

**From:** [Andrew Feirabend](#)  
**To:** [Dan Hastings](#)  
**Cc:** [Andrew Feirabend](#)  
**Subject:** Plan Change 7 CLWP - Meridian Energy - Evidence in Chief  
**Date:** Friday, 17 July 2020 5:04:08 pm  
**Attachments:** [Evidence: Jane White Plan Change 7 Land & Water Plan Canterbury Regional Council Final.pdf](#)  
[Evidence: Andrew Feirabend Plan Change 7 Land & Water Plan Canterbury Regional Council Final.pdf](#)  
[Evidence: Mark Thomas Plan Change 7 Land & Water Plan Canterbury Regional Council Final.pdf](#)

---

Good afternoon.

Please find attached 3 briefs of Evidence in Chief on behalf of Meridian Energy in support of its submissions to Plan Change 7.

Can you please acknowledge receipt of the same.

Regards

Andrew

Andrew Feirabend  
Meridian Energy Limited  
287 -293 Durham Street North  
P O Box 2146, Christchurch 8140.  
Ph 03 357-9731 M. 021 898 143  
<https://apc01.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.meridianenergy.co.nz%2F&data=02%7C01%7C%7C789e1156ad264f8482f908d82afca417%7C984bfeac12e454e91117b8d8da5e7e1%7C0%7C0%7C637305590464702814&data=rT5D8DucLZdq2s5KG84TnF5un0Q1i1Jh%2B5NpFxbDNo%3D&reserved=0>

**BEFORE THE CANTERBURY REGIONAL COUNCIL**

**UNDER**                      The Resource Management Act 1991  
                                      (RMA)

**IN THE MATTER**        Proposed Plan Change 7 to the  
                                      Canterbury Land and Water Regional  
                                      Plan

---

**STATEMENT OF EVIDENCE OF MARGARET JANE WHYTE**

**FOR**

**MERIDIAN ENERGY LIMITED**

**17 July 2020**

---

## INTRODUCTION

- 1 My name is Margaret Jane Whyte

## QUALIFICATIONS AND EXPERIENCE

- 2 I hold the degrees of Bachelor of Arts and Master of Regional and Resource Planning from Otago University. I am a full member of the New Zealand Planning Institute.
- 3 I am a Director of ResponsePlanning Consultants Limited. I have over twenty-seven years planning and resource management experience.
- 4 A core area of my planning and resource management practice is policy development and the evaluation of statutory planning documents prepared under the Resource Management Act 1991 (**RMA**). I have written, and been involved in the preparation of district plans, plan changes and variations (including privately requested plan changes). I have also evaluated a number of Regional Policy Statements, Regional Plans and Changes to Regional Plans. I have prepared submissions, further submissions, evidence and section 32 evaluations on these documents.
- 5 Another area of my practice is the preparation and evaluation of assessments of effects and resource consent applications. This has provided me with the experience of implementing provisions within statutory planning documents, including Regional Policy Statements, Regional Plans and City and District Plans. I have sought and obtained land use consents, subdivision consents, water permits and discharge consents and variations to consent conditions for a variety of clients. This has included renewable electricity generation including both wind and hydro projects as well as a range of infrastructure projects including obtaining consents for community water supplies, stormwater and wastewater related projects.
- 6 I am a certified hearings commissioner, holding a Chair endorsement. I have acted as a Commissioner on resource consent and plan change applications.
- 7 I have undertaken planning work on behalf of Meridian Energy Limited (**Meridian**) within both the Canterbury and Southland Regions.

- 8 I am familiar with the Environment Court's Code of Conduct for expert witnesses as contained in the Court's Practice Note 2014, and in preparing this evidence I have complied with it.
- 9 I provide the following declaration of conflict of interest. My husband is an employee of Meridian. This relationship has not had any influence on my evidence and my opinion as an independent expert.

### **SCOPE OF EVIDENCE**

- 10 My evidence addresses the following matters:
  - (a) The provisions relating to Indigenous Freshwater Species Habitat (IFSH) to ensure they are clear, capable of effective implementation and proportionate to the matter being addressed including:
    - the definitions and mapping of IFSH;
    - the policies that address the actions sought in the IFSH;
    - the changes to rules related to IFSH, particularly those rules where currently permitted activities will require a resource consent.
  - (b) Policy 4.102 addressing native fish passage to ensure it is appropriate in the context of existing structures related to the Waitaki Power Scheme (WPS).
  - (c) Rules relating to temporary discharges and ensuring they are appropriate in relation to sediment.
  - (d) Ensuring identified Salmon Spawning sites and Bathing sites are appropriate in their spatial identification.
  - (e) Ensuring the relationship between Regional Freshwater Outcomes and Freshwater Quality Limits and catchment specific Freshwater Outcomes and Freshwater Quality Limits is clear.
- 11 In Appendix 1, I provide a summary of the specific changes to the provisions of PC7 that are addressed in my evidence.
- 12 In preparing this evidence I have considered the following:
  - (a) The statements of evidence of the other witnesses for Meridian in relation to PC7, being Dr Mark James and Mr Andrew Feierabend.
  - (b) The submission and further submissions of Meridian.

- (c) The National Policy Statement for Freshwater Management (NPS-FM);
  - (d) The National Policy Statement for Renewable Electricity Generation (NPS-REG);
  - (e) The Canterbury Regional Policy Statement 2013 (CRPS);
  - (f) The Waitaki Catchment Water Allocation Regional Plan (WAP);
  - (g) The Canterbury Land and Water Regional Plan (CLWRP);
  - (h) PC7, and relevant parts of the associated section 32 and 42A reports;
  - (i) The relevant submissions and further submission of other submitters.
- 13 In preparing this evidence I have been cognisant that there is no proposal to amend the objectives of the CLWRP. On this basis it is the policy and methods (rules) introduced in PC7 that are to be considered. I have considered these in the manner consistent with Section 32 of the Resource Management Act<sup>1</sup>. I recognise that these are to be considered in the context of whether they are the most appropriate to achieve the unchanged objectives.

#### **PROVISIONS RELATING TO IFSH**

- 14 Meridian has lodged a number of submissions that address the suite of provisions introduced by PC7 relating to IFSH<sup>2</sup>.
- 15 The submissions relate to a number of interrelated provisions being:
- (a) the definition of IFSH;
  - (b) the mapping of IFSH in relation to Lake Aviemore and Lake Benmore;
  - (c) the wording proposed in Policy 4.101 and Policy 4.102; and
  - (d) a number of rules whereby if an activity is occurring within an IFSH a resource consent would be required.

---

<sup>1</sup> Including whether they are the most appropriate to achieve the unchanged CLWRP objectives having regard to their effectiveness and efficiency, and taking into account the risk of acting or not if there is uncertain or insufficient information.

<sup>2</sup> The Section 42A report recommends in paragraph 5.65 that the references to "Indigenous Freshwater Species Habitat" be changed to "Critical Habitat of Threatened Indigenous Freshwater Species". I have retained references in my evidence to IFSH, but have referred to the amended name in any changes recommended to provisions.

