

**BEFORE THE CANTERBURY REGIONAL COUNCIL
INDEPENDENT HEARING PANEL**

UNDER the Resource Management Act 1991

AND the Environment Canterbury (Transitional
Governance Arrangements) Act 2016

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

**Legal Submissions
on behalf of the Director-General of Conservation
Submitter Number: 160
Dated 28 September 2020**

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May it please the Hearing Panel

Introduction

1. These legal submissions are filed on behalf of the Director-General of Conservation (**DGC**). The DGC's submission supports many aspects of Plan Change 7 (**PC7**) to the Canterbury Land and Water Regional Plan (**the Plan**). There are, however, a number of amendments sought through the submission that aim to better promote the sustainable management purpose of the Resource Management Act (**the Act** or **RMA**), recognise and provide for the matters of national importance listed in s 6 of the Act, have particular regard to the other matters in s 7 of the Act, and give effect to the National Policy Statement for Freshwater Management.
2. PC7 is of critical importance to the management of Canterbury's freshwater resources. It introduces a range of provisions to the Plan, including to address freshwater degradation within the region, and better protect the habitats of threatened and at-risk freshwater species. Through the DGC's submission, a number of amendments have been sought to enable PC7 to more effectively address these issues. The recent gazettal of the NPSFM 2020 provides further high-level policy direction, and supports many aspects of the DGC's submission.
3. These legal submissions provide;
 - An overview of matters raised in the DGC's submission
 - An introduction to the witnesses called by the DGC
 - A discussion of key issues arising out of the DGC's submission and the evidence provided by the witnesses called by the DGC (including in relation to the NPSFM 2020).

Overview of matters raised in the Director-General of Conservation's submission

4. Particular matters raised, and relief sought, in the DGC's submission include;
 - 4.1. Substantial support for many aspects of PC7, and a desire to retain a broad range of notified provisions.

- 4.2 Better alignment of the Trophic Level Index (**TLI**) outcomes and limits for high country lakes. Under the notified plan there is discrepancy in the water quality, ecosystem, health and cultural outcomes and limits for high country lakes. These matters can be better aligned, and in particular the DGC seeks that TLI outcomes should be set at 3 or less for all small/medium high country lakes to ensure the natural character and ecosystem health is protected for future generations. The poor state and ongoing water quality decline of several Canterbury high country lakes (e.g. Māori lakes, Lake Emily and Georgina) presents a significant risk to the protection of ecological and cultural values of these waterbodies.¹
- 4.3 Stronger policy guidance for the refusal of resource consents for abstraction which would cause more than minor adverse effects on Indigenous Freshwater Species Habitat.²
- 4.4 Stronger policy guidance to dissuade the taking of water in exceedance of a river's allocation regime.³
- 4.5 Extending policy protection to the beds or banks of surface waterbodies, where activities would cause damage or loss of Indigenous Freshwater Species Habitat.⁴
- 4.6 Adjustment to the policy concerning fish passage past in-stream built structures.⁵
- 4.7 Strengthening rule status to non-complying activity (rather than restricted discretionary activity) for refuse disposal and offall pits, in circumstances where contaminants may enter water.⁶
- 4.8 Amendment to the permitted activity standards and vegetation clearance definition to better manage the effects of vegetation

¹ Table 1b Freshwater Outcomes for Canterbury Lakes. Refer T Drinan EIC at 5.1 – 5.47, K McArthur EIC at para 23.

² Policy 4.61A

³ Policy 4.100

⁴ Policy 4.101

⁵ Policy 4.102

⁶ Rules 5.26A and 5.28A

clearance within waterbodies, particularly effects on indigenous freshwater fish species.⁷

- 4.9 Modification of schedule 7 requirements for Farm Environment Plans (FEP's), so that FEP's for sensitive lake catchments are reviewed taking into account new cultural outcomes, proposed changes to TLI outcomes for small/medium high-country lakes and recent monitoring data on the state and trend of these lakes. A staged reduction in water quality contaminants for all sensitive lake catchments is recommended.⁸
- 4.10 Support for region wide water quality limits for rivers and lakes in Schedule 8.⁹
- 4.11 The indigenous freshwater species habitat mapping is supported in part. The mapping layer is based on datasets provided by the Department of Conservation (**DOC**) to Environment Canterbury (**E Can**). Concerns around discrepancies between the datasets provided, and the datasets presented in the maps are raised in the submission. The DGC's submission identified a desire to work with Council to refine the mapping dataset. This issue, and the work undertaken collaboratively by DOC and Council technical experts over recent months to improve the accuracy of the mapping, is discussed further below in these submissions.
- 4.12 The need for limits and targets to be set that are consistent with the freshwater outcomes set for rivers in the Waimakariri sub zone. Specifically, a need to specify dissolved inorganic nitrogen (**DIN**) values in Hill-fed lower and Spring-fed plains waterbody classes was identified (alongside DRP limits), along with a disconnect between DIN and the nitrate-nitrogen limits that are specified.¹⁰
- 4.13 The need for alignment of targets for lake nutrient levels with freshwater outcomes specified. In particular, more stringent targets to

⁷ Rule 5.163. Refer K McArthur EIC para 81.

⁸ Refer T Drinan EIC paras 6.1 – 6.14, K McArthur EIC paras 69 – 73.

