

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of Resource Consent Applications by Rangitata Diversion Race Management Limited to the Canterbury Regional Council and Ashburton District Council for resource consents for their construction, operation and maintenance of the Klondyke Water Storage Facility, its associated water takes from and discharges to the Rangitata River, and all associated activities

REPLY SUBMISSIONS ON BEHALF OF RANGITATA DIVERSION RACE MANAGEMENT LIMITED

TABLED AT HEARING

Application:

Date: 4/5/2018

TOPICS COVERED

1. Introductory comments
2. Legal issues
 - (a) WCO
 - (b) Resource consent constraints
 - (c) Lapse periods
 - (d) Bonds
3. Submitter cases
 - (a) RWL
4. Evidential issues
 - (a) Salmon angling
 - (b) Fish screen performance
 - (c) Maori cultural values
 - (d) Rafting/kayaking
 - (e) Cumulative effects
 - (f) Reasonable use of water

INTRODUCTION

General

5. Some submitters (e.g. Mr Ell) gave examples of the Rangitata River having been in a pristine state from the 1950s, with an inference that the river has been under pressure since that time. However, evidence of this nature ignores the simple facts that:
 - (a) The RDR itself has been in place and abstracting water since the 1940s, and that (as a simple matter of fact) there was no fish screen operating on the RDR intake until 2008.
 - (b) ECan has been monitoring water quality parameters and that monitoring does not suggest any declining trends of concern.
 - (c) As Dr Ryder said, the salmon run is in decline generally within the South Island.
6. The Hearings Panel will need to ensure that it approaches consideration of this issue objectively and with due respect to expert evidence. The angling community made many assertions and produced photographs which in evidential terms were fairly 'loose' with no dates or specifics of photographs let alone flow conditions on any given day. The Hearings Panel should approach this evidence with caution as much of it provides context to their submissions but is not necessarily of probative value.
7. The expert evidence called by CSIF&G in no way strongly or clearly points to any sort of decline either. The only CSIF&G evidence that goes anywhere near this is Dr Hicks' view ventured that the build-up of sediment at the river mouth could be attributable to the *existing* takes. However, this is not in agreement with the evidence of Mr Veendrick. Further, Mr Veendrick and the s 42A reporting from Mr Cope consider that the build-up of sediment in the lower reaches is unlikely given that the majority of sediment transport occurs when river flows are higher and the *proposal* will not significantly affect these higher flows.¹

¹ ECan s 42A report at p 153.

Commissioner queries

8. Fish Screen Verification Management Plan (**FSVMP**). This has been amended and has been tabled.
9. I confirm that the proposed fish screen will be implemented regardless of the resource consents for the storage pond or the flood flow take. This is demonstrated by RDRML's application to amend the conditions of existing resource consent CRC011237 (proposed by ECan to change to CRC182542). The proposed fish bypass flow (CRC182536) is however critical to the operation of the proposed fish screen which cannot operate without it.
10. In terms of the changes to existing resource consent CRC011237, RDRML has sought a 3 year period to have the new fish screen up and running.
11. The other related resource consents associated with the fish screen are the discharge of water to water (CRC182535), disturbance of the bed of the river during construction (CRC182537), temporary discharge of sediment from construction and maintenance (CRC182538), gravel extraction for construction and maintenance (CRC182539), and earthworks (CRC182540).
12. Use of water. A supplementary statement of Mr Curry has been provided today regarding this issue. I address this further under Evidential Issues / reasonable use of water.
13. I confirm that if resource consents for the storage pond are granted, but resource consent for the flood flow take is refused, RDRML still intends to build a storage pond. The impact of the flood flow take on the storage pond is that *with* the flood flow take a smaller pond footprint can be built to deliver the same result in reliability. *Without* the flood flow take a larger pond is required to deliver the same reliability - as more water needs to be stored because the pond cannot be refilled as certainly as it can with the flood flow take. You have heard evidence from a range of irrigation interests that support the flood flow take (refer, for example, to paragraph 17 of Mr Van Polanen's evidence in chief), due to the cost and efficiency outcomes that it will enable. Such evidence needs to be fully considered by the Hearings Panel as it provides further evidence that such a take will have a tangible and enduring benefit to the people and communities of mid-Canterbury.

