

Before the Hearings Panel of Greater Wellington Regional Council and Upper Hutt City Council

IN THE MATTER of the Resource Management Act 1991
(the Act)

AND

IN THE MATTER Resource consent application and Notice
of Requirement by Wellington Water
Limited (WWL) on behalf of Upper Hutt
City Council (UHCC) for the Pinehaven
Stream Improvement works.

BETWEEN Greater Wellington Regional Council
(GWRC) and Upper Hutt City Council
(Local Authorities)

AND Upper Hutt City Council
(Applicant)

Section 42A Addendum Report: Response to applicants evidence and joint witness statements and updated set of recommended consent conditions

On behalf of Greater Wellington Regional Council (GWRC)

Josephine Burrows
28 July 2020

INTRODUCTION

- 1 My full name is Josephine Claire Burrows. I am a Resource Advisor at GWRC. I am the reporting officer considering UHCC's application for land use, discharge and diversion consents associated with the Pinehaven Stream Improvement works.
- 2 This addendum:
 - Provides an update on the position of Submitters 3, 4, 5 and 14;
 - Addresses the applicants evidence, specifically evidence of Mr Eric Skowron (Jacobs), Mr Ben Fountain (Wellington Water Limited, WWL), Mr Peter Kinley (previously Jacobs), Dr Claire Conwell (Jacobs), Mr Tim Haylock (Downer), Dr Alex James (EOS Ecology) and Ms Helen Anderson (GHD);
 - Addresses several matters raised in the Joint Witness Statements for erosion and sediment control, and aquatic ecology;
 - Clarifies when I recommend the GWRC consents commence and lapse; and
 - Provides an updated set of conditions reflecting comments in this addendum and changes discussed during the planning expert conferencing (in which I was involved).
- 3 I have read and am familiar with the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2014. I agree to comply with that Code. Other than where I state that I am relying on the advice of another person, this evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

Changes to submissions

- 4 Ms Jayne Roberts (submission 3) has advised that she no longer wishes to be heard at the hearing, however her submission still stands (support).
- 5 On 14 July 2020, I received an email from Graham and Debbie Griffiths (submission 4) who advised they wished to withdraw their support for the project and now oppose the project and request that it be declined. On 20 July 2020, Ms Griffiths confirmed that they did not wish to be heard at the hearing, however would be supporting Save Our Hills in their submission.
- 6 Mr Graeme McCarthy (submission 5) has advised that he no longer wishes to be heard at the hearing, however his submission still stands (support).
- 7 Ms Robyn Hickson (submission 14) has advised that she no longer wishes to be heard at the hearing, however her submission still stands (support).

Response to applicants Project Need (Mr Skowron) and Project Overview (Mr Fountain) evidence

- 8 In section 4.4 and 7.1 of Mr Skowron's evidence for the Applicant, he refers to the RMA approvals authorising ongoing operation and maintenance of the Project. I would like to clarify that the GWRC consents do not include maintenance of the proposed structures as the Applicant has advised that these activities can meet the relevant permitted activity rules.
- 9 In section 4.3 of Mr Fountain's evidence for the Applicant, I would like to clarify that GWRC does not own or have responsibility for the stormwater networks and services, and I believe WWL manages this infrastructure for UHCC.

Response to applicants Flood Model and Flood Hazard Assessment evidence (Mr Kinley)

- 10 Mr Kinley suggested amendments to my recommended condition 10 in section 12.3 of his evidence for the Applicant. Mr Elliot Tuck (Beca Limited) and I have reviewed these proposed changes and are generally comfortable with the content of them. We have made further changes to the recommended condition to ensure that flood extent is assessed as well as peak flood depth, and that it is clear that the flood effects of the design cannot exceed those specified in the application documents. I consider that the use of the term 'achieved' in the condition could mean water levels reaching or exceeding that level. I have copied the condition with my amendments included below. A full copy of my updated recommended conditions are attached to this addendum as Appendix 1.

'The consent holder shall submit a final Detailed Hydraulic Design Memorandum (DHDM) to the Manager, at least 20 working days prior to commencement of construction. The DHDM shall be prepared by a suitably qualified and experienced hydrologist or hydraulic modelling specialist.

The purpose of the DHDM is to confirm compliance with, or improvement on, the information provided in the application. It shall confirm that the peak flood water levels and flood extents associated with the final design do not exceed those specified in the application documents for the 4% and the 1% Annual Exceedance Probability flood events.

The consent holder shall not commence construction until the DHDM has been confirmed in writing by the Manager as complying with this condition.'

Response to Applicants evidence on Construction Methodology (Mr Haylock) and Erosion and Sediment Control (Dr Conwell)

Standard works condition limit of 50g/m³ (condition 26)

- 11 In section 8.6 of her evidence for the Applicant, Dr Conwell refers to the 'ability for trigger levels to be appropriately adapted and managed via the AMP [Adaptive Management Plan]'. I would like to clarify that the suspended sediment concentrations (SSC) of 50g/m³ during standard works (condition 26) and 150g/m³ during and after heavy rainfall events (condition 27) in my recommended consent conditions are not able to be amended through the adaptive management process.
- 12 I consider that these are set limits to ensure that any effects of the discharge are managed appropriately. The assessment of effects in my s42A report is based on these limits being met. I do not consider it is appropriate to allow for these limits to be changed through an adaptive management process, as I believe that is outside the scope of a management plan due to the level of assessment that it would require (e.g. assessment of effects of the discharge and assessment against the relevant objectives and policies and section 107 of the Act). Allowing these limits to be changed through the adaptive management process provides no certainty of effects on the environment.
- 13 Mr Haylock has advised in section 14.2 of his evidence for the Applicant that he considers the conditions to be generally workable, with two exceptions – one being whether the limit of 50g/m³ for standard works is achievable (and the other being the winter works condition discussed in sections 14 and 15 below).
- 14 In terms of the discharge limit for standard works, the Applicant proposed a limit of 150g/m³ at the zone of reasonable mixing in their section 92(1) response dated 21 February 2020. I did not consider that this limit was appropriate for a number of reasons including that it would not meet the requirements of section 107 of the RMA, and also that there should be very little sediment being discharged once the dam and diversion is in place. As such, I recommended a 50g/m³ limit, which I consider is appropriate in terms of effects on the environment and it will be consistent with the objectives and policies of the regional plans and meet the requirements of section 107 of the RMA.
- 15 If the applicant has concerns they cannot meet this limit or they wish to change this limit, they would need to provide evidence as to why it needs to be changed and how their proposed limit would meet the relevant objectives, policies of the regional plans and sections of the Act (in particular s107). An alternative (including justification and assessment) has not been provided by the applicant to date.

Winter works conditions (conditions 40 and 41)

- 16 In section 8.7 of her evidence for the Applicant, Dr Conwell considers that the undertaking of works during winter is already appropriately catered for in the Construction Management Plan (CMP) framework, and that the additional approval step is unnecessary. Mr Haylock advises in section 14.2 of his evidence that if works cannot

occur during winter, the programme, cost and impact on neighbours and stakeholders will be increased.

17 Whilst I understand where both Dr Conwell and Mr Haylock are coming from with these statements, I consider that the winter works condition should be applied to these works for a number of reasons:

17.1 It still provides scope for works to be undertaken during the winter period, however adds another approval layer due to the high risk nature of undertaking streamworks during winter when there is increased rainfall and higher groundwater levels.

17.2 It provides GWRC with the ability to have a greater influence on how the works are undertaken and ensure that the learnings of previous stages are taken into account.

17.3 The ability to decline an application for winter works provides an additional control for GWRC (e.g. if the site has a history of non-compliance), without having to go down an enforcement route.

Response to Joint Witness Statement – Erosion and Sediment Control (ESC)

18 The final paragraph on page 3 of the ESC Joint Witness Statement refers to a discussion around whether an exceedance of a consent limit would result in immediate enforcement action from GWRC. Whilst these are consent limits, I consider that enforcement action would not likely be taken for one-off, infrequent or minor exceedances of these limits. Any exceedances of these limits require the consent holder to undertake a range of actions (as described in condition 29), so these would need to be addressed following any exceedance and the appropriate actions taken. In the event of ongoing or frequent exceedances, I consider it would be appropriate for GWRC to look at taking enforcement actions.