⁹ Refer K McArthur EIC paras 58-67.

¹⁰ Table 8-5 Water Quality Limits and Targets for Waimakariri Rivers. Refer K McArthur EIC paras 157 – 169.

achieve a B Band state for phytoplankton and TLI were sought for lakes in the Ashley/Rakahuri FMU.¹¹

- 4.14 Higher minimum flows, and a condensed timeframe for phasing out overallocation in the Temuka FMU.¹²
- 4.15 Adjustment to the environmental flow regime for the Opihi mainstem, to provide for enhanced instream habitat values and native fish migration requirements.¹³
- 4.16 Amended water quality limits for Orarai, Temuka, Opihi and Pareora Rivers, that allow for freshwater outcomes to be achieved.¹⁴ This includes providing DIN limits for some catchments where these have not been specified, and revising other limits specified which may be inadequate to control nuisance periphyton, macrophytes or cyanobacteria and protect ecosystem health. Adjustments to nitrate-nitrite limits may also be necessary to achieve freshwater outcomes and protect ecosystem health and mahinga kai values.
- 4.17 Amended limits for ammoniacal nitrogen, and targets for total phosphorus and total nitrogen, in the Waitarakao/Washdyke Lagoon to protect ecosystem health and achieve relevant outcomes.¹⁵

Evidence called

- 5. Five witnesses are called by the DGC. All expert evidence has been prepared in accordance with the Environment Court's practice note for expert evidence.

Dr Tom Drinan.

- 6. Dr Drinan is a Freshwater Technical Advisor employed by the Department of Conservation. His professional background includes prior consultancy roles with consultant advisory firms.

¹¹ Table 8-6 Water Quality Limits and Targets for Waimakariri Lakes. Refer K McArthur EIC paras 170 – 171.

¹² Policy 14.4.30 and tables 14(i) – (l). Refer T Drinan EIC 7.1 – 7.41.

¹³ Policy 14.4.35 and tables 14(v) and 14(w). Policy 14.4.38. Refer T Drinan EIC 7.1 – 7.41.

¹⁴ Table 14(c). Refer K McArthur paras 115 – 132.

¹⁵ Tables 14(e) and 14(f). Refer K McArthur paras 137 – 139.

7. Dr Drinan’s evidence focusses on lakes water quality (including Ō Tū Wharekai (Ashburton Lakes) and Lake Georgina, and PC7 provisions concerning Farm Environment Plans. It also covers changes to environmental flow regimes for the Temuka and Opihi FMU.
8. Dr Drinan participated in expert witness conferencing convened on Freshwater Quality/Ecology for the Orari – Temuka – Opihi – Pareora sub region and is a signatory to the Joint Witness Statement that resulted from that conference.

Ms Kate McArthur

9. Ms McArthur is formerly the Practice Leader – Water at the Catalyst Group, an environmental consultancy firm. Presently she is the principal of KM Water. Ms McArthur has extensive experience in water quality issues, gained within consultancy roles, and as senior scientist – water quality within a regional council.
10. Ms McArthur’s evidence pertains to water quality outcomes and limits, nutrient management, stock exclusion and riparian disturbance within the region wide, OTOP and Waimakariri sub region provisions of PC7.

Dr Nicholas Dunn

11. Dr Dunn is a Freshwater Science Advisor employed by the Department of Conservation, with 17 years professional experience working with Canterbury’s threatened freshwater fish species. Dr Dunn is the leader of the New Zealand Threat Classification System freshwater fish expert panel, which undertook the most recent conservation status assessment for New Zealand’s freshwater fish species. A dataset of threatened fish habitats within Canterbury initially developed by Dr Dunn, was provided to E Can by DOC, and formed the foundation of the dataset utilised for habitat mapping in PC7.
12. Dr Dunn’s evidence discusses the Indigenous Freshwater Species Habitat mapping, (now described as Critical Habitat of Threatened Indigenous Freshwater Species), used in PC7. He notes a number of issues associated with this mapping, including as to species included, how ‘critical habitat’ is defined, identification of translocation sites and artificial habitat, spatial representation (polylines or polygons) and the need to update datasets as further information

becomes available. However, Dr Dunn's EIC does not suggest complete removal of the planning maps or related provisions is warranted as a result of these issues.

13. Dr Dunn will also update the Hearing Panel, when he provides evidence, on the work undertaken by himself and Dr Duncan Gray (for E Can), with regards to reviewing mapped sites included in PC7 and updating the data underlying those maps to improve their accuracy and robustness.

Ms Anita Spencer

14. Ms Spencer is a Senior Ranger with almost 20 years' experience with the Department of Conservation. DOC has a close collaborative working relationship with the Isaac Wildlife and Conservation Trust (**the Trust**), and Ms Spencer is closely involved in the management of the Canterbury mudfish population which has been established in artificial ponds at the Trust's peacock springs site. Ms Spencer's evidence describes the active management undertaken by DOC and the Trust of Canterbury mudfish at that site.
15. Counsel for the Trust has sought the Panel's leave for Ms Spencer to also attend the hearing as part of the Trust's case, and to be available to assist the Panel in answering any questions related to her evidence, when the Trust presents its case. The DGC supports this approach.

