

**BEFORE AN EXPERT PANEL
TEKAPO POWER SCHEME**

FTAA-2503-1035

Under the **FAST-TRACK APPROVALS ACT 2024**

In the matter of an application for replacement resource consents in relation to the
Tekapo Power Scheme

By **GENESIS ENERGY LIMITED**
Applicant

STATEMENT OF PLANNING EVIDENCE OF HELEN MARIE MARR
25 August 2025

Royal Forest and Bird Protection Society of New Zealand

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1. INTRODUCTION

1.1 Qualifications and experience

1. My name is Helen Marie Marr (Ms/she/her).
2. I have a Bachelor of Resource and Environmental Planning (specialising in Environmental Science) with Honours from Massey University.
3. I have 25 years of experience in resource management and planning. My particular areas of expertise are in policy and plan development and natural resource management, particularly issues relating to biodiversity, freshwater management and aquaculture. My practice has had a particular focus on freshwater management.
4. My role at Kāhu Environmental involves working with a range of clients, including councils, government, special interest groups, and iwi, to assist them in creating or working with planning documents. For example, I often assist iwi in preparing management plans related to freshwater, and help environmental groups and regional councils in implementing the National Policy Statement for Freshwater Management (NPS-FM), including providing best practice guidance and reviewing draft provisions. I also work at the national level. I have been on the technical advisory group for the Ministry for the Environment guidance on nutrient limits to achieve ecosystem health, and I assisted the Ministry for the Environment to prepare guidance on the National Objectives Framework of the NPS-FM. I have participated in national forums, such as the Land and Water Forum, on behalf of environmental groups, and have prepared submissions on freshwater policy and regulation and the resource management law reform on behalf of clients.
5. I assisted Palmerston North City Council to present s42A reports on a plan change to manage the intersection of renewable energy (wind) and outstanding natural landscapes (PC15B). I worked with Marlborough District Council in preparing a comprehensive variation (Variation 1) to the Proposed Marlborough Environment Plan (PMEP) to manage aquaculture through a collaborative stakeholder process, writing provisions and preparing and presenting s42A reports at the hearing. This year I assisted Gisborne District Council prepare a draft RPS.

6. I have presented evidence to the Environment Court numerous times, on behalf of several different clients, on topics relating to the sustainable management of freshwater resources and implementation of the NPS-FM, including evidence on the One Plan, the Ruataniwha Water Storage Project (a matter of national importance heard by a Board of Inquiry), renewal of consents for hydroelectricity in the central North Island (New Zealand Energy), replacement and additional consents for the Rangitata Diversion Race (take and use consents for an irrigation scheme), Northland Regional Plan on behalf of the Director General of Conservation, and freshwater plan change for the Waikato catchment (PC1).
7. Between 2016 and 2023 I presented training several times a year to planning practitioners on freshwater management on behalf of the New Zealand Planning Institute, particularly focussed on implementation of the NPS-FM.
8. I have also prepared evidence for Forest and Bird on the applications by Meridian to re-consent the other parts of the Combined Waitaki Power Scheme.

1.2 PURPOSE AND SCOPE OF EVIDENCE

9. Forest and Bird have engaged me to prepare planning evidence about the consent applications for the Tekapo Power Scheme (TPS), addressing the adverse effects of the applications on ecosystem health and biodiversity.
10. In forming my opinions, I rely on the evidence of Ms McArthur, Mr Harding, and Dr McClellan to understand the adverse effects of the applications. I have reviewed the evidence of Genesis to understand the positive effects of the applications.
11. My evidence is focused on
 - (a) a section 104 RMA assessment of:
 - (i) The effects of the applications on flows in the Takapō River,
 - (ii) The effects of those flows on ecosystem health and biodiversity values,
 - (iii) The policy and planning framework for assessing positive and adverse effects on ecosystem health and biodiversity values, and

- (iv) An appropriate process for assessing offsets or compensation where adverse effects cannot be or are not addressed by an environmental flow regime or other mitigation measures.
 - (b) Given the adverse effects on the ecosystem health and biodiversity of the Takapō River, an assessment of appropriate consent conditions guided by s104, 108AA and restricted by s83 FTA,
 - (c) Whether having regard to the purpose of the FTA as a priority alters the assessments in (a) and (b)
12. This evidence does not address the other types of adverse effects anticipated by the TPS, and so I do not form any conclusions about other types of effects or on the overall proposal.

1.3 DOCUMENTS AND MATERIALS REFERENCED

13. In producing this statement of evidence, I have reviewed the following evidence and materials:
- (a) The parts of the AEE relevant to my evidence,
 - (b) The Waitaki Allocation Plan (WAP), Canterbury Regional Policy Statement (CRPS), and Canterbury Land and Water Regional Plan (CLWRP), where relevant to my evidence,
 - (c) The National Policy Statement for Freshwater Management (NPS-FM), National Policy Statement for Renewable Electricity Generation (NPS-REG),
 - (d) The evidence of Ms McArthur, Mr Harding and Dr McClellan for Forest and Bird.

1.4 CODE OF CONDUCT

14. I confirm that I have read the Expert Witness Code of Conduct set out in the Environment Court's Practice Note dated 1 January 2023. I have complied with the Code of Conduct in preparing this evidence and agree to comply with it while giving oral evidence. Except where I state that I am relying on the evidence of another person, this written 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 expressed in this evidence.

2. EXECUTIVE SUMMARY

15. This statement of planning evidence focuses on the appropriate management of the adverse effects of the applications on ecosystem health and biodiversity, and compensation.
16. The Assessment of Environmental Effects (AEE) adopts an "existing environment" approach that inconsistently considers positive and adverse effects. The AEE treats the current adverse effects of the Tekapo Power Scheme (TPS) as "baseline," leading to the conclusion that many ongoing adverse effects do not require mitigation if the current operating regime continues. In contrast, existing positive effects are considered relevant for "weighing up" against any adverse effects. In my opinion, both positive and adverse effects should use the same existing environment approach, and the approach taken in the AEE approach is inconsistent with national and regional planning documents.
17. There are chronic and episodic adverse effects of the TPS, including the dewatering of a significant section of the Takapō River and the loss of its natural flow regime, which negatively impacts the river's health, ecosystem functions, water quality, significant habitats of indigenous species, and fish passage. These effects are not adequately addressed in the AEE due to its "existing environment" approach.
18. The rules in the relevant plan allow for the control and mitigation of adverse effects, including environmental flows for the Takapō River. My analysis of the rules is also that the default minimum flow in the WAP should apply to the Takapō River below Lake George Scott. If the application does not comply with that, it may be a non-complying activity, which would remove restrictions on imposing conditions.
19. In my opinion, the applications are inconsistent with the relevant policies from the Canterbury Regional Policy Statement (CRPS), Waitaki Allocation Plan (WAP), and the National Policy Statement for Freshwater Management (NPS-FM),

particularly policies that relate to protection biodiversity, protection of significant habitats, and maintaining or improving the health and wellbeing of waterbodies.

20. The application offers the IBEP as a compensation measure for adverse effects. The application does not specify which adverse effects the IBEP is designed to address. There is no evidence in the application that the IBEP has been designed in accordance with the effects management hierarchy or the principles for compensation that are set out in the WAP and NPS-FM.
21. Based on the information in the application, I cannot conclude that compensation is an appropriate way to manage the identified adverse effects of the applications, or that it does so in a way that has appropriate regard to the policy direction.
22. To the extent that compensation could be an appropriate way to address adverse effects, the evidence of Ms McArthur, Mr Harding and Dr McClellan is that a larger compensation package, with more specific goals, targeted in different ways, would be necessary to compensate for the adverse effects of the applications.
23. In my opinion, the current suite of conditions securing compensation and mitigation of adverse effects is insufficient to ensure adverse effects are avoided, remedied, mitigated or compensated.

3. EVIDENCE

3.1 Existing Environment

24. The correct approach to the existing environment is a legal issue; however, I provide my assessment of the planning matters relevant to that question.
25. I agree that the existing environment includes the existing structures of the Tekapo Power Scheme (TPS), including the dam and diversion structures, and that the rules in the Canterbury Land and Water Regional Plan (CLWRP) permit these.
26. The AEE for the application appears to treat the existing environment as the current state of the environment, *including* the effects of the damming, takes, uses, diversions and discharges currently occurring, and as a result discounts or does not address adverse effects caused by the current operation of the TPS.

27. The legal submissions for Genesis state that the effects of water management, and changes to the present operations are within the scope of the matters of control, and restrictions of the Fast Track Act (FTA), and should not be excluded from consideration of effects.¹ However, I could not see evidence of that approach being applied in the AEE.

Positive effects and adverse effects should use the same existing environment approach.