14. Visual. RDRML would 'soften' the southern embankments of the storage pond if no other issues arose. However, dam and civil safety should take precedence over aesthetic issues with a structure of this nature. The engineering advice remains that all that will be available to do any shaping is topsoil and as noted in Mr Woods' evidence it is not ideal having a thick layer of topsoil on the embankment because you cannot tell if any surface instability is just in the topsoil or something else more serious going on.² Accordingly, RDRML does not offer such a condition.

LEGAL ISSUES

WCO

15. The WCO has received considerable attention through the hearing and accordingly it is necessary to be clear about the process, the effect of the WCO, what the WCO provides, and the relationship of the WCO to the proposed flood flow and fish bypass takes, and proposed fish screen.

WCO process

16. An application for a water conservation order is firstly heard by a Special Tribunal, which then prepares a report (s 208, RMA). The report of the Special Tribunal on the WCO was released on 21 October 2002 and contained a draft order.
17. Prescribed persons then have the opportunity to make submissions to the Environment Court who must hold an inquiry (ss 209-210, RMA). The WCO was referred to the Environment Court and it issued an interim report on 5 August 2004.³ For clarity, the Environment Court only looked at the Rangitata River below the gorge. The values above the gorge and the WCO's treatment of them were not in dispute before the Environment Court.
18. The report of the Special Tribunal and the interim report of the Environment Court are lengthy with both exceeding 100 pages and if the Hearings Panel wishes to look beyond the terms of the WCO itself then it will need, in my submission, to consider both documents in full. For

² See evidence of Steven Woods, at 9.5.

³ *Rangitata South Irrigation Limited v New Zealand Central South Island Fish & Game Council* C109/2004.

completeness it should then also consider the re-consenting decision in relation to the RDR which was issued in the same relative timeframe April 2003 (subsequently appealed, but settled on appeal).

19. Dr Rankin suggested that my legal submission that the Special Tribunal did not recommend restrictions on the taking of high flow water was incorrect. I disagree. The correct position is that:

- (a) The Special Tribunal did talk about a 'cap' on abstractions of 33m³/s. At paragraph 145 (bullet point 2) of its recommendation it talked of "capping total abstraction at a maximum of 33m³/s except during flood flows".
- (b) The draft order recommended by the Special Tribunal (Appendix 1, page 3) did include some additional abstraction blocks (a maximum of 43m³/s unless the naturally occurring flow at Klondyke exceeds 120m³/s, and a maximum of 53m³/s when the naturally occurring flow at Klondyke exceeds 120m³/s).
- (c) The interim report of the Environment Court states:

Caps on abstraction

[242] The Special Tribunal proposed a series of caps on abstraction:

- (i) maximum take of 33 m³/sec 'unless the naturally occurring flow at Klondyke exceeds 110 m³/sec, 179.,
- (ii) maximum take of 43 m³/sec at Klondyke flows above 120 m³/sec;
- (iii) maximum take of 53 m³/sec at Klondyke flows above 130 m³/sec.

No party argued for retention of caps (ii) and (iii), and in our opinion there should be no prohibition on takes at Klondyke flows above 110 m³/sec. **Restrictions on takes when the river is flowing above that rate are an issue that should be left for a regional water plan, or for individual water permit conditions.**

[243] However, whilst we have concluded that, at Klondyke flows below 110 m³/sec, there should be a cap on abstraction, the wording in the Special Tribunal's clause 9(d)(i) provides problems especially for groundwater abstraction. One difficulty is that the Special Tribunal's draft wording is apt for instantaneous abstraction but not

for flows an hour or more downstream, and certainly not for groundwater takes that have much delayed drawdown on the river flows.

- (d) As I said in my opening submissions, the Environment Court in its final report⁴ noted specifically that "It is the setting of the minimum flow and maximum extractions at flows above the minimum but less than 110m³/s for the protection of identified values which is the purpose of the water conservation order".
20. In short, neither the report of the Special Tribunal nor the reports of the Environment Court reflect what Dr Rankin (and other submitters) asserted.
21. Following the report of the Environment Court, the Minister makes a recommendation and then the Governor-General makes a water conservation order by Order in Council (s 214, RMA). The WCO was gazetted on 22 June 2006.