Mr Murray Brass.

16. Mr Brass is a Senior RMA Planner, with the Department of Conservation. He has over two decades experience in RMA planning work, including extensive experience in regional and district council roles.
17. Mr Brass provides a planning analysis of PC7, and the DGC's submission and relief sought. Mr Brass is supportive of much of PC7, while also identifying a number of areas and specific provisions where amendments are recommended to better give effect to Part 2 of the Act and the relevant higher order planning documents.

Key issues

National Policy Statement for Freshwater Management 2020

18. The NPSFM 2020 came into effect on 3 September 2020. The regional council is required to give effect to the NPSFM 2020 *as soon as reasonably practicable*¹⁶. Practicable, means ‘able to be done or put into action’¹⁷. So, E Can must give effect to the NPSFM 2020 as soon as it is reasonably able to do so. The extent to which it is ‘reasonably practicable’ to give effect to the NPSFM 2020 through the PC7 process will depend on issues of scope. If giving effect to a provision of the NPSFM 2020 is not within scope of the PC7 process, then a further plan change, or variation will be required in future. The NPSFM 2020 must be fully given effect to by 31 December 2024.¹⁸ Counsel concurs with the submission of counsel for the regional council that “to the extent that there is scope to do so, this Panel should strive to give effect to the NPSFM 2020.”¹⁹
19. These legal submissions will, accordingly, refer to the NPSFM 2020 in the context of discussion of the key issues addressed in the DGC’s submission. It is submitted that the NPSFM 2020 supports much of the relief sought in the DGC’s submission, and that providing for that relief will assist in giving effect to provisions of the NPSFM 2020 as soon as reasonably practicable.
20. However, it is also submitted that giving effect to some provisions of the NPSFM 2020 will require further or ongoing work. Where this is the case, it will be necessary for plan changes to be undertaken in future to ensure that the NPSFM 2020 is, and continues to be, given effect to.
21. The NPSFM 2020 requires inclusion of a policy regarding natural inland wetlands²⁰, a policy regarding rivers²¹ and an objective regarding fish passage²², into the Plan. These provisions are to be inserted without recourse to the

¹⁶ NPSFM 2020 cl 4.1(1).

¹⁷ Cambridge Online Dictionary

¹⁸ See s 80A(4)(b) RMA.

¹⁹ Opening Legal Submissions of Counsel for the Canterbury Regional Council, dated 22 September 2020, at paras 25, and 40.

²⁰ NPSFM 2020 cl 3.22(1).

²¹ NPSFM 2020 cl 3.24(1).

²² NPSFM 2020 cl 3.26(1).

process set out in Schedule 1 of the Act. It is submitted that PC7 should be considered within this amended policy context.

22. Te Mana o te Wai is given heightened prominence in the NPSFM 2020. There is now an explicit hierarchy of obligations in Te Mana o te Wai that prioritises²³
- (a) First, the health and well-being of water bodies and freshwater ecosystems
 - (b) Second, the health needs of people (such as drinking water)
 - (c) Third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.
23. Te mana o te Wai is a fundamental concept relevant to all freshwater management.²⁴ The priority of obligations within te Mana o te Wai is reiterated and emphasised in the single objective of the NPSFM 2020. While Te Mana o te Wai is given heightened prominence in the NPSFM 2020, it is not a new concept. It was also identified as a matter of national significance central to the NPSFM 2014 (as amended in 2017), and under that policy statement was a concept “at the forefront of all discussions and decisions about fresh water.”²⁵
24. As the Environment Court recently observed;²⁶
- Te Mana o te Wai [and indeed ki uta ki tai] while expressed in the NPS-FM in te reo Māori, benefits all New Zealanders. Te Mana o te Wai is not a “Māori centric” but a “water centric” approach.
25. Tangata whenua involvement in freshwater management (including decision making processes) is explicitly required under the NPSFM 2020.²⁷
26. Section 67(3) of the Act requires that the Plan, and to the extent relevant PC7, must give effect to (inter alia) any national policy statement, and any regional policy statement.

²³ NPSFM 2020 cl 1.3(5)

²⁴ NPSFM 2020 cl 1.3(2).

²⁵ NPSFM 2014 (2017), pg 7.

²⁶ *Aratiatia Livestock Ltd v Southland Regional Council* [2020] NZEnvC 93, at [6]. Footnotes omitted. While the discussion was in terms of the NPSFM 2014(2017), it is submitted that it remains applicable to the NPSFM 2020.

²⁷ NPSFM 2020 cl 3.4 and policy 2.

27. The NPSFM 2020 gives substance to the provisions in Part 2 of the Act in relation to freshwater management. Accordingly, by giving effect to the NPSFM 2020, a regional council will necessarily be acting “in accordance” with Part 2 of the Act.²⁸ There is no need to refer back to Part 2 when determining a plan change if giving effect to the NPSFM 2020²⁹.
28. In this context, some care may be required, when referencing the Canterbury Regional Policy Statement (**CRPS**). Obviously, this document predates the NPSFM 2020. In the event of conflict or inconsistency between the CRPS and NPSFM 2020, the NPSFM 2020 will prevail.
29. Like other submitters, the DGC’s evidence in chief was prepared and filed prior to the NPSFM 2020 being gazetted. Notwithstanding references in that evidence to provisions of the NPSFM 2014(2017), it is submitted that that evidence remains relevant and directly applicable. Indeed, overall, the NPSFM 2020 has strengthened the planning and legal rationale for the relief sought in the DGC’s submission. For the assistance of the Hearing Panel, a comparative table of provisions of the NPSFM 2014(2017) referred to in the evidence in chief of the witnesses called by the DGC, with the updated comparable provision in the NPSFM 2020 has been prepared and is filed with these legal submissions. (**Attachment A**). This will be addressed by Mr Brass when he presents his planning evidence to the Hearings Panel.

