive measures before adverse effects occur.

Amendment

RC23 Earthworks shall be progressively stabilised as soon as practicable following completion of earthworks activities.

Where an area is not subject to earthworks activities for a period exceeding 14 days, it shall be stabilised.

Stabilisation shall be undertaken in a manner that avoids erosion and sediment discharges to waterways, wetlands, freshwater habitats, habitats supporting taonga species and receiving environments.

Monitoring of stabilisation measures shall be undertaken in collaboration with Te Parawhau Hapū monitors and supported by a Suitably Qualified and Experienced Person. Monitoring results shall be provided to Te Parawhau for review and input in accordance with RC6.

This stabilisation requirement shall apply to all Establishment Works and Project Works, including all earthworks activities, spoil sites, haul roads, access tracks, completed sections of vertical cut faces and fill batters.

Winter works

RC24 Earthworks may be carried out during the winter period 1 May to 30 September inclusive provided that a winter application has been submitted to Council for certification that the application outlines:

(a) The nature of the proposed winter works, including the proposed locations;

(b) Identification of higher risk activities and locations;

(c) The proposed ESC methodologies and any additional ESCs required to manage the higher risk associated with working during the wetter winter period (e.g. chemical treatment of sediment retention ponds); and

(d) The proposed monitoring and maintenance schedule of the proposed ESC methodologies.

Review Comment

Te Parawhau acknowledges that winter works may be necessary. However, winter conditions generally increase the risk of erosion, sediment discharges and adverse effects on waterways, wetlands, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai. Te Parawhau considers that any streamworks, vegetation clearance, habitat disturbance or other

activities proposed to occur during the winter works period should be preceded by completion of all relevant ecological surveys, salvage, transfer, relocation, vegetation inspections and species management requirements required under the Resource Consent conditions, Designation conditions, Wildlife Act approvals and associated management plans. This is necessary to ensure that ecological management measures are undertaken during the appropriate seasonal windows and prior to commencement of higher-risk winter works activities.

As outlined throughout these comments, technical reviews undertaken by Te Parawhau SMEs and the Department of Conservation identify the importance of proactive planning, monitoring and adaptive management where activities have an increased risk of affecting freshwater environments. Winter works should therefore be treated as a higher risk activity requiring additional safeguards, monitoring and response measures.

The condition should ensure that winter works applications identify the values potentially affected by the works, the measures proposed to avoid adverse effects on freshwater environments and taonga species, and the actions that will be implemented where erosion and sediment control measures are not achieving the required outcomes.

The winter works application should also be provided to Te Parawhau for review and input in accordance with RC6 prior to certification.

Amendment

RC24 shall be amended as follows:

RC24 Earthworks may be carried out during the winter period 1 May to 30 September inclusive provided that an annual Winter Works Application has been submitted to Council for certification and provided to Te Parawhau for review and input in accordance with RC6.

The Winter Works Application shall outline:

(a) The nature of the proposed winter works, including the proposed locations;

(b) Identification of higher risk activities, locations and receiving environments potentially affected by the works, including waterways, wetlands, freshwater habitats and habitats supporting taonga species;

(c) The proposed ESC methodologies and any additional ESC measures required to manage the increased risks associated with winter works;

(d) The proposed monitoring and maintenance schedule for all ESC measures;

(e) Trigger Events, response actions and adaptive management measures to be implemented where ESC measures are not achieving the required outcomes; and

(f) Procedures to avoid erosion and sediment discharges to waterways, wetlands, freshwater habitats and receiving environments, and to protect the mauri of ngā wai during winter works.

RC25 Unless earthworks during the winter periods been certified by the Council monitoring team in a particular area in accordance with Condition [RC24], all areas shall be stabilised in accordance with Condition [RC25].

Review Comment

Te Parawhau supports stabilisation of disturbed areas during the winter period to reduce the risk of erosion and sediment discharges to waterways, wetlands, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai.

The condition appears to contain a drafting error and it is unclear whether the reference is intended to be to Condition RC24 or another condition. As currently drafted, the condition lacks certainty and is difficult to interpret and enforce.

Given the heightened risk of erosion and sediment discharges during winter, areas not subject to an approved Winter Works Application should be stabilised to avoid adverse effects on waterways, wetlands, receiving environments, taonga species and the wider taiao.

Te Parawhau also considers that any area proposed to remain unstabilised during the winter period should be specifically identified and justified within the Winter Works Application. The application should identify the location and extent of the area, explain why stabilisation is not proposed, assess the potential risks to waterways, wetlands, habitats supporting taonga species and the mauri of ngā wai, and identify the monitoring, contingency and adaptive management measures that will be implemented to avoid adverse effects. This information should be provided to Te Parawhau for review and input in accordance with RC6.

Amendment

RC25 shall be amended as follows:

RC25 Unless earthworks within a particular area are authorised under a certified Winter Works Application approved in accordance with RC24, all disturbed areas shall be stabilised in accordance with RC23.

Where an area is proposed to remain unstabilised during the winter period, the Winter Works Application shall:

(a) identify the location and extent of the area proposed to remain unstabilised;

(b) provide a detailed explanation as to why stabilisation cannot be undertaken;

(c) identify the potential adverse effects on waterways, wetlands, freshwater habitats, habitats supporting taonga species, receiving environments and the mauri of ngā wai;

(d) identify the erosion and sediment control measures proposed to avoid adverse effects;

(e) identify the monitoring, maintenance, contingency and adaptive management measures that will be implemented; and

(f) be provided to Te Parawhau for review and input in accordance with RC6.

Construction Erosion and Sediment Control Plans

RC26 A CESCP shall be prepared before starting land disturbance activities in any area of the Site. The purpose of the CESCP shall be to demonstrate how compliance with the ESCP will be achieved in relation to the specific Project Works being undertaken on the relevant area of the Site.

Review Comment

The condition should apply to both Establishment Works and Project Works. Significant land disturbance activities, including vegetation clearance, haul road construction, access tracks, spoil sites, stockpiles and establishment compounds may occur during Establishment Works and have the potential to adversely affect waterways, wetlands, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai.

Te Parawhau considers that a CESCP should not be limited to demonstrating compliance with the ESCP. It should also clearly identify how erosion and sediment discharges will be avoided and how freshwater environments, wetlands, habitats supporting taonga species and the mauri of ngā wai will be protected within the area subject to the CESCP.

The CESCP should also be provided to Te Parawhau for review and input in accordance with RC6 prior to certification and implementation.

Amendment

RC26 A Construction Erosion and Sediment Control Plan (CESCP) shall be prepared at least 40 Working Days prior to commencement of Establishment Works or Project Works involving land disturbance activities within any area of the Designation area and shall be provided to Te Parawhau for review and input in accordance with RC6.

The purpose of the CESCP shall be to demonstrate how compliance with the ESCP will be achieved in relation to the specific Establishment Works and Project Works being undertaken within the relevant area of the designation area, including the measures that will be implemented to:

(a) avoid erosion and sediment discharges;

(b) protect waterways, wetlands, freshwater habitats, habitats supporting taonga species and receiving environments;

(c) maintain the mauri of te taiao and ngā wai; and

(d) respond to Trigger Events, incidents and monitoring results through adaptive management measures.

RC27 The CESCP shall be prepared taking into account the ESCP and the ESC standards in **Appendix [C]**. Where practicable, the CESCP shall be in a plan format and align with the associated risk of the specific area of works or the specific activity to which the CESCP applies. The CESCPs shall include the following information:

Review Comment

Te Parawhau considers that a CESCP should do more than simply "take into account" the ESCP and the ESC standards contained within Appendix [C]. The CESCP should demonstrate how the outcomes sought by the ESCP will be achieved within the specific area subject to Establishment Works and Project Works.

The phrase "where practicable" introduces uncertainty and may result in inconsistent application of erosion and sediment control measures across the Project and as such is not supported by Te Parawhau.

Given the potential effects of erosion and sediment discharges on waterways, wetlands, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai, the CESCP should be prepared in a manner that reflects the actual risks, receiving environments and values present within the area to which it applies.

Te Parawhau considers that CESCPs must identify how waterways, wetlands, freshwater habitats, habitats supporting taonga species and the wider taiao will be protected from erosion and sediment discharges. These environments are interconnected components of te taiao and contribute to the mauri of ngā wai and the wellbeing of taonga species that rely upon them.

The CESCP should also be provided to Te Parawhau for review and input in accordance with RC6.

(a) Earthwork and streamwork construction methodologies (taking account of any unexpected conditions such as changes in geology);

Review Comment

The CESCP should identify how earthwork and streamwork methodologies will avoid adverse effects on waterways, wetlands, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai.

Amendment

(a) Earthwork and streamwork construction methodologies, including measures to avoid adverse effects on waterways, wetlands, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai, and taking account of unexpected conditions including changes in geology;

(b) Identification of all discharge points to land or surface water;

Review Comment

Te Parawhau supports identification of all discharge points. However, the condition should also identify the receiving environment and values potentially affected by each discharge.

Amendment

(b) Identification of all discharge points to land or surface water, the receiving environments associated with those discharge points, and any waterways, wetlands, freshwater habitats or habitats supporting taonga species that may be affected;

(c) Identification of high risk areas for sediment generation and implementation of ESC measures appropriate to the identified-risk area;

Review Comment

Higher risk areas should be identified by a Suitably Qualified and Experienced Person using a risk-based assessment that considers the sensitivity of receiving environments, waterways, wetlands, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai. The assessment and proposed management measures should be provided to Te Parawhau for review and input in accordance with RC6.

Amendment

(c) A Suitably Qualified and Experienced Person shall identify areas where erosion, sediment discharges or sediment-laden runoff from Establishment Works and Project Works may enter or adversely affect waterways, wetlands, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai.

The CESCP shall identify the erosion and sediment control measures that will be implemented to avoid those adverse effects.

The assessment and proposed management measures shall be provided to Te Parawhau for review and input in accordance with RC6.

(d) Details of the proposed work sequence and procedures to prioritise non- structural ESC elements that promote the reduction of sediment generation and yield;

Review Comment

Te Parawhau supports the use of non-structural erosion and sediment control measures as a means of avoiding erosion and sediment discharges at their source, rather than relying on treatment or capture after sediment has already been generated.

The proposed work sequence should be planned and implemented to avoid erosion and sediment discharges to waterways, wetlands, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai. This includes sequencing works

to minimise exposed earthworks, disturbed surfaces and discharge risks during Establishment Works and Project Works.

The CESCP should clearly identify the work sequence and procedures that will be implemented to avoid erosion and sediment generation and protect the receiving environment.

Amendment

(d) Details of the proposed work sequence and procedures that:

(i) avoid erosion and sediment generation;

(ii) minimise the extent and duration of exposed earthworks;

(iii) implement non-structural erosion and sediment control measures before structural erosion and sediment control measures are relied upon; and

(iv) avoid erosion and sediment discharges to waterways, wetlands, freshwater habitats and habitats supporting taonga species.

(e) Identification of any specific non-structural elements to be implemented including identification of specific personnel responsible for the ESC measures for the specific SSESCP area and/or activity;

Review Comment

Te Parawhau supports the identification of non-structural erosion and sediment control measures as these measures seek to avoid erosion and sediment generation at source, reducing the risk of adverse effects on waterways, wetlands, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai.

The condition should not be limited to identifying the measures that will be implemented. It should also clearly identify the persons responsible for implementation, monitoring, maintenance, reporting and decision-making in relation to the CESCP.

Clear lines of responsibility and accountability are important to ensure erosion and sediment control measures are effectively implemented and maintained throughout Establishment Works and Project Works, and that timely responses occur where Trigger Events, incidents or ESC failures arise.

Amendment

(e) Identification of all non-structural erosion and sediment control measures to be implemented, including:

(i) the personnel responsible for implementation, monitoring, maintenance and reporting of those measures;

(ii) the personnel responsible for decision-making where Trigger Events, incidents or ESC measure failures occur; and

(iii) the lines of communication and escalation procedures relating to the CESCP area and/or activity.

(f) Design specifications for all ESC measures including supporting calculations where appropriate, contributing catchment area, retention volume of structure (dead storage and live storage measured to the top of the primary spillway); shape of structure (dimensions of structure); safety and access, position of inlets and outlets; stabilisation of the structure, and maintenance provisions;

Review Comment

Te Parawhau supports the requirement for design specifications for erosion and sediment control measures. However, the condition currently focuses on engineering design requirements and does not clearly identify how those measures will protect waterways, wetlands, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai.

Technical reviews undertaken by Te Parawhau SMEs and the Department of Conservation identify the importance of ensuring erosion and sediment control measures are designed, implemented and maintained in a manner that protects receiving environments and responds appropriately where measures are not achieving their intended outcomes.

The condition should therefore require design specifications to identify:

- the receiving environments, taiao, potentially affected by the works, the performance standards to be achieved, and the monitoring and maintenance requirements necessary to ensure the measures remain effective throughout Establishment Works and Project Works.

Amendment

Design specifications for all ESC measures, including:

(i) supporting calculations;

(ii) contributing catchment area;

(iii) retention volume of the structure (dead storage and live storage measured to the top of the primary spillway);

(iv) dimensions and configuration of the structure;

(v) safety and access provisions;

(vi) inlet and outlet locations;

(vii) stabilisation measures;

(viii) maintenance requirements;

(ix) monitoring requirements and performance standards;

(x) identification of the waterways, wetlands, freshwater habitats and receiving environments that may be affected by the ESC measure; and

(xi) demonstration of how the ESC measure will avoid erosion and sediment discharges to waterways, wetlands, freshwater habitats and habitats supporting taonga species.

(g) A plan showing contours, cut and fill operations, the location of all ESC measures, and the location of catchment boundaries relevant to the ESC measures on the Site; and

Review Comment

Te Parawhau supports the requirement for ESC plans showing erosion and sediment control measures. However, this condition currently focuses on works and control measures and does not require identification of the freshwater environments, wetlands, habitats supporting taonga species and receiving environments that the controls are intended to protect.

As outlined throughout our review, technical reviews undertaken by Te Parawhau SMEs and the Department of Conservation identify concerns regarding the identification, mapping and assessment of waterways, wetlands and freshwater habitats potentially affected by the Project. Te Parawhau considers that the CESCP plans should clearly identify these values so that erosion and sediment control measures can be assessed in relation to the environments they are intended to protect.