- 16 Meridian also lodged a number of further submissions opposing submissions seeking additional species be added to the list in the definition of IFSH, or seeking that the policies and rules be made more restrictive.
- 17 Mr Feierabend has identified the implications these provisions could have on maintenance and monitoring activities associated with the WPS in and around Lakes Aviemore and Benmore.
- 18 The Section 42A report recommends some changes to the provisions submitted on by Meridian relating to IFSH in relation to:
  - (a) Recommendation Paragraph 5.44 – to amend the Planning Map layer ‘Indigenous Freshwater Species Habitat’ to provide at least a 40 metre buffer from all hydro-electric power generation infrastructure.
  - (b) Recommendation Paragraph 5.45 – to amend the definition of ‘Indigenous Freshwater Species Habitat’ relating to how the area in relation to rivers should be identified.
  - (c) Recommendation Paragraph 5.66 to amend the definition of “Indigenous Freshwater Species Habitat”.
  - (d) Recommendations Paragraph 5.92, Paragraph 5.93 and Paragraph 5.94, all related to Policy 4.101.
- 19 The Section 42A report also identifies some other recommended changes that would be implemented outside of PC7 relating to:
  - (a) Paragraph 5.34 - Better identifying which indigenous freshwater species was recorded with the mapped habitat. This information would not be included in the CLWRP itself, but rather as metadata that “could be added to the PC7 habitat layer in ‘Canterbury Maps’ once PC7 is made operative.’
- 20 The changes recommended in the Section 42A report address some but not all of the concerns raised in the submissions of Meridian.
- 21 From a planning perspective the implications of the individual provisions addressed in the submission of Meridian are all interrelated. The definition of IFSH specifies the species that the mapping and subsequent provisions relate to. In relation to Lakes Benmore and Aviemore the mapping defines the spatial extent of the area identified as IFSH. This spatial area determines the locations where any policy and rules related to IFSH apply.

- 22 Based on the evidence of Mr Feierabend as to Meridian's need to undertake maintenance and mitigation work, I consider that the suite of provisions applying to IFSH, as notified and as recommended in the Section 42A report, has the potential to create significant issues for the continuing activities associated with the WPS. While some of the Section 42A recommended changes assist in addressing the issues raised they are not sufficient and in my view cannot be considered as being the most appropriate provisions.

### **Consideration of IFSH Provisions**

- 23 Dr James in paragraphs 16 to 21 has addressed the list of species included within the definition of IFSH. He considers the current list of species is generally appropriate while recognising that the current list contains some with a threat status of "at risk declining" or "uncommon", or a very restricted or sparse distribution in Canterbury; and less than 10% in Protected Crown Land (CPL).
- 24 Dr James has identified concerns relating how the definition has been applied to the mapping of IFSH area spatially.
- 25 The submission of Meridian has identified that there is no clear link between the definition and the mapping as to what species are found in each identified Habitat area while the Section 42A report considers providing this link would assist (and as set out in my paragraph 19 above recommends providing a layer showing this on Canterbury Maps rather than within the Plan itself). This means that there has been a lack of clarity as to what species habitat is being managed for within Lakes Aviemore and Lakes Benmore.
- 26 Dr James has also recognised there is no link provided between what species relate to what water body. This does create uncertainty as if the species present are not clearly linked to the mapping this places the onus on an applicant to undertake the research necessary to determine what species the IFSH are being managed for. Given that Environment Canterbury has itself identified the species that are present in each mapped area it would be more efficient for that information to be provided in the Plan. Doing so would also avoid the difficulty that could arise if the Canterbury Maps were to be amended in the future, thereby giving rise to confusion as to what version of the Canterbury Maps should be consulted for the purpose of the Plan.

- 27 Dr James has considered what species habitat are likely being managed within Lake Benmore and Lake Aviemore. He has identified that as far as he can ascertain the only relevant species habitat being managed within these lakes is kakahi or freshwater mussel<sup>3</sup>. He considers that the existence of the freshwater mussel does not warrant the mapping of the whole of Lakes Benmore and Aviemore<sup>4</sup>. In paragraph 29 he states that “*I do not consider the freshwater mussel has been adequately mapped in these lakes and the existing information about its actual distribution combined with its known habitat preference does not justify the identification of the whole of both lakes as critical habitat for these species*”.
- 28 In the Section 42A report in relation to the submission of Meridian on the extent of the mapped areas it is stated in paragraph 5.43 that:
- In response to Meridian’s request that the mapped habitats in Lakes Benmore and Aviemore are amended to only show the known locations of species, I note that the entire bed area of both lakes have been mapped as freshwater mussel/Kakahi may be widely distributed throughout the lakes. The approach of mapping an entire lake within which the listed species have been found (rather than a discrete area within the lake) is consistent with habitat mapping of any other lakes in Canterbury.*
- 29 The consequence of the mapping is that irrespective of where kakahi habitat actually occurs within any mapped area, the suite of provisions relating to IFSH will apply to the whole area. This will mean that the activity status within the rules will change for a number of activities when undertaken within these areas. Activities that are currently permitted will require resource consent, as a discretionary activity<sup>5</sup>, if occurring in a mapped IFSH area.
- 30 This change in activity status when considered in the context of Policy 4.101 which is an “avoid” policy means that this suite of provisions create a high regulatory threshold for any person undertaking an activity within these areas. The recommended changes to Policy 4.101<sup>6</sup> in the section 42A report (set out below) would remove the range of management options

---

<sup>3</sup> Evidence of Dr James Paragraph 27

<sup>4</sup> Evidence of Dr James Paragraphs 28 and 29

<sup>5</sup> Rules 5.1.36, 5.137, 5.139, 5.140, 4.140A, 5.141, 5.148, 5.163, 5.167 contain permitted activity conditions that would require the activity not occur in an IFSH. If in a IFSH the activity would be a discretionary activity under Rules 4.141A, 5.150, 5.164). Rules 5.167, 5.168 contain permitted activity conditions that would require the activity not occur in an IFSH. If in a IFSH the activity would be a restricted discretionary activity under Rule 5.169.

<sup>6</sup> Section 42A report Paragraph 5.92, Paragraph 5.93 and Paragraph 5.94



that were included in the notified policy. These provided the ability to remedy or mitigate the effects of habitat damage or to offset habitat loss. These recommended changes are in my view significant and completely alter the way a decision maker can apply this policy from that notified.

~~*Habitat of Indigenous Freshwater Species*~~ *Critical Habitat of Threatened Indigenous Freshwater Species*

~~4.101 Avoid the damage or loss of *Indigenous Freshwater Species*~~  
*Habitat Critical Habitat of Threatened Indigenous Freshwater Species*  
 caused by sediment discharges, vegetation clearance, excavation and deposition of material, or other disturbance in, or on the bed, banks or riparian margins of, a surface water body, ~~unless:~~

~~a. the effects of habitat damage will be remedied or mitigated; or~~

~~b. habitat loss will be offset by the creation of new habitat in the same surface water catchment and with the same or improved habitat characteristics.~~

- 31 When provisions in a regional plan impose a high regulatory threshold on activities it is imperative that the actions required by the provisions are clear and that the consequences of having these provisions have been fully evaluated, including considering the matters of relevance in Section 32 as well as ensuring that they give effect to all relevant higher order documents.
- 32 The recognition in the Section 42A report that the whole of the lakes are identified as “freshwater mussel/Kakahi **may** (my emphasis) be widely distributed throughout the lakes” and “The approach of mapping an entire lake within which the listed species have been found (rather than a discrete area within the lake) is consistent with habitat mapping of any other lakes in Canterbury” is in my view not an appropriate rationale to change the activity status for a number of activities from permitted to discretionary or restricted discretionary, within the entire area of the lakes. Dr James has considered the available information which in his view indicates the identification of the whole of both lakes as critical habitat for this species is not justified.
- 33 The consequences of the change in activity status are exacerbated when combined with an “avoid” policy. The approach to the identification of IFSH for Lakes Benmore and Lakes Aviemore is putting the responsibility for determining whether the species exists in any given location within such a

large area of Lake Benmore and Lake Aviemore on a potential consent applicant, rather than the authority who is introducing the increased regulation. I rely on the evidence of Dr James that allocating the whole of two lakes as critical habitat is not justified.