Nutrient management, introductory comments

30. The NPSFM 2020 supports the approach of the DGC’s submission in relation to nutrient management issues, and the relief sought. Clause 3.13 introduces “special provisions for attributes affected by nutrients”. Cl 3.13(1) requires that “every regional council must, at a minimum, set appropriate instream concentrations and exceedance criteria for dissolved inorganic nitrogen (**DIN**)

²⁸ See *Environmental Defence Society Inc v New Zealand King Salmon Co Ltd* [2014] NZSC 38 at [85]. Also *Auckland Council v Cabra Rural Developments Ltd* [2019] NZHC 1892 at [49]. Both cases were considering the NZCPS, however it is submitted the same principle applies in respect of giving effect to the NPSFM 2020.

²⁹ *King Salmon*, at [85]. Subject to the caveats, noted by the Supreme Court at [88], of alleged unlawfulness, incomplete coverage, or uncertainty of meaning.

and dissolved reactive phosphorus (DRP)." While levels for DIN are not specified, they are to be set for upstream contributing waterbodies so as to achieve the environmental outcomes sought for the downstream receiving environment.³⁰ In this context, receiving environment is defined to include any water body (such as a river, lake, wetland or aquifer).³¹

31. Where a regional council detects that an FMU or part of an FMU is degraded or degrading, it must, as soon as practicable, take proportionate action to halt or reverse the degradation.³²

Water quality - Rivers

- *Region wide.*

32. The DGC's submission supported Table 8, and sought that it be retained as notified. However, through the course of preparing evidence for this hearing, an issue has been identified with regards to how Table 8 interrelates with sub regional tables.

33. E Can's approach is understood to be that where a subregional table includes any attributes, then Table 8 has no application, irrespective of whether the attributes included in the sub regional table are limited. In other words, attributes in Table 8 do not apply within a subregion, if a subregional table includes at least some attributes.³³

34. In my submission this approach has the potential to undermine the achievement of water quality outcomes in sub-regions, and within the region as a whole. Nor does it assist in implementing the NPSFM 2020. As a consequence, there is a need to ensure that all sub regional water quality tables contain the full suite of relevant attributes, as the region wide Table 8 cannot be relied on to fill any 'gaps', if a relevant attribute is omitted at a sub-regional level.

³⁰ NPSFM 2020, 3.13(2).

³¹ NPSFM 2020 cl 1.4.

³² NPSFM 2020, cl 3.20.

³³ M Brass, EIC 160 -181.

- *OTOP rivers*

35. The DGC's submission supports the approach of applying zone specific water quality outcomes and limits. Where changes are sought, it is to ensure that water quality limits give effect to the outcomes described and sought in the plan change, safeguard the life-supporting capacity of fresh water in the region and provide for the compulsory values of ecosystem health and human contact.

36. A number of specific changes are sought to relevant water quality tables. These are detailed in the evidence of Ms McArthur³⁴, and also summarised in the evidence of Mr Brass.³⁵

37. Ms McArthur notes the need for nutrient limits for DIN and DRP in table 14(c) - water quality limits for OTOP rivers, - and considers it very unlikely that periphyton, macrophyte or dissolved oxygen outcomes in table 14(a) will be achieved or ecosystem health supported without such limits and targets. Additional amendments to table 14(c) are also recommended. Amendments to table 14(d) -water quality targets for OTOP rivers, - to set targets for DIN and DRP are also recommended to better manage the effects of elevated Nitrate-Nitrogen and support ecosystem health.³⁶

- *Waimakariri rivers*

38. In terms of freshwater outcomes for Waimakariri sub-region rivers, Ms McArthur's evidence generally supports Table 8a - freshwater outcomes for Waimakariri rivers. Changes recommended include setting Dissolved Oxygen as a concentration limit rather than minimum percent saturation, including all four NPSFM numeric attribute states relating to *E.coli*, and including a lower chlorophyll *a* outcome of 120 mg/m² for hill-fed lower river types.³⁷ Mr Brass recommends the 2030 timeframe be specified in the heading, with exceptions clearly noted.³⁸

³⁴ K McArthur EIC at 102 -146.

³⁵ M Brass EIC at 206 – 245.

³⁶ K McArthur EIC at 133 - 136.

³⁷ K McArthur, EIC at 148 – 152.

³⁸ M Brass EIC at para 252.

39. Amendments to Table 8-5 - limits and targets for Waimakariri rivers are recommended by Ms McArthur, in relation to DO concentration outcomes, DIN, DRP, and nitrate toxicity.³⁹

Lakes; - region wide and sub regions

40. Dr Drinan notes the high cultural and conservation values of small – medium sized Canterbury high country lakes, including Māori Lakes, and Lakes Emily and Georgina.⁴⁰ They provide habitat for a range of threatened or at-risk indigenous birds, fish, invertebrates and plants.

