

Date	10 February 2026
To	Jon Bright, Project Director – Waitaha Hydro Scheme Westpower Ltd
From	Mason Jackson
Project advice provided for	<i>Waitaha Hydro Scheme</i>
Qualifications and Code of Conduct	Provided to the Panel on 21 January 2026
Documents referred to	<ul style="list-style-type: none"> • Waitaha Hydro Power Review of Intake Engineering and Fish Passage (26 January 2026); and • Statement of Evidence of Jon Francis Tunnicliffe on River Geomorphology (23 January 2026)
Signature	

1. Introduction

- 1.1 My name is Mason Jackson. I prepared the Waitaha Hydro Substantive Application and Westpower Limited's (the "**Applicant**") associated proposed resource consent conditions.
- 1.2 I have been asked by the Applicant to provide responses, as relevant, to various planning and resource consent conditions matters contained in the following documents prepared by the Panel's technical advisors (the "**Expert reviews**"):
 - (a) Waitaha Hydro Power Review of Intake Engineering and Fish Passage (26 January 2026) prepared by Paul Morgan (the "**Morgan review**"); and
 - (b) Statement of Evidence of Jon Francis Tunnicliffe on River Geomorphology (23 January 2026) (the "**Tunnicliffe review**").
- 1.3 I have worked with and reviewed draft reports in response to the Expert reviews by, the Westpower expert team. I have revised Westpower's proposed resource consent conditions to account for various further recommendations set out in Westpower's statements of 10 February 2025 responding to the Expert reviews

and to address the specific tracking and colour-coding requests made in the Panel's RFI#5 issued on 4 February 2026. This latest set of proposed resource consent conditions is provided as **Appendix A** of my statement.

1.4 I have considered the Expert reviews. I address the following matters in turn below:

- (a) The quality and quantity of design and assessment information presented in the Application;
- (b) The adaptive management approach proposed in respect of fish passage and Morgan Gorge flushing;
- (c) In-stream Headworks maintenance related effects and associated consent conditions;
- (d) Tunnicliffe report recommendations; and
- (e) Further changes to proposed consent conditions.

2. Quality and quantity of design and assessment information

2.1 The Morgan report expresses general concern over a lack of technical detail and assessment contained within the Application and that, instead, this sort of detail will be developed in detailed design¹.

2.2 In Mr Griffith's statement dated 10 February 2026, he provides additional information on the design processes the Applicant embarked on prior to submitting the Application. Additionally, Dr Clunie provides further design details on the main weir, sluice, environmental flow and fish pass structural elements². Consistent with the Application³, both these statements demonstrate the significant technical expertise involved in the preliminary design for the Project.

2.3 For large projects, similar to the Waitaha Hydro Scheme, that require years of pre-feasibility, pre-development and preliminary design work, it is not normal to include all this information in an application. The appropriate information for an Application, and a decision to be made, is:

- (a) Firstly, what I consider to be important is that an application and supporting information provides clear articulation of the proposed design

¹ Example: 3rd bullet on Page 3 regarding the main weir, overflow weir, sluice, and environmental flow

² Attachment A of Dr Clunie's statement

³ Section 2.4.1, 3.1 and Sections 3.13-3.16 and Section 4 of Appendix 3 (Project Overview Report)

framework from which environmental effects specialists have based their assessments; and

- (b) Secondly, it is also important that the proposed design is developed to a level where environmental effects specialists can understand how the scheme, and its operation and maintenance, will affect various environmental aspects and values in the context of the existing environment - acknowledging that likely minor amendments will be made through the final design process. In this respect, I note that Dr Hicks and Ms McMurtrie both confirm that the level of design detail developed by the Applicant has been sufficient to enable them to assess the environmental effects within their respective areas of expertise given the context of the existing environment and in light of the Applicant's proffered consent conditions (discussed more below).

2.4 In this respect, I also note that, after reviewing the Westpower expert statements:

- (a) Dr Hicks maintains his key Sediment Report conclusion that sediment related effects of the Project will be no more than minor and
- (b) Ms McMurtrie has not altered her Freshwater Ecology Report assessment conclusions.