28. In my opinion, the positive and adverse effects of the TPS should use the same existing environment approach. The AEE does not appear to do that and takes a different approach to considering adverse effects compared to positive effects.
29. Section 104(a) of the Resource Management Act (RMA) does not differentiate between positive and adverse effects, and the definition of 'effect' includes both positive and adverse effects and does not treat them differently.²
30. The AEE appears to consider the positive effects of the current operation, but does not consider the adverse effects of the current operation.
31. The assessment in the AEE treats current adverse effects of the operation of the TPS as 'baseline' and, on that basis, concludes there are no ongoing adverse effects that require mitigation if the same operating regime continues.
32. In contrast, the AEE treats current positive effects of the scheme as relevant considerations when determining the appropriateness of the applications, and a matter to 'weigh up' against any adverse effects.
33. For example, the AEE frames changes to habitat in the Takapō River that reduce the distribution of trout as a positive effect for native fish, but changes to habitat in the Takapō River that have reduced the available habitat for those native fish are not considered an adverse effect, because they are existing.

¹ Legal submissions for Genesis Energy Limited for the project overview conference, 22 July 2025, Paragraph 27.

² Section 3 RMA

34. While I understand that the FTA requires the significant benefits of the proposal to be had regard to, I understand this should happen separately from the assessment of environmental effects, not at the same time. To conflate the two assessments risks 'double counting' positive effects.
35. If the same approach is taken to assessing positive effects as is taken to assessing adverse effects (ie if existing positive effects were considered baseline), then the existing positive effects of renewable electricity generation would also form part of the baseline. That type of approach could mean that only the *additional* positive effects of the renewable electricity generation above the baseline of current benefits would be considered as part of the s104(a) assessment.
36. In my opinion, taking that approach to positive effects may be inconsistent with the direction in national policy documents. For example, the National Policy Statement for Renewable Energy Generation (NPS-REG) directs decision-makers to recognise and provide for the benefits of *current and ongoing* renewable electricity generation. I set out my full analysis of the policies that require recognition of positive effects in Appendix 1.

The 'existing environment' approach in the applications would be inconsistent with national direction.

37. As stated above, if both positive and adverse effects are treated equally, the approach to the existing environment taken in the AEE would not allow us to consider the existing benefits of renewable electricity generation, and so would be inconsistent with the NPS-REG.
38. The Waitaki Allocation Plan (WAP) does not give effect to the National Policy Statement for Freshwater Management (NPS-FM). Because of this, it is necessary to consider the provisions of the NPS-FM carefully. Implementing the NPS-FM will require a review of the WAP, including its allocations and environmental flow regime. The NPS-FM does not provide for maintaining the status quo for freshwater in the long term if that status quo does not support the health and well-being of freshwater and freshwater ecosystems. Assuming that the allocations and environmental flow regime in the WAP form part of the existing environment, would be inconsistent with the NPS-FM.

39. The NPS-FM will require the regional council to have regard to the benefits of the TPS, while also requiring maintenance or improvement of water quality, where the current water quality is below a national bottom line.³
40. I set out the requirements of the NPS-FM relevant to the application, including consideration of positive effects in Appendix 2.

Regional and national planning documents seek to manage the adverse effects of existing schemes.

41. The controlled activity status in the WAP and CLWRP, along with the allocation set aside in the WAP for the TPS, indicates that the regional plans have provided for the continuation of the TPS in the future. However, that provision is balanced with the ability to manage adverse effects in the matters of control. In my opinion, this indicates that the regional plans do not assume that the effects of the current operation of the scheme are provided for without change.
42. WAP Rule 15A, reserves control over adverse effects of flows in the Takapō River, in matter of control (a) and mitigation of adverse effects generally in matter of control (b). This acknowledges that the current operation of TPS may have adverse effects, and that those effects may require management. In my opinion, these matters of control do not support a planning interpretation that the WAP considers the effects of a lack of flows in the Takapō River part of the 'existing environment'.
43. Policy 4.51 of the CLWRP states that existing hydro-electricity generation schemes "are to be considered as part of the existing environment". It then goes on to say resource consent applications should consider improvements to the efficiency of water use and conveyance, and "reductions in any adverse effects on the environment".⁴
44. In my opinion, the other policy documents that acknowledge the benefits of renewable electricity generation, and require decision makers to provide for those benefits, also balance this acknowledgement with a requirement to consider and

³ NPS-FM 3.11, 3.31

⁴ This policy does not apply to the take, use, dam and divert aspects of the TPS.

manage adverse effects. This includes the NPS-REG, NPS-FM, and Canterbury RPS. I have set out my analysis of those 'benefits' policies in Appendix 1.

45. In my opinion, the policy documents do not support an approach to the 'existing environment' that discounts the adverse effects of the changes in flow in the Takapō River.

Summary on the existing environment

46. In summary, in my opinion, an approach to the 'existing environment' that excludes the effects of damming and diversion is more consistent with;
- (a) good planning practice in particular the requirement to consider both adverse and positive effects,
 - (b) the relevant provisions of the planning documents.

3.2 AEE does not address all adverse effects

47. Rule 15A reserves control over adverse effects generally, and over flows specifically. Given that matter of control, I would have expected to see an analysis of the effects of the proposed (status quo) flow regime in the AEE, to understand its adverse effects, and then to identify any appropriate mitigation, offset or compensation.
48. There is no analysis of the effects of the flow regime in the AEE due to the approach taken to the existing environment in the analysis. The assessment of the hydrological effects on the Takapō River in the AEE is a single paragraph concluding that the effects remain unchanged from those forming part of the existing environment.
49. If a different (more conventional) approach to assessing environmental effects is taken, then different conclusions about the adverse effects of the existing operation of the TPS would be formed. The evidence of Ms McArthur, Mr Harding and Dr McClellan sets out what those effects are. In particular, the effect of de-watering almost 7km of the Takapō River and loss of natural flow regime (in particular, flushing and flood flows) has adverse effects on:
- (a) The health and well-being of the Takapō River

- (b) Ecosystem health and life-supporting capacity of the Takapō River
 - (c) Water quality (as it relates to periphyton and didymo)
 - (d) Significant habitats of indigenous species and significant areas of indigenous vegetation, including loss of significant vegetation at risk of extinction and loss of appropriate nesting habitat for birds
 - (e) Fish passage
 - (f) The extent and values of the river
50. The policy framework that guides consideration of those effects is set out in section 3.4 below.
51. The AEE is premised on the approach to the existing environment, which excludes consideration of any adverse effect currently occurring. This includes chronic effects and episodic effects.
52. The chronic effects of effectively dewatering 7km of the Takapō River and removal of the natural flow regime on the entire Takapō River on ecosystem health, significant habitats of native fish and birds and significant areas of indigenous vegetation are described in the evidence of Ms McArthur, Mr Harding and Dr McClellan.
53. The AEE also excludes consideration of episodic effects that will occur in the future, if those effects have previously occurred in the past. For example, the effects of native fish stranding when flows recede rapidly. As a result of the approach to the existing environment in the application and AEE, these episodic events are considered to be 'baseline', and there are no consent conditions or other mitigation measures in the application that address these effects.
54. In my opinion, excluding episodic adverse effects simply because they have occurred in the past is a very unusual approach to the existing environment and the consideration of adverse effects and the policy documents do not support this approach.

55. The following sections of my evidence set out the ability to address those effects in consent conditions and the relevant provisions of the policy documents that guide how those effects should be managed.

3.3 Ability to control adverse effects

56. The rules under which applications are made reserve control over adverse effects and mitigation measures to address adverse effects.⁵ This includes control over environmental flows for the Takapō River and mitigation for adverse effects caused by the discharge of water. Conditions can be imposed that require minimum or flushing flows in the Takapō River to address adverse effects, measures to rescue stranded native fish and control over the release of other flows to mitigate adverse effects on nesting birds.
57. Measures relating to offsetting and compensation are discussed later in this evidence in section 3.5.
58. My analysis of the environmental flow and level regime and rules in the WAP (set out below) indicates that because the applications do not comply with the default minimum flow set in Table 3B(xxii), they may be a non-complying activity. If that is the case, the matters of control in the rules analysed in the applications do not constrain the ability to impose conditions.

Control over environmental flows

59. Rule 15A matter of control (a) reserves a broad control to impose conditions to address adverse effects of flows in the Tekapo River, and that includes control over environmental flow regimes.
60. “Environmental flow and level regimes” is a defined term in the WAP and means: “The flow-sharing, allocation limits, minimum flows and levels and flushing flows established by this Plan.” I take this to mean that the environmental flow and level regime is made up of each of the four distinct types of flows that make up the definition.