41. The evidence of Dr Drinan and Ms McArthur recommend a TLI of ≤ 3 , and TN, TP and chlorophyll *a* limits that align with this trophic state, for these lakes. This will better ensure that phytoplankton, high Lake SPI, and dissolved oxygen outcomes can be met, and water quality outcomes will be maintained.⁴¹

42. Dr Drinan’s evidence highlights the high cultural and conservation values of the lakes discussed⁴², including those with outstanding/significant characteristics. Many provide critical habitat for threatened or at risk aquatic and bird species.

43. Ms McArthur recommends a TLI of 5 for Waitarakao/Washdyke Lagoon (OTOP lakes)⁴³, so as to ensure improvements in nutrient concentrations over time. An amended ammoniacal nitrogen limit⁴⁴, and amended TN and TP⁴⁵ targets for this water body are also recommended.⁴⁶ Targets as notified are set at the National Bottom Line for this important waterbody. Such an approach will not give effect to the higher order planning documents or protect ecosystem health. Ms McArthur notes that Waitarakao/Washdyke Lagoon is “significantly degraded” by nutrients.⁴⁷ The NPSFM 2020 requires that a regional council that detects that part of an FMU is degraded, “*must, as soon as practicable, take action to*

³⁹ K McArthur EIC at 157 – 169.

⁴⁰ T Drinan, EIC at 5.5 – 5.47.

⁴¹ M Brass, EIC at 156.

⁴² T Drinan EIC at 5.5 – 5.18.

⁴³ K McArthur EIC 108 – 114.

⁴⁴ Table 14(e).

⁴⁵ Table 14(f).

⁴⁶ K McArthur EIC para 137 – 139, 140 – 143.

⁴⁷ K McArthur, EIC at 109.

halt or reverse that degradation"⁴⁸, and that such action must be proportionate to the magnitude and risk to the environment.

44. In relation to Tūtaepatu Lagoon (Waimakariri lakes) Ms McArthur recommends improvements in TN and TP targets and the planktonic cyanobacteria outcome, so as to improve outcomes and better align with human health values and safe mahinga kai harvesting⁴⁹. Mr Brass recommends the 2030 timeframe be specified in the heading, with exceptions clearly noted.⁵⁰
45. For Lake Pegasus, Ms McArthur recommends⁵¹ limits in Table 8b be set at the NPSFM B Band for TN and TP, to better achieve the intended outcomes for this water body.

River flows and allocation (OTOP)

46. The DGC's submission supports retention of the notified policy 14.4.13, as it would assist in phasing out over allocation. That remains the position, although as noted in Mr Brass's evidence, the s 42A author's recommended removal of limb c (which would otherwise bar transferring allocation out of the Temuka FMU) is accepted.
47. In relation to the Temuka catchment, the DGC supports the phasing out of overallocation through a staged process of increased minimum flows and reduced allocation limits. Specifically, the DGC sought that improved flows be implemented earlier than 2035, and that higher minimum flows be applied at Manse Bridge, especially during November to February. Dr Drinan, in his evidence in chief, recommends a summer minimum flow be set at $\geq 1.4\text{m}^3/\text{s}$.
48. The NPSFM 2020 requires that all existing over-allocation be phased out.⁵² As Mr Brass notes, for so long as over allocation persists in this catchment, Te Mana

⁴⁸ NPSFM 2020 cl 3.20.

⁴⁹ K McArthur EIC 153 -156.

⁵⁰ M Brass EIC at 256

⁵¹ K McArthur EIC at 170 – 171.

⁵² NPSFM 2020 Policy 11.

o te Wai is not being recognised. Overallocation is contrary to the hierarchy of priority obligations that sits within Te Mana o te Wai.⁵³

49. The NPSFM 2020 also requires the insertion of a new policy regarding rivers into the Plan without recourse to the RMA schedule 1 process⁵⁴. That new policy is as follows (or words to the same effect);

The loss of river extent and values is avoided, unless the council is satisfied:

- (a) That there is a functional need for the activity in that location; and
- (b) the effects of the activity are managed by applying the effects management hierarchy.

50. The DGC's submission sought amendments to the minimum flows and artificial flushing flows, and their duration, in relation to the Opihi catchment. Dr Drinan⁵⁵ supports some changes proposed in the s 42A report, and further recommends increases to minimum flows during January and February to provide increased instream habitat availability and minimise adverse effects of increased temperatures and other physio-chemical parameters.

51. Dr Drinan participated in an online expert conference on 'freshwater quality / ecology OTOPI subregion' on 18 August 2020. The resultant JWS records that Dr Drinan (and others) were of the view that "the Adaptive Management Working Group level two regime year round is less than optimal and may risk loss of some ecological values depending on the timing, duration and frequency of the level two regime". All experts participating in the conference supported the full allocation regime for the Opihi River at Saleyards Bridge proposed by the Adaptive Management Working Group. The JWS notes that the proposed increase in flows for this regime, particularly for January and February, provide greater support for ecological values than those proposed in PC7.⁵⁶ , Dr Drinan supports those higher minimum flows for January and February proposed by the Adaptive Management Working Group.