- 34 In addition to the uncertainty of information on the habitat, the lack of consideration of the NPS-REG, the CRPS provisions relating to Energy or the existing WPS within the Section 32 documentation that was provided with PC7 indicates to me that the provisions have not been adequately evaluated to determine they are the most appropriate to achieve the objectives of the CLWRP, and whether they give effect to the CRPS. The Section 42A report has sought to redress the lack of consideration of the WPS and other renewable electricity generation activities in the Region<sup>7</sup> through recommending a change to the mapping of these areas within 40 metres of key infrastructure of the WPS.
- 35 I acknowledge that the Section 42A report author in recommending the introduction of a 40 metre buffer has recognised the NPS-REG and stated in paragraph 5.41 “In forming this recommendation, I have considered the requirement in s6(c) of the RMA to recognise and provide for the protection of significant habitats of indigenous fauna and the Objectives of the CLWRP, but I consider the NPS-REG (in particular the policies listed above) to be more directive in requiring recognition of the practical constraints associated with operating and maintaining the existing hydro-electricity generation infrastructure.”
- 36 I agree in part with the evaluation undertaken by the Section 42A author regarding Policy C1(a), Policy C1(b), Policy C1(d), Policy C2 and Policy E2 of the NPS-REG. However, I consider that the Section 42A author’s focus in operating and maintaining the existing hydro-electricity generation **infrastructure** (my emphasis) is too narrow. The provisions of the NPS-REG identified in paragraph 5.40 of the Section 42A report relate to renewable electricity generation **activity** (my emphasis) which is broader than just the infrastructure.
- 37 Mr Feierabend has identified that while amending the maps around key assets, with some further amendment<sup>8</sup>, is helpful, solely focussing on the infrastructure does not address the range of maintenance and mitigation

---

<sup>7</sup> Section 42A report paragraphs 5.39-5.43

<sup>8</sup> Evidence of Mr Feierabend Paragraph 31 and Maps in his Appendix 1-3

related activities undertaken by Meridian in Lakes Aviemore and Lakes Benmore associated with the renewable electricity generation activity. Mr Feierabend in his evidence has provided examples of the type of activities undertaken<sup>9</sup>. Mr Feierabend has identified that maintenance and mitigation activities have been occurring, and will need to continue to occur, in and around lakes Aviemore and Benmore (which are man-made and managed hydro storage lakes) associated with the WPS. Further amendments would be required to the mapping and/or rules and policies to address the matters in the submission of Meridian.

- 38 I have considered the Section 32 evaluation prepared for PC7 and the Section 42A report and am unable to determine what inappropriate effects of the activities associated with the WPS cause that are of concern to the officers. The activities described by Mr Feierabend seem to be unlikely to give rise to adverse effects. On that basis I do not understand why a range of current activities on or around these managed lakes are no longer appropriate as permitted activities. I consider that the existing evaluation undertaken to determine that the amended provisions (rules and policies) are the most appropriate way to achieve the unchanged objectives is deficient as due consideration has not been given to the nationally significant renewable electricity generation activities associated with the WPS, the limited adverse effects such activities have, the operational and environmental need to undertake these activities in a timely way, and the uncertainty around the identification of species in the whole of the lake.
- 39 I do not share the confidence of the section 42A report author<sup>10</sup> that Policy 4.51 relating to the existing environment is sufficient to overcome the issues raised by Meridian, particularly as Policy 4.51 relates to the abstraction of water and discharges of water, being Section 14 and Section 15 functions when the key activities being managed by this suite of provisions are Section 9 and 13 functions. Further, as Policy 4.101 is recommended to be drafted in the Section 42A report as an “avoid” policy, without any of the sub-clauses addressing remediation, mitigation, offsetting or compensation I do not consider that Policy 4.51 will assist or balance the application of recommended Policy 4.101.
- 40 I have considered the provisions relating to renewable electricity generation activities in the CRPS as this was made operative after the

---

<sup>9</sup> Evidence of Mr Feierabend Paragraphs 33-40

<sup>10</sup> Section 42A report paragraph 5.43

NPS-REG and must have given effect to the NPS-REG. The key provisions I have considered are in Appendix 2.

- 41 With respect to recommended Policy 4.101, and its application to Lake Aviemore and Lake Benmore, which are managed facilities associated with the existing electricity generation facility forming the Waitaki Power scheme, I note that Policy 16.3.5 is:

*To recognise and provide for efficient, reliable and resilient electricity generation within Canterbury by:*

1. ....
2. ....
3. ....
4. *maintaining the generation output and enabling the maximum electricity supply benefit to be obtained from the existing electricity generation facilities within Canterbury where this can be achieved without resulting in additional significant adverse effects on the environment which are not fully offset or compensated.*

- 42 I consider that Policy 4.101 as both notified, and as recommended in the section 42A report is not consistent with the approach of focussing on additional significant adverse effects, and then even if those effects exist enabling them to be offset or compensated.

- 43 CRPS Policy 7.2.3 relates to the protection of intrinsic value of waterbodies and their riparian zones and states:

*7.2.3 Protection of intrinsic value of 7.2.3 Protection of intrinsic value of waterbodies and their riparian zones*

*The overall quality of freshwater in the region is maintained or improved, and the life supporting capacity, ecosystem processes and indigenous species and their associated fresh water ecosystems are safeguarded.*

- 44 I do not consider this CRPS policy warrants an “avoid” policy in the CLWRP in order to give effect to it. I consider that the indigenous species and their associated freshwater ecosystems can be safeguarded through actions in addition to simply avoiding effects on the identified species.