⁵ Rule 15A WAP matter of control (a) and (b) Rule 5.125A CLWRP matter of control 2

61. Each underlined part of the definition is defined separately.
62. Table 3B sets out the environmental flow and level regimes that are established by the plan for each waterbody. Some waterbodies include a statement explicitly stating there is a 'no flow' value for a particular part of the environmental flow and level regime. For other rivers or parts of the flow regime, Table 3B is silent.
63. It is not clear from reading the provisions what the effect of not including a particular part of the environmental flow and level regime in Table 3B is. It could mean that specific part of the regime:
- (a) has been set at zero, or
 - (b) is not 'defined by the plan' and could be set through the resource consent process.
64. I acknowledge this is largely a matter of legal interpretation, but from a planning perspective, it is relevant that Table 3B often explicitly states when the flow sharing component of the regime does not apply by stating, 'no flow-sharing regime'. It could have stated explicitly that for other parts of the environmental flows (e.g. 'no minimum flow') if that was the intention. For the purpose of this evidence, I use the interpretation that if Table 3B is silent on part of the environmental flow regime, that means it is 'not defined by the plan' and can be set through the resource consent process.
65. Table 3B (ii) sets allocation limits downstream of Lake George Scott, and a minimum flow downstream of the Fork Stream confluence. It does not set a minimum flow upstream of Fork Stream, and is silent on flushing flows. Table 3B(xxii) sets a default minimum flow for 'all other rivers', but the default does not apply to the Takapō River upstream of Lake George Scott.
66. My understanding of Table 3B is that it;
- (a) Sets a minimum flow downstream of Fork Stream,
 - (b) Sets a default minimum flow for 'other rivers',
 - (c) Excludes the Tekapo River upstream of Lake George Scott from the default minimum flow.

67. My understanding of Table 3B is that it does not;
- (a) set a flushing flow for the Tekapo River,
 - (b) state there is 'no flushing flow' for the Tekapo River
 - (c) set a specific minimum flow between Lake George Scott and the confluence with Fork Stream,
 - (d) exclude the section of river between Lake George Scott and the confluence with Fork Stream from the default minimum flow,
 - (e) state there is 'no minimum flow' between Lake George Scott and the confluence with Fork stream,
68. This is summarised in Table 1 below.

Table 1: Summary of the flow regime for the Tekapo River in the WAP.

	Minimum flow	Flushing flow
Upstream of Lake George Scott	Not defined by the plan.	Not defined by the plan.
Lake George Scott to Fork Stream	Default minimum flow (xxii (a))	Not defined by the plan.
Downstream of Fork Stream	3.4m ³ /s (ii(b))	Not defined by the plan.

69. Minimum flows are set by the plan downstream of Lake George Scott. Minimum flows upstream of Lake George Scott are not defined and are excluded from the default minimum flows. Flushing flow for the entire Takapō River are not 'defined by the plan' and could be set by conditions as part of the resource consent process.
70. Flows that are not defined by the plan can be set in resource consent conditions. I discuss the policy direction for setting environmental flows later in section 3.4.
71. If my interpretation of the WAP is correct, the application does not comply with the minimum flow downstream of Lake George Scott. It therefore does not meet the condition of Rule 15A that it complies with Rule 2. Activities that do not meet Rule 2 are non-complying activities under Rule 16.

72. If the application is a non-complying activity, then there are no restrictions on the matters that may be considered, or the matters that conditions may cover, including matters related to flow.

3.4 Direction on managing adverse effects in planning documents

73. This section of my evidence sets out the relevant policies to ‘have regard to’ under s104(1)(b) when considering how to manage the adverse effects of the applications appropriately. It is focused on the effects on biodiversity. The policies that address both positive and adverse effects of the application, which I set out in Appendix 1, are also relevant.

CRPS policies on biodiversity

74. Chapter 9 of the CRPS sets out provisions relevant to the management of biodiversity.
75. The application relies on the lack of adverse effects based on the ‘existing environment’ approach and the IBEP to assert compliance with the biodiversity policies in the CRPS.⁶ The assessment of the CRPS in the applications states that the IBEP is ‘inherently consistent’ with the direction in the CRPS, but provides no evaluation of the IBEP against the policies.
76. Objectives 9.2.1, 9.2.2 and 9.2.3 together seek to ‘halt the decline’, ‘restoration or enhancement’ and ‘protection’ of significant biodiversity, its values and ecosystem function. Policy 9.3.2 sets out particular priorities for protection, and Policy 9.3.4 promotes the improvement of the function and long-term sustainability of ecosystems.
77. The evidence of Ms McArthur, Mr Harding and Dr McClellan is that the applications will result in a loss of biodiversity, inconsistent with the CRPS.

⁶ Appendix T to the Applications, starting page 6

78. Policy 9.3.6 sets limitations on the use of biodiversity offsets and directs a 'no net loss' or 'net gain' approach to be taken, which is consistent with the direction in the NPS-FM and WAP.
79. The applications are not consistent with the biodiversity offset direction in the CRPS, because they do not include conditions that protect biodiversity and do not 'ensure' biodiversity offsets in accordance with Policy 9.3.3.⁷

WAP direction on managing adverse effects

80. Objective 1 of the WAP requires 'safeguarding' the life supporting capacity of the river and its ecosystems, and the integrity, form, function and resilience of the braided river system. Safeguarding requires active protection of those matters.
81. Policy 1 (for the whole catchment) and Policy 38 (for the Tekapo, Pūkaki and Ōhau Rivers) recognise the importance of connectedness in all parts of the catchment, and acknowledges that flows in the river could provide continuity of flow from mountains to sea. Maintaining almost 7km of dry river bed prevents the Waitaki River system from being connected.

WAP policy direction on setting environmental flows

82. Policy 2 requires setting environmental flow and level regimes that are consistent with Objective 1, which requires safeguarding the natural values of the braided river system. Policy 4 requires consideration of a large number of matters related to healthy ecosystems, including fish passage and periphyton. Ms McArthur's evidence is that the current flow regime does not adequately provide for those matters.
83. The assessment of the provisions of the WAP in the application relies on maintaining the status quo, and the implementation of the IBEP to conclude that the applications are consistent with the provisions of the WAP.

⁷ As required by Method 1 in chapter 9, page 150 CRPS

84. The evidence of Ms McArthur, Mr Harding and Dr McClellan is that continuing the status quo operation of the TPS will result in future and ongoing loss of those values.

WAP policy direction on appropriate offsetting and compensation

85. The WAP contains two policies relating to offsetting and compensation, incorporated from the NPS-FM.⁸ The applications do not include an assessment of these policies.
86. Policy 5A.4 and Policy 5A.5 are directive and require that the loss of river extent and values is avoided and resource consents are not granted for these activities, unless the effects management hierarchy is followed, and principles 1-6 of the principles of compensation are complied with. There is no evidence in the applications that these provisions have been followed.
87. I have assessed these policies in detail in the section of my evidence below addressing the NPS-FM. In summary, the applications are not consistent with the provisions in the WAP and NPS-FM relating to offsetting and compensation.
88. There is no information in the applications assessing the IBEP against the WAP. The evidence of Ms McArthur, Mr Harding and Dr McClellan is that the IBEP is insufficient to compensate for the future and ongoing loss of biodiversity values in the catchment.
89. In my opinion, the IBEP is not consistent with the provisions of the WAP relating to appropriate offset and compensation.
90. If the compensation is not adequate to compensate for the residual adverse effects, and if it is not consistent with the direction in the NPS-FM and WAP, those documents direct that consent is not granted. If the applications are a non-complying activity as I set out in section 3.3 above, then declining the consents is an available option, but only if the adverse impacts are 'out of proportion' to the

⁸ Policy 5A.4 and Policy 5A.5

benefits of the proposal, and not solely on the basis that the effect is inconsistent with planning provisions.⁹

Policy in the NPS-FM on managing adverse effects

91. The WAP and CLWRP were prepared before the NPS-FM 2020 was in force and cannot be assumed to give effect to the NPS-FM. I summarise below the direction in the NPS-FM relevant to managing adverse effects of the applications on the health and well-being of freshwater and freshwater ecosystems. My full analysis is in Appendix 2. My analysis of the provisions relating to positive effects is in Appendix 1.

Implementation of the NPS-FM

92. While the primary way to implement the NPS-FM is through comprehensive, integrated catchment planning, individual consent applications should still contribute to a "trajectory of change" towards improving the health and well-being of waterbodies and freshwater ecosystems. This approach is particularly relevant for long-term consent applications for large-scale activities, like the ones under consideration, to prevent them from frustrating the NPS-FM's goals. Without this approach, individual consent decisions could "lock in" effects that are inconsistent with the NPS-FM's goals for up to two planning cycles, leaving the issues for future generations to address. It would be more consistent with the NPS-FM to start taking positive steps towards achieving Te Mana o te Wai now.