⁵³ NPSFM 2020, cl 1.3(5) and Objective 2.1.

⁵⁴ NPSFM 2020, cl 3.24(1).

⁵⁵ T Drinan EIC 7.32 – 7.41

⁵⁶ Joint Witness Statement Freshwater Quality/Ecology Orara-Temuka-Opihi-Pareora sub-region. Paras 40 -42.

Fish passage and barriers

52. As noted earlier, the NPSFM 2020 requires an objective regarding fish passage to be inserted into the Plan without recourse to the RMA schedule 1 process.⁵⁷

That objective is as follows (or words to the same effect);

The passage of fish is maintained, or is improved, by instream structures, except where it is desirable to prevent the passage of some fish species in order to protect desired fish species, their life stages, or their habitats.

53. NPSFM 2020 goes on to describe further requirements in relation to fish passage. Some are directly relevant to, and when implemented will form part of the Plan. These include;

- Policies which identify desired and undesired fish species, and rivers and receiving environments where desired fish species have been identified, or where fish passage for undesired species is to be impeded,⁵⁸
- Mandatory matters to which regard must be had when considering a consent application for an instream structure,⁵⁹
- A requirement to promote the remediation of existing structures and provision of fish passage (other than for undesirable fish species).⁶⁰

54. Other requirements of the NPSFM 2020 regarding fish passage may sit outside the regional plan itself⁶¹. These include;

- The requirement to prepare an action plan to support the achievement of the fish passage objective.
- And the requirement to include a work programme within the action plan, which must contain specified requirements.

⁵⁷ NPSFM 2020, cl 3.26(1).

⁵⁸ NPSFM 2020, cl 3.26(2).

⁵⁹ NPSFM 2020, cl 3.26(4).

⁶⁰ NPSFM 2020, cl 3.26(5).

⁶¹ NPSFM 3.15(4) which notes that an action plan may be appended to a regional plan, or published separately from it.

55. In developing the policies regarding fish passage required by the NPSFM 2020, a regional council is required to take into account Freshwater Fisheries Management Plans and Sports Fish and Game Management Plans approved by the Minister of Conservation, and seek advice from DOC and statutory fisheries managers regarding fish habitat and population management.⁶²
56. The directive requirements of NPSFM 2020 in relation to fish passage issues is a significant shift from the NPSFM 2014 (2017), which gave little guidance or direction on such issues.
57. The policies required by the NPSFM 2020 are specific and detailed, as are the steps to implement them. Advice from DOC, and relevant Fish and Game Councils is required. In my submission, such detailed policy input is not within scope of PC7, and a further plan change, or variation, will be required in order to give effect to, or fully give effect to, cls 3.26(2), (4) and (5) of NPSFM 2020.
58. However, some policies regarding instream structures and fish passage issues are within scope of PC7. Notwithstanding that this is an area where further policy development work will be required, a new objective has now been inserted into the Plan, and to the extent that it is able to PC7 should provide a policy framework that implements that objective.
59. Mr Brass, in his rebuttal planning evidence, proposes revised wording for policy 4.102, having considered the new objective inserted into the Plan as a consequence of the NPSFM 2020, and also the matters raised in the planning evidence of Ms Whyte for Meridian. Mr Brass also notes that his revised wording has been shared with Fish and Game and endorsed by that submitter.
60. It is submitted that while a revised policy 4.102 does not fully address the requirements of cls 3.26(2), (4) and (5) of the NPSFM 2020 in relation to fish passage issues, it nonetheless will assist in the interim to implement the new fish passage objective. While it may be an 'interim' policy, in the sense that further work to address the more detailed directive requirements of NPSFM 2020 is to occur (including the seeking of specific advice from the Department of

⁶² NPSFM 2020 3.26(3).

Conservation (and Fish and Game) on fish habitat and population matters), until those policies are developed and included in the Plan, an amended policy is appropriate.

61. For completeness, it is also noted that the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (**NESF 2020**) has recently introduced a rule regime relating to instream structures, with a particular focus on the provision of upstream and downstream passage for fish.

Mapping of indigenous freshwater species habitat

62. The DGC's submission supported in part the notified maps, however it also noted some concern around discrepancies between the underlying data regarding fish distributions in Canterbury (as provided by DOC to E Can) and the distributions presented in the maps. A particular concern expressed related to how habitats within artificial waterbodies were mapped. The submission expressly noted a desire by DOC to work with E Can to refine the mapping dataset. The submission also identified the need to ensure that the mapping dataset will be updated in future.

63. The overall theme of the submission on this point is the DGC's desire to ensure the maps accurately reflect the known location of relevant species' habitats.

64. Through the s 42A process, a number of changes to the notified maps of freshwater species habitat were proposed by E Can. These proposed changes included;

- Removal of a number of mapped habitat sites.
- A change in the name of the mapping from 'Indigenous Freshwater Species Habitats' to 'Critical Habitat of Threatened Indigenous Freshwater Species'.

65. The datasets which support the maps are large, and contain a significant amount of technical information gathered through ecological surveys over many years.

