

File No: WGN200083  
3 December 2019

Wellington Water Limited  
C/o Helen Anderson  
Jacobs New Zealand Limited  
Level 3, 86 Customhouse Quay  
Wellington 6011

By email: helen.anderson@jacobs.com

Dear Helen

**Further information request under section 92(1) of the Resource Management Act 1991**

Thank you for your application for a notice of requirement and resource consent to undertake stream improvement works located within the Pinehaven Stream lodged with Greater Wellington Regional Council (GWRC) on 19 September 2019.

I have reviewed your application and the supporting information; however I require further information on your application to better understand the effects of your proposal, its effects on the environment and how any adverse effects on the environment might be mitigated.

**Information requested**

I have previously provided you with the initial technical reviews (which includes questions from our technical reviewers that feed into this formal s92(1) request) as I have received them, at your request. I understand you have been addressing these questions and hope to receive your response soon. Please provide the following information:

**Erosion and sediment control**

Mr Gregor McLean, Director/Environmental Consultant, Southern Skies Environmental, has reviewed your application in regards to the proposed erosion and sediment control methods and the construction methodology. We provided Mr McLean's review comments to you by email on 30 October 2019. Mr McLean's initial review memo is attached to this letter (Attachment 1) for reference/background to the questions summarised below.

- GM01. Provide an updated ESCP that contains consistent information that is in line with the pre-application advice from GWRC, including the preferred methodology for the works.

- GM02. Please address Mr McLean's comments relating to the piped stream diversion regarding the return period storm event triggers in terms of forecast and actual rainfall, and the actions taken as a result of these triggers.
- GM03. Modify the proposed monitoring to include appropriate parameters and triggers for the streamworks aspects of the proposed works and in rain events exceeding the design capacity of the piped diversion.
- GM04. Add maintenance actions for the instream works to Table 6.1.
- GM05. Advise what the baseline concentration refers to in the ESCP.
- GM06. Please update documents to ensure consistency in terminology, specifically in regard to CMP, ESCP, SEMP, SSEMP.

#### Aquatic ecology

Dr Evan Harrison, Senior Environmental Scientist (Freshwater), Greater Wellington Regional Council, has reviewed your application in regards to the effects on water quality and aquatic ecology. We provided Dr Harrison's review comments to you by email on 23 October 2019. Dr Harrison's initial review memo is attached to this letter (Attachment 2) for reference/background to the questions summarised below.

- EH01. Please provide the methodology for driving sheet piles into place and advise what controls will be in place to manage ecological and water quality effects, and advise whether this will be in the wet or dry bed.
- EH02. Confirm in what direction the works will occur (sections of the application contradict each other).
- EH03. Please propose appropriate measures to remediate compaction of the stream bed as a result of the proposed works, including assessment of compaction, method for remediation and how sediment effects of remediation would be controlled.
- EH04. Advise the logic behind the 30% increase between upstream and downstream sites from the baseline concentration.
- EH05. Confirm whether the Australian and New Zealand Guidelines for Marine and Fresh and Marine Water Quality will be used to set trigger values, or if the 30% increase between upstream and downstream sites will be used as the trigger value.
- EH06. Will pH just be measured with a field metre or confirmed in the lab with a water sample?
- EH07. The application states TSS will be measured with a field metre. Will turbidity (for an indication of the sediment level) be measured with the field metre and TSS be measured in the lab with a water sample?

- EH08. Will ammonia be measured in the water samples given the risk of concrete runoff?
- EH09. In regards to fish rescue, please confirm whether:
- a) If a fish exclusion screen breaks, will fishing start again?
  - b) In the application it is stated that fish are expected to leave the area. Can it please be confirmed that fishing will take place until the ecologist is satisfied no fish remain?
  - c) Sports fish will also be relocated?
  - d) Any sediment removed from the river during construction will be checked for fish?
- EH10. The application hasn't clearly outlined linkages with the report by Dr Alex James. For example, in section 10.7.2.1.6 can more detail please be provided on:
- a) Advise how fish passage will be maintained/impacted during construction. It is noted in the application that when damming occurs this will be short in duration - please provide details on how long this will be and how often this might occur during the construction works.
  - b) Confirmation that, if works are to occur in fish migration periods, manual trap and transfer will be undertaken. Dr James' report appears to show that the works will always be occurring in spawning/migration periods. Is the proposed mitigation for this the remediation of the downstream fish barrier following construction?
  - c) Advise how monitoring of fine sediment mitigates impacts on water quality/aquatic ecology, and what actions are required if triggered.
  - d) Advise how habitat reinstatement will be completed, including what will be done in riparian, pool and riffle areas, as well as compaction management.
  - e) For modifications to the riparian area, please provide details (e.g. maps/cross sections) that show locations of planting within rock walls to show planting post construction?
- EH11. Confirm whether an assessment of the effectiveness of the works will be undertaken with post-construction monitoring via the monitoring plan?
- EH12. Please confirm whether all of Dr Alex James' recommendations are being proposed as part of the application.