- 45 As PC 7 does not amend any of the existing objectives in the CLWRP I have reviewed these objectives to see if any of them provide support for Policy 4.101 to focus on 'avoidance' as the only appropriate management approach. I have reproduced the objectives in Appendix 3 of my evidence. Objective 3.8 is focused on water quality and quantity being managed to safeguard the life-supporting capacity of ecosystems and ecosystem processes, including ensuring sufficient flow and quality of water to support the habitat and feeding, breeding, migratory and other behavioral requirements of indigenous species, nesting birds and, where appropriate, trout and salmon. Objective 3.17 is that the significant indigenous biodiversity of rivers, wetlands and hāpua are protected. This does not provide guidance as to the managed lakes. Objective 3.19 focusses on natural character and Objective 3.21 focuses on alteration of the bed of a lake or river or the removal of vegetation or natural defences against water not exacerbating the risk of flooding or erosion of land and damage to structures.
- 46 Having considered the Objectives in the CLWRP I am of the view that none of the objectives require Policy 4.101 to be written as an "avoid" policy in order to implement the objectives.
- 47 The CRPS provisions I have identified, and the unchanged objectives in the CLWRP lead me to the view policy 4.101, both as notified in PC7 or as recommended to be changed in the Section 42A report, is not appropriate as an "avoid" policy in relation to activities of the WPS in and around Lakes Aviemore and Lake Benmore.
- 48 When I consider the suite of provisions that relate to IFSH, including the definition, mapping, rules and policy in light of the objectives in the CLWRP, the relevant provisions of the CRPS and the evidence of Mr Feierabend and Dr James I consider further changes are needed to the provisions in PC7 relating to IFSH.
- 49 I recognise that Mr Feierabend has identified that, subject to the mapped areas of IFSH for Lake Aviemore and Lake Benmore being amended in accordance with his Appendix 1, the key concerns of Meridian relate to Rule 5.163. However, given my evaluation of the implications of Policy 4.101 and the matters raised by Dr James in relation to the species present and mapping of Lakes Benmore and Aviemore, I consider that there is insufficient or uncertain information in relation to the distribution of kakahi

in Lakes Benmore and Aviemore to support the conclusion that the provisions relating to IFSH in relation to Lake Aviemore and Lake Benmore are the most appropriate way to achieve the objectives.

- 50 Based on the key rule Mr Feierabend has identified as being of concern to Meridian I have set out two options for revised wording of Rule 5.163 and Policy 4.101 which I support. The first is as sought in the submission of Meridian, which provides an exception in relation to the activities associated with the WPS. The second option is an alternative approach to address the matter of concern to Meridian that focuses exclusively on WPS-related activities in areas identified as Critical Habitat in Lakes Benmore and Aviemore, which I understand from Mr Feierabend's evidence to be the area of interest for Meridian in the application of this rule.
- 51 I have also addressed changes I support to Policy 4.101 (and the mapping of IFSH for Lakes Benmore and Aviemore). The provisions I support are set out below and reproduced in Appendix 1.

#### Policy 4.101

#### Critical Habitat of Threatened Indigenous Freshwater Species

4.101 ~~Avoid the d~~Avoid the dDamage or loss of Critical Habitat of Threatened Indigenous Freshwater Species caused by sediment discharges, vegetation clearance, excavation and deposition of material, or other disturbance in, or on the bed, banks or riparian margins of, a surface water body, is managed so that unless:

- a. the effects of habitat damage will be remedied or mitigated; or
- b. the habitat loss will be offset by the creation of new habitat in the same surface water catchment and with the same or improved habitat characteristics; or
- c. for activities associated with the Waitaki Power Scheme the effects of habitat damage will be managed to the extent practicable.

~~unless:~~

- a. ~~the effects of habitat damage will be remedied or mitigated; or~~

- b. ~~habitat loss will be offset by the creation of new habitat in the same surface water catchment and with the same or improved habitat characteristics.~~

Critical Habitat of Threatened Indigenous Freshwater Species

4.101 ~~**Avoid the d**~~Damage or loss of Critical Habitat of Threatened Indigenous Freshwater Species caused by sediment discharges, vegetation clearance, excavation and deposition of material, or other disturbance in, or on the bed, banks or riparian margins of, a surface water body, **is managed so that unless:**

- a. the effects of habitat damage will be remedied or mitigated; or
- b. the habitat loss will be offset by the creation of new habitat in the same surface water catchment and with the same or improved habitat characteristics; or
- c. **for activities occurring in and around Critical Habitat of Threatened Indigenous Freshwater Species identified in Lake Aviemore and Lake Benmore the effects of habitat damage will be managed, while enabling activities associated with the maintenance and operation of the Waitaki Power Scheme.**

*Rule 5.163*

*The introduction or planting of any plant, or the removal and disturbance of existing vegetation in, on or under the bed of a lake or river and any associated discharge of sediment or sediment-laden water in circumstances where sediment may enter surface water is a permitted activity, provided the following conditions are met:*

1. ....
7. *Vegetation clearance does not occur in a salmon spawning site listed in Schedule 17, or in any inanga spawning habitat during the period of 1 January to 1 June inclusive; or in any Indigenous Freshwater Species Habitat **unless the activity is vegetation clearance associated with the removal or eradication of any aquatic vegetation species listed in the Canterbury Regional Pest Management Plan** and*
8. ....

*Rule 5.163*

*The introduction or planting of any plant, or the removal and disturbance of existing vegetation in, on or under the bed of a lake or river and any associated discharge of sediment or sediment-laden water in circumstances where sediment may enter surface water is a permitted activity, provided the following conditions are met:*

1. ....
7. *Vegetation clearance does not occur in a salmon spawning site listed in Schedule 17, or in any inanga spawning habitat during the period of 1 January to 1 June inclusive; or in any Indigenous Freshwater Species Habitat unless the activity is associated with the Waitaki Power Scheme and*
8. ....

**NATIVE FISH PASSAGE POLICY 4.102**

52 Meridian has lodged a submission on Policy 4.102 relating to the safe passage of indigenous fish. The submission seeks amendments to the wording to ensure that the policy can reasonably be applied to large scale existing structures, such as those associated with the WPS, where the incorporation or retro-fitting of engineered structures to enable fish to swim upstream and downstream is impractical.

53 The Section 42A report recommends that Policy 4.102 be deleted. This is primarily for reasons other than those addressing the submission of Meridian. In relation to the submission of Meridian the Section 42A report author recognises in paragraph 5.138 that:

*“If the policy is retained, I recommend that an exception is provided for existing hydro-electricity generation structures that will be modified or removed should any operation or maintenance activities be subject to the policy. In forming this recommendation, I have considered the requirement in s6(c) of the RMA to recognise and provide for the protection of significant habitats of indigenous fauna, the Objectives of the CLWRP and the directives of the NPS-REG (as discussed in the preceding Part 3 Section 5 sub-topic ‘Extent and accuracy of the Planning Map layer’”*

54 The recommended deletion of Policy 4.102 does remove the concerns raised in the submission of Meridian.



- 55 If the decision of the Panel is not to accept the recommendation in the Section 42A report to delete the Policy then I consider changes should be made to it so it can be implemented appropriately. Mr Feierabend and Dr James have described the alternative “trap and transfer” approach that Meridian implements in partnership with Ngāi Tahu to provide effective fish passage that does not involve alteration or remediation of structures. As Mr Feierabend explains, there are circumstances where the modification or remediation of an existing structure may not be possible, practicable or effective to provide fish passage. Policy 4.102 would need to be amended to reflect this.
- 56 If Policy 4.102 is not deleted I support the changes set out in the submission of Meridian. The addition of a new clause to the policy would recognise that modification of an existing structure may not be the only means of achieving effective fish passage.
- 57 The wording sought, if Policy 4.102 is not deleted, is:

*Policy 4.102 Habitat of Indigenous Freshwater species*

**Structures Enable the safe passage of indigenous fish *where appropriate*, while avoiding as far as practicable, the passage of any invasive, pest or nuisance fish species by:**

- a. *the appropriate design, construction, installation and maintenance of new in-stream structures; and*
- b. *the modification, reconstruction or removal of existing in-stream structures **where this is practicable or***
- c. **by considering alternative means of providing fish passage for appropriate species in circumstances where the modification, reconstruction or removal of structures is not practicable or would not provide effective passage.**

**RULE 5.141**

- 58 In relation to Rule 5.141 the submission of Meridian raises concerns with new permitted activity standard 3 which introduces a regime for managing suspended solids that is more restrictive than the previous rule. The concern is that the new standard introduced is too restrictive when applied

to temporary activities and discharges. The submission seeks that sediment discharge limits recognise the zone of reasonable mixing.