Policy 1 – giving effect to Te Mana o Te Wai

93. Te Mana o te Wai is the core concept and primary policy of the NPS-FM, which focuses on the health and well-being of freshwater. Although specific provisions about the hierarchy of obligations must not be considered (due to sections 104(2F) and 104(2G) of the RMA), this does not serve as a general ban on prioritising freshwater health. Te Mana o te Wai is a holistic idea that highlights the interconnected relationship between people and freshwater, requiring care and attention for future generations. The application did not evaluate all six principles of Te Mana o te Wai, particularly those relating to non-tangata whenua New

⁹ FTA s85(3) and (4)

Zealanders. These principles include prioritising freshwater health and caring for it even when its use benefits the nation's health. The responsibility to care for and protect freshwater is an integral part of Te Mana o te Wai.

Policy 5

94. Policy 5 requires maintaining or improving the health and well-being of waterbodies and freshwater ecosystems. This obligation applies to all aspects of freshwater management, regardless of whether the National Objectives Framework (NOF) process has been undertaken. Improvement is necessary where waterbodies are degraded. The evidence shows that the Takapō River currently does not display good health and well-being, and the dewatered section of the Takapō River lacks functioning freshwater ecosystems. Keeping the current unhealthy condition would be inconsistent with Policy 5, and the consent process should aim to improve the health and well-being of these waterbodies.

Policy 7: Avoiding loss of river extent and values requires application of the effects management hierarchy.

95. Policy 7 requires the **avoidance of loss of river extent and values** to the extent practicable. This policy is expanded on in subpart 3 of the NPS-FM, which requires a functional need for the activity and the application of the effects management hierarchy. Values such as ecosystem health, indigenous biodiversity, and Māori freshwater values must be considered. If offsetting or compensation is used, it must comply with specific principles. The applications have a functional need to be in the Takapō River, but do not demonstrate consistency with the NPS-FM and WAP regarding the effects management hierarchy and principles of compensation. Evidence shows that the current operation of the Tekapo Power Station (TPS) results in a loss of ecosystem health and indigenous biodiversity values.

Policy 9: The habitats of indigenous freshwater species are protected.

96. Policy 9 mandates the **protection of the habitats of indigenous freshwater species**. Evidence from Ms McArthur, Mr Harding, and Dr McClellan shows that the TPS is degrading the habitats of indigenous species, including birds, fish, and plants, and that in some cases this degradation will continue under the continued operation. The current and proposed operation of the TPS is inconsistent with the

directive to protect these habitats. Any loss of these habitats is not being mitigated, offset, or compensated for in a way that is consistent with the NPS-FM.

3.5 Offsetting and compensating for adverse effects

97. Appropriately designed and implemented aquatic compensation is an option for addressing residual adverse effects resulting from the loss of river extent and values resulting from the applications. The WAP and NPS-FM have clear directive policy on when compensation is an appropriate way to address adverse effects. I have set this out in detail below. In summary, to be consistent with the policy direction, compensation must be used as a 'last resort' after all opportunities to avoid, remedy or mitigate have been exhausted, and must comply with Principles 1-6 of NPS-FM Appendix 7.

Effects management hierarchy

98. The NPS-FM clause 3.24 and Policy 5A.4 and 5A.5 of the WAP require that the loss of extent and values of rivers is avoided, unless there is a functional need for the activity in the location, and the effects management hierarchy is applied. Policy 9.3.6(1) of the CRPS limits the use of biodiversity offsets to situations where adverse effects cannot otherwise be avoided, remedied or mitigated.
99. The TPS has a functional need to operate in its location, and so the effects management hierarchy and offsetting and compensation for loss of river and wetland extent and values are available and consistent with the NPS-FM.
100. The effects management hierarchy is defined in the NPS-FM.¹⁰ It requires effects to be managed under each step in the hierarchy 'where practicable, and *then* to consider the next step in the hierarchy.
101. Guidance from MFE on the implementation of the NPS-FM describes the effects management hierarchy as 'the internationally-agreed best-practice approach to managing adverse environmental effects'.¹¹ The guidance identifies three good

¹⁰ NPS-FM 3.21

¹¹ <https://environment.govt.nz/acts-and-regulations/freshwater-implementation-guidance/clarification-of-the-essential-freshwater-programme-implementation-requirements/#biodiversity-offsetting>

practice guides (in addition to the principles in the NPS-FM) that could be applicable when considering offsetting for freshwater values.¹²

102. The good practice guides all emphasise the need to sequentially and transparently apply the effects management hierarchy, by exploring all avenues to avoid, remedy or mitigate adverse effects in turn, and exhausting all practicable options under each step before moving on to the next step in the hierarchy. This is because each step in the hierarchy provides less certain outcomes for biodiversity than the step before, and compensation provides the least certain outcomes of all.
103. In my opinion, this best practice guidance is consistent with the definition of the effects management hierarchy and its description in Principle 1 of Appendices 6 and 7 in the NPS-FM.
104. The NPS-FM 3.24 and Policy 5A.5 of the WAP require the demonstration of how each step of the effects management hierarchy has been applied.¹³ To comply with that policy direction, and to do so in a way consistent with the best practice guidance, I would expect to see;
 - (a) a clear, structured analysis that sets out all the adverse effects of the operation of the TPS,
 - (b) the options for avoiding those adverse effects,
 - (c) an assessment of the practicability of those options, and
 - (d) the implementation of each of those practicable options.
105. Those steps should then be repeated for any residual adverse effects that cannot practicably be avoided for each of the next steps in the effects management hierarchy.

¹² Environment Institute of Australia and New Zealand (EIANZ) guidelines for use in New Zealand: terrestrial and freshwater ecosystems, Department of Conservation Guidance on Good Practice Biodiversity Offsetting in New Zealand (August 2014), Local Government NZ (LGNZ) Biodiversity Offsetting under the Resource Management Act

¹³ NPS-FM 3.24(3)(a)(i) and WAP Policy 5A.5(a)(i)

106. I have not seen that type of clear, structured analysis in the application. Appendix 5 to the project overview briefing on 24 July 2025 ('the IBEP memo'), which describes the IBEP, contains only one sentence that refers to the effects mitigation hierarchy.¹⁴
107. When applying the practicability test for each stage of the effects management hierarchy, care should be taken not to conflate this with the 'functional need' test. The functional need test is a policy gateway to the effects management hierarchy. Having a functional need does not then automatically mean it is not practicable to avoid, minimise or remedy adverse effects. The practicability assessment should be undertaken independently of functional need assessment.
108. I accept that some effects cannot be avoided without returning naturalised flows to the Takapō River.¹⁵ However, there is no specific assessment in the evidence of how much impact some return of minimum and flushing flows to the Takapō River would have on adverse effects, or electricity generation benefits, or the practicability of different options for different levels of minimisation of effects.
109. The effects management hierarchy requires offsetting to be considered and applied 'where possible'. There is no structured analysis of residual adverse effects and whether or not offsetting is possible in the application or the IBEP memo. Ms McArthur disagrees with and responds to Dr Hughey's opinion that the interconnected nature of effects makes it inappropriate to do the type of structured analysis that, in my opinion, is required by the policy and guidance documents.
110. From a planning perspective, the lack of detailed consideration of whether offsetting is possible means that there is less certainty about the conservation outcomes that will be achieved, and therefore less certainty about how consistent the applications are with the policy frameworks about managing adverse effects.

¹⁴ Last paragraph on the sixth page of the memo to Ellie Watson from Ken Hughey dated 18 July 2025, presented as Appendix 5 to the project overview briefing on 24 July 2025

¹⁵ For example some effects on geomorphology and the significant indigenous vegetation that relies on that natural geomorphology.

Principles of compensation

111. Aquatic compensation is available to address residual adverse effects after the effects management hierarchy has been applied. Aquatic compensation is defined and “*means a conservation outcome resulting from actions that are intended to compensate for any more than minor residual adverse effects on a wetland or river after all appropriate avoidance, minimisation, remediation, and aquatic offset measures have been sequentially applied.*”
112. Aquatic compensation must:
- (a) be ‘a conservation outcome’,
 - (b) resulting from actions,
 - (c) comply with Principles 1 to 6 in Appendix 7 of the NPS-FM and
 - (d) have ‘regard to’ Principles 7-13.¹⁶
113. The best practice documents referred to in my evidence earlier do not have guidance that is bespoke to compensation. However, the Local Government New Zealand guidance does state that when compensation is considered, best practice approaches and the principles of offsetting should be followed as much as possible.¹⁷ That guidance emphasises that a structured approach is needed to understand and quantify adverse effects as much as possible, and ensure the positive measures proposed are sufficient in scale to outweigh adverse effects. Expert opinion is necessary when addressing compensation, as the benefits and outcomes of compensation are more uncertain than any of the other elements of the effects management hierarchy, but that expert opinion should be within the framework of a structured analysis of effects, options and anticipated benefits. This would also be consistent with Principle 13: Transparency. I have not seen that type of analysis in the evidence.

¹⁶ Definition of aquatic compensation NPS-FM, 3.24(3) WAP 5A.5

¹⁷ Biodiversity Offsetting under the Resource Management Act, LGNZ 2018, Chapter 1 key messages.