Response to Applicants Aquatic Ecology evidence

19 Dr James advises in section 9.2 and 13.2 of his evidence for the Applicant that the piped diversion methodology will ensure there is continuous flow of water free of temporary barriers, and therefore a greater chance of maintaining fish passage throughout the majority of the construction phase. I understand that there a number of factors which determine whether temporary diversions are able to be passed by fish species, including the height of the pipe outlet (whether it is perched or within the streamflow), substrate of the pipe (flat vs corrugated), velocity of the water, provision of sheltered resting places and length of the pipe.

20 I do not consider the applicant has provided sufficient evidence to demonstrate whether fish passage will be provided for the duration of the works (or for what proportion of the works it may be provided), and therefore stand by my conservative assessment that fish passage will not be provided during the construction period (which, based on advice from Dr Harrison, I am comfortable with).

Response to Joint Witness Statement – Aquatic Ecology

21 I am comfortable with all changes to consent conditions as described in section 4.1.f of the Joint Witness Statement – Aquatic Ecology, and have updated the conditions to reflect these wordings (Appendix 1 of this addendum):

21.1 Condition 12(b) removal to the EFM400 electric fishing model as it is unnecessarily restrictive;

21.2 Condition 12(e) replacement of 'immediately downstream' with 'upstream or downstream' to give the ecologist the discretion to release the fish at the best location;

21.3 Condition 12(f) change of wording to: 'Fish transfer in closed, cool containers that are kept in the shade at all times, and consider aeration during particularly warm weather', as it provides a higher level of protection to fish being relocated.

21.4 Condition 56 – change of wording to correct the reference from 'a fish movement barrier' to 'the stages' piped diversion dam'.

Response to Applicants Planning evidence

22 In section 10.2(c) of her evidence for the Applicant, Ms Anderson states that she agrees that fish passage will be blocked during the installation of the piped diversion, and potentially during the construction (with the piped diversion in place). However she also references Dr James' evidence relating to the potential for fish passage to be maintained to some extent during the construction works. As described in section 20 of this report, I do not consider the applicant has provided sufficient evidence to demonstrate whether fish passage will be provided through the temporary piped diversions.

23 In section 15.3(a) of her evidence, Ms Anderson has advised that she considers the inclusion of a winter works condition to be unnecessary, as the same best practice controls and mitigation steps are set out in the CMP and Site-specific Environmental Management Plans (SEMPs). She highlights a concern that requiring additional approval will add delays to the construction if approval was not provided, and also add time and cost through demobilisation and remobilisation. I have stated my position on the inclusion of the winter works condition in section 17 above, and still consider it should be recommended as a condition of consent.

24 In section 13.13 and Appendix B of her evidence, Ms Anderson outlines the conditions which she does not agree to, or amendments proposed to the conditions. I have addressed all requested changes to conditions in section 25 below. I have attached an amended (track changed) set of conditions as Appendix 1 to this addendum.

25 In regards to those conditions Ms Anderson has commented on, I respond as follows:

25.1 Condition 1 – I agree to the deletion of reference to the 27 November 2019 Flood Hazard Assessment Addendum as it has been superseded.

25.2 Condition 10 – As described in section 10 above, I have proposed further amendments to the wording of this condition.

25.3 Condition 12 – I agree to these changes, see sections 21.1 – 21.3 above.

25.4 Condition 16 – I am comfortable including the requested requirement relating to the Site Office Management Plan into the requirements of the Construction Management Plan at the request of the applicant, in order to avoid duplication between GWRC/UHCC management plans. Section 108AA outlines the requirements for conditions of resource consents. Whilst this part of the condition would not meet 108(1)(b) or (c), as it was requested by the applicant it meets 108AA(1)(a) so is able to be included on the consent. I cannot comment whether Mr Beban of UHCC is comfortable with the removal of this condition from the designation conditions.

25.5 As described in section 17 above, I do not agree with the deletion of conditions 40 and 41 (winter works), and movement of this information partially to condition 21 (SEMP requirements).

25.6 Condition 44 – I am comfortable with the provision of the weekly audits on a monthly basis. The consent holder is still required to undertake the audits at a weekly interval and notify GWRC in the event of any discharge limit exceedances (condition 29) or environmental incidents (condition 6).

25.7 Condition 56 – I agree to these changes, see section 21.4 above

25.8 Condition 79 – I agree to the deletion of this condition relating to management of effects on network utilities, which I had included only as it was part of the condition set proposed by the Applicant. Ms Anderson has advised that these matters are addressed directly between the Applicant and the network utility operator.

Further amendments to conditions

26 Ms Anderson and I also discussed further changes to the recommended conditions of consent, and agreed to the following changes (in addition to some of the changes listed in section 25 above).

- 26.1 Condition 5 – I agreed to add a note to this condition to make it clear that the consent holder is able to use the same register to fulfil the requirements of the GWRC and UHCC complaints registers (although they require some different information).
- 26.2 Condition 25 – I agreed to reword this condition as follows to ensure consistent of wording of conditions: ‘The discharge shall not give rise to the following effect in the Pinehaven Stream, except on a temporary and intermittent basis and in compliance with conditions 27 (effects of heavy rainfall) or condition 28 (installation/removal of the temporary piped diversion and dam): a) Any conspicuous change in the colour or visual clarity.’
- 26.3 Condition 57 – I have changed the reference in this condition from condition 57 to condition 56 as it is incorrect.
- 26.4 Definitions – I agreed to include the relevant definitions from the Applicant’s proposed conditions, to ensure clarity and consistency with the UHCC conditions. The definitions included are: Construction Management Plan, Commencement of Construction, Completion of Construction, Enabling works, Erosion and Sediment Control Plan, Greater Wellington Regional Council, Pinehaven Kaitiaki Monitoring Strategy, Upper Hutt City Council, Work or Works, and Working day.

Commencement and lapsing of resource consents

- 27 In section 15 of my s42A report I recommended the resource consents commence, and are considered to have been given effect to, on the day that the first Site-specific Environmental Management Plan (SEMP) is certified (i.e. this would occur after certification of the CMP and ESCP).
- 28 I would like to add that the consents should also be considered to commence, and to have been given effect to, on the approval of any Site-specific Construction Management Plan (SCMP, condition 15). A SCMP may be used for minor enabling works or isolated works undertaken prior to the commencement of the main construction works, so I consider it important that this plan is referenced in those plans that would trigger the commencement of the consent timeframes.
- 29 I have added a section describing the commencement and lapsing of consents to the amended ‘Recommended conditions of consent for WGN200083’, attached as Appendix 1 to this addendum.

CONCLUSION

- 30 In summary, this addendum addresses the Applicant's evidence of Mr Skowron, Mr Fountain, Mr Kinley, Dr Conwell, Mr Haylock, Dr James and Ms Anderson; and the Joint Witness Statements for erosion and sediment control and aquatic ecology.
- 31 The purpose of this addendum is to provide up to date information for the hearing panel prior to the hearing.
- 32 The applicant's evidence has not changed my view that the consent application should be granted, subject to the changes to consent conditions in Appendix 1 of this report.



Josephine Burrows
28 July 2020

Appendix 1 – Amended recommended conditions of consent for WGN200083

Consent ID descriptions

[36459] Land use consent to undertake works in the bed of the Pinehaven Stream involving the placement, replacement and removal of structures; and the construction of naturalised channel banks, in relation to the Pinehaven Stream Improvement flood mitigation works, including associated disturbance and deposition to the streambed.

[36460] Land use consent to undertake soil disturbance activities within 5m of the Pinehaven Stream, associated with the construction of the Pinehaven Stream Improvement works.

[36461] Water permit to undertake the temporary damming and diversion at 12 locations of the Pinehaven Stream, associated with the construction of the Pinehaven Stream Improvement works.

[36825] Discharge permit to temporarily discharge sediment-laden water associated with the construction of the Pinehaven Stream Improvement works to the Pinehaven Stream; and to temporarily discharge sediment-laden runoff from earthworks within 5m of the Pinehaven Stream to land where it may enter water (Pinehaven Stream).

[36829] Land use consent to reclaim a 78m stretch of the Pinehaven Stream at 26 and 28 Blue Mountains Road.

[36830] Water permit for the permanent realignment and diversion of the Pinehaven Stream at 26 and 28 Blue Mountains Road; and to construct a flood diversion wall at Willow Park outside of the bed of the Pinehaven Stream which permanently divert flood waters of the Pinehaven Stream.

Commencement and lapsing of resource consents

The resource consents will commence on the day that the first Site-specific Environmental Management Plan (SEMP) is certified (i.e. after certification of the Construction Management Plan (CMP) and Erosion and Sediment Control Plan (ESCP)), or on the day that the first Site-Specific Construction Management Plan (SCMP) is certified (i.e. prior to certification of the CMP, ESCP or any SEM).