2.5 Critically, I also consider that the level of design detail provided has allowed me to prepare a robust and comprehensive set of conditions that will ensure that environmental effects can be managed appropriately, and which are able to be enforced. These conditions have been agreed with the Councils and largely agreed with DOC. The conditions are key as they lock in the outcomes that must be achieved and provide for management plan processes and set out additional detail regarding how they will be achieved in the future.

2.6 In my opinion, I consider the quantity and quality of information presented in the Application, as it relates to the matters discussed in the Expert reviews, to be adequate and consistent with other similar project proposals of this scale and complexity. This conclusion is also bolstered by the following requirements, codified in Westpower's proffered conditions, that also form part of the Application:

- (a) The requirement that all physical structures and activities authorised by the Approvals are constructed and undertaken in general accordance with the Application and supporting information⁴;
- (b) The requirement that the final design for the Weir and Intake Structure:
 - (i) is in general accordance with preliminary plan drawing titled “Concept Design – Preferred Arrangement Headworks General Arrangement Channel and Intake” Revision E, and preliminary cross-section drawing titled “Preliminary Design – Headworks General Arrangement Section and Details” Revision D, provided in **Appendix 42** of the Application⁵;
 - (ii) has been prepared following advice inputs from a suitably qualified and experienced engineer, freshwater ecologist and an expert familiar with who⁶;
 - (iii) has considered DOC’s feedback⁷;
 - (iv) is set out in a Final Weir and Intake Structure Design Report prepared by Westpower that must include a raft of prescribed design and information details;
 - (v) must be certified by the West Coast Regional Council following receipt of the Final Weir and Intake Structure Design Report⁸; and
 - (vi) must be operated and maintained to retain existing natural fish passage at its location, including the continued provision for upstream and downstream passage of kōaro and the continued exclusion of upstream salmonid passage⁹;
- (c) The obligation for Westpower to undertake monitoring in accordance with the Freshwater Ecology Management Plan (“**FEMP**”) to ensure the Weir and Intake Structure design achieves its key fish passage requirements and to develop and implement a flushing management plan for Morgan Gorge (“**FlushMP**”)¹⁰ to minimise potential sedimentation effects in this part of the river; and

⁴ Part B, Condition 1

⁵ Part C9, Condition 3

⁶ Part C9, Condition 2

⁷ Part C9, Condition 3

⁸ Part C9, Condition 3

⁹ Part C9, Condition 9

¹⁰ Part C9, Conditions 21 (FEMP) and 45 (FlushMP)

- (d) The requirement to provide specific details regarding ongoing and routine in-stream maintenance works as part of the Site Operations Management Plan¹¹ (including further amendments as discussed in more detail below).

3. Adaptive Management

- 3.1 I address the general concerns expressed in the Morgan review about the ability for the weir and intake structures to achieve existing natural fish passage.
- 3.2 Separate to Ms McMurtrie's statement which confirms a contrary view to the Morgan review in respect of the ability for the weir and intake structures to achieve existing natural fish passage, I note that, in order to address any uncertainties, the Applicant has proposed a robust monitoring, reassessment and adaptive approach via the proposed consent conditions I have prepared, and more particularly, via the methods set out in the FEMP. Similarly, the consent conditions also provide, and map out the process, for any future circumstance where the weir and intake structure needs to be modified¹² and the specifics of such circumstances are set out in Section 7.2 of the FEMP (Adaptive management of kōaro and other fish in Kiwi Flat).
- 3.3 The Tunncliffe review expresses concern over the Applicant's proposed adaptive management approach to sediment related effects, opining that this is inappropriate given the Applicant's assessment contains fundamental uncertainties about bedload proportions, sediment transport dynamics, deposition patterns, and ecological thresholds.
- 3.4 Dr Hicks addresses bedload related matters in his statement.
- 3.5 In respect of sediment deposition patterns and ecological thresholds, Dr Hicks and Ms McMurtrie both consider that the proposed adaptive methodology of undertaking post commissioning visual monitoring to develop a Morgan Gorge Flushing Management Plan ("FlushMP") is entirely appropriate. Notwithstanding, Dr Hicks has recommended that setting of the fine sediment cover trigger for manually controlled flushes into Morgan Gorge (currently prescribed in the consent conditions as 20% greater than the reference states established for these parameters during the trials) should be delayed until the baseline dataset has been collected and the baseline precision determined. I have made this change to the FlushMP condition.