114. Principle 1 is adherence to the effects management hierarchy and must be complied with in order to ensure compensation is appropriate. I have addressed this in the previous section.
115. Ms McArthur has set out an assessment of the Principles of Compensation and whether or not there is technical evidence that those Principles have been complied with.¹⁸ She concludes that there is no evidence that the Principles have been complied with in most cases, and the benefits of the IBEP are unclear. Mr Harding's evidence is that even with the compensation, over time, there will be a complete loss of indigenous vegetation values which are distinctive, ecologically significant and not found elsewhere.
116. From a planning perspective, the key features of an environmental compensation package that complies with the policy framework would be that;
- (a) it is for the purpose of achieving a conservation outcome,¹⁹
 - (b) to redress adverse effects,²⁰
 - (c) through positive effects that outweigh the adverse effects,²¹ and
 - (d) the methods or measures to achieve the conservation outcome are secured by consent conditions.²²
117. It is not clear to me from reading the application documents what the defined conservation outcome of the proffered compensation package is. I understand that it is to fund an 'indigenous biodiversity enhancement programme' (IBEP) and that this will be the successor or continuance of the existing Project River Recovery. The stated aim of the IBEP set out in the proffered consent conditions is "to improve the condition, resilience, indigenous biodiversity, ecological processes and other values of the braided rivers and associated environments,

¹⁸ McArthur evidence Appendix 2

¹⁹ Definition 'aquatic compensation' NPS-FM

²⁰ Principle 1

²¹ Principle 3

²² 3.34(3)(a)(iii)

including wetlands, within the Waitaki Catchment”.²³ That seems a reasonably high-level goal, which could be interpreted in several different ways, and does not clearly describe the specific conservation outcome that is intended to be achieved by the compensation.

118. The programme’s aim is described differently in Kahu Ora, the draft strategic action plan for the IBEP, which has a narrower description of where improvement will occur, narrowing it down to ‘representative examples’ of environments, and a focus on specific types of waterbodies affected by the CWPS.
119. Compensation is intended to achieve conservation outcomes through actions that compensate for adverse effects. From reading Kahu Ora, I note that information gathering and monitoring of the programme is covered under the budget set aside for the IBEP. This means the amount of money being spent on the conservation outcome is less than the full amount set out in the proffered conditions.
120. Kahu Ora sets out some measurable outcomes for each zone and action milestones for the first 10 years. These are clear, specific and measurable, but:
 - (a) they are not included as part of the conservation outcome secured by conditions of consent and could be varied by changing the strategic plan, which could be done at any time, and
 - (b) the actions, milestones and projects chosen in the action plan were guided and adjusted by the fixed budget, and the priority sites covered in the agreements with DoC and Waitaki Rūnaka, rather than by a structured assessment of the conservation actions required to provide redress for adverse effects with appropriate consideration and inclusion of those sites.²⁴
121. It would be more consistent with best practice for these outcomes to have been guided by the adverse effects and an assessment of what is necessary to provide redress for those effects, and for them to be secured through consent conditions.

²³ Condition 23 Tekapo Power Scheme Proposed Consent Conditions Draft dated 25 July 2025,

²⁴ Kahu ora 2.1 At Methodology, Steps 3 and 4 and Step 5 pages 24 to 26

Conclusion on effects management hierarchy and principles of offset and compensation

122. Based on my assessment of the application and evidence, and the evidence of Ms McArthur, Mr Harding and Dr McClellan, my opinion about compensation is:
- (a) The policy documents require compliance with the effects management hierarchy,
 - (b) A structured assessment of the effects and the practicability of measures to avoid, minimise or remedy adverse effects would be needed to conclude that the effects management hierarchy has been complied with,
 - (c) I have not found a structured assessment that shows the effects management hierarchy has been complied with,
 - (d) Offsetting should have been assessed as part of the structured assessment, and provided where possible,
 - (e) Offsetting has not been assessed,
 - (f) The Principles of Compensation in Appendix 7 NPS-FM should have been comprehensively assessed and complied with (Principles 1-6) or had regard to (Principles 7-13),
 - (g) There are significant technical gaps in the assessment against the Principles, and not all information has been taken into account in that assessment.

3.6 Purpose of the FTA

123. Granting the consents, with conditions, will facilitate the significant regional and national benefits of the TPS. Imposing conditions to mitigate or compensate for significant adverse effects of the scheme will achieve additional regional and national benefits for biodiversity, because the ecosystems adversely affected and the indigenous species they support are of regional and national significance, and appropriate mitigation and compensation will bring regional and national benefits that are unlikely to be achieved without those conditions.

124. Returning flushing and minimum flows to the Takapō River is likely to reduce the renewable energy benefits of the scheme compared to the current situation, but the quantum of that loss is not specifically set out in the AEE.²⁵ That should be considered against the significant biodiversity benefits of returning flows to the Takapō River.
125. Granting the consents with conditions to address residual adverse effects, including, where appropriate, robust compensation that complies with the direction in the WAP and NPS-FM, would further the purpose of the FTA and be consistent with the considerations required under the RMA, which I set out in earlier sections of my evidence.

3.7 Conditions of consent

126. I have reviewed the proposed conditions of consent.²⁶ In this section of my evidence, I set out the types of changes to the conditions that I consider necessary to appropriately address the adverse effects, having regard to the planning documents and the restrictions in the Fast Track Act. I have not done detailed drafting or analysis, as Forest and Bird will be able to comment on the panel's draft conditions.²⁷

Conditions are no more onerous than necessary.

127. Subject to the other constraints in the RMA, any conditions on a resource consent that is 'directly connected' to an adverse effect may be valid.²⁸ The FTA requires that conditions must not be 'more onerous than necessary to address the reason' they are set.²⁹ In my opinion, this requires a further assessment to determine that a condition does not go further than necessary to manage the identified adverse effect.

²⁵ Assessment in the AEE is broad and qualitative, (e.g. page 70 AEE) and Appendix G only assesses the cost of the loss of the entire TPS.

²⁶ Draft consent conditions for consideration during the comments process. Draft dated 25 July 2025

²⁷ FTA s70(1)(b)

²⁸ S108AA RMA

²⁹ S83 FTA

128. Consideration of the adverse effects of the applications under s104 RMA is 'subject to' the purpose of the Act, and in my opinion, addressing adverse effects through consent conditions is fundamental to achieving its purpose. In my opinion, the direction in the FTA to ensure conditions are 'no more onerous than necessary' does not contradict the requirement for consent conditions to address identified adverse effects.
129. A condition to address an adverse effect would not be invalid simply because it imposes an onerous requirement, but if there is a less onerous option to address that adverse effect, that less onerous condition should be preferred.

Good practice for resource consent conditions

130. In addition to the legal restrictions posed on the imposition of conditions by the RMA and caselaw, and FTA, in my opinion, it is good planning practice for consent conditions to:
- (a) effectively deal with identified effects,
 - (b) provide for clear and certain outcomes that are clear on their face,
 - (c) have clear wording and structure,
 - (d) be able to be enforced, and
 - (e) be written in a way that it is clear whether they have been complied with or not,
 - (f) be specific and measurable where appropriate, with timeframes for completion where relevant,
 - (g) be able to stand alone (without intimate knowledge of the application documents), and
 - (h) remain relevant over time.
131. In addition, any conditions that relate to management plans or similar should;
- (a) clearly state the objective of any management plans in a way that is specific and enforceable, and

- (b) clearly state the performance standards or measurable outcomes the plan is required to demonstrate achievement of,
 - (c) require that the management plan be provided to the consent authority for certification to ensure the management plan provides for the objective, performance standards and measurable outcomes stated in the consent,
 - (d) set out the process for what happens if that certification is not passed,
 - (e) set timeframes for the provisions of the management plan, the certification process and any provision of revised management plans if necessary,
 - (f) require the consent holder to comply with that management plan.
 - (g) The frequency, timing, location and method for monitoring outcomes should be clearly stated, along with how often the results should be analysed and reported.
132. Conditions relating to adaptive management (which is relevant to securing some options relating to flows) should meet certain tests, which I set out in Appendix 3 and in summary should specify;
- (a) environmental trigger levels (e.g. >30% periphyton cover),
 - (b) required responses (e.g., a flushing flow sufficient to remove periphyton),
 - (c) management plans (e.g. the magnitude and duration of flushing flows that will be sequentially applied),
 - (d) certification of the management plans,
 - (e) monitoring and reporting conditions and
 - (f) review conditions.