The resource consents will lapse five years from the date of granting of consent. Consents will be considered to have been given effect to once the first Site-specific Environmental Management Plan or Site-specific Construction Management Plan has been certified.

Note relating to specific condition durations:

The following consent conditions relate to resource consent IDs [36459] [36830] and [36829] and therefore have a duration of 35 years/perpetuity, depending on the consent that they relate to (stream structures – 35 years; reclamation – perpetuity):

Condition 1 (consistency with application and documents),
Condition 8 (review condition),

Condition 58 (maintenance of fish passage),
Condition 59 (maintenance of any debris arrestor),
Conditions 64 - 69 (riparian planting requirements),
Conditions 70 - 74 (post-construction ecological monitoring),
Conditions 75 – 76 (maintenance of works).

- All conditions that are not identified above have a consent duration of five years from the certification of the first Site-specific Environmental Management Plan.

Interpretation

Wherever used in the conditions below, the following terms shall have the prescribed meaning:

Canopy cover means the percentage of ground area covered by planted native vegetation as viewed from vertically above the planted area. It includes all plant tiers (that is, it may be a mix of low growing species plus tree and shrub species).

CMP means Construction Management Plan.

Commencement of construction means the time when the Works that are subject of this consent (including any enabling works, other than removal or demolition of buildings) start.

Completion of construction means completion of stream improvement earthworks, restoration of the stream site, and completion of planting (but not including any further planting that may be required as part of the maintenance and monitoring period).

Compliance Officer means any Enforcement, Compliance or Duty Officer, Environmental Regulation, Greater Wellington Regional Council.

Enabling works means Works that may be carried out in advance of bulk earthworks that include site establishment, vegetation clearance, relocation of utilities and services, fencing and installation of accesses and erosion and sediment control measures.

ESCP means Erosion and Sediment Control Plan.

GWRC means Greater Wellington Regional Council.

Notification or notice means email of notification to notifications@gw.govt.nz. Please include the consent reference number (WGN200083) and the name and phone number of a contact person responsible for the proposed works.

PKMS means Pinehaven Kaitiaki Monitoring Strategy.

Stabilised means inherently resistant to erosion or rendered resistant, such as by using indurated rock or by the application of basecourse, colluvium, hydroseeding, grassing, mulch, or another method to the reasonable satisfaction of the Manager and as specified in Wellington Regional Council's *Erosion and Sediment Control Guidelines for the Wellington Region*, September 2002. Where seeding or grassing is used on a surface that is not otherwise resistant to erosion, the surface is considered stabilised once, on reasonable visual inspection by the Manager an 80% vegetative cover has been established.

The Manager means the Manager, Environmental Regulation, Greater Wellington Regional Council.

UHCC means Upper Hutt City Council.

Work or Works means the construction or operation of the Project, including where relevant any stage or part thereof.

Working day means the same as under Section 2 of the Resource Management Act 1991.

General conditions

1. The location, design, implementation and operation of the activity/structure shall be in general accordance with the consent application and its associated plans and documents lodged with the Greater Wellington Regional Council on:
 - a) 19 September 2019 (application documents);
 - ~~b) 27 November 2019 (Flood Hazard Assessment addendum);~~
 - ~~b)e)~~ 21 February 2020 (section 92 response to GWRC relating to questions raised during technical reviews, including updated General Arrangement Plans IZ089000-SP3-400-CD-DRG-3100 through to -3106 rev B (since superseded), and Erosion and Sediment Control Plan revision 5);
 - ~~c)d)~~ 26 February 2020 (section 92 response to GWRC relating to questions raised by submissions);
 - ~~d)e)~~ 25 March 2020 (letter to GWRC responding to request for clarification on proposed works and changes to original application);
 - ~~e)f)~~ 23 April 2020 (letter to GWRC with revised Table 2 outlining changes to the proposal since the original application and consent notification);
 - ~~f)g)~~ 11 June 2020 (updated General Arrangement Plans IZ089000-SP3-400-CD-DRG-3100 through to -3106 rev C);
 - ~~g)h)~~ 15 June 2020 (updated Flood Hazard Assessment report)

Where there may be contradiction or inconsistencies between the application and further information provided by the applicant, the most recent information applies. In addition, where there may be inconsistencies between information provided by the applicant and conditions of the consent, the conditions apply.

Note: Any change from the location, design concepts and parameters, implementation and/or operation may require a new resource consent or a change of consent conditions pursuant to section 127 of the Resource Management Act 1991.

2. The consent holder shall give the Manager a minimum of **two working days** (48 hours) notice prior to the works commencing on each stage of works.

Note: The works have been separated into 12 stages, as set out in ESCP revision 5 provided with the section 92 response dated 21 February 2020.

3. The consent holder shall provide a copy of this consent and any documents and plans referred to in this consent to each operator or contractor undertaking the works authorised by this consent, prior to the works commencing.

Note: It is recommended that the contractors be verbally briefed on the requirements of the conditions of this consent, and made aware of the location of the consent documents on site, prior to works commencing.

4. The consent holder shall ensure that a copy of this consent and all documents and plans referred to in this consent, are kept on site at all times during construction works and presented to any Compliance Officer on request.

Complaints and incidents

5. The consent holder shall maintain a written record of any complaints received alleging adverse effects that have or could have resulted in a condition or conditions of this consent being contravened for the duration of works authorised by this consent. This record shall include:
 - a) The name and address of the complainant;
 - b) The date and time that the complaint was received;
 - c) Details of the alleged event;
 - d) Weather conditions at the time of the complaint; and
 - e) Any measures taken to mitigate the complaint.

The consent holder shall give notice and the written record to the Manager within **one working day** of receiving the complaint.

Note: The same complaints register can be used for fulfilling the requirements of the GWRC and UHCC conditions.

6. The consent holder shall notify the Manager **immediately** if any contaminants (including sediment) or material are released during works and enter the Pinehaven Stream due to any of the following:
 - a) Discharges from non-stabilised areas that are not treated by erosion and sediment control measures required under this consent;
 - b) Failure of any erosion and sediment control measures; or
 - c) Any other incident (e.g. spills or leaks) which either directly or indirectly causes, or is likely to cause, adverse ecological effects in the Pinehaven Stream.

If any of these incidents listed under (a) to (c) above occur, the consent holder shall:

- d) Re-establish erosion and sediment control measures as soon as practicable;
- e) Liaise with the Manager to establish what remediation or rehabilitation is required;
- f) Carry out any remedial and/or mitigation action as required by, and to the satisfaction of, the Manager;

- g) Maintain a permanent record of incidents at the site (including date and time of the incident; the nature, manner and cause of the contaminants; weather conditions at the time of the incident; and the steps taken to contain any further release of contaminants and to remedy any adverse effects on the watercourse); and
- h) Provide a written report to the Manager covering the above matters (d)-(g) within **five working days** of the incident, or another timeframe agreed to in writing by the Manager.

Note 1: This notification shall be emailed to notifications@gw.govt.nz, and phoned into the GWRC Environmental Hotline on 0800 496 734.

Note 2: The Greater Wellington Regional Council may investigate any incidents or breaches associated with this consent or the Resource Management Act 1991, and may also undertake enforcement action depending on the circumstances.

Discovery of artefacts

- 7. If kōiwi, taonga, wāhi tapu or other archaeological material is discovered in any area during the works, work shall immediately cease and the consent holder shall notify Greater Wellington Regional Council, Port Nicholson Block Settlement Trust, Te Rūnanga o Toa Rangatira Inc and Heritage New Zealand as soon as possible, but within **twenty-four hours**. If human remains are found, the New Zealand Police shall also be contacted **immediately**.

The consent holder shall allow the above parties to inspect the site and in consultation with them, identify what needs to occur before work can resume.

Notification must be emailed to;

- a) Greater Wellington Regional Council, notifications@gw.govt.nz;
- b) Heritage New Zealand, information@heritage.org.nz;
- c) Port Nicholson Block Settlement Trust, taiao@portnicholson.org.nz; and
- d) Te Rūnanga o Toa Rangatira Inc, resourcemanagement@ngatittoa.iwi.nz.

Heritage New Zealand must also be contacted by phone on 04 472 4341 (National Office).

No works may resume on site until the consent holder has received written notification that consultation with the parties identified above has been undertaken to the satisfaction of the Manager.