EH13. Please provide details on the creation of the new channel and bank habitat, including ecology and instream habitat values and an assessment of the proposed reclamation/construction of a new channel.

### Erosion, scour and flooding

Ms Sharyn Westlake, Senior Engineer, Greater Wellington Regional Council, has reviewed your application in regards to the effects on erosion, scour and flooding. We provided Ms Westlake's review comments to you by email on 23 October 2019. Ms Westlake's initial review memo is attached to this letter (Attachment 3) for reference/background to the questions summarised below.

- SW01. Given the report is dated September 2019, the latest MfE recommendations should be used. Advise why they have they not been, and what are the design impacts of this are.
- SW02. The projected timeframe for climate change is 2080, and not 2120. Why has 2080 been used, and what are the impacts on design and capacity of the design if you extend the timeframe to 2120?
- SW03. Has freeboard been included for the design? If not, explain why not.
- SW04. With regard to the replacement of private access crossings, has the effect of raised approaches on overflow paths been modelled?
- SW05. Has the proposed vegetation to be planted on the banks been taken into account in the hydraulic modelling? Is the effect of this significant (including reasoning)?
- SW06. Has the flow restricting effect of providing the inlet structure blockage screens been established and designed for?
- SW07. Is there any effect of removing the school field at the Reformed Church of Silverstream area from flood storage by using the site as a cleanfill site?
- SW08. Regrading of land to manage overland flow from Pinehaven Stream towards Birch Grove is proposed. Do these earthworks trigger any rules in the regional plans? If not, advise how this will be covered off (e.g. is it through an outline plan process later?).
- SW09. Please describe the proposed erosion protection works at the driveway of 50 Blue Mountains Road and along this section of stream channel.
- SW10. The application states "Standard design types will be used for the various situations". What will be done if ground conditions require a non-standard approach and how this will be assessed.
- SW11. Please advise the process for peer review and approval of the detailed design. Is this information to be included in the CMP which is provided to GWRC for approval?

- SW12. The application states vegetation planting will occur after the last stage of works are complete. Advise why you cannot replant stages during the growing seasons as the works are completed (as erosion and weed control will potentially become an issue).
- SW13. Please detail the proposed design for the stream erosion repair between the house at 48 Blue Mountains Road and the downstream end of improvements behind Birch Grove. Please advise whether earthworks for grading on properties trigger any rules in regional plans and if not, how this will be covered off (e.g. through an outline plan process).
- SW14. Provide information on the velocities of the Pinehaven Stream flows (including 1% AEP flood) and describe how the proposed native planting and geotextile matting is sufficient to withstand these velocities.
- SW15. Advise how long the ‘natural stabiliser’ that will be applied to prevent sediment runoff is expected to work for (given SW12 above).
- SW16. Please confirm the process for design, review and assessment of effects of the proposed remediation for the partial fish barrier at the confluence of Pinehaven Stream and Hulls Creek, and possible removal or reinstatement of any other weirs.
- SW17. Please confirm:
- a) What is meant by ‘final detailed hydraulic design’
  - b) What the review process is for the design of works
  - c) What the process for post-construction sign-off is
- SW18. Concept plan and typical section information only is included in the application. Design details have not been included, such as retaining wall design, sheet pile wall design, redi-rock retaining wall design, giving embedment details, end design etc.
- Provide detailed design drawings, or advise when these will be available.
- SW19. In regards to the grade control weirs, who (along with the project ecologist) will decide if reinstatement is necessary, and what the design of the reinstated weir should be?
- SW20. Confirm whether UHCC have confirmed they can support the level of maintenance required for these works.