Conditions needed to address residual adverse effects

133. The conditions attached to the application are predicated on the assessment of effects, which is constrained by the position of the 'existing environment'. That AEE also does not (in my opinion) properly assess adverse effects against the

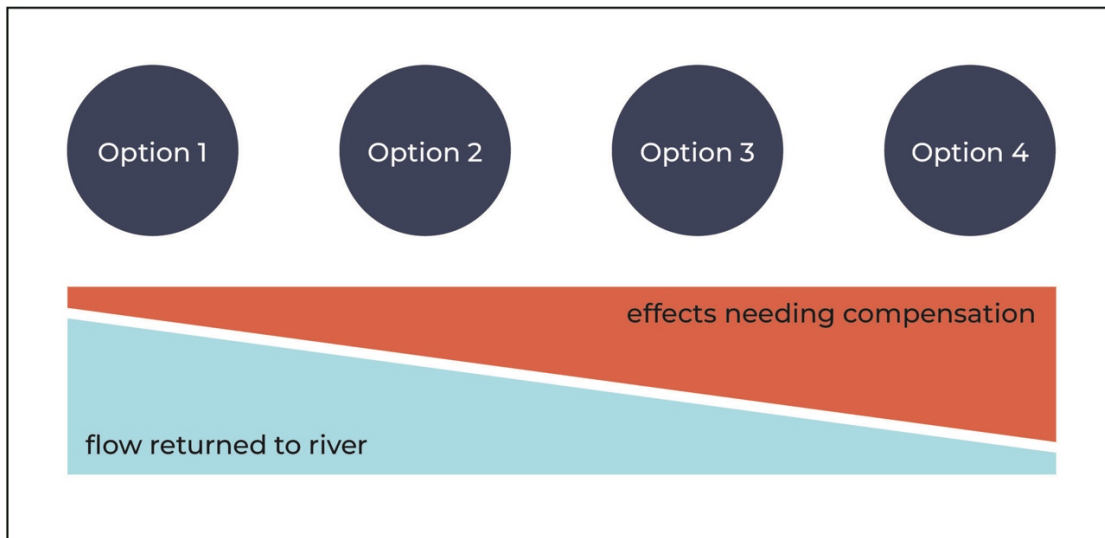
effects management hierarchy and principles for compensation as required by the WAP and NPS-FM.

134. In this section of my evidence I also identify some areas where changed or additional conditions are required to address adverse effects identified by Ms McArthur and Dr McClellan.

Flows in the Takapō River

135. The lack of flow in the upper part of the Takapō River and the lack of variability of flow in the lower parts of the Takapō River have adverse effects on the extent and values of the river, ecosystem health, indigenous vegetation, fish and birds. The IBEP does not adequately compensate for those effects.
136. Ms McArthur has identified four options for restoring some flow in the Takapō River to mitigate some adverse effects that result from the diversion of flow. These can be considered a spectrum with Option 1 being the most ecologically effective and also the most flow demanding, to Option 4 being the least ecologically effective and also the least flow demanding.
137. Option 1 complies with the environmental flow regime in the WAP. According to Dr McClellan, Options 1 and 2 will mitigate adverse effects on nesting birds, but Options 3 and 4 are unlikely to. None of the flow scenarios provided by Ms McArthur would mitigate the effects of the loss of flows on vegetation succession and composition identified by Mr Harding, as that would require naturalised flood flows to be returned to the river. Compensation would be needed to address the effects of the loss of indigenous vegetation.
138. All flow options will still leave residual adverse effects that need to be addressed by offsetting or compensation. Option 1 would result in the smallest residual effects and the lowest compensation required, and Option 4 would result in the greatest residual effects and the highest compensation requirements. No flow restoration (as sought in the application) would mean all adverse effects would have to be compensated for. The relationship between options, flows and compensation is summarised in Figure 1 below.

Figure 1: Relationship between flow and compensation for mitigation options.



139. Options 1, 3, and 4 would rely on an adaptive management approach to identify, test, monitor, and amend the size, frequency, and duration of flushing flow effects to achieve a periphyton cover < 30%. If either of these options is chosen, this approach should be secured by appropriate consent conditions. I have set out my understanding of the tests for appropriate adaptive management conditions in Appendix 3. In particular, consent conditions should set out:
- (a) a threshold for periphyton cover and a maximum number of exceedances per year,
 - (b) appropriate monitoring points and monitoring frequencies for assessing periphyton cover in the Takapō River,
 - (c) a requirement to monitor, record and report the frequency and duration of both periphyton blooms and flushing flows, and the effectiveness of those flushing flows at removing periphyton cover, and
 - (d) annual reporting to the Regional Council on the strategies used and the effectiveness of those strategies (this could be added into condition 39).
140. An additional review condition should be included that allows the Regional Council to review the adaptive management conditions following receipt of the annual

report, so that it may be amended if necessary, as more information is gathered on the effectiveness of the regime.

141. In my opinion, resource consent conditions should be included that require flows to be returned to the Takapō River, and the compensation package should be amended to compensate for residual adverse effects appropriately. The combination of flows and compensation depends on which combination of flows and compensation is 'no more onerous than necessary', and more information is required from the applicant to determine this.

Conditions securing compensation

142. Conditions 23 -35 of the Schedule 1 conditions proffers a compensation package.
143. That package does not meet the requirements of the policy framework, and the evidence of Ms McArthur, Mr Harding and Dr McClellan is that the package is inadequate to compensate for the residual adverse effects of the TPS appropriately. In my opinion, the conditions also need amendment to ensure they meet the tests for good consent conditions I set out earlier in my evidence. I have set the necessary changes out in Table 2 below.

Changes to conditions

144. I have reviewed the proffered conditions that are relevant to effects on freshwater and biodiversity against those criteria and provided comments in Table 2 below. I have relied on the evidence of Ms McArthur in relation to appropriately addressing effects on aquatic ecology.

Table 2: Amendments required to consent conditions

Condition	Comments
Additional conditions required	Conditions to address fish mortality through the TPS turbines – fish screening or investigation of upgrades to fish screens at regular intervals should be required
	Conditions to address the loss of tuna from the area affected by the TPS, including addressing inward and outward migration.
Diversion and take condition 5	Restriction of take. This condition refers to a separate Table in Appendix 1, which is a copy of the Table 5 from the WAP. To be clear and concise on its face the condition should set out the maximum take for the consents, which for most take locations is the natural inflow less the volume needed to comply with minimum flows, flushing flows, and allocations to other users set out in other conditions.
Diversion and take conditions 4-11	Include conditions that require an appropriate environmental flow regime, including adaptive management conditions for flushing flows to mitigate periphyton proliferation.
Schedule 1 Condition 14 – 20 Sports fish salvage measures	The fish salvage management plan conditions should be amended or duplicated so that they apply to native fish, and the protocols for appropriate salvage and relocated are agreed with the Department of Conservation.
Schedule 1 Condition 23 Environmental compensation	The condition does not clearly define a specific, measurable, enforceable conservation outcome from the package, against which the efficacy of management plans can be measured, or outcomes can be monitored. Consent conditions of this type usually set specific conservation outcomes that will be achieved, for each type of compensation. For example a conservation outcome to compensate for the loss of bare gravel as a result of weed incursion and loss of vegetative succession processes would read: (a) [X]ha of dry braided river banks in the Waitaki catchment, that is currently covered in woody vegetation when it would not naturally be, or is at risk of invasion by woody species

Condition	Comments
	in the absence of management intervention, will be cleared and maintained clear of woody vegetation for the duration of this consent. (b) The following species must be targeted: [list of species]. (c) The method of clearance must ensure non-target indigenous plants are not damaged or killed [or set a threshold for accidental loss]. This type of condition should be in place for every habitat or intervention that is required in order to achieve a measurable conservation outcome that compensates for the loss of river extent or values as a result of the activity.
Condition 23 Advice note	The advice note attached to condition 23 about not requiring changes to the operation of the TPS is unenforceable and redundant and should be deleted.
Condition 24	This condition should state who the IBEP contribution will be paid to, and how and when proof of payment is supplied to the Regional Council to ensure compliance. The amount of money contributed should be adjusted to reflect the amount necessary to compensate for loss of river extent and values.
Condition 25	This condition is too vague and uncertain to be a good enforceable consent condition. As set out for condition 23 above, it should set out exactly what is to be achieved and where it is to be achieved. Research and development to foster increased understanding of areas affected is not a measurable conservation outcome and should be undertaken separately and not form part of the compensation package.
Condition 26	This condition should include a requirement for the Regional Council to certify (not just provide comments on) the Strategic plan to ensure consistent with and will achieve the revised conservation outcomes of the programme, as set out in a revised condition 23 and 25. An additional condition should set out what happens if the plan is not certified, with timeframes for certification and re-submission of the plan.
New condition	There should also be a condition requiring the consent holder to ensure the IBEP is undertaken in accordance with the certified strategic plan.
Condition 31	This condition should be made more specific (eg list locations and areas that will be managed) and be incorporated into or align with the conservation outcome statements in condition 23.