The plans should also identify areas of cultural, ecological or freshwater significance identified by Te Parawhau where those areas may be affected by Establishment Works or Project Works.

Amendment

(g) A plan showing:

(i) contours;

(ii) cut and fill operations;

(iii) the location of all ESC measures;

(iv) catchment boundaries relevant to the ESC measures;

(v) waterways, wetlands, freshwater habitats and receiving environments that may be affected by the works;

(vi) habitats supporting taonga species;

(vii) any cultural, freshwater or ecological monitoring areas identified through the CVMP or through engagement with Te Parawhau that may be affected by the works; and

(viii) the ESC measures proposed to protect the identified waterways, wetlands, freshwater habitats, receiving environments and habitats supporting taonga species.

(h) Chemical treatment design and details specific to the stage, consistent with the ChemTMP.

Review Comment

Te Parawhau acknowledges that chemical treatment, including flocculation, may form part of an erosion and sediment control system. However, chemical treatment is only supported where it can be demonstrated that the proposed chemicals, treatment methodologies and associated discharges will not adversely affect the taiao, ngā wai, wetlands, freshwater habitats, habitats supporting taonga species, receiving environments or the mauri of ngā wai.

Te Parawhau is particularly concerned that sediment retention ponds and associated freshwater environments may be utilised by taonga species, including Hochstetter's frogs and other indigenous fauna. The condition therefore requires greater certainty regarding the chemicals proposed for use and their potential effects on freshwater environments and species.

As currently drafted, the condition is overly generic and does not identify the information necessary to assess whether chemical treatment systems are appropriate for the receiving environment. The CESCP should identify the chemicals proposed for use, application methods, dosage rates, treatment triggers, receiving environments that may be affected, monitoring requirements, contingency measures and the actions that will be implemented if treatment systems are not achieving the intended outcomes.

The CESCP should also demonstrate that chemical treatment activities will not result in adverse effects on the taiao, ngā wai, freshwater habitats, habitats supporting taonga species or the mauri of ngā wai and should be provided to Te Parawhau for review and input in accordance with RC6.

Amendment.

(h) Chemical treatment design and details specific to the stage, consistent with the ChemTMP, including:

(i) the chemicals proposed for use;

(ii) application methods, dosage rates and treatment triggers;

(iii) identification of all waterways, wetlands, freshwater habitats and receiving environments that may be directly or indirectly affected by chemical treatment activities;

(iv) monitoring and reporting requirements;

(v) Contingency measures, corrective actions and adaptive management measures where monitoring identifies that a treatment system is not meeting the performance standards, treatment objectives or monitoring trigger levels specified in the ChemTMP, or where changes to relevant regulatory requirements, environmental standards, contaminant guideline values or recognised industry best practice necessitate amendment of the ChemTMP;

(vi) procedures for responding to treatment system failures, unauthorised discharges and exceedances of performance standards; and

(vii) demonstration that the proposed chemicals, treatment methodologies and associated discharges will not adversely affect the taiao, ngā wai, wetlands, freshwater habitats, habitats supporting taonga species, receiving environments or the mauri of ngā wai.

GROUNDWATER

Conditions RC28-RC31 apply to Consent RC03. Existing

water users

RC28 The Project shall be designed to minimise, as far as practicable, groundwater drawdown at any consented water supply well that exists prior to the commencement of this consent. If groundwater drawdown exceeds 1 m at any consented water supply well, the Consent Holder shall offer an alternative water supply to the landowner where the existing water supply is located.

Review Comment

Te Parawhau is concerned that the condition focuses solely on consented water supply wells and does not recognise the wider relationship between groundwater, ngā wai, wetlands, freshwater habitats, habitats supporting taonga species and the mauri of the receiving environment.

Technical reviews undertaken by Te Parawhau SMEs identify concerns regarding groundwater drawdown effects and the potential for groundwater level changes to adversely affect wetlands, spring-fed systems, stream flows, freshwater habitats and ecological values. The condition should therefore address more than the provision of an alternative water supply to individual well owners.

The phrase "as far as practicable" introduces uncertainty and may result in avoidable groundwater effects occurring. Te Parawhau does not support the use of this qualifier.

The condition should require groundwater drawdown effects to be avoided and should include groundwater monitoring, adaptive management and contingency measures where groundwater drawdown has the potential to adversely affect waterways, wetlands, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai.

Te Parawhau is also unclear as to the basis for the proposed 1 metre groundwater drawdown trigger. The application does not demonstrate why a drawdown of up to one metre is considered acceptable, nor whether lesser drawdowns may adversely affect wetlands, spring-fed systems, waterways, freshwater habitats, habitats supporting taonga species or the mauri of ngā wai.

Te Parawhau does not support reliance on the proposed 1 metre groundwater drawdown trigger in the absence of hydrogeological evidence demonstrating that the threshold is protective of waterways, wetlands, freshwater habitats, habitats

supporting taonga species and the mauri of ngā wai. Any trigger level should be supported by hydrogeological evidence and should not be limited to effects on consented water supply wells.

Groundwater monitoring results should be provided to Te Parawhau for review and input in accordance with RC6.

Amendment

RC28 The Project shall be designed and implemented to avoid adverse groundwater drawdown effects on waterways, wetlands, freshwater habitats, habitats supporting taonga species, the mauri of ngā wai and consented water supply wells.

A groundwater monitoring programme shall be implemented prior to and throughout Establishment Works and Project Works.

Groundwater monitoring locations, trigger levels, monitoring requirements, contingency measures and adaptive management responses shall be identified by a Suitably Qualified and Experienced Hydrogeologist and provided to Te Parawhau for review and input in accordance with RC6.

Where groundwater monitoring identifies that a groundwater drawdown trigger level has been exceeded, contingency measures and adaptive management responses shall be implemented immediately.

Where groundwater monitoring identifies adverse effects on waterways, wetlands, freshwater habitats, habitats supporting taonga species or consented water supply wells, remedial measures shall be implemented immediately.

Groundwater monitoring results shall be provided to Te Parawhau for review and input in accordance with RC6.

Settlement

RC29 The design and construction of the Project shall ensure settlement effects on National Grid Transmission Assets and the Gas Pipeline (where operational) are:

(a) No more than 50mm total settlement; and

(b) Within 1/200 and 1/300 differential settlement.

Review Comment

Te Parawhau acknowledges the need to manage settlement effects on National Grid Transmission Assets and the Gas Pipeline. However, the condition is limited to infrastructure assets and does not recognise the potential for settlement effects associated with groundwater drawdown to adversely affect waterways, wetlands, spring-fed systems, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai.

Technical reviews undertaken by Te Parawhau SMEs identify concerns regarding groundwater drawdown and the potential for groundwater level changes to adversely affect the wider freshwater environment. Effects on waterways, wetlands, spring-fed

systems, freshwater habitats and habitats supporting taonga species should be afforded the same level of consideration as effects on infrastructure assets.

For consistency with other conditions, the scope of the condition should clearly identify whether it applies to Establishment Works, Project Works or both. Te Parawhau considers that settlement effects arising from either Establishment Works or Project Works have the potential to adversely affect waterways, wetlands, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai and should therefore be captured by this condition.

The condition should require monitoring and management of groundwater-related settlement effects on waterways, wetlands, spring-fed systems, freshwater habitats and habitats supporting taonga species, in addition to the protection of infrastructure assets.

Groundwater and settlement monitoring information should be provided to Te Parawhau for review and input in accordance with RC6.

Amendment

RC29 The design and construction of the Project shall ensure settlement effects on National Grid Transmission Assets and the Gas Pipeline (where operational) are:

(a) No more than 50mm total settlement; and

(b) Within 1/200 and 1/300 differential settlement.

(c) Settlement effects associated with groundwater drawdown shall be monitored by a Suitably Qualified and Experienced Hydrogeologist to identify any adverse effects on waterways, wetlands, spring-fed systems, freshwater habitats and habitats supporting taonga species.

(d) Monitoring shall be undertaken in collaboration with Te Parawhau Hapū monitors where monitoring activities are undertaken within areas of relevance to Te Parawhau.

(e) Where monitoring identifies adverse effects on waterways, wetlands, spring-fed systems, freshwater habitats or habitats supporting taonga species, remedial measures shall be implemented immediately.

(f) Groundwater and settlement monitoring results shall be provided to Te Parawhau for review and input in accordance with RC6.

RC30 Compliance with Conditions [RC28] and [RC29] shall be demonstrated by a numerical groundwater model as required by Condition [RC31].

Review Comment

Te Parawhau is concerned that compliance with RC28 and RC29 is proposed to be demonstrated solely through a numerical groundwater model. Groundwater models are predictive tools and are dependent on assumptions, input data and calibration methodologies. Actual groundwater behaviour and environmental responses may differ from modelled outcomes.

Technical reviews undertaken by Te Parawhau SMEs identify uncertainty regarding groundwater drawdown effects and the potential for groundwater level changes to adversely

affect waterways, wetlands, spring-fed systems, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai.

Te Parawhau considers that compliance with RC28 and RC29 should not rely solely on modelled predictions. Groundwater monitoring and settlement monitoring should be undertaken to verify model predictions and identify actual effects occurring within the receiving environment.

Where monitoring results differ from model predictions, monitoring results should prevail and adaptive management and contingency measures should be implemented.

The groundwater model, supporting assumptions, calibration data, monitoring results and any model updates should be provided to Te Parawhau for review and input in accordance with RC6.

Amendment

RC30 shall be amended as follows:

RC30 Compliance with Conditions RC28 and RC29 shall be demonstrated through:

(a) a numerical groundwater model prepared and maintained by a Suitably Qualified and Experienced Hydrogeologist;

(b) groundwater monitoring and settlement monitoring undertaken in accordance with RC28 and RC29;

(c) comparison of monitoring results against model predictions;

(d) implementation of adaptive management and contingency measures where monitoring identifies effects that exceed model predictions or trigger levels; and

(e) provision of the groundwater model, model assumptions, calibration data, monitoring results and any model updates to Te Parawhau for review and input in accordance with RC6.

RC31 At least 40 Working Days before the start of any Major Cuts, a report prepared by a Suitably Qualified Person shall be provided to Council for certification that it:

(a) Includes detailed design drawings of any Major Cut; and

(b) Demonstrates (through use of a numerical groundwater model and a settlement model, where applicable) that:

(i) The requirement in Condition [RC28] has been met. If an alternative water supply is offered, records of any consultation undertaken with the relevant well owner shall also be provided; and

(ii) The requirements in Condition [RC29] have been met. Records of any engagement undertaken with Transpower or First Gas must also be provided.

Review Comment

Te Parawhau supports the requirement for a detailed assessment prior to commencement of any Major Cut. However, the condition relies primarily on numerical groundwater and settlement modelling and does not provide sufficient certainty that actual environmental effects on waterways, wetlands, spring-fed systems, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai will be identified and managed.

Technical reviews undertaken by Te Parawhau SMEs identify uncertainty regarding groundwater drawdown effects and the limitations associated with predictive modelling. Te Parawhau considers that modelling should be supported by groundwater monitoring, settlement monitoring, adaptive management and contingency measures.

The condition also requires records of consultation with affected well owners, Transpower and First Gas, but does not provide an equivalent role for Te Parawhau despite the potential for groundwater drawdown and settlement effects to adversely affect ngā wai, wetlands, freshwater habitats, taonga species and the wider taiao.

The report should therefore include an assessment of potential effects on waterways, wetlands, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai and should be provided to Te Parawhau for review and input in accordance with RC6 prior to certification.

Amendment

RC31 shall be reworded as follows:

RC31 At least 40 Working Days before the commencement of any Major Cut, a report prepared by a Suitably Qualified and Experienced Hydrogeologist shall be provided to Council for certification and to Te Parawhau for review and input in accordance with RC6.

The report shall:

(a) Include detailed design drawings of any Major Cut;

(b) Demonstrate, through use of a numerical groundwater model, settlement model, groundwater monitoring data and settlement monitoring data (where applicable), that:

(i) the requirements of RC28 have been met;

(ii) the requirements of RC29 have been met; and

(iii) assess potential groundwater drawdown and settlement effects on waterways, wetlands, spring-fed systems, freshwater habitats and habitats supporting taonga species and identify measures to avoid those effects and protect the mauri of waterways.

(c) Identify groundwater drawdown trigger levels, monitoring requirements, contingency measures and adaptive management responses;

(d) Include records of consultation undertaken with any affected well owner, together with any proposed mitigation or alternative water supply arrangements;

(e) Include records of engagement undertaken with Transpower and First Gas, where relevant; and

(f) Include a summary of engagement undertaken with Te Parawhau, identify matters raised by Te Parawhau, and outline how those matters have been addressed, or where recommendations have not been adopted, the reasons why.

WORKS IN WATERCOURSES, FRESHWATER AND WETLAND ECOLOGY

Conditions RC32-RC49 apply to Consent RC02 and RC05.

RC32 The Waihoihoi main stem Watercourse shown on **Appendix [Bx]** must either be:

(a) Bridged; or

(b) Realigned or culverted in accordance with Conditions RC[35] to RC[37].

Review Comment

Te Parawhau strongly supports the protection of the Waihoihoi Awa. The Waihoihoi is not simply a drainage feature or engineering constraint. It is part of the wider freshwater network that contributes to the health of ngā wai, supports freshwater habitats and taonga species, maintains ecological connectivity and sustains the mauri of the receiving environment.

The condition currently presents bridging, realignment and culverting as equivalent options. Te Parawhau does not support this approach. Realignment and culverting have the potential to adversely affect stream function, natural character, ecological connectivity, fish passage, frog passage, freshwater habitats, habitats supporting taonga species and the mauri of the Waihoihoi Awa.

Te Parawhau considers that bridging should be the preferred outcome and that realignment or culverting should only be considered where it can be demonstrated that bridging cannot be achieved and where adverse effects on the Waihoihoi Awa can be avoided.

Technical reviews undertaken by Te Parawhau SMEs and the Department of Conservation emphasise the importance of maintaining ecological connectivity, stream function and aquatic habitat values. Te Parawhau therefore seeks greater certainty that adverse effects on the Waihoihoi Awa will be avoided.

Amendment

RC32 The Waihoihoi main stem Watercourse shown on Appendix [Bx] shall be bridged.