- 59 The section 42A report addresses this submission in paragraphs 5.164 and 5.165. This identifies that the use of the visual clarity standards in Schedule 5 of the CLWRP does include the application of a 'mixing zone', which is defined in the schedule as the area (and underlying volume) of a receiving water body where the water quality standards do not have to be met. The section 42A report identifies that this is considered appropriate in the situation where suspended fine sediments have been re-mobilised from within the bed rather than discharged into the waterway.
- 60 Mr Feierabend has described some of the activities that Meridian undertakes which may be captured by this rule. Dr James has considered the impacts of fine sediment arising from temporary activities. In particular he has identified in paragraph 43 of his evidence that the sediment that may go into suspension for a short time is natural sediment from the lakes. This is consistent with the evaluation of the sediment that is re-mobilised from the bed recognised in the section 42A report.
- 61 I support the changes recommended to condition 3 of Rule 5.141 as set out in the Section 42A report which are:
3. ~~The discharge is not for more than ten hours in any 24-hour period, and not more than 40 hours in total in any calendar month concentration of total suspended solids in the discharge, except within the first 4 hours of discharge, does not exceed:~~
    - a. ~~50g/m<sup>3</sup> where the discharge is to any spring-fed river, Banks Peninsula river, or to a lake except when the background total suspended solids in the waterbody is greater than 50g/m<sup>3</sup> in which case the Schedule 5 visual clarity standards shall apply; or~~
    - b. ~~100g/m<sup>3</sup> where the discharge is to any other river or to an artificial watercourse except when the background total suspended solids in the waterbody is greater than 100g/m<sup>3</sup> in which case Schedule 5 visual clarity standards shall apply.~~
  3. The discharge is not for more than ten hours in any 24-hour period, and not more than 40 hours in total in any calendar and, except within

the first 4 hours of discharge, does not exceed the Schedule 5 visual clarity standards.

#### **SCHEDULE 6 – AREAS ON RIVERS OR LAKES COMMONLY USED FOR FRESHWATER BATHING**

- 62 Meridian has lodged submissions on Schedule 6 – Areas on Rivers or Lakes Commonly used for Freshwater Bathing, seeking the deletion of two of the new sites (Loch Cameron and Pond at Old Iron Bridge Road) proposed to be introduced by PC7.
- 63 The Section 42A report evaluates these submissions in paragraphs 9.22 and 9.23 and recommends the sites not be deleted as sought.
- 64 Mr Feierabend has addressed these matters in his evidence. If the evidence of Mr Feierabend is accepted then the change required to Schedule 6 would be the deletion of these sites as set out below:
- (a) Loch Cameron 1364728mE, 5099491mN
  - (b) Pond at Old Iron Bridge Road 367794 mE, 5092249 mN

#### **SCHEDULE 17 SALMON SPAWNING SITES**

- 65 Meridian has lodged submissions on Schedule 17 – Salmon Spawning Sites, seeking that the locations of two of the new sites (Lower Ohau River and Upper Ohau River) proposed by PC7 be amended by changing the map references.
- 66 The Section 42A report evaluates these submissions in paragraph 10.19 and recommends that the map references of the sites be amended, but recommends wording different to that proposed in the submission of Meridian. The associated maps would also be amended to reflect the changed map references.
- 67 Mr Feierabend has addressed these matters in his evidence. I consider that the wording recommended in the Section 42A would address the submissions of Meridian and are appropriate.
- 68 The change in wording as recommended in the Section 42A is:
- Amend Schedule 17 as follows:
- Lower Ohau River Below Ruataniwha Dam 1368095 mE 5092016 mN

Below Lake Ohau Weir 1356198 mE, 5091984 mN Upper Ohau River  
1362678 mE, 5093654 mN

Amend Planning Maps B-094 and B-095 to reflect the map references above.

**RELATIONSHIP OF REGIONAL FRESHWATER OUTCOMES AND  
FRESHWATER QUALITY LIMITS AND CATCHMENT SPECIFIC  
FRESHWATER OUTCOMES AND FRESHWATER QUALITY LIMITS**

- 69 Meridian has lodged a submission on Schedule 8 which relates to Regional Wide Water Quality Limits seeking clear expression of the relationship between Schedule 8 and the Sections 6 to 15 of the CLWRP.
- 70 The submission seeks that an explanation be added to Schedule 8 to make it clear that Schedule 8 only applies in circumstances where sub-regional outcomes and limits have not been established.
- 71 The section 42A report addresses this submission in paragraphs 2.81 and 2.82 and does not recommend any change. The Section 42A report considers that the Plan already provides guidance as to the relationship in that Schedule 8 does not apply when sub-regional outcomes and limits have been established.
- 72 The reason this matter has arisen is addressed in the evidence of Mr Feierabend where he explains differing views that have been expressed to Meridian regarding the relationship of Schedule 8 and the Waitaki sub-region limits in Section 15 of the CLWRP. Dr James in his evidence has identified some of the differences between Schedule 8 and Waitaki sub-region limits in Section 15 and identifies the importance of the Waitaki sub-region limits in Section 15 being the ones that are specific to the catchment and that should therefore apply.
- 73 I concur with the evaluation in the section 42A report that the Plan does provide some guidance on this in the strategic policies. I consider that Policies 4.1, 4.2 and 4.7 are the key policies providing guidance which state:

*4.1 Lakes, rivers, wetlands and aquifers will meet the fresh water outcomes set in 6 to 15 within the specified timeframes. If outcomes have not been established for a catchment, then each type of lake, river or aquifer should meet the outcomes set out in Table 1 by 2030.*

4.2 *The management of lakes, rivers, wetlands and aquifers will take account of the fresh water outcomes, water quantity limits and the individual and cumulative effects of land uses, discharges and abstractions will meet the water quality limits set in Sections 6 to 15 or Schedule 8 and the individual and cumulative effects of abstractions will meet the water quantity limits in 6 to 15.*

4.7 Resource consents for new or existing activities will not be granted if the granting would cause a water quality or quantity limit set in Sections 6 to 15 to be breached or further over allocation (water quality and/or water quantity) to occur or in the absence of any water quality standards in Sections 6 to 15, the limits set in Schedule 8 to be breached. Replacement consents, or new consents for existing activities may be granted to:

- a. allow the continuation of existing activities at the same or lesser rate or scale, provided the consent contains conditions that contribute to the phasing out of the over allocation (water quality and/or water quantity) within a specified timeframe; or
- b. exceed the allocation limit (water quality and/or water quantity) to a minor extent and in the short-term if that exceedance is part of a proposal to phase out the over-allocation within a specified timeframe included in Sections 6 to 15 of this Plan.

74 I consider that the most likely interpretation of the policy to be that if outcomes and limits have been established through the sub-region chapters then they apply in preference to those set out in Schedule 8.

75 However, as outlined by Mr Feierabend, Meridian has been the recipient of differing views on this from ECAN. This illustrates that greater clarity could be provided to improve the consistent administration of the Plan, and to reduce the chances of confusion in the future.