Note: Evidence of archaeological material may include burnt stones, charcoal, rubbish heaps, shell, bone, old building foundations, artefacts and human burials.

Review condition

8. Greater Wellington Regional Council may review any or all conditions of this consent by giving notice of its intention to do so pursuant to section 128 of the Resource Management Act 1991, within one month of each anniversary of the commencement of this consent, for any of the following reasons:
 - a) To review the adequacy of any plan and/or monitoring requirements, and if necessary, amend these requirements outlined in this consent;
 - b) To deal with any adverse effects on the environment that may arise from the exercise of this consent; and which are appropriate to deal with at a later stage;
 - c) To require the implementation of Best Practicable Options, in respect to new methodologies for the undertaking of the works to avoid, remedy or mitigate any significant adverse effect on the environment arising from the works; or
 - d) To enable consistency with any relevant Regional Plans or any National Environmental Standards or Regulations.

The review of conditions shall allow for the deletion or amendment of conditions of this consent; and the addition of such new conditions as are shown to be necessary to avoid, remedy or mitigate any significant adverse effects on the environment.

Note: For the purposes of this condition the “exercise of the consent” is deemed to be once the works authorised by this consent have commenced.

Notes:

- A. A resource management charge, set in accordance with section 36(2) of the Resource Management Act 1991 shall be paid to the Greater Wellington Regional Council for the carrying out of its functions in relation to the administration, monitoring, and supervision of resource consents and for the carrying out of its functions under section 35 (duty to gather information, monitor, and keep records) of the Act.
- B. The Greater Wellington Regional Council shall be entitled to recover from the consent holder the costs of any review, calculated in accordance with and limited to GWRC’s scale of charges in force and applicable at that time pursuant to section 36 of the Resource Management Act 1991.
- C. Please note that the granting of this resource consent does not provide you with the right to access private properties. Landowner entry requirements need to be gained and be in place before you may exercise this consent.

Pre-works conditions

Pre-construction site meeting

9. The consent holder shall arrange and conduct a pre-construction site meeting prior to any work authorised by this consent commencing on site and invite, with a minimum of **ten working days'** notice, the Greater Wellington Regional Council and the contractor undertaking the works.

The consent holder shall provide minutes of the meeting to GWRC within five working days of the pre-construction meeting being held.

Note: In the case that Greater Wellington Regional Council does not attend this meeting, the consent holder will have complied with this condition, provided the invitation requirement is met.

Detailed Hydraulic Design Memorandum

10. The consent holder shall submit a final **Detailed Hydraulic Design Memorandum (DHDM)** to the Manager, at least **20 working days** prior to ~~works commencing~~ commencement of construction. The DHDM shall be prepared by a suitably qualified and experienced hydrologist or hydraulic modelling specialist

The purpose of the DHDM is to confirm compliance with, or improvement on, and consistency with the information provided in the application. The DHDM shall be prepared by a suitably qualified and experienced hydrologist or hydraulic modelling specialist, and It shall confirm that the peak flood water levels and flood extents associated with the final design do not exceed those specified in the application documents for the 4% AEP flood event and 1% Annual Exceedance Probability flood events. 25-year and 100-year return period flood event level project objectives are achieved in the final design.

The consent holder shall not commence ~~works~~ construction until the DHDM has been confirmed in writing by the Manager as complying with this condition, ~~in writing.~~

Pinehaven Kaitiaki Monitoring Strategy

11. The consent holder shall engage a suitably qualified and experienced person to prepare, in consultation with appropriate iwi representatives of Port Nicholson Block Settlement Trust, a **Pinehaven Kaitiaki Monitoring Strategy (PKMS)**. The PKMS shall be submitted to the Manager for certification at least **20 working days** prior to the works commencing.

The purpose of the PKMS is to ensure the potential effects of construction to the mana and mauri of the Pinehaven Stream are appropriately managed and mitigated. The PKMS shall include, but not be limited to:

- a) Identification of tohu (attributes) of the Pinehaven Stream;

- b) Identification of mahinga kai and Māori customary use of the Pinehaven Stream;
- c) Methods to monitor effects on tohu, mahinga kai and Māori customary use; and
- d) Management and mitigation of effects on tohu, mahinga kai and Māori customary use.

Where applicable, findings from the PKMS shall be incorporated into the relevant construction-related management plans.

Fish Relocation and Recovery Programme

12. The consent holder shall engage a suitably qualified ecologist to prepare a **Fish Relocation and Recovery Programme (FRRP)** for native and sports fish located within the works area. The FRRP shall be submitted to the Manager for certification at least **20 working days** prior to construction works commencing.

The FRRP shall apply to both native and sports fish, and shall include but not be limited to:

- a) Where sufficient water is present, use of Gee-minnow traps and fyke nets at appropriate distances overnight;
- b) Several electric fishing runs of the watercourse each day using the electric fishing machine (EFM400);
- c) Capture and relocation of any remaining fish during stream ‘dewatering’ processes;
- d) Checking of any sediment removed from the stream for fish;
- e) Relocation of all native and sports fish on the same day to a suitable similar habitat immediately upstream or downstream of the works area and within the same catchment;
- f) Fish transfer in closed, cool containers that are kept in the shade at all times, and consider aeration during particularly warm weather;
- g) Humane euthanizing and disposal of any exotic non-sports fish.

Note: It is the responsibility of the consent holder to ensure they hold all relevant permits relating to undertaking fish rescue and temporary blocking fish passage.

Certification of management plans

Certification of construction-related management plans

13. The consent holder shall not commence works until the relevant management plans have been certified by the Manager. For all works, that shall include certification of:

- a) **Construction Management Plan (CMP)** as required by condition 16 of this consent – for the full project;
- b) **Erosion and Sediment Control Plan (ESCP)** as required by condition 18 of this consent – for the full project;

And prior to commencing each stage of the works, in addition to the management plans listed under (a) and (b) above, the:

- c) Relevant **Site-specific Environmental Management Plan (SEMP)** as required by condition 21 of this consent; and

The consent holder shall involve Port Nicholson Block Settlement Trust in the development of all relevant management plans.

These management plans shall be in general accordance with any draft management plan included as part of the application or further information provided.

The consent holder shall provide the certified CMP and ESCP to Upper Hutt City Council for their information.

Note 1: The SEMPs are required to be certified prior to works commencing on each stage, they are not all required to be certified at the start of works commencing under this consent.

Note 2: In the case that Port Nicholson Block Settlement Trust does not take up the offer to be involved in the development of plans the consent holder will have complied with this condition, if sufficient time and opportunity is provided to be conducive to PNBST's involvement.

14. All construction works authorised under this consent shall be carried out in accordance with the certified management plans.

Amendments to Management Plans

15. Any amendments proposed to the certified management plans shall be confirmed in writing by the consent holder and be to the satisfaction of the Manager prior to the implementation of any amendments proposed.

Note: Depending on the scale of amendment proposed, this could be done as an addendum rather than complete update to the management plan.

Construction Management Plan

16. The consent holder shall prepare, in consultation with the contractor undertaking the works, a **Construction Management Plan (CMP)**. The CMP shall be submitted to the Manager for certification at least **20 working days** prior to the works commencing.

The CMP shall set out the management procedures and construction methods to avoid, remedy or mitigate potential adverse effects arising from the construction activities, and shall include (but not be limited to):

- a) Roles, responsibilities and contact details for construction management staff, including the manager responsible for erosion and sediment control;
- b) The name of the consent holder's representative on the project;
- c) General site layout;
- d) An outline of the Project's construction programme;
- e) Methods for ensuring that the works take into account anticipated ground conditions and contingency plans for unanticipated ground conditions;
- f) Methods for ensuring the works are designed and undertaken in a manner that ensures the safety of the public and stability of surrounding land, buildings and structures;
- g) Vehicle/machinery maintenance and cleaning procedures, particularly for machinery entering the stream channel;
- h) Measures for addressing spills (including fuels, oils, grease, hydraulic fluids and cement products) and location of spill kits;
- i) An outline of how monitoring and reporting on all relevant conditions will be undertaken;
- j) Procedures and timing for review and/or amendment to the CMP;
- k) Details for responding to the discovery of unrecorded archaeological sites in accordance with condition 7 of this consent; and
- l) Methods for managing dust in accordance with condition 77 and 78 of this consent.

m) Site office establishment and management including location, proposed working hours, traffic movements to and from the site, on and off site parking for staff, location and nature of any security fencing, light spill from security lighting, laydown areas.