Where the Consent Holder proposes that bridging cannot be achieved, a report prepared by a Suitably Qualified and Experienced Freshwater Ecologist shall be

provided to Council and Te Parawhau at least 40 Working Days prior to certification demonstrating:

(a) why bridging cannot be achieved;

(b) why realignment or culverting is required;

(c) how adverse effects on stream function, ecological connectivity, fish passage, frog passage, freshwater habitats, habitats supporting taonga species and the mauri of the Waihoihoi Awa will be avoided; and

(d) the monitoring, contingency and adaptive management measures that will be implemented.

Any proposed realignment or culverting shall be subject to certification by Council following review and input from Te Parawhau in accordance with RC6.

RC33 For any loss of length of perennial Watercourse identified on **Appendix [Bx]** (ie. a length of Watercourse that is not realigned or culverted in accordance with Conditions [RC36] and [RC37]), the Consent Holder must undertake riparian enhancement works outlined in Condition [RC35] where:

(SEV-ImpEx – SEVImpPost) x length of perennial Watercourse to be lost

must equal

(SEVPostRip – SEVPreRip) x length of permanent Watercourse where riparian works are to occur

Where:

- SEV-ImpEx is the habitat functionality (SEV) value before Project Works of the perennial Watercourse to be lost (as discussed in Condition [RC34])).
- SEV-ImpPost is the predicted SEV value after Project Works of the perennial Watercourse to be lost.
- SEV-PreRip is the SEV value of the permanent Watercourse where riparian works are to occur.
- SEV-PostRip is the predicted SEV value for the permanent Watercourse where riparian works are to occur following those works.

For the purpose of this condition, SEV value is to be calculated in accordance with Technical Report 2011/009 Stream Ecological Valuation: a method for assessing the ecological functions of Auckland Streams (Stream SEV method).

Review Comments

The condition assumes that loss of a watercourse can be adequately compensated for through a numerical Stream Ecological Valuation (SEV) calculation and riparian enhancement undertaken elsewhere. Te Parawhau does not support this approach.

The condition relies on a Freshwater Ecology Assessment that Te Parawhau does not consider to be fit for purpose. Independent technical reviews undertaken by Bay

Ecological and the Department of Conservation identify significant deficiencies in the identification, mapping and assessment of waterways, wetlands, freshwater habitats, ecological connectivity, fish habitat, fish passage, frog habitat and freshwater ecological values. This inadequacy continues in the RC33 modification of the peer reviewed and standard ECR formula and underlying methodology. Using the current value rather than the usual potential value of an impact site in the calculation is based on unsubstantiated opinion in the Freshwater Ecology Assessment that none of the impacted waterways would likely be restored at any time in the future and is therefore without merit. In RC33 the x 1.5 multiplier of the standard ECR formula is also removed, reducing the required offsetting contribution. The 1.5x allows for time lag and risk of some failure in achieving the benefit of the offset. Neither change is accepted practice.

Te Parawhau does not accept that the Freshwater Ecology Assessment provides a reliable basis for stream loss calculations, stream realignment proposals, freshwater offsetting calculations or riparian enhancement requirements.

Additionally, RC33 as currently drafted treats stream length and SEV calculations as substitutes for ecological function. Te Parawhau does not accept that riparian enhancement undertaken elsewhere necessarily replaces stream function, fish passage, frog passage, ecological connectivity, spawning habitat, recruitment habitat, refuge habitat, freshwater habitat values, habitats supporting taonga species or the mauri of the affected waterway.

Technical reviews undertaken by Te Parawhau SMEs and the Department of Conservation also identify that ecological values and effects have been significantly underestimated and that aspects of the proposed assessment methods and offsetting calculations cannot be independently reproduced or verified. Consequently, Te Parawhau does not support the proposed SEV-based approach and does not consider it capable of adequately accounting for the actual freshwater effects of the Project.

Te Parawhau supports and requires avoidance of watercourse loss.

Amendment

RC33 shall be reworded as follows:

RC33 Perennial Watercourses shall be retained and protected.

Riparian enhancement, ecological offsetting, enhancement planting, compensation measures or SEV calculations shall not be relied upon as a substitute for avoiding the loss of perennial Watercourses.

~~RC34 For the purpose of Condition [RC33], a perennial Watercourse will be considered "lost" where a Suitably Qualified Person determines that the depth or wetted width can no longer support existing fish and macroinvertebrate communities.~~

Review Comment

Te Parawhau does not support stream loss, stream realignment, stream reclamation, stream reclamation through culverting, or activities that create, contribute to or result in the loss of a Watercourse.

The proposed definition of watercourse loss is overly narrow and relies upon a Freshwater Ecology Assessment that Te Parawhau does not consider fit for purpose. Technical reviews undertaken by Bay Ecological and the Department of Conservation identify significant deficiencies in the identification, mapping and assessment of waterways, wetlands, freshwater habitats, ecological connectivity, fish habitat, fish passage, frog habitat and freshwater ecological values.

The condition defines watercourse loss solely by reference to wetted width, depth, fish communities and macroinvertebrate communities. Te Parawhau does not accept that stream loss can be reduced to these measures alone. Stream loss may also occur through the degradation of ecological integrity, ecological connectivity, fish passage, frog passage, freshwater habitat values, habitats supporting taonga species, stream function and the mauri of waterways.

Te Parawhau does not support stream loss, stream realignment, culverting or activities that create, contribute to or result in the loss of a Watercourse. Accordingly, RC34 should be deleted.

Amendment

Delete RC34

RC35 The riparian works required by Condition [RC33] must be determined by a Suitably Qualified Person and include:

(a) Planting of indigenous vegetation for a width of 10 m on each side of the Watercourse;

(i) Be of a suitable species composition;

(ii) Be sourced from the ecological district in which it is to be planted or be otherwise eco-sourced, except where it is not practicable to do so;

(iii) Have spacing between 0.5 and 1.5 m; and

(iv) Be maintained for a period of 5 or until 80% indigenous canopy cover is achieved (whichever is earlier); and

(b) Be fenced off or subject to some other method to exclude stock.

Review Comment

RC35 assumes that riparian planting can adequately compensate for the loss of the ecosystem function of a perennial Watercourse. Te Parawhau does not support this approach.

The condition relies on a Freshwater Ecology Assessment that Te Parawhau does not consider to be fit for purpose. Independent technical reviews undertaken by Bay Ecological and the Department of Conservation identify significant deficiencies in the identification, mapping and assessment of waterways, wetlands, freshwater habitats, ecological connectivity, fish habitat, fish passage, frog habitat and freshwater ecological

values. Te Parawhau does not accept that riparian enhancement planting alone can adequately address the loss of stream function, ecological integrity, ecological connectivity or the mauri of waterways.

The proposed 10 metre riparian width is not supported by evidence and is considered insufficient to restore ecological function, freshwater habitat values, ecological connectivity, habitats supporting taonga species, ngā uara ahurea o Te Parawhau and the wider freshwater environment. Te Parawhau considers that wider riparian margins are required and should be determined through ecological assessment rather than a fixed minimum width.

The phrase "where it is not practicable to do so" introduces uncertainty and creates a discretionary pathway that may undermine eco-sourcing requirements. Te Parawhau supports the use of eco-sourced indigenous vegetation appropriate to the receiving environment.

The proposed five-year maintenance period and 80% canopy cover threshold are not considered adequate indicators of restoration success. Canopy cover alone does not demonstrate successful restoration, habitat function, ecological connectivity, taonga species habitat values, Te Mana o te Wai, Mana o te Taiao, Mana Whenua values or protection of the mauri of waterways.

Te Parawhau considers that any riparian enhancement works required under RC35 should be identified, implemented, monitored and reported through the Freshwater Management Plan. Riparian enhancement forms part of a wider freshwater ecosystem response and should not occur in isolation from freshwater habitat restoration, fish passage, frog passage, ecological connectivity, wetland management and the protection of ngā uara ahurea o Te Parawhau.

Te Parawhau supports the use of eco-sourced indigenous vegetation in principle. However, Te Parawhau is aware of instances where plants have been described as eco-sourced without clear evidence that seed source, propagation source, ecological district or local provenance requirements have been met.

Te Parawhau also considers that eco-sourcing should be verified through documented provenance records and reviewed by a Suitably Qualified and Experienced Ecologist. Indigenous species used for restoration, enhancement, mitigation or riparian planting should be appropriate to Te Mano Hiwa Ariki, Waipū and the surrounding taiao and should reflect naturally occurring indigenous vegetation communities identified through ecological assessments, vegetation surveys, Hapū reports and Cultural Values Assessments.

Riparian enhancement proposals, monitoring results and restoration outcomes should be provided to Te Parawhau for review and input in accordance with RC6.

Amendment

RC35 should be amended to read as follows:

RC35 Any riparian enhancement works required under RC33 shall be identified, implemented, monitored and reported through the Freshwater Management Plan and shall be determined by a Suitably Qualified and Experienced Freshwater Ecologist in collaboration with Te Parawhau.

The Freshwater Management Plan shall identify:

(a) Riparian restoration objectives and outcomes;

(b) Riparian widths determined through site specific ecological assessment and freshwater values rather than a fixed minimum width;

(c) Use of eco-sourced indigenous species appropriate to Te Mano Hiwa Ariki, Waipū and the surrounding taiao;

(d) Evidence of plant provenance, including seed source, collection location, nursery source and ecological district of origin, which shall be maintained and made available to Council and Te Parawhau upon request;

(e) Species composition informed by ecological assessments, vegetation surveys, NRC predicted ecosystem type mapping, Hapū reports and Cultural Values Assessments;

(f) Measures to maintain and enhance ecological integrity, ecological connectivity, fish passage, frog passage, habitats supporting taonga species, Te Mana o te Wai and the mauri of waterways;

(g) Monitoring, reporting, maintenance and replacement planting requirements;

(h) Restoration success criteria;

(i) Adaptive management triggers and corrective actions where restoration outcomes are not being achieved;

(j) Provision of monitoring and reporting information to Council and Te Parawhau in accordance with RC6; and

(k) Fencing, stock exclusion measures or other methods necessary to prevent stock access to riparian margins, freshwater habitats and restoration areas.

Watercourse realignment and culvert design

Watercourse realignment design requirements

RC36 All Watercourses realigned as part of Project Works must be designed by a Suitably Qualified Person to achieve, as far as practicable, the following outcomes:

(a) The dimensions of each realigned Watercourse (depth, width, and gradient pattern) must be similar to the reclaimed Watercourse that it replaces to achieve similar velocities, depth profiles and wetted widths;

(b) Each realigned Watercourse must have hydrological heterogeneity (pools, runs, riffles, etc) that is similar or better than the reclaimed Watercourse that it replaces. The realigned Watercourses must not have a homogenous run system;

(c) Each realigned Watercourse must have the same or better mosaic of substrates and riparian planting as the reclaimed Watercourse that it replaces;

(d) Where a Watercourse is realigned at a spoil site, the realignment shall be situated at the juncture between the spoil and natural ground; and

(e) Subject to achieving (a) – (d) above, the realigned Watercourses should provide for the conveyance of a 100-year ARI event, including adaptation for 100 years of climate change (from the date that the Project becomes operational).

Review Comment

Te Parawhau does not support stream realignment. Existing waterways should be retained and protected. Realignment does not necessarily maintain or replace the ecological, hydrological, geomorphological, habitat, cultural and mauri values of the existing waterway.

Amendment

RC36 Delete.

Stream realignment is not supported.

Permanent culvert design requirements

RC37 Where permanent culverts are installed, they must be designed and constructed to provide fish passage and benthic habitat substrate where there is intermittent or perennial habitat above the culvert:

(a) In the following Watercourses shown on **Appendix [B]**: Waihoihoi main stem, Piroa main stem, Mayflower tributary main stem, Wairau north tributary and Pine north main tributary;

(b) In all other Watercourses, unless fish passage is considered unnecessary by a Suitably Qualified Person because, prior to the Project Works commencing, there is:

(i) Limited upstream fish habitat;

(ii) Limited fish populations that require fish passage; or

(iii) There are other existing barriers to fish passage.

Review Comment

Te Parawhau acknowledges that permanent culverts may be necessary in some circumstances. However, bridges are the preferred option where waterways are crossed, as they are more likely to maintain natural stream function, ecological integrity, ecological connectivity, fish and frog passage, freshwater habitat values, habitats supporting taonga species, Te Mana o Te Wai and the mauri of waterways.

Technical reviews undertaken by Te Parawhau SMEs and the Department of Conservation identify significant concerns regarding freshwater habitat assessment, fish habitat assessment, fish passage and spawning requirements, ecological connectivity and the identification of waterways potentially affected by the Project. Te Parawhau does not support discretionary exemptions that allow fish passage requirements to be avoided based on assumptions regarding habitat availability, fish population size or existing barriers. The existence of upstream or downstream barriers does not justify creating additional barriers to fish passage, frog passage or ecological connectivity.

Te Parawhau considers that fish passage requirements should be consistent with the Resource Management (National Environmental Standards for Freshwater Management) Regulations 2020 and the New Zealand Fish Passage Guidelines. These standards provide a recognised benchmark for maintaining fish passage and ecological connectivity and should apply to all permanent culverts.

Te Parawhau does not support the piping or enclosure of waterways. Permanent culverts should not be used as a substitute for retaining natural waterways or providing bridging solutions. As drafted, the condition does not place any meaningful limitation on the extent of stream enclosure that may occur and could allow significant lengths of watercourse to be enclosed while remaining technically compliant.

Where waterways are crossed, bridges are the preferred solution. Permanent culverts should only be used where it can be demonstrated that they avoid adverse effects on Te Mana o Te Wai, freshwater habitat values, habitats supporting taonga species, ecological integrity, ecological connectivity and the mauri of the affected waterway.

Where a permanent culvert is proposed, the assessment supporting the use of a culvert should be prepared by a Suitably Qualified and Experienced Freshwater Ecologist and provided to Te Parawhau for review and input in accordance with RC6. Te Parawhau considers that decisions relating to stream enclosure, ecological connectivity, fish passage, frog passage, Te Mana o Te Wai and the mauri of waterways should not be made without Te Parawhau involvement.

Amendment

RC37 should be amended as follows:

RC37 Permanent culverts shall only be used where it can be demonstrated that:

(a) A bridge cannot be used;

(b) The culvert complies with the conditions in regulation 70 of the Resource Management (National Environmental Standards for Freshwater) Regulations 2020

(c) The proposal has been assessed by a Suitably Qualified and Experienced Freshwater Ecologist; and;

(d) (The assessment has been provided to Council and Te Parawhau for review and input in accordance with RC6.