## Flood model and Flood Hazard Assessment

Mr Mike Law, Senior Associate – Water Resources, Beca Limited, has reviewed your application in regards to the flood model and Flood Hazard Assessment. We provided Mr Law’s report to you on 21 November 2019. You responded to Mr Law’s comment on culvert roughness with the final Flood

Hazard Assessment addendum report on 27 November 2019, and Mr Law provided a revised version (revision 3) of his review report on 2 December 2019. This is provided as Attachment 4 to this letter, for your reference/background to the questions summarised below.

- ML01. Are the detailed design drawings available? If so, confirm the design has been represented and modelled correctly.
- ML02. Advise whether sufficient design freeboard has been provided at the top of the bank (see also ML04b, below).
- ML03. Using a culvert roughness of  $n=0.020$ , confirm whether the water level design criteria have been met.
- ML04. Address the two remaining open issues in Mr Law's review, specifically:
- Blockage testing: Please provide the blockage assessment for the design.
  - Water levels and flood extents: Update water level results and flood extents to confirm hydraulic performance.

#### Riparian ecology

Ms Frances Forsyth, Senior Ecologist, Wildlands Consultants, has reviewed your application in regards to the effects on riparian ecology. Mr James Beban, Urban Edge Planning (on behalf of Upper Hutt City Council) provided this report to you, and it is attached to this letter (Attachment 5) for reference/background to the questions summarised below.

- FF01. How many areas of existing concrete structures require amenity planting?
- FF02. Are any additional planted structures planned?

#### Planning questions

I have reviewed your application in regards to planning requirements, and have the following questions. These have not previously been provided to you.

- JB01. The application identifies three relevant iwi (Te Ati Awa, Ngāti Toa Rangatira and Rangitane). Ngāti Toa have a 'Statement of Association' to the Hutt River and tributaries. Confirm whether you consulted with Ngāti Toa about the proposal, and if so what their views on the proposal are.
- JB02. Table 13 states the existing low flow channel will be maintained. Please provide an explanation of how this will be maintained during construction works with significant plant movement in the streambed. Does the bed need to be levelled to use the excavators in the streambed? Please also provide an assessment of the potential adverse effects of these activities and how you propose to avoid, remedy or mitigate these effects.

- JB03. The application states (in regard to replacement of private access crossings), ‘freeboard will be provided if the raised approaches do not impact on surrounding overflow paths’. Please explain what this means.
- JB04. Show the locations and details including dimensions of all erosion and scour protection proposed under this resource consent on a plan. It is important we know where it is and what erosion protection is proposed to assess the effects on the environment.
- Please include: where the native plantings and geotextile fabrics will be used, and where the riprap will be placed, and confirmation of what erosion protection is proposed for 50 Blue Mountains Road and ‘along the stream channel’.
- JB05. Please provide a complete description of the proposed works requiring regional resource consents at the three reaches. Sections 6.1.1 – 6.1.3 do not mention any bridge replacement works or the low wall at Willow Park/10A Blue Mountains Road.
- JB06. I understand the vehicle access arrangement at 30-36 Blue Mountains Road is yet to be confirmed. Will the decision of this have any effect on the results of the flood model?
- JB07. In relation to section 6.1.4, please advise what material is proposed to be ‘frequently cleared’ (e.g. vegetation, gravels, litter). If it is vegetation or bed material, please describe the proposed works and provide an assessment against the relevant rules in the RFP and PNRP.
- JB08. Confirm the location of all proposed inlet structures/inlet blockage reduction measures that are located within the Pinehaven Stream.
- JB09. Section 6.2.1 refers to proprietary products being used for the culverts. Confirm whether this application includes the construction/placement of any culverts and provide an assessment against the relevant rules in the RFP and PNRP.
- JB10. Please explain what is meant by ‘the completion of sections before moving along the stream will be fixed as will the activity based individual teams’. I.e. will there be a bridge team and a retaining wall team, etc.? How many stages will be worked on at one time?
- JB11. Section 6.2.3 states ‘vegetation planting will occur after the last stage’. How will the banks etc. be stabilised in the meantime (which would potentially be up to two years)?
- JB12. Table 14 outlines 12 stages while the ESCP and ecology assessments refer to 7 stages. Confirm how many stages there are expected to be.
- JB13. Table 14: stage 3 - please confirm the methodology for the stream bank stabilisation works at this location.