17. Where minor enabling works or isolated works are to be undertaken prior to commencement of the main construction works, at the discretion of the Manager, the consent holder may submit a **Site-specific Construction Management Plan** commensurate with the scale and effects of the proposed works at least **15 working days** prior to commencing works to the Manager for certification.

Erosion and Sediment Control Plan

18. The consent holder shall prepare, in consultation with the contractor undertaking the works, a final **Erosion and Sediment Control Plan (ESCP)**. The ESCP shall be submitted to the Manager for certification at least **20 working days** prior to the works commencing.

The final ESCP shall, as a minimum, be prepared in general accordance with ESCP revision 5 (submitted with the section 92 response to GWRC on 21 February 2020) and the current *Erosion and Sediment Control Guidelines for the Wellington Region*. It shall include, but not be limited to:

- a) A description of the works proposed and anticipated timetable;
- b) Details of all principles, procedures and practices that will be implemented to undertake erosion and sediment control and minimise the potential for sediment discharges from the site (including the temporary piped diversion and stream livening protocol);
- c) The design criteria and dimensions of all erosion and sediment control measures;
- d) Plan(s) of an appropriate scale clearly identifying:
 - i) The locations of waterways and stormwater inlets;
 - ii) Staging sequence of erosion and sediment control measures;
 - iii) Areas and cross sections of all streamworks, cut and fill;
 - iv) The extent of soil disturbance and vegetation removal;
 - v) Any 'no go' and/or buffer areas to be maintained undisturbed;
 - vi) Locations of topsoil stockpiles;
 - vii) All key erosion and sediment control measures;
 - viii) The boundaries and area of catchments contributing to all stormwater impoundment structures;
 - ix) The locations of all specific points of discharge to the environment; and
 - x) Any other relevant site information.
- e) Timetable and nature of progressive site rehabilitation and re-vegetation;
- f) Details of the adaptive management approach to addressing sediment discharges, including trigger levels for the installation and removal of the temporary piped diversion in accordance with condition 28 of this consent;

- g) Maintenance procedures and frequency for erosion and sediment controls;
 - h) Details for determining the downstream zone of reasonable mixing where 50m downstream of a stage of works is not practicable;
 - i) Details of erosion and sediment control and water quality monitoring procedures and frequency, as required by condition 19 and in accordance with condition 20 of this consent, including the relationship between turbidity (NTU) and suspended sediment concentrations (SSC);
 - j) Reporting procedures and frequency, including trigger exceedance reporting (time of trigger; time samples were collected; pH, SSC and turbidity results; cause of exceedance; remedial actions undertaken)
 - k) Rainfall triggers, response and contingency measures, including procedures to minimise adverse effects in the event of heavy rainfall events and/or the failure of any key erosion and sediment control structures;
 - l) Procedures and timing for review and/or amendment to the ESCP;
 - m) Decommissioning methodology for all erosion and sediment control measures;
 - n) Procedures for re-instating erosion and sediment control measures at the end of each working day, where applicable; and
 - o) Any other relevant matters to ensure compliance with all consent conditions.
19. The erosion and sediment control and water quality monitoring (required by condition 18(i) of this consent) shall include:
- a) Pre-construction monitoring;
 - b) Rainfall monitoring;
 - c) Routine device monitoring;
 - d) Trigger device monitoring;
 - e) Pinehaven Stream baseline water quality monitoring (upstream of works); and
 - f) Pinehaven Stream receiving environment water quality monitoring at the zone of reasonable mixing locations;
20. The Pinehaven Stream baseline and receiving environment water quality monitoring shall include the following parameters, which shall be developed with reference to the Australia and New Zealand Marine and Freshwater Quality Guidelines where applicable:
- a) Turbidity – NTU;

- b) Suspended Sediment Concentrations (SSC) – g/m³;
- c) pH; and
- d) Total ammonia – mg/L (when wet cementitious products are being used within the streambed).

Site-specific Environmental Management Plan

21. The consent holder shall prepare, in consultation with the contractor undertaking the works, a **Site-specific Environmental Management Plan (SEMP)** for each stage of the works. The SEMPs shall be submitted to the Manager for certification at least **20 working days** prior to the works on that stage commencing.

The SEMPs shall be consistent with the CMP and ESCP certified under conditions 16 and 18 of this consent. They shall include, but not be limited to:

- a) Identification of the construction zones and construction support areas;
- b) Identification of the proposed works, construction methodology and anticipated timeline of works;
- c) Construction drawings and design reporting (including review records) to demonstrate that:
 - i) the design is appropriate for the stream conditions (e.g. sufficient embedment depth); and
 - ii) the potential for erosion and scour has been appropriately addressed.
- d) Details of the specific erosion and sediment control measures that will be implemented (including location, dimensions and capacity, where appropriate);
- e) A plan showing the boundaries of the works and control measures;
- f) Details of the stream livening protocol;
- g) Methods for ensuring contracting staff are aware of the erosion and sediment controls employed and do not remove them without appropriate approval;
- h) Timing and duration of construction and operation of control works (in relation to the staging and sequencing of works);
- i) Details relating to the management and stabilisation of exposed areas;
- j) Identification of upstream monitoring site and downstream zone of reasonable mixing monitoring sites (GPS coordinates and a map) in accordance with condition 23 of this consent;

- k) A description of how the SEMP implements the best practicable option for limiting discharges of sediment to the Pinehaven Stream, and responds to the effectiveness of any measures already carried out pursuant to any previous SEMP's (including further actions in relation to sedimentation exceedances under conditions 55 of this consent);
- l) Contain interim sediment monitoring triggers and actions in the event that triggers are exceeded for stream works undertaken in accordance with conditions 28, which are in accordance with the adaptive management principles set out in the certified ESCP;
- m) Contain a detailed methodology outlining how water quality monitoring will be undertaken to ensure compliance with conditions 24, 25, 26, 27 and 28 of this consent.
- n) Methods for a fish recovery and relocation programme for native and sports fish located within the works area prior to any diversion of water (in accordance with the Fish Relocation and Recovery Programme certified under condition 12 of this consent) and who will be responsible for doing this.
- o) Survey details of any pools in the works area that will require reinstatement at the completion of works, required under conditions 50 and 51 of this consent.
- p) Details for assessment and remediation of any stream bed compaction, required under conditions 52 and 53 of this consent.
- q) Details of bank habitat complexity that will be constructed, including embedded pipes (fish/eel 'hotels'), installation of stable undercuts, and placement of marginal boulders to provide fish cover, required under condition 49 of this consent;
- r) Details of the pre-construction fine deposited sediment survey results, required under condition 54; and
- s) Any other relevant matters to ensure compliance with all consent conditions.

Flocculation Management Plan

22. If the use of flocculant is required, the consent holder shall prepare, in consultation with a suitably qualified person with experience in flocculant management, a final **Flocculation Management Plan (FMP)**. The FMP shall be submitted to the Manager for certification at least **ten working days** prior to the use of flocculant.

Use of flocculant on site shall not commence prior to receiving written confirmation that the FMP is to the satisfaction of the Manager.

The FMP shall include, but not be limited to:

- a) Confirmation of the flocculant to be used, the method of flocculation to be used, and any alternatives if that method is found to be ineffective (including timeframes for making the change between methods);
- b) Details of how the flocculation dosage will be triggered;
- c) Details of optimum dosage rate calculated from the soils in the catchment (including details of the calculation including bench testing results);
- d) Details of when flocculant batch dosing may be required;
- e) Details of protocols to be followed when implementing batch dosing to ensure that the dose rate or application methodology will not cause any adverse environmental effects;
- f) Identification of NTU or SSC trigger levels and procedures to be undertaken if the trigger levels are exceeded;
- g) Procedures for the storage of flocculation chemical(s) onsite;
- h) A flocculation chemical spill contingency plan;
- i) Details of the monitoring programme including frequency of monitoring and reporting of results and testing of the following parameters:
 - i) pH;
 - ii) Turbidity (NTU);
 - iii) Suspended Sediment Concentration (SSC) (g/m^3); and
 - iv) Dissolved aluminium (g/m^3).
- j) Details of the water quality monitoring points for the above parameters;
- k) Details of rainfall event based monitoring;
- l) Methods and responsibilities for monitoring and maintenance of the system;
- m) Identification of a suitably qualified and experienced person and their specific responsibilities for ensuring the operation, monitoring and maintenance of the chemical flocculation system to ensure that it is operating as outlined in the FMP;
- n) Responsibilities and contact details of any other parties that are involved in the operation, monitoring and maintenance of the chemical flocculation system, any batch dosing or any other contingencies; and
- o) A plan for the decommissioning of flocculated device(s).