RC38 The permanent culverts shall be designed by a Suitably Qualified Persons to achieve, as far as practicable, the following outcomes:

(a) The width of the culvert must be wider than the Watercourse it has replaced;

(b) The gradient of the culvert and the velocity of water flow in the culvert must be the same or similar as in the Watercourse it has replaced;

(c) Retention of appropriate in-pipe substrate;

(d) No obstructions to fish passage at the entrance or exit;

(e) Provide for the conveyance of a 100-year ARI event, including adaptation for 100-years of climate change (from the date that the Project becomes operational); and

(f) Incorporate energy dissipation and erosion control to minimise the occurrence of bed scour and bank erosion downstream.

~~Any culvert that complies with the conditions in regulation 70 of the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 shall be deemed to comply with this Condition [RC38].~~

Information relating to structures, fish passage and culverts

Advice Note: *The following information listed in the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 will be provided to Council for information within 20 Working Days of construction of any culverts being completed:*

(a) Regulation 62(3) Requirements for all activities: information about structures and passage of fish; and

(b) Regulation 63(3) Requirement for culvert activities: information about culverts.

Review Comment

Te Parawhau acknowledges that permanent culverts may be necessary in some circumstances. However, bridges are the preferred option where waterways are crossed, as they are more likely to maintain natural stream function, ecological integrity, ecological connectivity, fish and frog passage, freshwater habitat values, habitats supporting taonga species, Te Mana o Te Wai and the mauri of waterways.

Technical reviews undertaken by Te Parawhau SMEs and the Department of Conservation identify significant concerns regarding freshwater habitat assessment, fish habitat assessment, fish passage and spawning requirements, ecological connectivity and the identification of waterways potentially affected by the Project. Te Parawhau does not support discretionary exemptions that allow fish passage requirements to be avoided based on assumptions regarding habitat availability, fish population size or existing barriers. The existence of upstream or downstream barriers does not justify creating additional barriers to fish passage, frog passage or ecological connectivity.

Te Parawhau considers that fish passage requirements should be consistent with the Resource Management (National Environmental Standards for Freshwater Management) Regulations 2020 and the New Zealand Fish Passage Guidelines. These standards provide a recognised benchmark for maintaining fish passage and ecological connectivity and should apply to all permanent culverts.

Te Parawhau does not support the piping or enclosure of waterways. Permanent culverts should not be used as a substitute for retaining natural waterways or providing bridging solutions. As drafted, the condition does not place any meaningful limitation on the extent of stream enclosure that may occur and could allow significant lengths of watercourse to be enclosed while remaining technically compliant.

Permanent culverts should only be used where it can be demonstrated that they avoid adverse effects on Te Mana o Te Wai, freshwater habitat values, habitats supporting taonga species, ecological integrity, ecological connectivity and the mauri of the affected waterway.

Te Parawhau does not support deemed compliance provisions that rely solely on compliance with the Resource Management (National Environmental Standards for Freshwater Management) Regulations 2020. Compliance with minimum fish passage standards does not necessarily demonstrate that ecological integrity, ecological connectivity, freshwater habitat values, habitats supporting taonga species, Te Mana o Te Wai and the mauri of the affected waterway have been maintained.

Where a permanent culvert is proposed, the onus should be on the Consent Holder to demonstrate, through technical evidence prepared by a Suitably Qualified and Experienced Freshwater Ecologist, why a bridge cannot be used and why culverting is

necessary. That assessment should be provided to Te Parawhau for review and input in accordance with RC6.

Amendment

RC38 Where permanent culverts are installed, they shall be located, designed, constructed and maintained to:

(a) Maintain ecological and hydrological connectivity of the waterway;

(b) Provide fish passage in accordance with the Resource Management (National Environmental Standards for Freshwater Management) Regulations 2020 REG 70 and the New Zealand Fish Passage Guidelines 2024;

(d) Provide frog passage and passage for taonga species that utilise the affected freshwater environment;

(e) Maintain freshwater habitat values and habitats supporting taonga species;

(f) Provide benthic habitat substrate where intermittent or perennial habitat exists upstream of the culvert;

(g) Avoid and remedy impediment to fish passage, frog passage, movement of taonga species or ecological connectivity;

(h) Protect Te Mana o Te Wai;

(i) Protect the mauri of the affected waterway;

(j) Avoid adverse effects on freshwater habitats, habitats supporting taonga species and the ecological function of the waterway;

(k) Incorporate energy dissipation and erosion control measures to avoid downstream bed scour and bank erosion which do not impede fish and frog passage; and

(l) Provide for the conveyance of a 100-year ARI event, including climate change adaptation allowances.

Delete:

"Any culvert that complies with the conditions in Regulation 70 of the Resource Management (National Environmental Standards for Freshwater Management) Regulations 2020 shall be deemed to comply with this Condition RC38".

WETLANDS

Conditions RC39-RC49 apply to Consent RC01 and RC05.

Wetland outcomes

RC39 The loss of any extent of the following Existing Wetlands shall be replaced at the following loss to gain ratios:

(a) Existing Wetland(s) [8], [16], [Q08/066] and [24]:

(i) 1:2 (where the replacement Wetland(s) is Established within 2 to 5 years of the loss); or

(ii) 1:1.5 (where the Wetland(s) is Established within 1 year of the loss); or

(ii) 1:1 (where the replacement Wetland(s) is Established 3 years prior to the loss).

(b) Existing Wetlands 11, 12, 13 and 14:

(i) 1:1 (where the replacement Wetland(s) is Established prior to the loss and created as contiguous habitat); or

(ii) 1:1.5 (where the replacement Wetland(s) is Established prior to the loss but not created as contiguous habitat); or

(iii) 1:2 (where the replacement Wetland(s) is Established after the loss and not created as contiguous habitat).

Advice note: *Temporary loss of an Existing Wetland that is remediated is not loss of an Existing Wetland for the purpose of this condition.*

Review Comment

The condition assumes that loss of Existing Wetlands can be adequately addressed through wetland replacement at prescribed gain-to-loss ratios. Te Parawhau does not support this approach.

The condition relies on a Freshwater Ecology Assessment that Te Parawhau does not consider to be fit for purpose. Independent technical reviews undertaken by Bay Ecological and the Department of Conservation identify significant deficiencies in the identification, mapping, delineation and assessment of wetlands, freshwater habitats, ecological connectivity, taonga species habitat and freshwater ecological values. Te Parawhau does not accept that the Freshwater Ecology Assessment provides a reliable basis for wetland loss calculations, wetland replacement ratios, freshwater offsetting calculations or wetland enhancement requirements.

Te Parawhau is concerned that the assessment framework applied throughout the Freshwater Ecology Assessment systematically understates and undermines the ecological, freshwater and cultural values associated with wetlands. As a consequence, Te Parawhau does not consider that the proposed wetland replacement framework adequately reflects the actual extent, function, connectivity, habitat values, Te Mana o Te Wai, ngā uara ahurea o Te Parawhau or the mauri of affected wetlands.

The condition treats wetland area and replacement ratios as substitutes for ecological and cultural function. Te Parawhau does not accept that replacement wetlands necessarily replicate or restore wetland function, ecological integrity, ecological connectivity, freshwater habitat values, habitats supporting taonga species, Te Mana o Te Wai, ngā uara ahurea o Te Parawhau or the mauri of the affected wetland.

Technical reviews undertaken by Te Parawhau SMEs and the Department of Conservation also identify that wetland values and effects have been significantly underestimated and that aspects of the proposed assessment methods, replacement ratios and offsetting calculations cannot be independently reproduced or verified. Consequently, Te Parawhau

does not support the proposed wetland replacement framework and does not consider it capable of adequately accounting for the actual freshwater and wetland effects of the Project.

Te Parawhau supports and requires avoidance of wetland loss.

Te Parawhau does not accept that wetland loss can be justified solely through replacement, enhancement, offsetting or compensation measures. Existing wetlands should be retained and protected.

Where wetland loss is proposed, the Consent Holder should first demonstrate to Te Parawhau why avoidance cannot be achieved and identify how wetland function, ecological integrity, ecological connectivity, habitats supporting taonga species, Te Mana o Te Wai, ngā uara ahurea o Te Parawhau and the mauri of wetlands will be maintained.

The assessment should be prepared by a Suitably Qualified and Experienced Freshwater Ecologist and provided to Te Parawhau for review and input in accordance with RC6.

Amendment

RC39 Delete the condition in its entirety and replace with:

RC39 Loss, degradation or adverse effects on Existing Wetlands shall be avoided.

Where loss, degradation or adverse effects on an Existing Wetland are proposed, the Consent Holder shall prepare a Wetland Impact Assessment prepared by a Suitably Qualified and Experienced Freshwater Ecologist and provide that assessment to Te Parawhau for review and input in accordance with RC6 prior to certification or implementation.

The Wetland Impact Assessment shall:

(a) Demonstrate why loss, degradation or adverse effects on the Existing Wetland cannot be avoided;

(b) identify the extent, location and nature of the wetland loss proposed;

(c) assess the effects on wetland function, ecological integrity, ecological connectivity, habitats supporting taonga species, Te Mana o Te Wai, ngā uara ahurea o Te Parawhau and the mauri of wetlands, including the cultural, ecological and freshwater values those wetlands support;

(d) identify measures proposed to avoid, remedy or mitigate those effects on wetland function, ecological integrity, ecological connectivity, habitats supporting taonga species, Te Mana o Te Wai, ngā uara ahurea o Te Parawhau and the mauri of wetlands;

(e) identify monitoring requirements, performance criteria, adaptive management measures and contingency actions; and

(f) identify any proposed wetland replacement, enhancement, offsetting or compensation measures and how their effectiveness will be measured, monitored, reported and maintained.

Wetland Management Plan

RC40 A **Wetland Management Plan (WMP)** shall be prepared. The purpose of the WMP is to identify measures that will be implemented to achieve the outcomes in Condition [RC39] to manage any effects of the Project Works on the:

(a) Extent and values of Existing Wetlands that are lost; and

(b) Habitat of Australasian bittern (*Botaurus poiciloptilus*), spotless crake (*Porzana tabuensis),* and North Island Fernbird (*Poodytes punctatus vealeae*) (together, Cryptic Marsh Bird Species).

Review Comment

The purpose of the WMP is founded on a wetland assessment that Te Parawhau does not consider reliable. Independent technical reviews undertaken by Bay Ecological and the Department of Conservation identify significant deficiencies in the identification, mapping, delineation and assessment of wetlands potentially affected by the Project.

Before wetland management, enhancement, replacement, offsetting or compensation measures can be determined, Te Parawhau considers that all wetlands within and adjacent to the Designation footprint must first be accurately identified, mapped and assessed.

The WMP should not be limited to managing wetland loss and effects on selected bird species. Wetlands support a wide range of indigenous taonga species, including freshwater fish, Hochstetter's frogs, invertebrates and other indigenous fauna, together with the ecological functions and habitat values upon which those species depend.

The WMP should identify how wetland function, ecological integrity, ecological connectivity, freshwater habitat values, habitats supporting taonga species, Te Mana o Te Wai, ngā uara ahurea o Te Parawhau and the mauri of wetlands will be protected, maintained and monitored.

The WMP should be prepared sufficiently in advance of Establishment Works and Project Works to enable meaningful review and input by Te Parawhau. Given the significance of wetlands to Te Mana o Te Wai, ngā uara ahurea o Te Parawhau, freshwater ecosystems, taonga species and the wider taiao, the WMP should be completed prior to commencement of Establishment Works.

The WMP should not assume that mitigation, enhancement, offset or release sites are suitable or capable of achieving the intended ecological outcomes. Technical

reviews undertaken by the Department of Conservation identify significant uncertainty regarding the capacity of proposed mitigation, enhancement and release sites to support the species, habitats and ecological functions they are intended to replace.

The WMP should therefore demonstrate that all mitigation, enhancement and release sites are fit for purpose and capable of supporting the taonga species, habitats and ecological functions for which they are proposed.

The WMP should also identify monitoring requirements, performance criteria, adaptive management measures, contingency actions and reporting requirements where wetland outcomes are not achieved and be provided to Te Parawhau for review and input in accordance with RC6.

Amendment

RC40 shall be reworded as follows:

RC40 At least 40 Working Days prior to commencement of Establishment Works and Project Works, a Wetland Management Plan (WMP) shall be prepared and provided to Te Parawhau for review and input in accordance with RC6.

The purpose of the WMP is to:

(a) Identify, map and assess all wetlands within and adjacent to the Designation footprint, including wetlands identified through field investigations, technical reviews, monitoring, Cultural Values Assessments and information provided by Te Parawhau;

(b) Avoid loss of Existing Wetlands within and adjacent to the Designation;

(c) Identify measures to avoid, remedy or mitigate adverse effects on Existing Wetlands and the taonga species they support;

(d) Identify measures to maintain wetland function, ecological integrity, ecological connectivity, freshwater habitat values, habitats supporting taonga species, Te Mana o Te Wai, ngā uara ahurea o Te Parawhau and the mauri of wetlands;

(e) Identify monitoring requirements, performance criteria, adaptive management measures and contingency actions;

(f) Identify reporting requirements and provide monitoring and reporting information to Council and Te Parawhau in accordance with RC6;

(g) Identify measures to avoid, remedy or mitigate adverse effects on habitats supporting Australasian bittern (Botaurus poiciloptilus), spotless crake (Porzana tabuensis), North Island fernbird (Poodytes punctatus vealeae), freshwater fish, Hochstetter's frogs, mokomoko, taonga species and other indigenous fauna associated with wetlands and their margins;

(h) Identify any mitigation, enhancement, offset or release sites relied upon to manage wetland effects and demonstrate that those sites are fit for purpose and capable of supporting the taonga species, habitats and ecological functions for which they are proposed;

(i) Specify the ecological outcomes, monitoring requirements, performance criteria, adaptive management measures and contingency actions associated with each mitigation, enhancement, offset or release site; and

(j) Identify the actions that will be implemented where monitoring demonstrates that a mitigation, enhancement, offset or release site is not achieving the required outcomes, including the trigger for implementation, the timeframe within which corrective actions must be undertaken, and the monitoring required to confirm the effectiveness of those actions.