JB14. In regards to sections 6.2.5.3 & 4: Stage 1 of the Willow Park works is referred to. What are the other stages of work at Willow Park? Are the methodologies in both 6.2.5.3 and 6.2.5.4 proposed, or just one of these? Table 14 (stage 10) states that there will be diversion dams and pipe associated with the Willow Park works.

Provide a complete construction methodology for the proposed works at Willow Park.

JB15. Section 6.2.6 (Private Bridges) states the methodology will use cranes, which does not match the methodology proposed in Table 14 (specifically stage 12, pg 72). Please advise how the private bridges will be constructed.

JB16. Advise whether the 'instream works sheet piling' methodology (6.2.5.1) is still proposed at any locations of the works. If so, advise at which locations this methodology is proposed.

JB17. Please provide updated general arrangement plans showing the vehicle access arrangement at 30-36 Blue Mountains Road and removal of the culverts/statement on the plans the culvert replacements are not part of this consent application.

JB18. In regards to Rule 32 (Overhead cables Pg 240), the application states that the 'new overhead cables are likely to be permitted'. Confirm whether the proposed works meet the permitted activity rules in the RFP and PNRP or whether you would like to apply for consent. If you need to apply for consent please provide information on the location of the cables, methodology, and assess the effects on the environment.

JB19. In regards to Rule 36 Clearance of flood debris, when is the clearance of flood debris proposed? Is it during the ongoing maintenance? Please provide an assessment of the proposed activity against the relevant rule (R119) of the PNRP.

JB20. Rule 46 is for pipelines and ducts. Is consent sought for the replacement/laying of any cables (Rule 45)? If so, provide confirmation that all conditions of Rule 45 can be met.

JB21. Please provide details of the locations of the network utilities that are being relocated/realigned. Are they in, on, under or over the bed of the stream? Where are they located? How will they be relocated (e.g. construction methodology), how will the effects be managed (e.g. construction effects, height in streambed re flooding)?

JB22. Your assessment against Rule 48 (pg 245) is incomplete and there is no assessment for the proposed rip rap and erosion protection structures in section 7.2 (rules assessment) of the application. Advise whether consent is sought for the placement of impermeable erosion protection structures. If so, please provide an assessment against the relevant rules, objectives and policies.

JB23. Your assessment against Rule 33 (pg 240) states that the removal of structures will meet permitted activity Rule 33 and lists a number of structures to be removed.

Please confirm that the removal of the dwelling at 48 Blue Mountains Road and the garage at 12 Birch Grove are able to meet the permitted activity conditions.

- JB24. Is resource consent sought for vegetation removal during the works or during maintenance of the works? Provide an assessment against the relevant rules in the operative and proposed plans for both situations.
- JB25. Please confirm the length of the stream reclamation at 26 and 28 Blue Mountains Road, and length of the constructed stream corridor.
- JB26. Mr McLean has recommended the standard winter works condition be imposed due to works during these months having a higher risk of increased streamflows, groundwater levels and subsequent sediment discharges are more likely. Confirm whether you intend to do works during winter.
- JB27. Please provide a draft Riparian Planting Plan in accordance with the suggestions of Ms Forsyth's riparian ecology review.

### **Date information required**

The RMA requires the above information be provided by 15 January 2020, however due to the applicant's time constraints and the provision of technical reviews (including questions) as we have received them, we hope to receive your response as soon as possible.

If you are not able to supply the information requested<sup>1</sup> by this date, you must let us know in writing within this timeframe, either that you require additional time (at which time we will set a reasonable timeframe for you to provide the information) or that you refuse to provide the requested information.

### **Processing of your application**

Your application has not been placed on hold, because the consent has been publically notified at your request.

As discussed, please advise whether you are agreeable to an extension of timeframes under section 37 of the RMA, from the date the public notification period closes (18 December 2019) until we have received your response to the s92(1) request for further information.

Please feel free to contact us if you have any questions or concerns.

### **Charging policy review**

The Resource Management Charging Policy is reviewed on an annual basis. As a result of this process the charges associated with processing your consent may alter – you will be informed if this is the case.

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<sup>1</sup> Under section 92A of the Resource Management Act 1991.

Yours sincerely

*J Burrows*

**Josie Burrows**  
Resource Advisor  
Environmental Regulation  
Greater Wellington Regional Council