Water quality and construction-related monitoring

Zone of reasonable mixing and effects

- 23. The zone of reasonable mixing shall be 50m downstream of each stage of works. In the event that this is not practicable e.g. if there is a downstream stage of works being undertaken at 50m downstream, or 50m downstream is part of a piped/culverted network, the zone of reasonable mixing shall be confirmed in the relevant SEMP.
- 24. The discharge shall not give rise to any of the following effects in the Pinehaven Stream after a reasonable mixing zone of 50m downstream of the relevant stage of works (or in the event that this distance is not practicable the distance agreed upon in the relevant SEMP):
 - a) The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials (excluding suspended sediment); or
 - b) Any emission of objectionable odour; or
 - c) The rendering of fresh water unsuitable for consumption by farm animals; or
 - d) Any significant adverse effects on aquatic life.
- 25. ~~The discharge shall not give rise to the following effect in the Pinehaven Stream, except on a temporary and intermittent basis and in compliance with conditions 27 (effects of heavy rainfall) or condition 28 (installation/removal of the temporary piped diversion and dam):~~
~~The discharge may give rise to the following effect in the Pinehaven Stream on a temporary and intermittent basis, if the discharge is in compliance with conditions 27 (effects of heavy rainfall) or condition 28 (installation/removal of the temporary piped diversion and dam):~~
 - ea) Any conspicuous change in the colour or visual clarity.

Suspended sediment concentration water quality limits

Note: These conditions allow and manage the effects of sediment discharges in three scenarios - standard construction works (condition 26), heavy rainfall events (condition 27) and the installation/removal of the temporary piped diversion and dam (condition 28). In the event of any exceedances, the response required is outlined in condition 29.

- 26. The consent holder shall ensure any discharges (except those managed by conditions 27 and 28 of this consent) from each stage of the works directly or indirectly to freshwater, do not result in an increase in suspended solids (measured as SSC) in the Pinehaven Stream at the zone of reasonable mixing of 50g/m³ above the concentration measured at the upstream baseline monitoring site.

The method for monitoring water quality for the purposes of assessing compliance with this condition shall be in accordance with the method and locations in the certified SEMP for the relevant stage.

Note: The zone of reasonable mixing for the purpose of this consent is defined in condition 23.

Note: Recording and reporting of this monitoring will be set out in the ESCP certified under condition 18 of this consent.

27. The consent holder shall ensure that during, and for 24 hours after heavy rainfall conditions, any discharge from each stage of the works directly or indirectly to freshwater, does not result in an increase in suspended solids (measured as SSC) in the Pinehaven Stream at the zone of reasonable mixing of 150g/m³ above the concentration measured at the upstream baseline monitoring site.

The method for monitoring water quality for the purposes of assessing compliance with this condition shall be in accordance with the method and locations in the certified SEMP for the relevant stage.

Note: Heavy rainfall conditions are considered to be 20mm in a 24-hour period or a rainfall event with an intensity equal to or greater than 6mm/hour as measured at the GWRC Pinehaven Stream Site at Pinehaven Reservoir and/or the site rain gauge located at the main construction yard.

Note: The zone of reasonable mixing for the purpose of this consent is defined in condition 23.

Note: Recording and reporting of this monitoring will be set out in the ESCP certified under condition 18 of this consent

28. The consent holder shall manage discharges from the excavator movements within the stream for the construction and removal of the temporary piped diversion and dams through the following steps:

- a) Prior to commencing works in the stream to install the temporary dams, the consent holder shall collect instream turbidity data using a continuous data logger from the upstream monitoring site(s) identified in the ESCP (required by condition 18 of this consent) for at least 2 weeks.

The monitoring data shall, in conjunction with the findings of the culvert construction works under WGN200101, be used to establish a turbidity trigger level to be applied at 50 metres downstream of the temporary dam. This trigger level shall be provided with the SEMP required by condition 21 of this consent;

- b) During the construction or removal of the temporary dam works, the consent holder shall collect instream turbidity data at the zone of reasonable mixing for the relevant stage, every hour. Measurements shall be taken using a continuous data logger.

- c) In the event that the downstream turbidity value at the zone of reasonable mixing for the relevant stage fails to return to the trigger level or within 20% of the baseline levels where levels are <20NTU, within 24 hours of the temporary piped dam or diversion being installed or removed, the consent holder shall undertake response actions as detailed in condition 29.

Exceedance of suspended sediment concentration water quality limits

29. In the event that a discharge does not comply with the limits set by conditions 26, 27 or 28, the consent holder shall take the following actions:
- a) Immediately notify the Manager that the exceedance has occurred;
 - b) Immediately undertake onsite investigations to determine the cause of the exceedance and what changes can be made to onsite management to prevent re-occurrence;
 - c) Record details of the onsite investigations and actions taken or to be taken to prevent re-occurrence;
 - d) Within **five working days** of the exceedance being recorded provide the information required by (c) above to the Manager; and
 - e) Where appropriate, update the SEMP in relation to adaptive management learnings from the exceedance.

Note 1: A discharge of an unauthorised contaminant is deemed to be non-compliance. The Greater Wellington Regional Council may investigate any incidents or breaches associated with this consent or the Resource Management Act 1991, and may also undertake enforcement action depending on the circumstances.

Note 2: Any amendments to certified management plans shall be done in accordance with condition 15 of this consent.

Flocculation monitoring

30. In the event that flocculation is used, the consent holder shall sample and record the following parameters at the locations and frequency specified in the FMP after a rainfall event of greater than 7mm in 1 hour or 20mm in a 24 hour period as measured at the GWRC Pinehaven Stream site at Pinehaven Reservoir gauge:
- a) pH;
 - b) Turbidity (NTU);
 - c) Suspended Sediment Concentration (SSC) (g/m³); and
 - d) Dissolved aluminium.

The consent holder shall submit the results of this monitoring to the Manager within five working days of the date the sampling being undertaken.

31. In the event that any monitoring results required under condition 30 indicates that the pH of any chemically-treated sediment retention device outflow is at or below 5.5 or above 8.5 and/or turbidity NTU values increase above 150, the consent holder shall cease dosing of that device with flocculant and notify the Manager immediately.

The consent holder shall liaise with the Manager on an appropriate course of action.

Erosion and sediment control

Erosion and sediment control treatment requirements

32. The consent holder shall ensure that all stormwater contaminated with sediment from the site is treated by erosion and sediment control measures as detailed in the ESCP, SEMP and (where required) FMP certified under conditions 18, 21 and 22 of this consent.
33. The consent holder shall ensure that prior to the completion of operations each working day, all necessary erosion and sediment control measures are reinstated as detailed in the ESCP, SEMP and (where required) FMP certified under conditions 18, 21 and 22 of this consent.
34. The consent holder shall remain responsible for all erosion and sediment control measures, and no erosion and sediment control measures shall be removed prior to receiving written confirmation that the relevant phase is stabilised to the satisfaction of the Manager.
35. The consent holder's requirements under the ESCP, SEMP and (where required) FMP certified under conditions 18, 21 and 22 of this consent shall cease when the catchment has been completely stabilised and the sediment retention devices decommissioned or with the written authorisation of the Manager.

Progressive stabilisation

36. The consent holder shall progressively stabilise any disturbed areas as they complete each stage of work to minimise sediment runoff. The progressive stabilisation shall be undertaken in accordance with the SEMP certified under condition 21 of this consent, and be to the satisfaction of the Manager.
37. The maximum area of disturbed earth open at any one time shall not exceed the calculated capacity of the sediment treatment devices.

Fill material

38. The consent holder shall ensure all fill material used on site is:
 - a) Restricted to natural material, such as clay, soil and rock and other inert materials as detailed in the definition of cleanfill material in section 2.2 of the

Ministry for the Environment publication ‘*A guide to the Management of Cleanfills, 2002*’; and

- b) Restricted to those materials listed as acceptable in table 4.1 of the Ministry for the Environment publication ‘*A guide to the Management of Cleanfills, 2002*’
39. The consent holder shall place and compact all fill material so as to avoid erosion and instability. Any erosion of soil (including failure of cut and fill batters) that is attributable to the works shall be contained, remedied and mitigated by the consent holder to the satisfaction of the Manager.