RC41 For the purpose of the WMP, the timing of loss is to be fixed as follows:

(a) Where due to vegetation removal and / or earthworks, at the point of the relevant soil disturbing works; and

(b) Where there is a permanent fall in groundwater level or loss of saturation that results in the water table being more than 30cm below the soil surface during the growing season where wetland hydrology is not remediated (to be shown through a numerical groundwater model or by monitoring of the water table at the Existing Wetland).

Offsetting Wetlands [8], [16], [Q08/066] and [24]

Review Comment

The purpose of RC41 is to establish when wetland loss is deemed to occur. Te Parawhau is concerned that the condition relies on assumptions and methodologies contained within the Freshwater Ecology Assessment that Te Parawhau does not consider reliable.

Technical reviews undertaken by Te Parawhau SMEs and the Department of Conservation identify concerns regarding wetland mapping, delineation, hydrology, groundwater interactions and wetland extent. Te Parawhau does not support defining wetland loss solely through vegetation removal, earthworks or a groundwater threshold.

The proposed groundwater threshold of 30 cm below the soil surface is not justified within the condition and it is unclear whether this threshold is protective of wetland function, wetland habitat values, taonga species, Te Mana o Te Wai, ngā uara ahurea o Te Parawhau, the mauri of wetlands and the wider freshwater environment.

Te Parawhau is also concerned that the condition relies heavily on numerical groundwater modelling and other predictive assessment tools to determine wetland loss and wetland effects. Technical reviews undertaken by Te Parawhau SMEs and the Department of Conservation identify significant deficiencies in the Freshwater Ecology Assessment,

wetland mapping, wetland delineation and groundwater assessment that underpin those modelling outputs.

Te Parawhau does not accept that numerical modelling alone provides a sufficient basis for determining wetland loss, wetland function or wetland effects. Model predictions should be verified through field investigations, monitoring, observed environmental conditions and assessment of actual effects on wetlands, freshwater habitats, habitats supporting taonga species, Te Mana o Te Wai, ngā uara ahurea o Te Parawhau and the mauri of wetlands.

Where monitoring results differ from model predictions, observed conditions and monitoring results should prevail.

Any determination of wetland loss should consider the full range of wetland values and functions, including wetland hydrology, ecological integrity, ecological connectivity, freshwater habitat values, habitats supporting taonga species, Te Mana o Te Wai, ngā uara ahurea o Te Parawhau and the mauri of wetlands, rather than relying solely on hydrological or vegetation-based indicators.

Amendment

RC41 For the purpose of the WMP, a Wetland Impact Assessment shall assess:

(a) Changes to wetland extent;

(b) Changes to wetland hydrology, including groundwater levels and wetland saturation;

(c) Changes to wetland function;

(d) Changes to ecological integrity;

(e) Changes to ecological connectivity;

(f) Changes to freshwater habitat values and habitats supporting taonga species;

(g) Effects on Te Mana o Te Wai;

(h) Effects on ngā uara ahurea o Te Parawhau; and

(i) Effects on the mauri of wetlands.

RC42 The WMP shall include:

(a) Identification of the extent of any Existing Wetlands [8], [16], [Q08/066] and [24] that will be lost due to the Project Works, and the timing of such loss;

(b) The amount of Wetland to be created, as calculated in accordance with Condition [RC39(a)];

(c) Methods for the creation of Wetland(s) that achieve the following requirements:

(i) Be located:

(A) Within the same catchment, or otherwise within the same Ecological District as the Existing Wetland lost; and

(B) In an area that a Suitably Qualified Person determines is (or can be made) free from persistent ecological weed and pest species;

(ii) Provide a mix of Wetland hydrology and a majority of shallow water suitable for raupō;

(iii) Include raupō in large and solid stands;

(iv) Include fencing to prevent stock access;

(v) Include edges of Carex sedgelands and rushland and have a dry land riparian buffer of 10m width; and

(vi) Be setback an appropriate distance determined by a Suitably Qualified Person from the operational carriageway of the Project to avoid adverse effects on Cryptic Marsh Bird Species.

Habitat creation for Cryptic Marsh Bird Species

Review Comment

RC42 remains heavily focused on wetland creation and replacement as the primary response to wetland loss. Te Parawhau does not support this approach.

The condition assumes that wetland loss can be adequately addressed through the creation of replacement wetlands without first demonstrating why wetland loss cannot be avoided.

Independent technical reviews undertaken by Bay Ecological and the Department of Conservation identify significant deficiencies in the identification, mapping, delineation and assessment of wetlands affected by the Project. Te Parawhau does not consider the Freshwater Ecology Assessment to provide a reliable basis for determining wetland loss, wetland replacement requirements, offsetting calculations or compensation measures.

Te Parawhau rejects the proposition that wetland loss can be adequately addressed through replacement ratios or wetland creation elsewhere. Existing wetlands possess ecological, freshwater and cultural values, ecological connectivity, habitats supporting taonga species, Te Mana o Te Wai and mauri that may not be capable of being recreated or replaced.

Where wetland replacement, enhancement, offsetting or compensation measures are proposed, the methods used should be informed by the Wetland Impact Assessment and Wetland Management Plan and demonstrate how wetland function, ecological integrity, ecological connectivity, habitats supporting taonga species, Te Mana o Te Wai, ngā uara ahurea o Te Parawhau and the mauri of wetlands will be maintained.

The proposed replacement, enhancement, offset or release areas should not be assumed to be suitable. The Consent Holder shall demonstrate, to Te Parawhau and Council, that such areas are fit for purpose and capable of

supporting the species, habitats, ecological functions, freshwater values and cultural values for which they are proposed.

The assessment shall identify measurable ecological outcomes, performance criteria, monitoring requirements, adaptive management measures and contingency actions that will apply if the required outcomes are not achieved. The assessment shall be provided to Te Parawhau for review and input in accordance with RC6 prior to certification or implementation.

Amendment

RC42 Where wetland loss has been demonstrated as unavoidable through the Wetland Impact Assessment required by RC39, the Wetland Management Plan shall identify the measures required to maintain wetland function, ecological integrity, ecological connectivity, habitats supporting taonga species, Te Mana o Te Wai, ngā uara ahurea o Te Parawhau and the mauri of wetlands.

Any proposed wetland replacement, enhancement, offset or release site shall:

(a) Be supported by an assessment prepared by a Suitably Qualified and Experienced Freshwater Ecologist and provided to Te Parawhau for review and input in accordance with RC6;

(b) Demonstrate that the site is fit for purpose and capable of supporting the species, habitats, ecological functions, freshwater values and cultural values for which it is proposed;

(c) Be located within the same catchment and ecological district as the wetland affected by the Project;

(d) Demonstrate that the site is free from, or will be effectively managed to control, persistent pest plant and pest animal species;

(e) Demonstrate how wetland function, ecological integrity, ecological connectivity, freshwater habitat values, habitats supporting taonga species, Te Mana o Te Wai, ngā uara ahurea o Te Parawhau and the mauri of wetlands will be maintained;

(f) Include monitoring requirements, performance criteria, adaptive management measures, contingency actions and reporting requirements;

(g) Identify the actions that will be implemented where monitoring demonstrates that the required outcomes are not being achieved, including implementation triggers, corrective action timeframes and monitoring required to confirm effectiveness; and

(h) Be monitored, maintained and reported on until the specified performance criteria and restoration outcomes have been achieved.

RC43 The WMP shall include:

(a) Identification of the extent of any Existing Wetlands 11, 12, 13 and 14 that will be lost due to the Project Works, and the timing of such loss in accordance with Condition [RC41];

(b) The amount of wetland to be created, including whether it will be contiguous, as calculated in accordance with Condition [RC39(b)];

(c) Methods for the creation of Wetland(s) that meet the following requirements:

(i) Contain the same or better habitat features than what has been lost (including the replacement of the open water habitat, such as that within Existing Wetland [Q08/066]);

(ii) Be setback an appropriate distance determined by a Suitably Qualified Person from the operational carriageway of the Project to avoid adverse effects of Cryptic Marsh Bird Species; and

(iii) Be contiguous (where the extent of habitat to be created has been calculated in accordance with Condition [RC39(b)(i)]).

Review Comment

RC43 continues to rely on a wetland replacement and compensation framework that Te Parawhau does not support as the primary response to wetland loss.

The condition assumes that replacement wetland habitat can be created and managed to replicate the ecological, freshwater, cultural and taonga species values of existing wetlands.

Technical reviews undertaken by Te Parawhau SMEs and the Department of Conservation identify significant uncertainty regarding the effectiveness of replacement, enhancement, offset and release sites, including whether those sites can support the species, habitats and ecological functions they are intended to replace.

Te Parawhau considers that the WMP should not assume that mitigation, enhancement, offset or compensation sites are suitable. The suitability, functionality and long-term viability of those sites should be demonstrated and subject to monitoring, performance criteria, adaptive management measures and contingency actions.

The condition should also recognise that wetlands support a wider range of taonga species and ecological functions than the Cryptic Marsh Bird Species identified in the condition. Wetland management should be directed toward maintaining wetland function, ecological integrity and connectivity, freshwater habitat values, habitats supporting all taonga species, Te Mana o Te Wai, ngā uara ahurea o Te Parawhau and the mauri of wetlands.

Amendment

RC43 shall be amended to read as follows:

RC43 Where wetland loss has been demonstrated as unavoidable through the Wetland Impact Assessment required by RC39, the WMP shall:

(a) Identify any mitigation, enhancement, offset or release sites relied upon to manage wetland effects;

(b) Demonstrate that those sites are fit for purpose and capable of supporting the species, habitats, ecological functions, freshwater values and cultural values for which they are proposed;

(c) Identify the ecological outcomes to be achieved at each site;

(d) Identify performance criteria, monitoring requirements, reporting requirements, adaptive management measures and contingency actions for each site;

(e) Identify measures to avoid, remedy or mitigate adverse effects on habitats supporting Australasian bittern (Botaurus poiciloptilus), spotless crake (Porzana tabuensis), North Island fernbird (Poodytes punctatus vealeae), freshwater fish, Hochstetter's frogs, taonga species and other indigenous fauna associated with wetlands and their margins;

(f) Demonstrate how wetland function, ecological integrity, ecological connectivity, freshwater habitat values, habitats supporting taonga species, Te Mana o Te Wai, ngā uara ahurea o Te Parawhau and the mauri of wetlands will be maintained; and

(g) Be provided to Te Parawhau for review and input in accordance with RC6.

RC44 Where it is not practicable to comply with [RC42] or [RC43], in whole or in part, the WMP shall include details of wetland compensation funds the Consent Holder will pay to a conservation group or organisation to undertake wetland creation or restoration works within the appropriate (affected) catchment). The purpose of the payment will be to improve hydrological function and indigenous biodiversity cover within the Wairau catchment. The details shall include:

(i) The group or organisation the wetland compensation funds will be paid to, and when it will be paid;

(ii) The wetland creation works that the Consent Holder will stipulate the wetland compensation funds are to be used for; and

(iii) The quantum of the payment that the Consent Holder will make, which must be calculated as follows:

The extent of wetland required to be created under Condition RC[42] and RC[43] in hectares	-	The extent of wetland that will be created by the Consent Holder in hectares	=	Compensation extent

Compensation extent	x	Cost per hectare to Consent Holder of creating wetland under Condition RC[42] and RC[43]	=	Compensation amount

Review Comment

RC44 assumes that where wetland replacement, enhancement, restoration or compensation cannot be achieved by the Consent Holder, a financial payment to a third party is an acceptable alternative. Te Parawhau does not support this approach.

The condition is inconsistent with ngā uara ahurea o Te Parawhau, Te Mana o Te Wai and Te Parawhau obligations arising from kaitiakitanga to protect, restore and uphold the wellbeing of te taiao, ngā wai, wetlands, taonga species and future generations.

RC44 is founded upon the Freshwater Ecology Assessment and associated wetland mapping prepared in support of the Project. Te Parawhau does not consider the Freshwater Ecology Assessment to be fit for purpose. Independent technical reviews undertaken by Bay Ecological and the Department of Conservation identify significant deficiencies in the identification, mapping, delineation and assessment of wetlands affected by the Project. What's more, Te Parawhau does not accept that the Freshwater Ecology Assessment provides a reliable basis for determining wetland loss, wetland replacement requirements, wetland offsetting calculations, compensation measures or the extent of wetlands affected by the Project.

Te Parawhau is particularly concerned that wetlands and associated wetland values affected by the Project have not been comprehensively identified, mapped or assessed. Consequently, Te Parawhau does not accept that the compensation framework provides a reliable basis for determining where compensation should occur, how much compensation is required, or whether the proposed compensation would address the actual wetland values affected by the Project.

The condition also assumes that compensation directed toward the Wairau catchment as prescribed in the above condition will address wetland loss resulting from the Project. Te Parawhau does not accept that this relationship has been demonstrated.

Te Parawhau does not accept that the loss of wetlands, wetland function, ecological integrity, ecological connectivity, habitats supporting taonga species, freshwater habitat values, Te Mana o Te Wai or the mauri of wetlands can be compensated for through a financial payment.

The condition provides no certainty regarding:

- who receives the compensation funds;
- how recipients are selected;

- how outcomes will be achieved;
- how success will be measured;
- how outcomes will be monitored;
- what actions will be taken if the intended outcomes are not achieved; or
- how Te Parawhau will be involved in reviewing proposed compensation arrangements.

Additionally, independent technical reviews undertaken by Te Parawhau SMEs and the Department of Conservation identify significant concerns regarding the effectiveness of proposed wetland replacement, enhancement, offsetting and compensation measures. The proposed compensation framework introduces an additional layer of uncertainty by relying on future actions undertaken by third parties outside the direct control of the Consent Holder.

Te Parawhau supports and requires avoidance of wetland loss. Existing wetlands should be retained and protected. Te Parawhau does not accept that wetland loss can be justified solely through replacement, enhancement, offsetting or compensation measures as proposed by this condition.

Te Parawhau is also concerned that the condition contains no mechanism to demonstrate that proposed compensation is sufficient to account for temporal loss, uncertainty of success, loss of ecological function during establishment, or the permanent loss of values that cannot be recreated. Also, the condition does not explain how compensation would maintain or replace wetland function, ecological integrity, ecological connectivity, habitats supporting taonga species, Te Mana o Te Wai, ngā uara ahurea o Te Parawhau or the mauri of wetlands over time.