76 I note that within the Section 42A report (in paragraph 2.82) to illustrate that the relationship is clear it is stated that *“For example, Section 11.7.3: Selwyn-Waihora explains that the water quality limits in Tables 11(k), 11(l) and 11(m) prevail over the region wide limits in Schedule 8. Therefore, I do not consider any additional guidance is necessary.”* The reference to the Selwyn-Waihora provision reinforces the point Meridian’s submission makes. An equivalent statement is not included in all sub-regional chapters where water quality limits are set. It is not included in the Waitaki Chapter.

As the sub-regional provisions are introduced by way of separate plan changes, I speculate that the matter of such a description being included or not may have simply depended on who drafted the Plan Change introducing the provisions. Be that as it may, the fact that the plan does include a clear statement in the case of the Selwyn-Waihora sub-chapter, and does not include a similar statement in the Waitaki sub-chapter could be interpreted in the future as an indication that a different approach must have been intended.

- 77 While not being necessary on the basis that all future plan readers agree with my preferred interpretation, I do consider that including a statement clearly setting out the relationship between Schedule 8 and the sub-regional chapters where limits are set, would be a helpful clarification. I support the submission of Meridian that a statement explaining the relationship would be useful within Schedule 8. I have suggested slightly modified wording to that in the Meridian submission:

Insert the following under the heading in Schedule 8

*Schedule 8 is not relevant in circumstances where Water Quality Limits for Rivers, Lakes and or Groundwater have been set in Sections 6-15B.*

A handwritten signature in dark ink, appearing to read 'J Whyte', is written over a light blue rectangular background.

Margaret Jane Whyte

17 July 2020

## APPENDIX 1 – CHANGES TO PROVISIONS

1. Amend Maps of IFSH as specified in Appendix 1 of the evidence of Mr Feierabend.

2. Amend Policy 4.101 to read:

Policy 4.101

Critical Habitat of Threatened Indigenous Freshwater Species

4.101 ~~Avoid the d~~Damage or loss of Critical Habitat of Threatened Indigenous Freshwater Species caused by sediment discharges, vegetation clearance, excavation and deposition of material, or other disturbance in, or on the bed, banks or riparian margins of, a surface water body, **is managed so that unless:**

- a. the effects of habitat damage will be remedied or mitigated; or
- b. the habitat loss will be offset by the creation of new habitat in the same surface water catchment and with the same or improved habitat characteristics; or
- c. **for activities associated with the Waitaki Power Scheme the effects of habitat damage will be managed to the extent practicable.**

~~unless:~~

- a. ~~the effects of habitat damage will be remedied or mitigated; or~~
- b. ~~habitat loss will be offset by the creation of new habitat in the same surface water catchment and with the same or improved habitat characteristics.~~

OR

Critical Habitat of Threatened Indigenous Freshwater Species

4.101 ~~Avoid the d~~Damage or loss of Critical Habitat of Threatened Indigenous Freshwater Species caused by sediment discharges, vegetation clearance, excavation and deposition of material, or other disturbance in, or on the bed, banks or riparian margins of, a surface water body, **is managed so that unless:**

- a. the effects of habitat damage will be remedied or mitigated; or
- b. the habitat loss will be offset by the creation of new habitat in the same surface water catchment and with the same or improved habitat characteristics; or
- c. **for activities occurring in and around Critical Habitat of Threatened Indigenous Freshwater Species identified in Lake Aviemore and Lake Benmore the effects**

**of habitat damage will be managed, while enabling activities associated with the maintenance and operation of the Waitaki Power Scheme.**

**3. Amend Rule 5.163 to read:**

*Rule 5.163*

*The introduction or planting of any plant, or the removal and disturbance of existing vegetation in, on or under the bed of a lake or river and any associated discharge of sediment or sediment-laden water in circumstances where sediment may enter surface water is a permitted activity, provided the following conditions are met:*

1. ....
7. *Vegetation clearance does not occur in a salmon spawning site listed in Schedule 17, or in any inanga spawning habitat during the period of 1 January to 1 June inclusive; or in any Indigenous Freshwater Species Habitat **unless the activity is vegetation clearance associated with the removal or eradication of any aquatic vegetation species listed in the Canterbury Regional Pest Management Plan** and*
8. ....

OR

*Rule 5.163*

*The introduction or planting of any plant, or the removal and disturbance of existing vegetation in, on or under the bed of a lake or river and any associated discharge of sediment or sediment-laden water in circumstances where sediment may enter surface water is a permitted activity, provided the following conditions are met:*

1. ....
7. *Vegetation clearance does not occur in a salmon spawning site listed in Schedule 17, or in any inanga spawning habitat during the period of 1 January to 1 June inclusive; or in any Indigenous Freshwater Species Habitat **unless the activity is associated with the Waitaki Power Scheme** and*
8. ....



**4. Delete Policy 4.102 or amend Policy 4.102 to read:**

*Policy 4.102 Habitat of Indigenous Freshwater species*

**Structures Enable** the safe passage of indigenous fish **where appropriate,** while avoiding as far as practicable, the passage of any invasive, pest or nuisance fish species by:

- a. the appropriate design, construction, installation and maintenance of new in-stream structures; and
- b. the modification, reconstruction or removal of existing in-stream structures **where this is practicable or**
- c. **by considering alternative means of providing fish passage for appropriate species in circumstances where the modification, reconstruction or removal of structures is not practicable or would not provide effective passage.**

**5. Amend Schedule 6 to delete the following sites:**

- Loch Cameron 1364728mE, 5099491mN
- Pond at Old Iron Bridge Road 367794 mE, 5092249 mN

**6. Amend Schedule 8 to include the following statement under the heading:**

The matters in Schedule 8 are not relevant in circumstances where Water Quality Limits for Rivers, Lakes and or Groundwater have been set in Sections 6-15B

**7. Amend Schedule 17 Salmon Spawning Sites to read:**

Lower Ohau River Below Ruataniwha Dam 1368095 mE 5092016 mN

Below Lake Ohau Weir 1356198 mE, 5091984 mN Upper Ohau River 1362678 mE, 5093654 mN

Amend Planning Maps B-094 and B-095 to reflect the map references above.

## **APPENDIX 2 – CANTERBURY REGIONAL POLICY STATEMENT PROVISIONS**

### **Chapter 7 Fresh Water**

#### **7.2.1 Sustainable management of fresh water**

The region's fresh water resources are sustainably managed to enable people and communities to provide for their economic and social well-being through abstracting and/or using water for irrigation, hydro-electricity generation and other economic activities, and for recreational and amenity values, and any economic and social activities associated with those values, providing:

1. the life-supporting capacity ecosystem processes, and indigenous species and their associated freshwater ecosystems and mauri of the fresh water is safe-guarded;
2. the natural character values of wetlands, lakes and rivers and their margins are preserved and these areas are protected from inappropriate subdivision, use and development and where appropriate restored or enhanced; and
3. any actual or reasonably foreseeable requirements for community and stockwater supplies and customary uses, are provided for.

#### **7.2.3 Protection of intrinsic value of waterbodies and their riparian zones**

The overall quality of freshwater in the region is maintained or improved, and the life supporting capacity, ecosystem processes and indigenous species and their associated fresh water ecosystems are safeguarded.