Winter works

40. No works authorised by this consent shall take place during the period of 1 June to 30 September inclusive each year unless approved by the Manager.
41. All open works areas shall be stabilised during the period 1 June to 30 September (inclusive) each year, unless a later date or winter works is approved in writing by the Manager. The stabilised surface is to be maintained to the satisfaction of the Manager.

Note: Requests for winter works could be undertaken as an addendum to the relevant SEMP.

Certification and site auditing of erosion and sediment controls

42. Prior to works commencing on each stage, the consent holder shall provide to the satisfaction of the Manager, a certificate signed by an appropriately qualified and experienced engineer to certify that the erosion and sediment controls have been constructed in accordance with the ESCP, SEMP and (where required) FMP certified under conditions 18, 21 and 22 of this consent, and the current version (at the time of submission of the ESCP) of the ‘*Erosion and Sediment Control Guidelines for the Wellington Region*’ as a minimum standard.

Certification shall include, but not be limited to, the following:

- a) As-built plans of the erosion and sediment controls measures; and
 - b) Any other details that will facilitate assessment of compliance with the authorised ESCP, SEMP and (where required) FMP, and the current ‘*Erosion and Sediment Control Guidelines for the Wellington Region*’.
43. The consent holder shall ensure that the site is audited by a suitably qualified and experienced person on a minimum of a **weekly basis** to ensure that the erosion and sediment control methods are being maintained in accordance with the ESCP, SEMP and (where required) FMP certified under conditions 18, 21 and 22 of this consent.

The weekly audits shall include, but not be limited to, the following information:

- a) Date;

- b) Name of auditor;
- c) Site condition;
- d) Weather conditions;
- e) Sediment management (including identification of problem areas that are not being treated by sediment control measures, and any measures put in place to treat these areas);
- f) Runoff control (check of diversion channels and check sediment retention devices);
- g) Condition of sediment control measures;
- h) Maintenance required and the date by which this will be completed;
- i) Contractor responsible for the maintenance; and
- j) General comments.

The frequency of the audits may be reduced if agreed to in writing by the Manager.

44. The results of the audits as required by condition 43 of this consent shall be provided to the Manager within **five working days** of being undertaken.

Reducing construction-related effects on water quality

45. The consent holder shall ensure that:
- a) All machinery is free of vegetation, seeds or contaminants prior to entering the water body;
 - b) No contaminants (including but not limited to oil, petrol, diesel, hydraulic fluid and sediment) are released into water, or to land where it may enter water, from equipment being used for the works;
 - c) All contaminant storage or re-fuelling areas are bunded or contained to prevent the discharge of contaminants to water or to land where it may enter water; and
 - d) No equipment is cleaned, stored or refuelled within 10 metres of any waterbody or stormwater system.
46. The consent holder shall ensure that prior to entering a water body that all vehicles and equipment are inspected for the presence of invasive or pest aquatic species including *Didymosphenia geminata* (didymo).

In the event that an invasive or pest aquatic species is discovered upon any vehicle or equipment it shall be cleaned, to the satisfaction of the Manager.

Note: The machinery shall be cleaned in accordance with the Ministry for Primary Industries cleaning methods which can be found at <http://www.mpi.govt.nz/travel-and-recreation/outdoor-activities/check-clean-dry/>.

47. The consent holder shall ensure that no dry cement product, unset concrete, concrete wash water or any water contaminated with concrete enters water as a result of the works.
48. The consent holder shall remove all excess material from the bed and banks of the stream and dispose of it in an appropriate manner, to the satisfaction of the Manager.

Managing effects on aquatic and riparian ecology

Habitat complexity

49. The consent holder shall recreate bank habitat complexity through the installation of stable undercuts, use of embedded pipes and placement of marginal boulders to provide fish cover.

The construction of all bank habitat complexity shall be detailed in the relevant SEMP under condition 21 of this consent and constructed prior to the stream being livened and to the satisfaction of the Manager.

50. The consent holder shall engage a suitably qualified ecologist to survey all pools within the project stage prior to commencing works in that stage. The survey shall include, but not be limited to:
 - a) Pool width, length and depth;
 - b) Substrate of the base of pool; and
 - c) Any other relevant details.

Note: This information is reported in the SEMP for that stage under condition 21(o).

51. The consent holder shall reinstate pools to their original dimension in a suitable location, determined in consultation with a suitably qualified ecologist. All reinstatement of pools shall be detailed in the relevant SEMP under condition 21 of this consent and constructed to the satisfaction of the Manager.

Compaction

52. The consent holder shall engage a suitably qualified person who shall, in consultation with a suitably qualified ecologist, undertake a compaction survey before, during and after each stage of the construction works.

The compaction survey shall be undertaken to the satisfaction of the Manager, and comprise a visual qualitative assessment of the stream bed, and compaction shall be measured using the 4-point scale outlined on page 63 of Harding *et al.* (2009).

The results of the compaction survey shall be provided to the Manager within **five working days** of the works stage being completed.

53. In the event that undue compaction is identified, the consent holder shall remediate the compacted bed to the initial compaction rating, or as agreed with the Manager.

The consent holder shall engage a suitably qualified ecologist to confirm remediation has been completed to a satisfactory standard.

Remediation must occur in a dry stream bed before the stream is re-livened, and must not lead to the exceedance of any SSC limits of this consent.

Note: Undue compaction is defined as an increase in compaction rating of two categories (e.g. from 1 to 3 or 4, or from 2 to 4).

Sedimentation

54. The consent holder shall engage a suitably qualified ecologist to undertake fine deposited sediment monitoring before and after each stage of the construction works.

The fine deposited sediment monitoring shall be undertaken in accordance with the ‘*Sediment Assessment Method 2 (SAM-2) – In-stream visual estimate of % sediment cover*’ by Clapcott *et al.* (2011).

Note: The pre-construction sediment survey results shall be reported in the SEMP for that stage under condition 21(r).

55. In the event that the fine deposited sediment cover increases by more than 10% between the monitoring events, the consent holder shall immediately notify the Manager, and commence a review of the erosion and sediment control methods and construction methodology for works within the streambed.

The review shall assess the adequacy and appropriateness of the existing controls and methodologies, and shall identify whether any further actions should be implemented for future stages of works. Further actions could include, but are not limited to:

- a) Further staging of earthworks;
- b) Stabilisation of key at-risk areas;
- c) Amendment to existing erosion and sediment controls;
- d) Installation of further erosion and sediment controls;
- e) Alternative construction methodologies for works occurring within the streambed; and
- f) Use or alternatives to flocculation.

The review shall be provided to the satisfaction of the Manager within **five working days** of the fine deposited sediment cover exceedance.

Fish relocation and recovery

56. The consent holder shall engage a suitably qualified ecologist to undertake fish rescue in accordance with the FRRP certified under condition 12.

Fish rescue shall be undertaken for at least 48 hours prior to the commencement of works on each stage, and again in the event that **the stages' piped diversion dam a fish movement barrier** is breached, until the ecologist is satisfied that no fish remain within the works area.

57. The consent holder shall provide a **Fish Relocation and Recovery Report (FRRR)** to the satisfaction of the Manager, for fish rescue undertaken in accordance with conditions 12 and **5756** for each stage of the works and within **20 working days** of the completion of each stage of works.

The FRRR shall include an excel spreadsheet presenting the number, species and size classes of native and exotic fish that were relocated prior to and during the works.

The consent holder shall also upload this data to the NIWA New Zealand Fish Database: <https://niwa.co.nz/information-services/nz-freshwater-fish-database>

Fish passage

58. The consent holder shall ensure that fish passage is maintained at all times after construction.

59. The consent holder shall ensure the design, construction and maintenance of any debris arrestor is be done in consultation with an appropriately qualified ecologist.

60. The consent holder shall ensure that the reinstatement of any grade control weirs occurs only where necessary for flood control purposes, and the design of any reinstated weirs shall be in consultation with an appropriately qualified ecologist and designed, constructed and maintained in accordance with the New Zealand Fish Passage Guidelines (NIWA and DOC, 2018) or to the satisfaction of the Manager.

61. The consent holder shall assess, and where required, remediate fish passage barriers at the retained grade control weirs within the project extent.

The design of any fish passage measures at the retained grade control weirs shall be in consultation with an appropriately qualified ecologist and designed, constructed and maintained in accordance with the New Zealand Fish Passage Guidelines (NIWA and DOC, 2018) or to the satisfaction of the Manager.

62. The consent holder shall prepare a **Fish Passage Remediation Plan (FPRP)** for the remediation of the fish passage barrier at the confluence of Pinehaven Stream and Hulls Creek, and submit to the satisfaction of the Manager at least **20 working days** prior to commencing remediation of the structure.