66. In the DGC's submission, the issues related to the accurate mapping of threatened freshwater species habitat in the Plan are important. The DGC

supports accurate, robust mapping of threatened freshwater species habitat being included through PC7.

67. Accuracy is critical. One concern is that sites which do not contain relevant freshwater species habitat should not be included in the mapping. The reasons are obvious. Quite aside from imposing unnecessary controls on land or water users, including sites which do not support the relevant freshwater species will undermine the integrity of the overall mapping process, and the policies and rules which relate to it.
68. As noted above, the original dataset, on which the mapping of freshwater fish distributions used in PC7 was based, was provided by DOC to E Can⁶³. Some changes were then made to the dataset by E Can staff prior to notification of PC7. Further changes were then recommended through the s 42A process. The reasoning for some of these changes was not always transparent.
69. In order to clarify (and resolve) these issues, DOC staff have spent a substantial amount of time working with E Can over the last two months, to review the mapping dataset, and verify the mapping of habitat of threatened indigenous freshwater fish species in Canterbury proposed for inclusion in PC7. This process has been constructive. The result is agreement, between DOC and E Can technical staff, that a number of changes to the dataset supporting the mapping layers (as notified, and as recommended in the s 42A report) are appropriate so as to;
- Remove some sites where threatened fish species are no longer present,
 - Remove some sites where threatened species habitat (and hence species) are no longer present,
 - Reinsert some sites originally included in the publicly notified PC7 habitat maps, but then proposed to be removed through the s 42A recommendation process,
 - Better spatially define a number of sites to more accurately reflect the known habitat extent.

⁶³ Distributions of kākahi or kōura were not included in that dataset.

70. Dr Dunn has undertaken this work for DOC. He will speak to the process and the changes agreed with Dr Gray (the E Can technical lead for this work) when he presents his evidence. Attached to these legal submissions is the revised dataset (dataset 5), containing the outcome of the work undertaken by Dr Dunn and Dr Gray. (**Attachment B**) Dr Dunn's review was specifically limited to threatened non-migratory freshwater fish species. It did not include the habitat distributions of freshwater crayfish/kekewai, freshwater mussel/kākahi or giant kōkopu/taiwharu.
71. Recently E Can has helpfully prepared a set of maps to reflect the revised dataset as agreed by Dr Dunn and Dr Gray, and provided these maps to DOC⁶⁴. A copy of these maps is attached (**Attachment C**). It is understood that to prepare these maps E Can staff have combined the outcome of the work undertaken by Dr Dunn and Dr Gray in relation to threatened non-migratory freshwater fish species (dataset 5) with habitat layers for other species mapped in PC7 (i.e. freshwater crayfish/kekewai, freshwater mussel/kākahi and giant kōkopu/taiwharu) to produce 'dataset 6'. This has then been mapped against the habitat distributions previously recommended in the s 42a report.
72. In relation to any possible changes to habitat mapping, it is anticipated that the Panel will be interested in issues of scope, and this will be discussed further when the case for the DGC is presented at the hearing. It is submitted that there are no issues regarding scope where habitat sites which were originally notified as part of PC7 (but then proposed for deletion through the s 42A report) are now recommended to be retained. Similarly, removal of a site, or part of a site, from the habitat mapping layers where the experts agree that it does not contain a species habitat also, in my submission, does not give rise to a scope issue.
73. Refinement of a site to more accurately reflect spatial location on the ground (or in the water) likewise, in my submission does not give rise to a scope issue. Such refinement of a notified habitat site is "on" the proposed plan change.

⁶⁴ The maps were provided to DOC on Friday 25 September 2020 and Monday 28 September 2020.

Furthermore, it is not “proposing something completely novel” and nor is it “out of left field”.⁶⁵

74. However, inclusion of a new habitat site which was not previously notified could give rise to concerns regarding scope, and for this reason, the DGC is not seeking the inclusion of any such new site through PC7.⁶⁶
75. The NPSFM 2020 has provided policy direction in relation to this issue. Regional Councils are required to identify “*the location of habitats of threatened species*” within each FMU.⁶⁷ This must occur “*as soon as reasonably practicable*”⁶⁸. Threatened species, and in particular “*the extent to which an FMU or part of an FMU that supports a population of threatened species has the critical habitats and conditions necessary to support the presence, abundance, survival and recovery of the threatened species*”, are now a compulsory value to be assessed in identifying values and setting environmental outcomes for FMU.⁶⁹
76. Of particular relevance to mapping, when setting attribute states to achieve environmental outcomes, a regional council must “*identify the site or sites to which the target attribute state applies*”⁷⁰, and use the “*best information available at the time*”⁷¹. This is defined as being “*complete and scientifically robust data*”, with an express preference for “*sources of information that provide the greatest level of certainty*”.⁷² In my submission, in relation to the mapping of threatened non-migratory fish species habitat in Canterbury, the best information available at this time, which contains complete and scientifically robust data, and which provides the greatest level of certainty, is the dataset prepared and reviewed by Dr Dunn, in conjunction with Dr Gray.

⁶⁵ *Palmerston North City Council v Motor Machinists Ltd* [2013] NZHC 1290, *Clearwater Resort Ltd v Christchurch City Council* HC AP34/02

⁶⁶ One new habitat site (not included in the notified PC7) was identified in the work undertaken by Dr Gray and Dr Dunn. This site has been deliberately omitted from dataset 5.