Effect of WCO

22. Section 200 of the RMA sets out the meaning of "water conservation order":

In this Act, the term **water conservation order** means an order made under section 214 for any of the purposes set out in section 199 and that imposes restrictions or prohibitions on the exercise of regional councils' powers under paragraphs (e) and (f) of section 30(1) (as they relate to water) including, in particular, restrictions or prohibitions relating to—

- (a) The quantity, quality, rate of flow, or level of the water body; and
- (b) The maximum and minimum levels or flow or range of levels or flows, or the rate of change of levels or flows to be sought or permitted for the water body; and
- (c) The maximum allocation for abstraction or maximum contaminant loading consistent with the purposes of the order; and
- (d) The ranges of temperature and pressure in a water body.

23. The reference to "an order made under section 214" is the RMA provision by which the Governor-General makes an Order in Council. It is the WCO itself which is the relevant document (and the "restrictions or prohibitions on the exercise of regional councils' powers"

⁴ *Rangitata South Irrigation Limited v New Zealand and Central South Island Fish and Game Council* EnvC Christchurch, C135/05, 22 September 2005.

therein) that are important. The reports of the Special Tribunal or the Environment Court may provide context to the WCO but they are not the WCO.

24. Section 217(2) of the RMA spells out the effect of a water conservation order:

(2) Where a water conservation order is operative, the relevant consent authority—

(a) **Shall not grant a water permit, coastal permit, or discharge permit if the grant of that permit would be contrary to any restriction or prohibition or any other provision of the order:**

25. This reinforces that it is the restrictions or prohibitions (or “any other provision”) of the order which govern the exercise of the regional council’s powers.

26. Within the WCO itself, it is Schedule 2 which is relevant (items 4 and 5 which relate to the reaches from Klondyke to the SH72 bridge at Arundel, and from there to the coast). Clause 6 of the WCO provides that:

Because of the outstanding characteristics, features, and values identified in clause 4, the waters specified in Schedule 2 are to be protected **in accordance with the relevant conditions** in clauses 8 to 11, as specified in Schedule 2.

27. Clause 6 itself therefore expressly relates the protection of the outstanding characteristics, features, and values to the “relevant conditions in clauses 8 to 11”.
28. There are no other “provisions” in the WCO that operate independently. Even the listed values in Schedule 2 (items 4 and 5) are tied in the third column of the table to clauses in the WCO.

Clauses 8 to 11 of the WCO

29. No evidence substantiates a breach of conditions 8 to 11 of the WCO. CSIF&G submits that there are breaches of the WCO in respect of the material alteration of the channel cross-section, or meandering pattern, or braided river channel characteristics (clause 9(1)), the passage of salmon (clause 10(1)), fish screening requirements (Clause 10(2)), and discharges (clause 11). However, in my submission these are not made out on the evidence:

- (a) Neither the evidence of Dr Hicks or Ms Marr shows that the grant of the flood flow consent would “cause the material alteration of the channel cross-section, or meandering pattern, or braided river channel characteristics of the form of” the Rangitata River. Dr Hicks’ evidence was that any change would take decades to manifest itself.
 - (b) The grant of the flood flow consent would not adversely affect the *passage* of salmon, *particularly* given that the proposed new fish screen would be in operation. Mr Webb also confirmed that he did not see sediment *in* the fish bypass as a problem for salmon in the bypass.
 - (c) The applicant’s proposed changes to the conditions of resource consent CRC011237 meet the fish screening requirements of the WCO. Mr Webb’s evidence was that the new screen and bypass is certainly better than the existing BAFF – and will potentially operate at 100% if everything works well and all goes according to plan.
 - (d) There is no evidence that the water quality in the reservoir *will* be such that to discharge it to the river will breach clause 11 of the WCO. Notwithstanding that, Dr Ryder proposes both monitoring of the reservoir water quality, and that the emergency discharge testing shall only operate when the river is at elevated levels.⁵
30. In summary, the evidence before the Hearings Panel demonstrates that the proposed flood flow and fish bypass takes do not contravene the WCO.

Fish screening and the RDR

31. RDRML has acknowledged that the BAFF is not functioning effectively and has made the resource consent application to replace the BAFF with the mechanical rotary fish screen. As Mr Hodgson said, RDRML should be congratulated for that.

⁵ CRC182541, condition 3B.

32. Some submitters went on at length⁶ about RDRML taking water unlawfully because the BAFF did not work and therefore RDRML was in breach of the WCO.