The FPRP shall be prepared in consultation with an appropriately qualified ecologist and show how it will be designed, constructed and maintained in accordance with the New Zealand Fish Passage Guidelines (NIWA and DOC, 2018) or to the satisfaction of the Manager.

The consent holder shall undertake the remediation in accordance with the certified FPRP within six months of the completion of the main stream works.

Note: This remediation may involve removing the perched drop and installing baffles on the concrete ramp.

Reclamation Design Report

63. The consent holder shall prepare, in consultation with an appropriately qualified freshwater ecologist, a **Reclamation Design Report (RDR)**. The RDR shall be submitted to the Manager for certification at least **20 working days** prior to the works commencing on the reclamation at 26 and 28 Blue Mountains Road. No reclamation works shall commence until the consent holder has received written notice that the RDR has been certified by the Manager.

The RDR shall demonstrate that the reclamation results in no net loss of ecological value and shall include, but not be limited to:

- a) Details of the proposed bed substrate and complexity
- b) Details of the proposed bank habitat complexity; and
- c) Details of the proposed riparian planting.

Riparian planting

64. The consent holder shall engage a suitably qualified ecologist to prepare a **Riparian Planting Plan (RPP)**. The RPP shall be submitted to the Manager for certification at least **20 working days** prior to the riparian planting works commencing.

The RPP shall be generally consistent with the draft planting plan provided as Appendix J of the section 92 response dated 21 February 2020, and include, but not be limited to:

- a) A detailed description of riparian planting goals;
- b) Plan(s) to scale showing the location, lengths and widths of all proposed areas to be planted and proposed species mix, and fencing;
- c) The native species that are proposed to be planted (in accordance with condition 65 of this consent), the size of the plants and the density of planting;
- d) Details of eco-sourcing and how plants are appropriate to the locality;
- e) A detailed timeline for proposed planting;

- f) Details of pre-planting site preparation (clearing, mulching, fertilising);
- g) Details of the on-going maintenance of the planting including, but not limited to, the replacement of plants, future management, and eradication of pest plants;
- h) Details of enrichment and replacement planting, including timeframes to ensure a plant success rate of at least 80% canopy cover is achieved within 5 years;
- i) Details of how plants will be protected from pest animals; and
- j) Details of the proposed monitoring regime.

Note: For the purpose of this condition, eco-sourcing refers to plants that have been sourced and propagated from those that grow naturally in the same ecological district.

65. The riparian planting outlined in the RPP shall include, but not be limited to:
- a) Planting of bank-holding species including:
 - i) Upper storey (rarely wet riparian zone) – tī kōuka/cabbage tree (*Cordyline australis*), mānuka (*Leptospermum scorparium*), whekī (*Dicksonia squarrosa*), kōwhai (*Sophora Microphylla*) and tutu (*Coriaria arborea*), rangiora (*Brachyglottis repanda*) and *Olearia rani*; and
 - ii) Understory – hook grass (*Uncinia uncinata*), *Austroderia fulvida*, rarauhe (bracken fern *Pteridium esculentum*), shining spleenwort (*Asplenium oblongifolium*), and rarely wharariki (*Phormium cookianum*) reaching down into the lower part of the bank.
 - b) Planting of *Libertia grandiflora*, *Libertia ixioides*, rarauhe, *Haloragis erecta* subspecies *erecta* on and around concrete structures, where appropriate; and
 - c) No planting in the active channel area which is inundated in all except very light rainfall events (as it reduces galaxiid spawning habitat and encourages deposition of fine sediment).
66. Any amendment proposed to the RPP certified under condition 64 of this consent shall be submitted for approval, in writing, to the Manager. Implementation of any amendment shall only occur once the amendment has been certified in writing by the Manager.
67. The consent holder shall complete the planting as required in the RPP certified under condition 64 of this consent as soon as practicable, and within 18 months of completion of works approved by this consent, or other timeframe approved by the Manager.
68. The consent holder shall notify the Manager when the planting as required by the RPP approved under condition 64 of this consent is complete.

69. All riparian planting must be maintained for 5 years or until 80% canopy cover over the relevant mitigation area is achieved.

Post-construction monitoring of effects on aquatic and riparian ecology

70. The consent holder shall submit a **Post-construction Freshwater and Riparian Ecological Monitoring Plan (PFREMP)** to the Manager for certification within **20 working days** of completion of the final stage of works.

The PFREMP shall be prepared by a suitably qualified ecologist and include, but not be limited to, details and procedures for:

- a) Assessment of the fish passage remediation of the Pinehaven Stream outlet to Hulls Creek, to ensure it is performing as anticipated and in accordance with the NZ Fish Passage Guidelines (NIWA and DoC, 2018);
 - b) Assessment of all re-instated and existing grade control weirs and debris arrestors, to ensure they are performing as anticipated and in accordance with the NZ Fish Passage Guidelines (NIWA and DoC, 2018);
 - c) Assessment of fish passage at the debris arrestors;
 - d) Assessment of any artificial and re-created habitat features to ensure they are providing the habitat as anticipated;
 - e) Assessment of riparian vegetation performance, in accordance with the RPP certified under condition 64 of this consent;
 - f) Targets for freshwater and riparian ecology values;
 - g) Regime for post-construction freshwater and riparian ecological monitoring against the targets identified above. The monitoring shall include, but not be limited to, aquatic habitat, macroinvertebrates and fish.
 - h) Format for which the data will be reported in (e.g. excel tables, written report, etc.)
71. The consent holder shall undertake all post-construction freshwater and riparian ecology monitoring in accordance with the PFREMP certified under condition 70 of this consent.
72. Any amendment proposed to the PFREMP certified under condition 70 of this consent shall be submitted for approval, in writing, to the Manager. Implementation of any amendment shall only occur once the amendment has been certified in writing by the Manager.
73. The consent holder shall, within 14 months of the completion of the construction works, provide a **Post-construction Monitoring Report (PMR)** outlining the results of the monitoring required under conditions 70 and 71 of this consent to the Manager.

74. In the event that the targets of the PFREMP certified under condition 70 of this consent have not been met, as reported in the PMR provided under condition 73 of this consent, the consent holder shall engage a suitably qualified ecologist to prepare an **Ecology Action Plan (EAP)** outlining how these targets will be achieved, associated timeframes, and further monitoring and reporting required. The EAP shall be to the satisfaction of the Manager.

Managing ongoing effects on erosion, scour and flooding

Maintenance and removal of the works

75. The consent holder shall remain responsible for all works authorised under this consent, and shall maintain the structure(s) to the satisfaction of the Manager so that:
- a) Any erosion, scour or instability of the stream bed or banks that is attributable to the works carried out as part of this consent is remedied by the consent holder;
 - b) Any adverse effects caused by the presence of the structure that limit or restrict fish passage shall be rectified by the consent holder; and
 - c) The structural integrity of the works remains sound in the opinion of a Professional Chartered Engineer.

Note: Maintenance does not include any works outside of the scope of the application. Any additional works (including structures, reshaping or disturbance to the bed of the watercourse) following completion of the construction works as proposed in the application, may require further resource consents.

76. If any of the works authorised under this consent are no longer required, and/or the structure(s) is not being maintained in accordance with condition 75 of this consent, or sustains irreparable damage then the structure shall be removed, within a timeframe that is to the satisfaction of the Manager.

Note: Rule 33 of the Regional Freshwater Plan and Rule R118 of the Proposed Natural Resources Plan provide for the removal of structures as a permitted activity if certain conditions are met. Prior to the removal of the structure the consent holder must ascertain whether the removal of the structure can comply with the conditions of these rules. If not, a resource consent will be required from the Wellington Regional Council.

Managing effects on dust

77. The consent holder shall manage the work sites consented under this consent in such a way as to keep fugitive dust emissions to a minimum. This may include, but is not limited to, the use of a water cart or other dust suppressant methods as outlined in the CMP required under condition 16.
78. The consent holder shall ensure that there are no discharges to air resulting from the exercise of this consent that are noxious, dangerous, offensive or objectionable in the opinion of a Compliance Officer at or beyond the construction site boundary.

Managing effects on network utilities

- ~~79. The Consent Holder shall ensure that construction work does not adversely impact on the safe and efficient operation of network utilities. The scope and timing of necessary utility relocation and protection works shall be developed and agreed between the Consent Holder and network utility providers to mitigate any safety hazards for the required works.~~