Condition	Comments
Condition 43	This condition only allows the regional council to review the IBEP conditions after receipt of a strategic plan review report, which is every 10 years. This should be amended to annually following receipt of the relevant annual reports. If annual reporting and monitoring shows the IBEP and strategic plan are not achieving their objectives, the regional council should be able to review the consent conditions more frequently.

Helen Marr

Dated 25 August 2025

Appendix 1: Policies that require recognition of benefits

NPS-REG guidance on positive effects

145. The NPS-REG requires decision makers to recognise and provide for the benefits of maintaining and improving renewable electricity generation. I recognise that the CWPS makes a significant contribution to renewable electricity generation in New Zealand. In my opinion, the NPS-REG does not require provision for the benefits of renewable electricity generation to be at the expense of managing adverse effects on the environment.
146. Policy A of the NPS-REG directs decision makers to recognise and provide for the benefits of renewable electricity generation. One of the stated benefits is the reversibility of adverse effects associated with some types of technologies.³⁰ The ability to change the management of flows in the Takapō River to reduce or mitigate adverse effects is a relevant consideration under this policy.
147. Policy B of the NPS-REG requires decision makers to have particular regard to the impact even small reductions in generation output can have on meeting renewable energy goals. Any change of flows in the Takapō River to address adverse environmental effects needs to be weighed carefully against the actual generation output that would be lost as a result of some water not passing through some of the turbines in the upper part of the CWPS. Unfortunately, I have not been able to find an assessment in application about the quantum or impact on electricity generation of providing minimum or flushing flows that vary from the current flow regime. The application sets out the significance of the TPS to electricity generation, and the value that would be lost if the entire scheme were to be lost or needed to be replaced.
148. Policy C1 and C2 require decision makers to have particular regard to constraints around the operation and location of renewable electricity, and designing mitigation measures which provide for both operational and mitigation

³⁰ NPS-REG Policy A(d)

opportunities. This requires decision makers to have as much regard to any 'win-win' measures to address adverse effects as to any operational constraints.

149. Policy C2 requires regard to offsetting or compensation where residual effects cannot be avoided, remedied or mitigated. The NPS-REG predates the inclusion of explicit policy frameworks about offsetting and compensation which now exist in the NPS-FM. However, Policy C2 does include two key aspects of that more up-to-date framework; that offset and compensation are considered for effects that cannot be avoided, remedied or mitigated (referred to as the 'effects management hierarchy in the NPS-FM), and particular mention of measures that benefit the local environment (which is stated as a preference in the principle of 'landscape context' in the NPS-FM). In my opinion the offsetting and compensation framework in the NPS-REG is a sub-set of the framework in the NPS-FM, and as the framework in the NPS-FM is more recent and more comprehensive, the NPS-FM framework is more relevant for effects on freshwater related values. I discuss that framework in more detail in Appendix 2 of this evidence.
150. In summary, in my opinion, the NPS-REG requires decision makers to recognise and provide for the benefits of renewable electricity, and it also directs a specific approach to the consideration of adverse effects of renewable electricity generation and how those effects are managed.

Canterbury Regional Policy Statement guidance on positive effects

151. Objective 16.2.1 relates to the effects of other development on the efficient *use* of energy, but not the generation of electricity. I disagree with the assessment in Appendix T of the application that Objective 16.2.1 is relevant to the applications.³¹
152. Objective 16.2.2 seeks reliable and resilient generation, with an emphasis on renewable energy and, similar to the NPS-REG, seeks to manage adverse effects of that generation alongside its benefits. Objective 16.2.2 (6) requires avoidance of adverse effects on significant natural and physical resources where practicable, and appropriate controls on other adverse effects.

³¹ page 11 Appendix T Application documents

153. Policy 16.3.3 recognises and provides for the benefits of renewable electricity generation consistent with the NPS-REG including recognising the ability to reverse some adverse effects if necessary.
154. Policy 16.3.5 also provides for benefits, so long as significant adverse effects are avoided in a similar way as set out in Objective 16.2.2.(6). Policy 16.3.5(4) adds an additional caveat, that generation benefits should be achieved without resulting in additional significant adverse effects that are not fully offset or compensated. There is no guidance in this part of the plan about appropriate offset or compensation, but there is guidance in the NPS-FM and in CRPS Chapter 9, which I set out in section 3.4 of this evidence.

NPS-FM guidance on positive effects

155. Policy 15 directs that communities are enabled to provide for their wellbeing, “in a way that” is consistent with the NPS-FM. In my opinion, this means wellbeing must be provided for ‘at the same time as’ achieving the other policies. Other policies include giving effect to Te Mana o te Wai, and the protection of the habitats and values identified in policies 6-10. To be consistent with Policy 15, provision of social or economic wellbeing cannot disregard Te Mana o te Wai and achievement of the other policies.
156. Clause 3.31 directs the regional council to have regard to the benefits of the scheme when implementing the NPS-FM.³² The clause goes on to direct a different approach to setting water quality goals where the achievement of those goals will be affected by hydroelectricity structures. It provides that less ambitious water quality goal may be set in these circumstances, but specifies that water quality goals must be set at a level that achieves improvement in water quality.
157. In my opinion the NPS-FM recognises the benefits of renewable electricity generation and its contribution to community wellbeing, but it also directs that environmental goals are achieved at the same time.

³² This clause may have little relevance to this resource consent, as this resource consent is not part of the regional council implementing the NPS-FM, but to the extent that it is relevant, I have set out my opinion about its application.

WAP guidance on positive effects

158. The first objective of the WAP is to sustain the natural values and s14(3)(b) uses of the Waitaki catchment. Objective 2 directs enabling of wellbeing by providing water for uses including hydro-electricity generation, but only to the extent consistent with the Objective 1. This is consistent with direction in Policy 15 of the NPS-FM and directs an achievement of community wellbeing, at the same time as sustaining the qualities of the freshwater environment as sought by Objective 1.
159. The policies in the WAP that follow aim to set environmental flow and level regimes that enable access to water for wellbeing, to the extent consistent with Objective 1. In my opinion the WAP seeks to provide water allocation for uses at the same time as achieving instream goals.

Summary on recognition of positive effects and adverse effects in policy documents

160. In summary, my analysis of the policy documents is that they;
- (a) recognise and provide for the benefits of renewable electricity generation, and
 - (b) seek to manage the adverse effects of renewable electricity generation so that values associated with waterbodies are sustained, and
 - (c) seek 'win-win' solutions to managing the effects of renewable electricity.

Appendix 2 Analysis of relevant provisions of NPS-FM

Implementation of the NPS-FM

161. I acknowledge that the primary way to implement the NPS-FM is through comprehensive, integrated catchment planning processes. The contribution of individual consent applications to achieving the goals of the NPS-FM is ideally achieved by the cumulative adverse effects of activities being managed through a comprehensive planning framework that gives effect to the NPS-FM. In the absence of that, in my opinion an appropriate approach is that consent applications should contribute to a trajectory of change (where required) towards implementing key provisions of the NPS-FM such as maintaining, or making improvements towards, a state of health and wellbeing for waterbodies and freshwater ecosystems.
162. This 'trajectory of change' is particularly relevant when 35 year consent terms are being sought for large-scale activities. The effects associated with consent decisions today will be 'locked in' prior to the comprehensive planning framework required under the NPS-FM being in place. If individual consent decisions are 'out of step' with the goals of the NPS-FM, they will frustrate the achievement of those goals beyond the lifetime of that comprehensive planning framework. It then may take a further two planning cycles to be able to fully address the goals of the NPS-FM. This will leave the effects of activities and the goals of the NPS-FM to be addressed by a future generation. While I acknowledge that the journey towards Te Mana o te Wai is an intergenerational undertaking, it would be more consistent with the direction in the NPS-FM to start taking positive steps towards achieving Te Mana o te Wai.
163. In my opinion the main goals of the NPS-FM relevant to consideration of adverse effects are Te Mana o te Wai, providing for the health and wellbeing of waterbodies and freshwater ecosystems, and the key policies I set out below. Ms McArthur has addressed the health and well-being of waterbodies and freshwater ecosystems in detail through the ecosystem health framework in her evidence.

Policy 1 – giving effect to Te Mana o Te Wai

164. I agree that sections 104 (2F) and 104(2G) of the RMA mean that clauses 1.3(5) or 2.1 of the NPS-FM must not be taken into consideration when considering the applications.
165. However, the restrictions in s104(2F) and 104(2G) are specific to particular parts of the NPS-FM. They are not a general or absolute prohibition on considering a priority for the health and wellbeing of freshwater, where such a consideration is contained in other provisions, including in considering Te Mana o te Wai.
166. The application sets out the approach taken by Waitaki Rūnaka to Te Mana o te Wai in the context of the applications.³³ The description of Te Mana o Te Wai in the TIA emphasises the need to restore natural flows to the Waitaki catchment, taking an inter-generational approach. I acknowledge that restoration of minimum flows alone is not sufficient. Te Mana o Te Wai encompasses relationships and connections and a whole of catchment approach that will take time to be fully realised.
167. The application does not assess aspects of Te Mana o te Wai that are not addressed in the TIA and does not identify what the applications could do now to begin the long term journey towards health and wellbeing.
168. The concept and framework of Te Mana o te Wai set out in 1.3 describes a holistic understanding of the relationship between people and freshwater, and that freshwater needs to be cared for and reprioritised or rebalanced so that freshwater can provide for our health and wellbeing now and for future generations. The concept and principles utilise words such as ‘protecting’, ‘responsibility’, and ‘sustaining’ in relation to freshwater, with a focus on the reciprocal nature of people’s relationship with freshwater, emphasising the need for care and attention to future generations.