33. This is, in my submission, an overstatement of the requirements of the WCO. Clause 10 of the WCO provides:

(1) No resource consent may be granted or rule included in a regional plan relating to the waters identified in Schedule 2, authorising an activity that will adversely affect the passage of salmon, where Schedule 2 identifies salmon passage or salmon spawning as an outstanding characteristic or contributing to an outstanding characteristic.

(2) No resource consent in relation to an intake site may be granted, or rule included in a regional plan, for the waters specified in Schedule 2 authorising an activity unless that resource consent provides for fish exclusion or a fish bypass system to prevent fish from being lost from the specified waters.

34. Clause 12(4) of the WCO also provides:

This order does not prevent the granting of further resource consents for the Rangitata Diversion Race on similar terms and conditions to those imposed on the resource consents held on the date this order comes into force including a stepped flow regime.

35. Resource consent CRC011237 was granted, and the resource consent provides for fish exclusion or a fish bypass system (i.e. the BAFF) to prevent fish from being lost from the river. The distance from the point of abstraction to the discharge from the fish bypass is 2.5km (the maximum distance specified in the WCO) which demonstrates that WCO squarely contemplated the continuation of the RDR.

36. In particular, condition 5 of resource consent CRC011237 provides:

The consent holder shall take such measures as are appropriate to ensure that, so far as is reasonably practicable, juvenile salmon are excluded from the body of the diversion race and are returned to the river. To that end:

a. Within 18 months from the commencement of this consent the consent holder shall install and commission a Bio-acoustic Fish Guidance system for the purpose of diverting as far as

⁶ E.g. Mr Ell.

practicable migrating salmon smolt to the Rangitata River. That system shall be generally as outlined in the evidence presented on 14 February 2003 by Charles Paul Mitchell, Consultant Biologist;

- b. Within three years of the commencement of this consent the consent holder shall provide the consent authority with a report, prepared by a person appropriately qualified and experienced in freshwater fisheries biology, detailing the extent to which the system referred to in paragraph (a) above is meeting the object of this condition and making recommendations, if such are thought by that person to be necessary, as to the way in which that object may better be met;
- c. At any time within the fourth year of this consent and during every fourth year thereafter the consent authority may review this condition (pursuant to section 128) for the purpose of determining what steps should be taken by the consent holder so as better to achieve the object of this condition;
- d. The consent holder may at any time apply to the consent authority for a change to this condition, but for the sole purpose of the better achievement of its object.

37. Clause 10(2) of the WCO was accordingly met when resource consent CRC011237 was granted.

38. Some submitters have said that RDRML is in breach of the WCO. This is not strictly correct. The requirement in condition 5 of resource consent CRC011237 is to “take such measures as are appropriate to ensure that, so far as is reasonably practicable, juvenile salmon are excluded from the body of the diversion race and are returned to the river”. It has attempted that at length with the BAFF (which was supported at the time by CSIF&G) and the current application for the mechanical rotary fish screen is a further attempt to do just that.

Resource consent constraints

39. Various mechanisms have been suggested by submitters, which RDRML is not necessarily opposed to in principle, but which are likely precluded by the scope of the current resource consent applications:

- (a) CSIF&G suggest 1:1 flow sharing in its hydrological evidence. RDRML has applied to take flood water within certain parameters – linked to flow at Klondyke being between 132.6 and 142.6m³/s. This means that another resource consent applicant could make a resource consent application for water above that. As such, there is

unlikely to be scope for a 1:1 flow share which accommodates a 10m³/s flood flow take as that would allocate the resource up to 152m³/s. Instead, the implication of a 1:1 flow share is that RDRML would be able to take only 5m³/s within the 132.6 to 142.6m³/s flow band.

- (b) Dr Rankin suggested the flood flow take should operate when the Rangitata River is flowing at 290m³/s at Klondyke. Again, this begs the question of what happens between 132.6 and 290m³/s. In legal terms that water is presently available, and RDRML has not framed an application with the effect that it is unavailable. Accordingly, this is unlikely to be permissible within the current resource consent applications.
- (c) CSIF&G suggest that the sandtrap should be flushed when the Rangitata River is flowing at 150m³/s. That consent (CRC011241) is not part of the suite of resource consent applications, so there is no ability to raise that threshold within the sandtrap consent. It would be open to the Commissioners to condition the resource consent for the flood flow take so that the flood flow is not abstracted when the sandtrap is being flushed. Condition wording is proposed in this regard.