#### **7.3.1 Adverse effects of activities on the natural character of fresh water**

To identify the natural character values of fresh water bodies and their margins in the region and to:

1. preserve natural character values where there is a high state of natural character;
2. maintain natural character values where they are modified but highly valued; and
3. improve natural character values where they have been degraded to unacceptable levels;

unless modification of the natural character values of a fresh water body is provided for as part of an integrated solution to water management in a catchment in accordance with Policy 7.3.9, which addresses remedying and mitigating adverse effects on the environment and its natural character values.

### **7.3.2 Natural character of braided rivers and lakes**

To maintain the natural character of braided rivers, and of natural lakes by:

1. subject to clause (3), by prohibiting the damming of each of the main-stem of the Clarence, Waiau, Hurunui, Waimakariri, Rakaia, Rangitata and Waitaki rivers;
2. in respect of every other braided river in the region; by ensuring any damming of a braided river does not reduce the braided character of the the main stem;
3. in respect of every natural lake by limiting any use of the lake for water storage so its level does not exceed or fall below the upper or lower levels of its natural operating range;
4. clauses 1 – 3 do not restrict continued operation, maintenance or upgrading of any water storage scheme, irrigation scheme or hydro-electricity generation scheme for which lawful consent was in effect when this regional policy statement becomes operative, subject to the activity:
  - a. remaining a similar scale, intensity and character; and
  - b. not resulting in any additional significant adverse effect on the natural character of the river or lake.

### **7.3.3 Enhancing fresh water environments and biodiversity**

To promote, and where appropriate require the protection, restoration and improvement of lakes, rivers, wetlands and their riparian zones and associated Ngāi Tahu values, and to:

1. identify and protect areas of significant indigenous vegetation and significant habitats, sites of significant cultural value, wetlands, lakes and lagoons/Hapūa, and other outstanding water bodies; and
2. require the maintenance and promote the enhancement of indigenous biodiversity, inland basin ecosystems and riparian zones; and
3. promote, facilitate or undertake pest control.

### **7.3.10 Harvest & storage of fresh water**

To recognise the potential benefits of harvesting and storing surface water for:

1. improving the reliability of irrigation water and therefore efficiency of use;
2. improving the storage potential and generation output of hydro-electricity generation activities;
3. increasing the irrigated land area in Canterbury;

4. providing resilience to the impacts of climate change on the productivity and economy of Canterbury;
5. reducing pressure on surface water bodies, especially foothill and lowland streams, during periods of low flow;

and facilitate the conversion of resource consents to abstract water under 'run of river' conditions to takes to storage, where this can be done under conditions which maintain or enhance the surface water body.

### **7.3.11 Existing activities and infrastructure**

In relation to existing activities and infrastructure:

1. to recognise and provide for the continuation of existing hydro-electricity generation and irrigation schemes, and other activities which involve substantial investment in infrastructure; but
2. require improvements in water use efficiency and reductions in adverse environmental effects of these activities, where appropriate.

## **Chapter 9 Ecosystems and Indigenous Biodiversity**

### **9.2.1 Halting the decline of Canterbury's ecosystems and indigenous biodiversity**

The decline in the quality and quantity of Canterbury's ecosystems and indigenous biodiversity is halted and their life-supporting capacity and mauri safeguarded.

### **9.2.2 Restoration or enhancement of ecosystems and indigenous biodiversity**

Restoration or enhancement of ecosystem functioning and indigenous biodiversity, in appropriate locations, particularly where it can contribute to Canterbury's distinctive natural character and identity and to the social, cultural, environmental and economic well-being of its people and communities.

### **9.2.3 Protection of significant indigenous vegetation and habitats**

Areas of significant indigenous vegetation and significant habitats of indigenous fauna are identified and their values and ecosystem functions protected.

### 9.3.1 Protecting significant natural areas

1. Significance, with respect to ecosystems and indigenous biodiversity, will be determined by assessing areas and habitats against the following matters:
  - a. Representativeness
  - b. Rarity or distinctive features
  - c. Diversity and pattern
  - d. Ecological context

The assessment of each matter will be made using the criteria listed in Appendix 3.

2. Areas or habitats are considered to be significant if they meet one or more of the criteria in Appendix 3.
3. Areas identified as significant will be protected to ensure no net loss of indigenous biodiversity or indigenous biodiversity values as a result of land use activities.

### 9.3.2 Priorities for protection

To recognise the following national priorities for protection:

1. Indigenous vegetation in land environments where less than 20% of the original indigenous vegetation cover remains.
2. Areas of indigenous vegetation associated with sand dunes and wetlands.
3. Areas of indigenous vegetation located in “originally rare” terrestrial ecosystem types not covered under (1) and (2) above.
4. Habitats of threatened and at risk indigenous species.

### 9.3.6 Limitations on the use of biodiversity offsets

The following criteria will apply to the use of biodiversity offsets:

1. the offset will only compensate for residual adverse effects that cannot otherwise be avoided, remedied or mitigated;
2. the residual adverse effects on biodiversity are capable of being offset and will be fully compensated by the offset to ensure no net loss of biodiversity;
3. where the area to be offset is identified as a national priority for protection under Policy 3.2, the offset must deliver a net gain for biodiversity;
4. there is a strong likelihood that the offsets will be achieved in perpetuity; and

5. where the offset involves the ongoing protection of a separate site, it will deliver no net loss, and preferably a net gain for indigenous biodiversity conservation.

Offsets should re-establish or protect the same type of ecosystem or habitat that is adversely affected, unless an alternative ecosystem or habitat will provide a net gain for indigenous biodiversity.

## **Chapter 10 Beds of Rivers and Lakes and their Riparian Zones**

### **10.2.1 Provision for activities in beds and riparian zones and protection and enhancement of bed and riparian zone values**

Enable subdivision, use and development of river and lake beds and their riparian zones while protecting all significant values of those areas, and enhancing those values in appropriate locations.

### **10.2.3 Protection of essential structures**

Protection of the stability, performance and operation of essential structures from activities in river and lake beds and on their banks or margins.

### **10.3.1 Activities in river and lake beds and their riparian zones**

To provide for activities in river and lake beds and their riparian zones, including the planting and removal of vegetation and the removal of bed material, while:

1. recognising the implications of the activity on the whole catchment;
2. ensuring that significant bed and riparian zone values are maintained or enhanced; or
3. avoiding significant adverse effects on the values of those beds and their riparian zones, unless they are necessary for the maintenance, operation, upgrade, and repair of essential structures, or for the prevention of losses from floods, in which case significant adverse effects should be mitigated or remedied.

### **10.3.2 Protection and enhancement of areas of river and lake beds and their riparian zones**

To preserve the natural character of river and lake beds and their margins and protect them from inappropriate subdivision, use and development, and where appropriate to maintain and/or enhance areas of river and lake beds and their margins and riparian zones where:

1. they exist in a degraded state and enhancement will achieve long-term improvement in those values;

2. they have ecological values for which protection and/or enhancement will assist in the establishment or re-establishment of indigenous biodiversity or ecosystems, particularly for ecosystems that are threatened or unrepresented in protected areas;
3. they have existing significant trout or salmon habitat;
4. maintenance and/or enhancement will improve or establish connections between habitats and create corridors for indigenous species and trout and salmon and their movement between areas;
5. riparian zones provide a buffer from activities that may adversely affect bed values;
6. opportunities exist to create habitat corridors for plants and animals; or
7. riparian zones provide spawning or other significant habitats for at risk or threatened species, such as inanga or Canterbury mudfish.