Where the Consent Holder is unable to achieve the outcomes required by RC42 or RC43, this should first trigger engagement with Te Parawhau to identify alternative solutions capable of maintaining wetland function, ecological integrity, ecological connectivity, habitats supporting taonga species, Te Mana o Te Wai, ngā uara ahurea o Te Parawhau and the mauri of wetlands. This should be supported by further assessment, monitoring, adaptive management and restoration actions rather than the payment of compensation funds.

Any proposal to rely on compensation should first demonstrate why avoidance, remediation, enhancement and restoration cannot achieve the required outcomes and should be provided to Te Parawhau for review and input in accordance with RC6.

Amendment

Delete RC44 in its entirety. RC44 shall be reworded as follows:

RC44 Where the Consent Holder is unable to achieve the outcomes required by RC42 or RC43, the Consent Holder shall first engage with Te Parawhau to identify alternative measures capable of maintaining wetland function, ecological integrity, ecological connectivity, habitats supporting taonga species, Te Mana o Te Wai, ngā uara ahurea o Te Parawhau and the mauri of wetlands.

Prior to relying on any compensation measure, the Consent Holder shall prepare a report prepared by a Suitably Qualified and Experienced Freshwater Ecologist and provide that report to Te Parawhau for review and input in accordance with RC6.

The report shall demonstrate that:

(a) avoidance of wetland loss cannot be achieved;

(b) the measures identified through the Wetland Impact Assessment required by RC39 and the Wetland Management Plan required by RC40 have been implemented;

(c) remediation, enhancement and restoration measures have not achieved the required outcomes;

(d) adaptive management measures have been implemented and have not achieved the required outcomes;

(e) all alternative measures identified through the Wetland Impact Assessment and Wetland Management Plan have been assessed and are unable to achieve the required outcomes; and

(f) compensation is necessary to address residual effects that cannot otherwise be avoided, remedied or mitigated.

Where compensation is proposed, the report shall also:

(g) identify the proposed recipient or recipients of the compensation;

(h) identify the ecological, freshwater and cultural outcomes that the proposed compensation is intended to achieve;

(i) identify measurable performance criteria, monitoring requirements, reporting requirements, implementation timeframes and maintenance requirements;

(j) identify adaptive management measures and contingency actions where outcomes are not achieved; and

(k) demonstrate how the proposed compensation accounts for temporal loss, uncertainty of success, loss of ecological function during establishment and the loss of values that may not be capable of being recreated.

Groundwater monitoring

RC45 The WMP shall include:

(a) Measures for installing piezometers and surveying vegetation composition at Existing Wetlands [8], [16], [Q08/066] and [24] within the Site to undertake the following monitoring:

(i) Before the start of Project Works:

(A) Groundwater monitoring between the 1 September until 31 March to determine the average dynamic low flow periods; and

(B) Baseline surveys to determine the vegetation composition in a representative plot of the Existing Wetland; and

(ii) During, and up to 6 months after, any Major Cuts to determine:

(A) If there has been a reduction in groundwater levels greater than [x] below the average dynamic low flow period; and

(B) A change in the vegetation composition such that the Existing Wetland no longer meets the definition of natural inland wetland.

(b) Requirements for review of the WMP following completion of the monitoring referred to in (a) if the monitoring identifies that any of Existing Wetlands [8], [16], [Q08/066] and [24] have experienced a decline in groundwater levels and no longer meet the definition of natural inland wetland.

Review Comment

Te Parawhau does not support RC45 as currently proposed.

RC45 relies on wetland identification, delineation and mapping that Te Parawhau does not consider reliable. Independent technical reviews undertaken by Bay Ecological and the Department of Conservation have identified significant deficiencies in the identification, delineation, mapping and assessment of wetlands potentially affected by the Project.

The condition is currently limited to Wetlands [8], [16], [Q08/066] and [24]. Te Parawhau does not support restricting groundwater and vegetation monitoring to those wetlands alone, particularly given the acknowledged uncertainties and deficiencies in the Freshwater Ecological Assessment and supporting wetland mapping. Additional wetlands, wetland margins and connected freshwater receiving environments may also be affected by the Project and should be included within the monitoring framework where there is a reasonable potential for adverse effects.

Te Parawhau considers the proposed monitoring framework to be overly narrow. Monitoring should not be limited to groundwater levels and vegetation composition alone. It should also assess wetland function, ecological integrity, hydrological connectivity, ecological connectivity, freshwater habitat values, habitat supporting taonga species, water quality, and the health and resilience of wetland ecosystems over time.

Monitoring and assessment should also recognise and provide for Te Mana o Te Wai, ngā uara ahurea o Te Parawhau, and the protection and enhancement of wetland mauri. These matters are fundamental indicators of wetland health from a Te Ao Māori perspective and should be expressly incorporated into the monitoring programme, performance criteria and reporting framework.

The condition does not identify groundwater drawdown thresholds, acceptable limits of change, trigger levels for management intervention, adaptive management requirements, or contingency measures where monitoring identifies actual or potential adverse effects. A requirement to simply review the Wetland Management Plan should it no longer be able to be classified as a natural inland wetland is catastrophically inadequate. The condition should clearly specify

monitoring triggers, corrective actions, remediation requirements and escalation processes that must be implemented where adverse effects are detected.

Te Parawhau considers that groundwater and wetland monitoring should continue throughout the duration of the Establishment Works and Project Works and should not cease until monitoring demonstrates that wetland outcomes, performance standards and restoration objectives have been achieved and sustained.

All groundwater, ecological and wetland monitoring data, analyses and reports should be provided to Te Parawhau for review and input in accordance with RC6. This information should be supplied in a timely manner to enable meaningful participation in monitoring, management responses and ongoing assessment of effects on wetlands and associated cultural values.

Amendment RC45 shall be reworded as follows:

RC45 Groundwater and Wetland Monitoring

RC45 The WMP shall include:

(a) Measures for installing piezometers and undertaking groundwater and wetland monitoring at Existing Wetlands [8], [16], [Q08/066] and [24], and any other wetlands within the Designation or adjacent areas identified through field investigations, monitoring, technical review, wetland delineation or ecological assessment as potentially affected by Establishment Works or Project Works.

(b) Prior to commencement of Establishment Works:

(i) Baseline groundwater monitoring shall be undertaken to establish groundwater levels, seasonal variability and average dynamic low flow conditions;

(ii) Baseline wetland monitoring shall be undertaken to assess wetland extent, hydrology, wetland function, ecological integrity, ecological connectivity, freshwater habitat values, habitats supporting taonga species, vegetation composition and water quality; and

(iii) Baseline cultural health indicators reflecting Te Mana o Te Wai, ngā uara ahurea o Te Parawhau and wetland mauri shall be identified in collaboration with Te Parawhau.

(c) Groundwater and wetland monitoring shall be undertaken throughout Establishment Works and Project Works.

(d) The monitoring programme shall identify:

(i) Groundwater drawdown trigger levels;

(ii) Wetland performance standards;

(iii) Indicators of wetland function;

(iv) Indicators of ecological integrity and ecological connectivity;

(v) Indicators of freshwater habitat values including taonga species; and

(vi) Cultural health indicators developed in collaboration with Te Parawhau.

(e) Where monitoring identifies exceedance of a groundwater drawdown trigger level, failure to achieve a wetland performance standard, or deterioration in any monitored indicator identified in clause (d), the Consent Holder shall immediately implement the adaptive management and contingency measures specified in the WMP.

(f) The WMP shall specify:

(i) Monitoring methodologies;

(ii) Monitoring frequency;

(iii) Reporting requirements;

(iv) Adaptive management measures;

(v) Corrective actions;

(vi) Contingency measures; and

(vii) Timeframes within which corrective actions must be implemented.

(g) All groundwater monitoring data, wetland monitoring data, analyses, assessments and reports shall be provided to Te Parawhau in accordance with RC6.

(h) Monitoring shall continue for the duration of Establishment Works and Project Works and shall not cease until all Establishment Works and Project Works have been completed.

Monitoring and maintenance of created Wetlands

RC46 The WMP shall outline methods and measures to monitor and maintain the Wetland(s) created in accordance with [RC42] and [RC43] (including measures to control persistent ecological species that the Suitably Qualified Person determines is an invasive weed and / or pest) until they have Established.

Review Comment

RC46 is inadequate as currently drafted.

The condition focuses on monitoring and maintenance until the created wetland is considered to have "Established". Te Parawhau does not consider establishment alone to be an appropriate measure of success. The condition should ensure that created wetlands are functioning as intended and achieving the ecological, hydrological and cultural outcomes relied upon to address the adverse effects of the Project.

The term "Established" is not defined and no performance standards, success criteria or measurable outcomes are specified. As drafted, it is unclear when monitoring and maintenance obligations would cease and whether the created wetlands would be capable of achieving the outcomes for which they were established.

The condition is also too narrowly focused on vegetation establishment and weed and pest control. Monitoring should assess whether the created wetlands are supporting wetland hydrology, wetland function, ecological integrity, ecological connectivity, freshwater habitat values and habitat for taonga species.

The condition does not include any requirement for adaptive management, corrective actions or contingency measures where monitoring demonstrates that wetland outcomes are not being achieved including over an extended time frame inclusive of stochastic weather events.

Te Parawhau also considers that the condition should recognise Te Mana o Te Wai, wetland mauri and ngā uara ahurea o Te Parawhau when assessing the success of wetland creation, restoration and enhancement activities.

Groundwater, ecological and wetland monitoring information should be provided to Te Parawhau for review and input in accordance with RC6.

Additionally, monitoring and maintenance should not cease solely because a wetland is considered to be established. Monitoring and maintenance should continue until the consent holder can demonstrate that the created wetlands are functioning as intended and achieving the ecological, hydrological and cultural outcomes specified in the WMP.

Amendment

RC46 should be reworded as follows:

RC46 Monitoring and maintenance of created Wetlands

RC46 The WMP shall specify the methods and measures to monitor, maintain and manage the Wetland(s) created in accordance with RC42 and RC43, including measures to control invasive weeds, pest plants and pest animals.

The WMP shall include:

(a) Performance standards and success criteria for each created Wetland;

(b) Monitoring methodologies, monitoring locations, monitoring frequency and reporting requirements;

(c) Monitoring of:

(i) wetland hydrology;

(ii) wetland extent;

(iii) vegetation survival and vegetation composition;

(iv) ecological integrity;

(v) ecological connectivity;

(vi) freshwater habitat values;

(vii) taonga species and their habitats;

(viii) water quality; and

(ix) cultural health indicators developed in collaboration with Te Parawhau;

(d) Trigger levels and performance criteria for each parameter monitored under clause (c);

(e) Adaptive management measures, corrective actions and contingency measures to be implemented where a trigger level is exceeded or a performance criterion is not met; and

(f) Provision of all monitoring data, assessments and reports to Te Parawhau in accordance with RC6.

RC47 If the WMP is prepared for Wetland creation works only, then only the requirements of Conditions RC[42(b) and (c)], [RC43(b) and (c)], [RC44] and [RC45] need to be certified under RC[6(b)].

Review Comment

RC47 is currently unclear and should be amended.

As drafted, the condition appears to allow a reduced certification process where the WMP relates only to wetland creation works. Te Parawhau is concerned that will result in elements of the WMP that are relevant to wetland creation, management, monitoring and long-term performance not being subject to the same level of review and certification as other components of the WMP.

Furthermore, the rationale for limiting certification to Conditions RC42(b) and (c), RC43(b) and (c), RC44 and RC45 is not clear. All components of the WMP should be consistent and should be subject to certification where they are relied upon to avoid, remedy or mitigate adverse effects on wetlands and associated values.

The rationale for limiting certification to selected provisions is not supported. Te Parawhau does not consider the Freshwater Ecological Assessment relied upon by NZTA to provide a reliable foundation for restricting the scope of certification. Independent technical reviews undertaken by Bay Ecological and the Department of Conservation identify significant deficiencies in the identification, delineation, mapping and assessment of wetlands affected by the Project. Te Parawhau considers that all wetland creation, restoration, monitoring, maintenance, performance criteria, adaptive management and reporting provisions should therefore be subject to certification under RC6(b).

The condition should also ensure that any monitoring, performance standards, success criteria, adaptive management measures and contingency actions associated with wetland creation works are included within the certification process.

Amendment

RC47 must be amended to read as follows:

RC47 Any WMP prepared in accordance with these conditions, including a WMP prepared solely for Wetland creation works, shall be submitted in full for certification in accordance with RC6(b).

The WMP shall not be implemented until certification has been obtained.

For the avoidance of doubt, all provisions of the WMP relating to wetland creation, restoration, monitoring, maintenance, performance standards, success criteria, monitoring methodologies, adaptive management measures, corrective actions, contingency measures and reporting requirements shall be subject to certification.

RC48 A Suitably Qualified Person shall provide a report to Council confirming:

(a) That Wetland(s) have been created in compliance with Condition [RC42(b)] and [RC43(b)] within 2 months of Completion of Construction; and

(b) Any ongoing maintenance that will be undertaken at these created Wetlands until the requirements of [RC42(b) and RC43(b)] have been achieved.

Review Comment

The condition is limited to confirming that wetlands have been created in accordance with RC42(b) and RC43(b). Demonstrating that a wetland has been physically constructed does not demonstrate that it is functioning as intended or that it is achieving the ecological, hydrological and cultural outcomes relied upon to address the adverse effects of the Project.

The requirement for reporting within two months of Completion of Construction is premature and inadequate. At that stage, it is highly unlikely that sufficient monitoring information will be available to determine whether the created wetlands are achieving the performance standards, success criteria and outcomes specified in the WMP.

RC48 also focuses on ongoing maintenance only and does not require reporting on monitoring results, wetland performance, achievement of success criteria, implementation of adaptive ecological management measures, corrective actions, contingency measures or mahi whakaora.

Te Parawhau considers that reporting should demonstrate not only that the wetlands have been established in accordance with the approved design, but also whether they are achieving the performance standards, success criteria and ecological outcomes specified in the WMP. This should be supported by specialist ecological assessment and monitoring undertaken by a Suitably Qualified and Experienced Wetland Ecologist.

The condition should also require all reports to be provided to Te Parawhau in accordance with RC6.

Amendment

RC48 shall be reworded as follows:

RC48 A Suitably Qualified and Experienced Wetland Ecologist shall provide a report to Council and Te Parawhau in accordance with RC6:

(a) Within 2 months of completion of Wetland creation works, confirming that the Wetland(s) have been established in accordance with RC42, RC43 and the certified WMP;

(b) Upon completion of monitoring required under RC46, confirming whether the Wetland(s) have achieved the performance standards, success criteria and completion criteria specified in the WMP;

(c) Where the Wetland(s) have not achieved the applicable performance standards, success criteria or completion criteria, identifying:

(i) the matter(s) requiring further management;

(ii) any corrective actions, adaptive management measures, contingency measures or mahi whakaora required; and

(iii) the proposed timeframe for achieving compliance with the WMP.