¹¹ Part B, Condition 23

¹² Part C9, Condition 4

3.6 In addition, I have also made a further change to the FlushMP condition to align with Dr Hicks' recommendations to provide for the cessation of the FlushMP in the event natural flushes prove adequate for maintaining acceptable levels of sediment within the abstraction reach. More specifically, this change requires that Westpower must implement the certified FlushMP for no less than five years at which time they can request to cease its implementation. Any cessation request must also be accompanied by a report setting out the rationale for ceasing FlushMP activities. Provisions are also included to enable WCRC to later instruct Westpower to reinstate the FlushMP(e.g. in the event of a significant upstream landslide or other significant erosion events that creates significantly higher than normal sediment loads).

3.7 These types of adaptive management approaches are widely accepted and widely used to deal with circumstances where there is a need for a proposal to respond to circumstances "on the ground". However, I agree with the Tunncliffe report where it notes its use should not be a license to "fix it later" or be a substitute for understanding effects upfront. The Applicant's approach does **not** do that. Moreover, it provides a management tool to be used on the basis that the following criteria are met:

- (a) Clear environmental bottom lines are set at consent stage; and
- (b) Robust monitoring, thresholds, and enforceable responses are built into conditions.

3.8 In my opinion any perceived uncertainties associated with fish passage and Morgan gorge sedimentation effects are appropriately addressed by the proposed conditions.

4. In-stream Headworks Maintenance Related Effects and Associated Consent Conditions

4.1 The Tunncliffe report notes that the Applicant has not provided any detailed operational maintenance plans and considers details regarding anticipated effects of maintenance related riverbed disturbances and associated proposed consent conditions are inadequate.

4.2 Dr Clunie provides additional context to sediment management design considerations and explains that the preliminary Headworks design will result in little change to the channel width into Morgan Gorge and is not expected to cause

routine clogging of the system¹³. Dr Clunie also confirms that mechanical intervention by an excavator, although allowed for in the project description, is not intended as the regular means of sediment management. Mr McCahon also considers that sediment will be transported into the gorge largely as it occurs now¹⁴.

4.3 Westpower's proposed consent conditions require all ongoing operational, monitoring and maintenance methods to be set out in the Site Operations Management Plan ("**SOMP**") including methods for undertaking any in-stream maintenance works¹⁵. Notwithstanding, in response to the sediment transportation commentary from both the Panel's experts and Dr Hicks, I consider it is appropriate to further clarify that the SOMP needs to include the following specific information on sediment management at, and above, the Headworks¹⁶:

- (a) Operations, monitoring, and maintenance procedures for ensuring ongoing downstream passage of sediment past the Headworks and ensuring the occurrence of "clogging" events at or near the Headworks requiring instream sediment excavation works is minimised; and
- (b) Methods for monitoring the frequency, duration, and spatial extent of any in-stream sediment excavation works required above the Headworks.

4.4 I also consider it appropriate that the conditions allow for this information to be confirmed after the Headworks final design phase has been completed but prior to the SOMP being provided to the West Coast Regional Council for their certification.

4.5 In addition, Westpower agrees to include information on the frequency, duration, and spatial extent of any in-stream sediment excavation works required above the Headworks as part of their Annual Report. I have amended the proposed Annual Report condition accordingly¹⁷. This information will provide the basis to enable a check on the level of any adverse effects associated with in-stream sediment excavation works in this location and can inform any requirement to review bedload sediment management procedures set out in the SOMP.

¹³ Attachment A of Dr Clunie's statement

¹⁴ Paragraph 16 of Mr McCahon's statement

¹⁵ Part B Conditions 23(a) and 23(h)

¹⁶ Part B Conditions 23(a)(iii) and 23(a)(iv)

¹⁷ Part B Conditions 26

5. Tunncliffe Review Recommendations

5.1 The Tunncliffe review provides various recommendations in paragraphs 54 to 60, including some that I consider are adequately addressed in the proposed consent conditions. I address these in turn below.