### **10.3.3 Management for flood control and protecting essential structures**

To manage activities in river and lake beds and their banks or margins to:

1. avoid or, where this is not practicable, to remedy or mitigate adverse effects on vegetation that controls flood flows or protects river banks or lake margins from erosion; and
2. avoid adverse effects on the stability, performance, operation, maintenance, upgrade and repair of essential structures that are located in, on, under or over a river or lake bed or its bank or margin.

## **Chapter 16 Energy**

### **16.2.2 Promote a diverse and secure supply of energy**

Reliable and resilient generation and supply of energy for the region, and wider contributions beyond Canterbury, with a particular emphasis on renewable energy, which:

1. provides for the appropriate use of the region's renewable resources to generate energy;
2. reduces dependency on fossil fuels;
3. improves the efficient end-use of energy;
4. minimises transmission losses;
5. is diverse in the location, type and scale of renewable energy development;

6. recognises the locational constraints in the development of renewable electricity generation activities; and
  - a. avoids any adverse effects on significant natural and physical resources and cultural values or where this is not practicable, remedies or mitigates; and
  - b. appropriately controls other adverse effects on the environment

### **16.3.3 Benefits of renewable energy generation facilities**

To recognise and provide for the local, regional and national benefits when considering proposed or existing renewable energy generation facilities, having particular regard to the following:

1. maintaining or increasing electricity generation capacity while avoiding, reducing or displacing greenhouse gas emissions;
2. maintaining or increasing the security of supply at local and regional levels, and also wider contributions beyond Canterbury; by diversifying the type and/or location of electricity generation;
3. using renewable natural resources rather than finite resources;
4. the reversibility of the adverse effects on the environment of some renewable electricity generation facilities;
5. avoiding reliance on imported fuels for the purposes of generating electricity; and
6. assisting in meeting international climate obligations.

### **Policy 16.3.5 — Efficient, reliable and resilient electricity generation within Canterbury**

To recognise and provide for efficient, reliable and resilient electricity generation within Canterbury by:

1. avoiding subdivision, use and development which limits the generation capacity from existing or consented electricity generation infrastructure to be used, upgraded or maintained;
2. enabling the upgrade of existing, or development of new electricity generation infrastructure, with a particular emphasis on encouraging the operation, maintenance and upgrade of renewable electricity generation activities and associated infrastructure:
  - a. having particular regard to the locational, functional, operational or technical constraints that result in renewable electricity generation activities being located or designed in the manner proposed;



- b. provided that, as a result of site, design and method selection:
  - i. the adverse effects on significant natural and physical resources or cultural values are avoided, or where this is not practicable remedied, mitigated or offset; and
  - ii. other adverse effects on the environment are appropriately controlled.
- 3. providing for activities associated with the investigation, identification and assessment of potential sites and energy sources for renewable electricity generation;
- 4. maintaining the generation output and enabling the maximum electricity supply benefit to be obtained from the existing electricity generation facilities within Canterbury, where this can be achieved without resulting in additional significant adverse effects on the environment which are not fully offset or compensated.

## APPENDIX 3 – CANTERBURY LAND AND WATER REGIONAL PLAN OBJECTIVES

### Section 3 Objectives

The Objectives of this Plan must be read in their entirety and considered together. In any particular case some Objectives may be more relevant than others, but in general no single Objective has more importance than any other.

- 3.1 Land and water are managed as integrated natural resources to recognise and enable Ngāi Tahu culture, traditions, customary uses and relationships with land and water.
- 3.2 Water management applies the ethic of ki uta ki tai – from the mountains to the sea – and land and water are managed as integrated natural resources recognising the connectivity between surface water and groundwater, and between fresh water, land and the coast.
- 3.3 Nationally and regionally significant infrastructure is enabled and is resilient and positively contributes to economic, cultural and social wellbeing through its efficient and effective operation, on-going maintenance, repair, development and upgrading.
- 3.4 A regional network of water storage and distribution facilities provides for sustainable, efficient and multiple use of water.
- 3.5 Land uses continue to develop and change in response to socio-economic and community demand.
- 3.6 Water is recognised as essential to all life and is respected for its intrinsic values.
- 3.7 Fresh water is managed prudently as a shared resource with many in-stream and out-of-stream values.
- 3.8 The quality and quantity of water in fresh water bodies and their catchments is managed to safeguard the life-supporting capacity of ecosystems and ecosystem processes, including ensuring sufficient flow and quality of water to support the habitat and feeding, breeding, migratory and other behavioural requirements of indigenous species, nesting birds and, where appropriate, trout and salmon.
- 3.8A High quality fresh water is available to meet actual and reasonably foreseeable needs for community drinking water supplies.
- 3.9 Abstracted water is shown to be necessary and reasonable for its intended use and any water that is abstracted is used efficiently.
- 3.10 Water is available for sustainable abstraction or use to support social and economic activities and social and economic benefits are maximised by the efficient storage, distribution and use of the water made available within the allocation limits or management regimes which are set in this Plan.

- 3.11 Water is recognised as an enabler of the economic and social wellbeing of the region.
- 3.12 When setting and managing within limits, regard is had to community outcomes for water quality and quantity.
- 3.13 Groundwater resources remain a sustainable source of high quality water which is available for abstraction while supporting base flows or levels in surface water bodies, springs and wetlands and avoiding salt-water intrusion.
- 3.14 high naturalness waterbodies and Hapūa and their margins are maintained in a healthy state or are improved where degraded.
- 3.15 Those parts of lakes and rivers that are valued by the community for recreation are suitable for contact recreation.
- 3.16 Freshwater bodies and their catchments are maintained in a healthy state, including through hydrological and geomorphic processes such as flushing and opening hāpua and river mouths, flushing algal and weed growth, and transporting sediment.
- 3.17 The significant indigenous biodiversity values of rivers, wetlands and hāpua are protected.
- 3.18 Wetlands that contribute to cultural and community values, biodiversity, water quality, mahinga kai, water cleansing and flood mitigation are maintained.
- 3.19 Natural character values of freshwater bodies, including braided rivers and their margins, wetlands, hāpua and coastal lagoons, are protected.
- 3.20 Gravel in riverbeds is extracted to maintain floodway capacity and to provide resources for building and construction and maintenance, while maintaining the natural character of braided rivers and not adversely affecting water quality, ecosystems or their habitats, access to or the quality of mahinga kai or causing or exacerbating erosion.
- 3.21 The diversion of water, erection, placement or failure of structures, the removal of gravel or other alteration of the bed of a lake or river or the removal of vegetation or natural defences against water does not exacerbate the risk of flooding or erosion of land or damage to structures.
- 3.22 The effectiveness of both man-made natural hazard protection infrastructure, and wetlands and Hapūa as natural water retention areas, is maintained to reduce the risk of and effects from natural hazards, including those arising from seismic activity and climate change.
- 3.23 Soils are healthy and productive, and human-induced erosion and contamination are minimised.

- 3.24 All activities operate at good environmental practice or better to optimise efficient resource use and protect the region's fresh water resources from quality and quantity degradation.