³³ Application AEE section 7.2.6.2 and the Treaty Impact Assessment

169. Te Mana o te Wai encompasses 6 principles. Principles (a) to (c) are assessed in the TIA. Principles (d) to (f) relate to the roles of New Zealanders who are not tangata whenua and are not assessed in the application.
170. Principle (d) requires decision makers to prioritise the health and well-being of freshwater. Read in the context of the rest of the description of Te Mana o te Wai, it is logical that the responsibility of care for freshwater and ensuring its health and well-being first, is inherent in Te Mana o te Wai.
171. Principle (f) specifically addresses the need to care for freshwater even where the use of freshwater provides for the health of the nation. The health of the nation does not over-ride the responsibility for care. Without the care, there can be no provision for human needs.
172. In my opinion the concept of Te Mana o te Wai incorporates a responsibility to care for and protect freshwater. This means ensuring that its health and wellbeing is upheld, so that it can provide for our needs. This responsibility is part of Te Mana o te Wai even if we cannot have regard to the specific provisions setting out the hierarchy of obligations.
173. Clause 3.5(1) sets out that ki uta ki tai approach is required by Te Mana o te Wai. Ki uta ki tai requires recognition of the interconnectedness of the whole environment, from mountains to sea, and requires management of freshwater in an integrated and sustainable way, to avoid, remedy or mitigate adverse effects on the health and wellbeing of waterbodies.

Policy 5

174. The application quotes the incorrect wording from a previous version of Policy 5.³⁴ The obligation in Policy 5 to ensure the health and wellbeing of waterbodies is maintained or improved applies to all aspects of freshwater management, not just the National Objectives Framework.

³⁴ Application AEE section 7.2.6.2 page 225

175. Policy 5 requires maintenance and improvement of the health and wellbeing of waterbodies, and freshwater ecosystems. This maintenance or improvement is required regardless of whether the NOF process has been undertaken.
176. Improvement is required where waterbodies are degraded, and through implementation of the NOF process where water quality is below national bottom-lines or where communities choose improvement.³⁵
177. Ms McArthur's evidence is that the lower Takapō River regularly exceeds the national bottom-line for periphyton. The future NOF process, must seek improvement of that. Improvement of the health and wellbeing of the waterbodies through this application process would contribute to achievement of Policy 5 and be consistent with the outcomes of a future NOF process.
178. The minimum requirement under Policy 5 is to manage freshwater to maintain the health and wellbeing of water bodies and freshwater ecosystems. Ms McArthur's evidence is that the Takapō River does not currently exhibit health and wellbeing, and the dewatered length in particular does not have functioning freshwater ecosystems. An improvement is required to arrive at a state of health and wellbeing, and then that must be maintained. Maintenance of the current unhealthy and disconnected state of the affected rivers would not be consistent with Policy 5.
179. It is my opinion that working towards a state of health and wellbeing and at least maintaining it through this application process, would be consistent with the NPS-FM.

Policy 7 Avoiding loss of river extent and values requires application of the effects management hierarchy

180. Policy 7 requires the loss of river extent and values to be avoided to the extent practicable.

³⁵ Where the baseline state of a compulsory attribute state is below the national bottom line set in Appendix 2A or 2B, a target attribute state must be set at or above the national bottom line (which means improvement is required) unless the exceptions large hydro or natural processes apply. If the large hydro exception applies, improvement is still required (3.31(4)).

181. This policy is expanded upon in subpart 3 of the NPSFM, which sets out when and how ‘the extent practicable’ is applied. The relevant provisions have been included in the WAP.
182. The application does not assess the applications against these requirements.
183. The provisions are clear and directive and require that:
- (a) the loss of river extent and values to be avoided, unless there is a functional need and the effects management hierarchy is applied,³⁶
 - (b) the values of ecosystem health, indigenous biodiversity, hydrological functioning, Māori freshwater values, and amenity are all considered,³⁷
 - (c) the applications demonstrate how each step of the effects management hierarchy has been applied,³⁸
 - (d) if offsetting or compensation is applied, it complies with principles 1-6 of Appendix 6 and 7 NPS-FM,³⁹
 - (e) if these requirements of (functional need and application of the effects management hierarchy, and adherence to the principles) are not met, then resource consent applications that result in the loss of extent or values are not granted.⁴⁰
184. The applications have a functional need to locate in the Takapō River, and so may be granted, provided the effects management hierarchy is applied to effects on river extent and values.
185. The evidence of Ms McArthur, Mr Harding and Dr McClellan shows there is a loss of ecosystem health and indigenous biodiversity values as a result of the current and ongoing operation of the TPS.

³⁶ Clause 3.24(1) (incorporated as Policy 5A.4 in the WAP)

³⁷ Clause 3.24(3)(a)(i) (included as Policy 5A.5(a)(i) in the WAP)

³⁸ Clause 3.24(3)(a)(i) (included as Policy 5A.5(a)(i) in the WAP)

³⁹ Clause 3.24(3)(a)(ii) (included as Policy 5A.5(a)(ii) in the WAP)

⁴⁰ Clause 3.24(3) the NPS-FM incorporated into Policy 5A.5 of the WAP

186. There is no evidence that the applications are consistent with the directions in the NPS-FM and WAP regarding the effects management hierarchy and principles of compensation, complies with the effects management hierarchy and principles of compensation.

Policy 9 The habitats of indigenous freshwater species are protected

187. Policy 9 requires that the habitats of indigenous freshwater species are protected. The evidence of Ms McArthur, Mr Harding and Dr McClellan set out the indigenous species found in the Takapō River catchment, including birds, fish and plants, their habitats and the effects of the TPS on these habitats. Some of these habitats and areas are considered 'significant' and their protection must be recognised and provided for in accordance with section 6(c) RMA.
188. The evidence of Ms McArthur, Mr Harding and Dr McClellan is that the habitats of threatened species are degraded by the effects of the scheme and that in some cases their condition will continue to degrade if the current operation of the TPS continues.
189. In my opinion the current and proposed future operation of the TPS is not consistent with the direction to protect indigenous species habitats. The loss of these habitats is not mitigated, offset or compensated for in a way that is consistent with the NPS-FM, as set out earlier in my evidence.

Appendix 3: Adaptive Management

190. The Environment Court has described adaptive management as an “experimental approach to management, or ‘structured learning by doing’. It is based on developing dynamic models that attempt to make predictions or hypotheses about the impacts of alternative management policies. Management learning then proceeds by systematic testing of these models, rather than by random trial and error. Adaptive management is most useful when large complex ecological systems are being managed and management decisions cannot wait for final research results.”⁴¹
191. The Environment Court has identified the following features of adaptive management (in relation to a marine energy project)⁴²:
- (a) Stages of development are set out;
 - (b) The existing environment is established by robust baseline monitoring;
 - (c) There are clear and strong monitoring, reporting and checking mechanisms so that;
 - (d) Steps can be taken before significant adverse effects eventuate;
 - (e) These mechanisms must be supported by enforceable resource consent conditions;
 - (f) Which require certain criteria to be met before the next stage can proceed; and
 - (g) There is a real ability to remove all or some of the development that has occurred at that time if the monitoring results warrant it.
192. The Supreme Court referred to the extent to which an adaptive management approach will sufficiently diminish risk and uncertainty associated with adverse effect as “[t]he vital part of the test” and set out the following matters to be

⁴¹ Golden Bay Marine Farmers v Tasman District Council W19/2003 at [405]

⁴² Crest Energy Kaipara Limited v Northland Regional Council A132/09

satisfied for an adaptive management approach to sufficiently diminish risk and uncertainty:⁴³

- (a) good baseline monitoring about the receiving environment;
- (b) the conditions provide for effective monitoring of adverse effects using appropriate indicators;
- (c) thresholds are set to trigger remedial action before the effects become overly damaging; and
- (d) effects that might arise can be remedied before they become irreversible.

193. Together these comments by the courts set out a good framework for understanding if an adaptive management approach will be suitable, and the types of conditions that are appropriate to secure it.

⁴³ Sustain our Sounds Incorporated v The New Zealand King Salmon Company Ltd at [133]