(d) All reports required by this condition shall be provided to Te Parawhau in accordance with RC6.

RC49 ~~For the purpose of Conditions [RC39] to [RC46], "**Established**" means the Wetlands have:~~

~~(a) Achieved 80% vegetation cover at vegetation assemblages;~~

~~(b) No persistent ecological weeds that the Suitably Qualified Person preparing the WMP considers is an invasive weed and would compromise the value of the Existing Wetlands and~~

~~(c) Have typical hydrology (ie. do not have exacerbated dry periods).~~

Review Comment

RC49 is inadequate and should be replaced. RC49 wording is provided below.

Te Parawhau does not support defining "Established" solely by reference to vegetation cover, weed presence and hydrology.

The proposed criteria do not demonstrate that a created wetland is functioning as intended or achieving the ecological, hydrological and cultural outcomes relied upon to address the adverse effects of the Project.

The requirement to achieve 80% vegetation cover is arbitrary and provides no assurance that the wetland supports appropriate indigenous wetland species, ecological integrity, ecological connectivity, freshwater habitat values or habitat for taonga species.

Similarly, the absence of persistent ecological weeds does not demonstrate that a wetland is achieving the intended wetland outcomes.

The hydrological criterion is also inadequate. The phrase "typical hydrology" and the reference to "exacerbated dry periods" are subjective and difficult to assess or enforce. The condition does not identify any measurable hydrological performance criteria or baseline against which compliance can be assessed.

The condition also relies upon the opinion of a Suitably Qualified Person and does not require assessment by a Suitably Qualified and Experienced Wetland Ecologist.

Te Parawhau considers that the success of wetland creation should be determined against clearly defined performance standards and success criteria specified in the WMP rather than a simplified definition based solely on vegetation cover, weeds and hydrology.

The condition should also recognise wetland function, ecological integrity, ecological connectivity, freshwater habitat values, habitats supporting taonga species, Te Mana o Te Wai, wetland mauri and ngā uara ahurea o Te Parawhau.

Amendment

RC49 For the purposes of Conditions RC39 to RC48, the achievement of wetland creation outcomes shall be determined by reference to the performance standards, success criteria and completion criteria specified in the certified WMP and assessed by a Suitably Qualified and Experienced Wetland Ecologist.

OPERATIONAL STORMWATER

Conditions RC50-RC58 apply to Consent RC04.

Stormwater Detailed Design Report

RC50 A **Stormwater Detailed Design Report (SDDR)** shall be prepared by a Suitably Qualified Person. The purpose of the SDDR is to outline the detailed design of the stormwater management system for the Project achieves the following requirements:

(a) Treatment of stormwater run-off from the State Highway carriageway during operation of the Project;

(b) Constructed wetlands and wetland swales shall be designed in accordance with NZTA STWS; and

(c) Constructed wetlands shall be located offline from Watercourses. RC51

The SDDR shall include:

(a) A description of the receiving environment;

(b) Measures to achieve the stormwater management requirements outlined in [RC50] above; and

(c) Design drawings, planting plans (where relevant to the stormwater design) and design methodologies and that demonstrate how compliance with the stormwater management requirements outlined in [RC50] has been achieved.

Review Comment

RC50 and RC51 are inadequate as currently drafted.

The purpose of the SDDR is narrowly focused on the treatment of stormwater runoff and the engineering design of stormwater treatment devices. Te Parawhau considers that the SDDR should also demonstrate how adverse effects on receiving environments will be avoided, remedied or mitigated and how the stormwater management system has been designed to protect and maintain the health and wellbeing of freshwater receiving environments.

The conditions place significant reliance on constructed wetlands and wetland swales designed in accordance with the NZTA Stormwater Treatment Standard. However, compliance with engineering design standards alone does not provide assurance that adverse effects on wetlands, watercourses, groundwater, freshwater habitat values, habitats supporting taonga species, ecological integrity or ecological connectivity will be appropriately avoided, remedied or mitigated.

The requirement for a description of the receiving environment is inadequate. The SDDR should identify and assess the freshwater, ecological and cultural values of receiving environments that may be affected by operational stormwater discharges, including wetlands, watercourses, groundwater connections, freshwater habitat values, habitats supporting taonga species, Te Mana o Te Wai, freshwater mauri and ngā uara ahurea o Te Parawhau. This includes flow obstruction to fish passage or disturbing of spawning or spawning grounds through artificially amplified flow conditions.

Te Parawhau does not support reliance on a Suitably Qualified Person alone. Preparation of the SDDR should involve suitably qualified and experienced specialists with expertise relevant to the matters being assessed, including stormwater engineering, freshwater ecology and wetland ecology where ecological treatment systems form part of the stormwater management approach.

RC51 is buried in condition RC50 and is not clear. The conditions do not require the SDDR to include performance standards, monitoring requirements, maintenance requirements, adaptive management measures, corrective actions or contingency measures. Te Parawhau considers these provisions are necessary to ensure that stormwater treatment devices continue to perform as intended and that adverse effects on receiving environments are identified and addressed before degradation occurs.

The SDDR should demonstrate how the operational stormwater management system has been designed to protect freshwater values and achieve positive environmental outcomes, rather than merely demonstrating compliance with engineering design requirements.

The SDDR and all supporting technical information should be provided to Te Parawhau for review and input in accordance with RC6.

Amendment

RC50 A Stormwater Detailed Design Report (SDDR) shall be prepared by suitably qualified and experienced specialists with expertise relevant to the matters addressed by the SDDR.

The purpose of the SDDR is to demonstrate that the operational stormwater management system has been designed to:

(a) Avoid, remedy or mitigate adverse effects of stormwater discharges on receiving environments;

(b) Protect wetlands, watercourses, groundwater, freshwater habitat values, habitats supporting taonga species, ecological integrity and ecological connectivity;

(c) Treat stormwater runoff from the State Highway carriageway during operation of the Project;

(d) Recognise and provide for Te Mana o Te Wai, freshwater mauri and ngā uara ahurea o Te Parawhau;

(e) Ensure constructed wetlands and wetland swales are designed in accordance with recognised industry best practice, including the NZTA Stormwater Treatment Standard, and are capable of achieving the stormwater treatment and environmental outcomes specified in the SDDR; and

(f) Ensure constructed wetlands are located offline from watercourses.

Amended RC51

RC51 The SDDR shall include:

(a) A description and assessment of the receiving environment, including wetlands, watercourses, groundwater connections, freshwater habitat values, habitats supporting taonga species, ecological integrity, ecological connectivity, Te Mana o Te Wai, freshwater mauri and ngā uara ahurea o Te Parawhau;

(b) Measures to achieve the stormwater management requirements outlined in RC50;

(c) Design drawings, planting plans (where relevant), design methodologies, supporting calculations and performance criteria that demonstrate how compliance with the stormwater management requirements outlined in RC50 will be achieved;

(d) Details of stormwater treatment devices, including their design objectives, treatment performance and operational requirements;

(e) Inspection, maintenance and monitoring requirements necessary to ensure stormwater treatment devices continue to perform as intended;

(f) Trigger levels, performance standards and response actions where monitoring identifies that stormwater treatment devices are not achieving their intended performance;

(g) Adaptive management measures, corrective actions and contingency measures to be implemented where performance standards are not achieved;

(h) Reporting requirements, including provision of monitoring information and reports to Te Parawhau in accordance with RC6; and

(i) Where constructed wetlands or wetland swales form part of the stormwater treatment system, specialist freshwater ecological advice confirming how those systems have been designed to protect and maintain freshwater values and ecological function.

Operational stormwater - construction

RC52 A stormwater management system shall be constructed in general accordance with the SDDR certified in accordance with Condition [RC6(b)].

Review Comment

The phrase "constructed in general accordance with" lacks certainty and provides significant discretion regarding the extent to which the stormwater management system may depart from the certified SDDR. Given the importance of the operational stormwater management system in avoiding, remedying or mitigating adverse effects on freshwater receiving environments, Te Parawhau does not support a condition that enables unspecified departures from the certified design.

The condition also focuses solely on construction of the stormwater management system and does not require confirmation that the system has been constructed in accordance with the performance standards, design requirements and environmental outcomes specified in the certified SDDR.

Te Parawhau considers that construction of the stormwater management system should be certified by appropriately qualified and experienced specialists and that any material changes to the certified SDDR should be subject to further review and certification.

The condition should also require confirmation that the stormwater management system has been constructed in a manner that enables the stormwater treatment, ecological and freshwater outcomes anticipated by the SDDR to be achieved.

Amendment

RC52 should be amended to read as follows:

RC52 The stormwater management system shall be constructed in accordance with the Stormwater Detailed Design Report certified under RC6(b).

Upon completion of construction of the stormwater management system, a suitably qualified and experienced stormwater engineer shall provide certification to Council and Te Parawhau confirming that:

(a) The stormwater management system has been constructed in accordance with the certified SDDR;

(b) All stormwater treatment devices have been constructed in accordance with the approved plans, specifications and design requirements;

(c) The stormwater management system is capable of achieving the performance standards specified in the certified SDDR; and

(d) Any amendments to the certified SDDR identified during construction have been approved in accordance with RC6(b).

No changes to the certified SDDR shall be implemented unless the amended SDDR has been submitted for certification in accordance with RC6(b).

RC53 Stormwater management devices used for:

(a) Stormwater treatment shall be fully operational before Completion of Construction; and

(b) Extended detention, where required, shall be fully operational prior to the discharge of water from any sealed area identified any device.

Review Comment

RC53 The condition requires stormwater treatment and detention devices to be operational prior to Completion of Construction or the discharge of stormwater from sealed surfaces. While Te Parawhau supports this requirement in principle, the condition does not require verification that stormwater management devices have been constructed, commissioned and are operating in accordance with the certified SDDR.

The condition does not provide any mechanism to demonstrate that stormwater treatment devices are capable of achieving the treatment performance, detention performance and environmental outcomes for which they were designed.

The condition also does not require inspection, testing or certification by suitably qualified and experienced specialists prior to operation of the stormwater management system.

Te Parawhau considers that stormwater treatment and detention devices should be fully constructed, commissioned and certified as operational before receiving stormwater discharges from the Project.

The condition should also require the relevant certification and commissioning information to be provided to Te Parawhau in accordance with RC6.

Amendment

The following amendments to RC53 are required

RC53 Stormwater management devices used for:

(a) Stormwater treatment shall be fully constructed, commissioned and operational prior to Completion of Construction; and

(b) Extended detention, where required, shall be fully constructed, commissioned and operational prior to the discharge of stormwater from any sealed area to that device.

Prior to operation of any stormwater management device, a suitably qualified and experienced stormwater engineer shall certify to Council and Te Parawhau that:

(i) The device has been constructed in accordance with the certified SDDR;

(ii) The device has been commissioned and is operating as designed;

(iii) Any planting required for the operation of the device has been completed; and

(iv) The device is capable of achieving the treatment and detention performance requirements specified in the certified SDDR.

Operational stormwater maintenance

RC54 The stormwater management system constructed in accordance with Condition [RC52] shall be operated and maintained to meet the requirements of [RC50] for the duration of this consent.

Review Comment

While Te Parawhau supports the requirement for the stormwater management system to be operated and maintained for the duration of the consent, the condition does not specify how ongoing performance will be achieved, measured, monitored or verified.

The condition relies on compliance with the broad requirements of RC50 but does not require inspection, maintenance, monitoring, performance assessment, reporting, adaptive management or corrective actions where stormwater treatment devices are not functioning as intended.

The condition also does not identify who is responsible for assessing whether the stormwater management system continues to achieve the treatment performance and environmental outcomes anticipated by the certified SDDR.

Te Parawhau considers that stormwater treatment devices should be subject to ongoing inspection, maintenance and monitoring to ensure they continue to protect receiving environments and achieve the stormwater treatment, detention and environmental outcomes for which they were designed.

The condition should also require adaptive management, corrective actions and contingency measures where monitoring or inspections identify system failures, deterioration in performance or maintenance deficiencies.

Operational monitoring, maintenance records and performance reports should be provided to Te Parawhau in accordance with RC6.

Amendment

RC54 shall be amended to read as follows:

The following amendments to RC54 is required

RC54 The stormwater management system constructed in accordance with RC52 shall be operated, maintained and monitored for the duration of this consent in accordance with the certified SDDR.

The Consent Holder shall ensure that:

(a) All stormwater management devices are inspected, maintained and operated in accordance with the maintenance, monitoring and performance requirements specified in the certified SDDR;

(b) Stormwater management devices continue to achieve the treatment, detention and performance standards specified in the certified SDDR;

(c) Monitoring, inspection and maintenance records are retained and provided to Council and Te Parawhau in accordance with the reporting requirements specified in the certified SDDR and RC6;

(d) Any deficiencies, deterioration in performance, exceedance of performance standards, damage, malfunction or failure identified through monitoring, inspection or maintenance activities are rectified as soon as practicable;

(e) Adaptive management measures, corrective actions and contingency measures specified in the certified SDDR are implemented where monitoring or inspections identify that stormwater management devices are not achieving their intended performance; and

(f) Monitoring results, performance assessments and maintenance reports shall be provided to Te Parawhau in accordance with RC6.

Flooding

RC55 Before the start of Project Works, a report shall be provided to Council demonstrating that at the time of construction the Project will not, as far as practicable, increase

water levels in the 100 year ARI event (including allowance for RCP6 climate change to the year 2110):

(a) By more than 100mm vertically in areas that are outside the Site at the time of construction and outside the banks of a Watercourse, Wetland or flood plain; and

(b) Above floor level of any habitable building in areas outside the Site.

Review Comment

The condition requires a report to be prepared before the commencement of Project Works but does not account for the potential flooding and hydrological effects arising from Establishment Works. Te Parawhau notes that Establishment Works for the Project are extensive and have the potential to alter runoff characteristics, drainage pathways, overland flow paths, flood storage and flood conveyance prior to the commencement of Project Works.

Te Parawhau considers that any assessment of flood effects should include the effects of both Establishment Works and Project Works and should demonstrate that flood risk is not increased at any stage of the Project.