Lapse periods

- 40. Case law on lapse periods largely centres on extension of a lapse period under s 125(1A) of the RMA. Policy reasons which caution against extended lapse periods generally relate to changing circumstances that can occur over time.⁷ Two recent Environment Court decisions, which consider and endorse longer lapse periods of 10 years are:

*Re Meridian Energy Ltd*⁸

- (a) Meridian Energy Ltd applied via direct referral to the Environment Court for resource consents to construct and operate a windfarm. Meridian sought a 10 year lapse period for all consents, which was contested by local residents concerned about an extended period of uncertainty. Meridian submitted that a 10 year lapse period was

⁷ See for example *Katz v Auckland CC* (1987) 12 NZTPA 211 which has been cited in subsequent RMA cases.

⁸ *Re Meridian Energy Ltd* [2013] NZEnvC 59.

appropriate given the scale and national importance of the project, and contended that there was no evidence suggesting the existing environment of the site would change to such an extent over five years to warrant a reconsideration of the effects at that time. The Court was of the clear view that five years is too short for a project of this nature and scale and, taking into account the submitters' desire not to be engaged in another resource consent application process in the near future, concluded the 10 year lapse period was appropriate.

*Crest Energy Kaipara Ltd v Northland Regional Council*⁹

- (b) This was a decision of the Environment Court making a recommendation to the Minister of Conservation concerning applications by Crest Energy Kaipara Ltd for restricted coastal activity and other resource consents. Crest sought a 10 year lapse period due to the scale and national importance of the project, and given the lengthy and exacting consenting process. The Court agreed that the 10 year lapse period was appropriate.

41. Examples of a 15 year lapse period include:

- (a) Consents for the Opotiki Harbour Entrance works. These involve the modification of sandspit to create a harbour entrance through the construction of groynes, and were granted by the Bay of Plenty Regional Council in 2009 with a lapse period to 2024.¹⁰
- (b) Consents to dredge the Tauranga Harbour to widen and deepen the shipping channels.¹¹

42. Thus, longer lapse periods are generally associated with large scale infrastructure projects where the scale and importance of the project drives the need for a longer lead-in period to implementation.

⁹ *Crest Energy Kaipara Ltd v Northland Regional Council* [2011] NZEnvC 26.

¹⁰ Decision and Recommendation to the Minister of Conservation, on Notified Coastal Permits 65566, 65567, 65569 and Land Use Consent Application Numbers 65563-65565, 65568 Opotiki District Council, and Land use Consents from Opotiki District Council RC2009/24 – 27.

¹¹ See *Te Runanga O Ngai Te Rangi Iwi Trust v Bay of plenty Regional Council* [2011] NZEnvC 402.

43. In this case, there are strong policy reasons why a longer lapse period is appropriate. These include the usual reasons regarding the scale and importance of the project. However, there are further reasons which apply in this case which support a longer lapse period. These are that some of the drivers for the storage pond will take a slightly longer period to manifest themselves, specifically:
- (a) Climate change impacts;
 - (b) The increase in minimum flows in the Ashburton River (certainly the main step change in 2033); and
 - (c) The time required for any supply to south Canterbury to eventuate (if at all).
44. Looking ahead with a forward-looking view and *anticipating* the changes, which will arise over the next 10-15 years in this case, *support* rather than militate against a longer lapse period. Furthermore, the longer lapse period is likely to benefit a large number of people (such as the shareholders in the Mayfield Hinds Valetta and Ashburton Lyndhurst irrigation schemes) rather than present the sort of uncertainty to landowners that might caution against a longer lapse period.

Bonds

45. The wording of s 108A(1) RMA is relevant:
- (1) A bond required under section 108(2)(b) may be given for the performance of any 1 or more conditions the consent authority considers appropriate and may continue after the expiry of the resource consent **to secure the ongoing performance of conditions relating to long-term effects**, including—
- (a) a condition relating to the alteration or removal of structures;
 - (b) a condition relating to remedial, restoration, or maintenance work;
 - (c) a condition providing for ongoing monitoring of long-term effects.
46. In my submission bond conditions are typically imposed on mining consents regarding remediation obligations. They have also been imposed on some geothermal consents in the Waikato region. The Hearings Panel hearing the application to leave the wreck of the *MV*