⁶⁷ NPSFM 2020 cl 3.8(3)(c).

⁶⁸ NPSFM 2020 cl 4.1(1).

⁶⁹ NPSFM 2020 Appendix 1A and cl 3.9.

⁷⁰ NPSFM 2020 3.11(1)(b).

⁷¹ NPSFM 2020, cl 3.11(8)(b).

⁷² NPSFM 2020 cl 1.6.

77. Before leaving the NPSFM 2020 on this point, I also note for completeness the relevance of the requirement that councils “*continue to make whatever changes to [plans] are necessary to respond to changes over time in the state of water bodies and freshwater ecosystems.*”⁷³ This means that the maps of freshwater species habitat should not be viewed as being ‘set in stone’. They will need to be kept under review, and as changes in distribution occur, or further information comes to light, changes will need to be made to the maps.
78. Aside from the overall general issue of mapping accuracy, a number of more specific issues in relation to habitat mapping also arose through the submission or s 42A process.

Threatened indigenous freshwater species or indigenous freshwater species more generally?

79. Notwithstanding the heading proposed through the s 42A report, species habitat mapped through PC7;
- Includes habitat for all threatened freshwater fish species in Canterbury,
 - Includes habitat for freshwater mussels/kākahi and freshwater crayfish/kekewai (neither of which are classified as threatened species under the NZ conservation status system),
 - Does not include habitat for other threatened freshwater invertebrate species (unless co-incidentally to the above).
 - Does not include habitat for other threatened species (e.g. birds) which rely on freshwater.
80. The DGC considers that the highest priority for habitat mapping in PC7 is that of threatened fish species. The DGC would also support, over time, the inclusion of threatened freshwater invertebrate, plant and bird species habitat, but accepts that inclusion of such habitat may be out of scope of PC7 as notified. The DGC also supports the inclusion of known kākahi and kekewai habitat within the mapping layers, notwithstanding that these species are not classified as “threatened”. The heading as proposed in the s 42A report however, is not

⁷³ NPSFM 2020, cl 4.2.

technically accurate, and has the potential to be misleading. Accordingly, an amendment may be appropriate.

81. It is noted that the NPSFM 2020 includes a definition of “threatened species”

threatened species means any indigenous species of flora or fauna that:

- (a) Relies on water bodies for at least part of its life cycle; and
- (b) Meets the criteria for nationally critical, nationally endangered, or nationally vulnerable species in the New Zealand Threat Classification System Manual

82. However, the NPSFM does not preclude a council from mapping the habitat of valued at risk freshwater species, such as kākahi and kekewai, in its planning documents.

Artificial watercourses

83. In keeping with the principal of ensuring mapping accuracy, the DGC’s position is that artificial watercourses which provide habitat for the relevant freshwater species should be included in the maps of habitat.

84. Within Canterbury, many watercourses and waterbodies are now modified to some extent. Even watercourses that appear artificial, such as straight line drains may drain surrounding lands and channel runoff, in a proxy of the natural meandering watercourses which they have replaced.

85. As a general principal, where an artificial watercourse or waterbody supports a self-sustaining population of relevant freshwater species, the DGC supports the inclusion of that habitat within the maps.

Hydro Generation lakes

86. The DGC supports the inclusion of hydro generation lakes within the habitat maps, where they are known to provide habitat to the relevant freshwater species. Within those lakes, again in keeping with the principal of mapping accuracy, it may be feasible to map specific areas as habitat, and exclude others,

if surveys confirm this. However, it is also important that all life-stages of the relevant species are considered. Some species have highly mobile life-stages and this should be reflected in the mapped areas, where this is the case.

Peacock Springs.

87. Peacock springs is owned by the Isaac Wildlife and Conservation Trust (**the Trust**). Within this site, there are several artificial ponds which contain Canterbury mudfish as a consequence of translocations. The ponds, and the mudfish populations, are actively managed by DOC and the Trust. The Trust seeks that the ponds at Peacock Springs not be included in the mapped habitat layer, and the DGC is supportive of this for several reasons.
88. The Canterbury mudfish population at Peacock Springs, and the ponds within which they live, are not physically or ecologically connected to any other population, or waterbody.
89. The Canterbury mudfish population at Peacock Springs is actively managed for conservation purposes.
90. In essence, the Peacock Springs site holds a captive managed population of Canterbury mudfish. It can be seen as analogous to, for example, the captive managed kiwi population held at Willowbank, or Orana Park. The DGC supports the removal of this particular site from the freshwater fish habitat layer.

Conclusion

91. In conclusion, the DGC supports many aspects of PC7. In a number of respects however, as discussed in these legal submissions, in the DGC's original submission, and in the evidence filed in support, further changes are sought to better achieve the sustainable management of water resources, and aquatic ecosystems, in Canterbury.



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28 September 2020

Attachments

- A. Comparative table of NPSFM 2014 (2017) and NPSFM 2020 provisions.
- B. Dataset 5 spread sheet of habitat of threatened non-migratory fish species, as agreed by Dr Dunn and Dr Gray.
- C. Habitat maps prepared by E Can to reflect agreements reached by Dr Dunn and Dr Gray regarding threatened fish habitat sites.