Sediment Management Plan

5.2 At paragraph 54, the Tunncliffe review recommends that a comprehensive sediment and debris management strategy is required, to address coarse material and large wood, including explicit protocols for maintaining sediment continuity through the intake zone without reliance on frequent mechanical excavation.

5.3 As discussed above, this operational sediment management information is required as part of the SOMP and I consider it is adequately covered by the revised proposed SOMP condition¹⁸.

Water and Sediment Modelling

5.4 At paragraph 56, the Tunncliffe review recommends parameterised and calibrated modelling approaches be used.

5.5 As confirmed by Dr Clunie, detailed water and sediment modelling will be undertaken in the final design stage. I do not consider it appropriate, nor necessary, to prescribe specific final design work and/or processes by way of consent conditions in this case.

Ecologically-Based Thresholds

5.6 At paragraph 58, the Tunncliffe review recommends the establishment of trigger thresholds based on demonstrated ecological relationships rather than arbitrary percentage increases, including invertebrate community monitoring using standardised protocols.

5.7 As summarised above, I have removed the 20% change trigger from the FlushMP consent condition as per Dr Hicks' recommendation and note that Ms McMurtrie does not consider invertebrate community monitoring is necessary.

¹⁸ Part B Conditions 23

Maintenance Audit:

- 5.8 Paragraph 59 of the Tunnicliffe review recommends annual reporting on the frequency, duration, and spatial extent of in-channel maintenance works, with provisions for consent review if maintenance frequency exceeds predicted levels.
- 5.9 As discussed above, in line with this recommendation, I have included frequency, duration, and spatial extent of in-channel maintenance works as requirements of both the SOMP and the Annual Report. The conditions also require that the SOMP is reviewed no less than once every five years (Note: it can be reviewed more frequently if required). Therefore, although Westpower's witnesses consider it highly unlikely, if effects associated with in-stream sediment removal works exceed predicted levels, the consent conditions already provide an appropriate SOMP review mechanism to address this.

Effectiveness Review

- 5.10 Paragraph 59 of the Tunnicliffe review recommends an independent review of monitoring results and mitigation effectiveness be required after two years of operation, with explicit provision for consent modification if effects exceed predictions.
- 5.11 My understanding is that the West Coast Regional Council will undertake consent compliance audits and routine site inspections as part of their consent monitoring role. They will also be provided with an Annual Report including detailed information on operational and monitoring aspects of the authorised activities. In my opinion, this integration of monitoring, reporting, and compliance assessment, as set out in the proposed consent conditions, addresses the Tunnicliffe report's recommendation for independent review. Furthermore, the consent review condition¹⁹ provides an additional mechanism to address adverse environmental effects that might exceed predictions.

6. Further Changes to Proposed Consent Conditions

- 6.1 In addition to the changes to Westpower's proposed consent condition discussed above, as recommended by Dr Hicks, I have updated the Monitoring Plan condition²⁰ to require annual Kiwi Flat riverbed level surveys for the first five years following the commencement of generation.

¹⁹ Part B, Condition 27

²⁰ Part C9, Condition 45

6.2 Westpower has also reconsidered DOC's request to adjust the ecological compensation amounts in accordance with the Consumer Price Index and has agreed to this. Accordingly, I have included new condition number 60 in Part D of the conditions to this effect.

7. Other Matters

7.1 The Tunncliffe review (at paragraph 16) concludes that the overall effects profile as moderate to more than minor and states that the Applicant's conclusion of "less than minor" effects rests on optimistic assumptions about sediment dispersal, a likely underestimate of bedload proportions, reliance on spatial averaging that obscures localised impacts, and faith in adaptive management despite well-documented limitations.

7.2 I note that the AEE does not conclude "less than minor" effects. At section 6.7.1.1 of the AEE it states that the Sediment Report concludes that, in general, the Scheme will have "no more than minor" effects on sediment transport processes and channel characteristics along the Waitaha channel. This is also in line with the commentary Dr Hicks makes on this matter²¹.

Mason Jackson

²¹ Paragraph 2 of Dr Hicks' Statement.

APPENDIX A: Revised Proposed Resource Consent Conditions (10.2.26)