The condition is also limited to water levels during a 100-year ARI event and does not require assessment of flood effects on wetlands, watercourses, floodplains, freshwater habitat values, ecological connectivity or other receiving environment values.

Te Parawhau considers that the assessment should demonstrate that Establishment Works and Project Works will not result in increased flood risk, altered flood behaviour or adverse effects on the health and functioning of receiving environments. This includes flow obstruction to fish passage or disturbing of spawning or spawning grounds through artificially amplified flow conditions.

The condition should also require the report to be provided to Te Parawhau in accordance with RC6.

The following amendment to RC55 is recommended

RC55 Prior to the commencement of Establishment Works, a report prepared by a suitably qualified and experienced flood modelling specialist shall be submitted to Council and Te Parawhau in accordance with RC6 demonstrating that Establishment Works and Project Works will not, as far as practicable, increase water levels during the 100-year ARI event (including allowance for climate change based on RCP6 to the year 2110):

(a) By more than 100 mm vertically in areas outside the Designation and outside the banks of a Watercourse, Wetland or floodplain; and

(b) Above the floor level of any habitable building located outside the Designation.

The report shall also identify:

(c) Any changes to flood storage, flood conveyance, overland flow paths or drainage patterns arising from Establishment Works or Project Works;

(d) Any actual or potential adverse effects on wetlands, watercourses and associated floodplain environments; and

(e) Any measures required to avoid, remedy or mitigate identified adverse effects.

RC56 The report required by Condition [RC55] shall demonstrate compliance with [RC55] by a hydraulic and hydrological model with the level of detail and reporting to be confirmed by a Suitably Qualified Person. The peak flood levels for the without-Project and with-Project scenarios (both considering maximum probable development) shall be compared upstream and downstream at the Site boundary.

Review Comment

The condition relies on a hydraulic and hydrological model prepared to a level of detail determined by a Suitably Qualified Person. Te Parawhau does not support leaving the scope, methodology and level of detail of the assessment to the discretion of a single practitioner. The condition should clearly specify the assessment requirements necessary to demonstrate compliance with RC55.

The condition is also limited to comparison of peak flood levels at the Site boundary. Te Parawhau considers that this is too narrow and may not adequately identify adverse effects on wetlands, watercourses, floodplains, overland flow paths, freshwater ecosystems and downstream receiving environments.

The condition should assess the effects of both Establishment Works and Project Works, noting that significant hydrological and flood-related effects may arise during either phase of the Project.

Te Parawhau considers that the hydraulic and hydrological assessment should evaluate changes in flood levels, flood storage, flood conveyance, flow paths, flow velocities and flood extents and should identify any actual or potential adverse effects on freshwater receiving environments.

The reference to comparison at the Site boundary should also be amended. Assessment should include areas within and beyond the Designation where flood effects may occur and should not be artificially constrained by project boundaries.

The hydraulic and hydrological modelling, assumptions, inputs and results should be provided to Te Parawhau in accordance with RC6.

Recommended Amendment Required

RC56 The report required by RC55 shall demonstrate compliance with RC55 using hydraulic and hydrological modelling prepared by suitably qualified and experienced flood modelling specialists.

The modelling shall assess the effects of both Establishment Works and Project Works and shall include:

(a) Peak flood levels, flood extents, flow paths, flow velocities, flood storage and flood conveyance;

(b) Comparison of without-Project and with-Project scenarios, including maximum probable development;

(c) Assessment of actual and potential effects on wetlands, watercourses, floodplains, freshwater ecosystems and downstream receiving environments;

(d) Assessment of actual and potential effects on adjacent land and buildings outside the Designation;

(e) Identification of measures required to avoid, remedy or mitigate adverse flood effects; and

(f) Details of modelling methodologies, assumptions, inputs and outputs.

The comparison of without-Project and with-Project scenarios shall not be limited to the Designation boundary and shall include all areas potentially affected by changes in flood behaviour arising from Establishment Works or Project Works.

The report, modelling, assumptions and supporting technical information shall be provided to Te Parawhau in accordance with RC6.

APPENDIX A – Existing Wetlands

APPENDIX B – Watercourses referenced in conditions

APPENDIX C – Earthwork Details ESC

Standards

S1 All ESC measures shall be located outside the 20 year ARI flood level, unless no other viable location exists.

Review Comment

Te Parawhau questions 20-year ARI flood levels. Given the changing extremes of climate events experienced in recent years and associated localised hazard impacts, the ARI flood levels should be assessed on a site-by-site basis. Accordingly, conditions of consent should be amended to capture this requirement. Unless otherwise exists creates a loophole and should be deleted. S1 should be reworded as follows.

Amendment

S1 All ESC measures shall be site specific and at a minimum located outside the 20-year ARI flood level, notwithstanding site specific assessment may require a more precautionary location.

S2 Clean and dirty water diversion channels shall be sized to accommodate the flow from a 100 year ARI storm event where practicable, and at a minimum, the flow from a 20 year ARI storm event and an additional 300 mm freeboard.

Review Comment

The condition is generally supported. However, Te Parawhau does not support the phrase "where practicable" as it introduces uncertainty regarding the required design standard and provides no clear basis for determining when compliance with the 100 year ARI storm event requirement is not achievable.

Amendment

S2 Clean and dirty water diversion channels shall be sized to accommodate the flow from a 100 year ARI storm event, unless otherwise identified and justified within a certified CESCP, and at a minimum, the flow from a 20 year ARI storm event and an additional 300 mm freeboard.

S3 All silt and super silt fences shall be designed with a return upslope at the base of the fence to ensure robustness of the device.

S4 Whenever practicable, streamworks activities and associated works shall be undertaken with stream diversions in place to accommodate up to the 20 year ARI rain event. All stream flows above the 20 year ARI rain event shall be diverted, via systems (such as overland flow paths) capable of conveying the 100 year ARI rain event flow around the works area or through the works area in a stabilised flow path.

Review Comment

Te Parawhau does not support the phrase "whenever practicable" as it introduces uncertainty regarding when stream diversions are required and provides no clear basis for determining whether diversion of stream flows can be avoided.

Te Parawhau considers that all streamworks activities and associated works should be undertaken in a manner that avoids, remedies or mitigates adverse effects on waterways, wetlands, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai.

The condition should recognise that stormwater, sediment-laden runoff and diverted flows associated with streamworks have the potential to adversely affect freshwater environments and should be appropriately managed and treated prior to discharge to receiving environments.

Te Parawhau is also concerned that the Freshwater Ecological Assessment and associated mapping do not accurately identify all freshwater receiving environments potentially affected by the Project. Areas identified as overland flow paths may comprise ephemeral streams, intermittent streams, wetlands or other freshwater habitats that contribute flow to downstream receiving environments. These features should not be assumed to be of lesser ecological value and should be afforded appropriate protection through the design and implementation of stream diversion measures.

Recommended Amendment

S4 Streamworks activities and associated works shall be undertaken with stream diversions in place to accommodate up to the 20-year ARI rain event, unless alternative methodology is identified and justified within a certified CESCP.

All stream flows above the 20 year ARI rain event shall be diverted, via systems capable of conveying the 100 year ARI rain event flow around the works area or through the works area in a stabilised flow path incorporating treatment prior to discharge.

S5 Unless otherwise specified in a certified CESCP, all SRP volumes shall be designed based on 3% of the contributing catchment area and shall contain reverse slopes in the base of ponds, baffles and decant pulley systems and a forebay with a volume of 10% of the pond volume.

Review Comment

Te Parawhau does not support reliance on a generic design requirement based on 3% of the contributing catchment area without demonstrating that the design is appropriate for the specific catchment and receiving environment.

The suitability of sediment control measures including retention pond volumes should be determined having regard to catchment characteristics, land cover, hydrology, soil conditions, slope, rainfall patterns, the proportion of impervious surfaces, receiving environment sensitivity, freshwater values and the potential effects on waterways, wetlands, freshwater habitats and habitats supporting taonga species.

Te Parawhau considers that sediment retention pond sizing and design should be supported by catchment-specific assessment rather than relying solely on a generic percentage-based approach.

Amendment

S5 Unless otherwise specified and justified within a certified CESCP, all SRP volumes shall be designed based on catchment-specific assessment having regard to catchment characteristics, land cover, hydrology, soil conditions, slope, rainfall patterns, the proportion of impervious surfaces, receiving environment sensitivity and freshwater values.

All SRPs shall contain reverse slopes in the base of ponds, baffles and decant pulley systems and a forebay with a volume of 10% of the pond volume.

S7 The ESC shall include the installation of a last line of defence, which shall include measures to protect freshwater receiving environments from erosion and sediment discharges (such as additional bunding, silt fences, super silt fences or alternative as defined in the CESCP for that particular CESCP area or activity).

S8 All dirty water diversion channels shall be designed and constructed with sediment sumps at locations specified in the CESCP with a minimum volume of $2m^3$ per sump.

Chemical Treatment Management Plan Requirements

The Chemical Treatment Management Plan required by Condition [RC22(e)] shall include the following details:

(a) Specific design details of the chemical treatment system (including locations where this is necessary) based on a rainfall or flow activated and manual batch dosing methodology for the site's sediment retention ponds (SRPs), decanting earth bunds (DEBs) and any impoundment systems and any other sediment detention or flow device system as may be employed on Site;

(b) Monitoring, maintenance (including post storm) and contingency programme (including a record sheet);

(c) Details of flocculant and optimum dosage (including assumptions);

(d) Results of initial chemical treatment trial; and

(e) A spill contingency plan of relevance to the flocculant used and the associated material safety data sheet.

Review Comment

Chemical treatment systems have the potential to adversely affect waterways, wetlands, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai if they are not appropriately selected, designed, operated, monitored and maintained.

Te Parawhau considers that the ChemTMP should clearly identify the chemicals proposed for use, application methods, dosage rates, treatment triggers, receiving environments, sensitive receptors, monitoring requirements and contingency measures.

Dose rates should not be prescribed generically but should be established through site-specific bench testing of representative soils and sediment. The ChemTMP should demonstrate that the proposed chemicals and treatment methodologies are suitable for use and will achieve the intended treatment outcomes without resulting in adverse effects on waterways, wetlands, freshwater habitats, habitats supporting taonga species or the mauri of ngā wai.

The ChemTMP should include monitoring requirements to ensure chemical treatment does not result in unacceptable changes in pH, residual aluminium concentrations or other contaminants in discharges to receiving environments.

Given the long duration of the Project, the ChemTMP should also include a mechanism for review and amendment where updated regulatory requirements, environmental standards, contaminant guideline values or recognised industry best practice become available.

The ChemTMP should not be limited to compliance with Appendix C and should be provided to Te Parawhau for review and input in accordance with RC6.

(a) A Chemical Treatment Management Plan (ChemTMP) which shall include the details outlined in **Appendix [C]**.

Review Comment

Chemical treatment systems have the potential to adversely affect waterways, wetlands, freshwater habitats, taonga species and the mauri of ngā wai if they are not appropriately selected, operated, monitored and maintained.

Te Parawhau considers that the ChemTMP should clearly identify;

- the chemicals proposed for use, application methods, dosage rates, treatment triggers, receiving environments, monitoring requirements and contingency measures.
- The ChemTMP should also demonstrate that the proposed chemicals and treatment methodologies are suitable for use and will not result in adverse effects on waterways, wetlands, freshwater habitats, taonga species or the mauri of ngā wai.

- The ChemTMP should not be limited to compliance with Appendix [C] and should be provided to Te Parawhau for review and input in accordance with RC6.

Amendment

RC22(e) shall be amended to read as follows:

RC22(e) A Chemical Treatment Management Plan (ChemTMP), prepared in accordance with Appendix [C] and provided to Te Parawhau for review and input in accordance with RC6, which shall include:

(i) details of all chemicals proposed for use;

(ii) application methods, dosage rates and treatment triggers;

(iii) Identification of all waterways, wetlands, freshwater environments and receiving environments that may be directly or indirectly affected by chemical treatment activities;

(iv) measures to avoid adverse effects on waterways, wetlands, freshwater habitats, habitats supporting taonga species and the mauri of ngā wai;

(v) monitoring and reporting requirements for chemical treatment systems and associated discharges;

(vi) incident response procedures for treatment system failures, unauthorised discharges and exceedances of performance standards;

(vii) Adaptive management measures and corrective actions where monitoring identifies that treatment systems are not meeting the performance standards, treatment objectives or monitoring trigger levels specified in the ChemTMP;

(viii) Evidence, supported by technical assessment, demonstrating that the proposed chemicals and treatment methodologies are suitable for use and capable of achieving the required treatment outcomes without resulting in adverse effects on freshwater environments, habitats supporting taonga species or receiving environments; and

(ix) A process for review and amendment of the ChemTMP where updated regulatory requirements, environmental standards, contaminant guideline values or recognised industry best practice become available during the life of the Project, or where monitoring demonstrates that amendments are required to achieve the performance standards, treatment objectives or monitoring trigger levels specified in the ChemTMP.

Continuous Improvement Programme Requirements

The CIP required by Condition RC[22(f)] shall identify how the ESC outcomes in [RC20(c)] are to be achieved and include:

(a) A description of:

(i) TSS and / or NTU thresholds that trigger management responses; and

(ii) The qualitative monitoring outcomes required following each Trigger Event.

(b) Procedures for:

(i) Monitoring ESC measures (including flocculation) and upstream and downstream of discharge location;

(ii) Monitoring discharges from SRPs and DEBs to confirm the effectiveness of flocculation, and that pH levels of any discharge are not less than 5.5 (unless otherwise approved in a CESCP);

(iii) Automatic rainfall monitoring using at least 2 rain gauges located on Site;

(iv) Sampling to measure TSS and NTU of discharge points of a selection of identified 'high risk' sediment retention devices, at the time of a discharge and as a result of a Trigger Event;

(v) Establishing a relationship between TSS and NTU to enable the determination of sediment yields for the Project;

(vi) Ongoing monitoring (measured in m^3/sec) of the discharges out of four SRPs, with at least two SRPs representing 'high risk' locations;

(vii) Automatic sediment sampling at the same four selected SRPs to measure outflow of TSS and / or NTU; and

(viii) responding to exceedances of TSS and / or NTU thresholds (including reporting to Council, investigating possible causes and effects, identification of potential linkages between on-site practices and these effects, assessing the effectiveness of on-site practices and remedial actions (where necessary).