Rena on the Astrolabe Reef also agreed that the obligations of the consent holder trust (established by the insurer) should be secured through a bond.¹²

47. In this case, RDRML is a long established company and there is no question about the wherewithal of the company to comply with its consent obligations. Furthermore, substantial public liability insurance conditions are proposed. Insurance will cover construction, operation and maintenance, and is in itself a form of security. RDRML's preference therefore is *not* to have a bond in addition to the proposed consent condition obligations. This is on the basis that it is unnecessary.
48. RDRML has however reviewed other storage pond consents, and bond requirements, and these are summarised in the table attached as Attachment A. It asks that if the Hearings Panel determines that a bond is necessary, this apply to the construction phase of the storage pond, as with Central Plains Water (CPW). The proposed conditions tabled by the applicant reproduce these, with a note that it is RDRML's preference that they are not included.

SUBMITTER ISSUES

RWL

49. RWL has raised a scattergun of issues with the principal issue relating to whether RDRML is entitled to make the application for the Klondyke Storage Pond at all. Closely related to that is the question of reasonable use. Beyond that, RWL raises questions regarding dam break issues, sediment management, and the issue of security for RWL in the event of a dam breach.

The water exchange and RDRML's resource consent applications

50. RWL's case overreaches in delivering its opposition to the resource consent applications.
51. Mr McIndoe and Mr Rooney suggest that RDRML is changing from run of river to storage and that this fundamentally changes the nature of RDRML's activities. This is not correct. RDRML's resource consents enable it to take water all year round. During the irrigation season, if irrigation demand is met, the water goes through to hydro-electricity generation. During the

¹² Decision of Panel on MV *Rena* Resource Consent Applications dated 26 February 2016.

winter, water goes through to hydro-electricity generation. In the absence of the flood flow there is no *fundamental* change.

52. Mr Rooney did not clearly answer whether RWL use of RDRML water was in contemplation when RWL was established. He eventually confirmed that it was not.
53. RWL infers that the Klondyke Storage Pond proposal was unknown to RWL when the water exchange consents were obtained. The storage pond has been in public contemplation since 2009 when RDRML bought part of the land on which the farm is sited.
54. If the storage pond is built, then when the RDR is fully shut down, all RDR water will still be available to RWL which accounts for most of the water RWL has had to date. This is confirmed in Mr Curry's statement of evidence; Mr Curry also said in his evidence that this accounts for approximately two thirds of the water which RWL has had under the water exchange arrangement to date.¹³
55. RWL insists that RDRML must carry out further hydrological modelling, of the impact of the storage pond. Such modelling would require supply and demand information from the irrigation scheme, which obtains its water from RWL (Rangitata South Irrigation Limited, or RSIL). Murray Turley gave evidence for RSIL in support of RDRML's resource consent applications. Mr Turley noted that RSIL has an option to buy RWL.
56. The PDP AEE attached to Mr Rooney's evidence clearly states that "this application is strictly for two 'subserving resource consents' to take and use water" (section 1.0). It also clearly states that it is for one to take the other's water when they "are not using it" (section 3.0); see also (section 7.6):

This proposal involves RDRML taking and using any portion of RWL's allocation when RWL are not using it and RWL taking and using any portion of RDRML's allocation when RDRML are not using it.

57. Ms Steven also drew attention to section 3.0 of the application, which clearly talks about filling storage reservoirs.

¹³ Evidence of Ben Curry, at 8.8.9.

58. It is trite law that a consent authority cannot grant more than what is sought in the application. Counsel for RWL said the same, stating “this is the application that defines the scope of the consent or at least informs the parties’ expectations, at the very least”.
59. Accordingly, it was never open to ECan to restrict RDRML’s use of water pursuant to its resource consents, and the water exchange consents could not (and in any event do not purport to) do this.
60. ECan could only ever have granted subservient consents.
61. RWL say that the ‘intermediary’ storage of water is a use that is not authorised by RDRML’s consents and therefore derogates from the water exchange consents. This is not correct:
- (a) Storage is not a *use* of water. ECan agrees with this proposition.
 - (b) RWL does not object to on farm storage of water or the MHV Carew storage ponds. These are in principle no different from the Klondyke storage proposal. RDR water is stored in on farm storage ponds within the MHV and ALIL irrigation schemes, and in the MHV Carew storage ponds.
 - (c) Derogation is no longer a relevant RMA concept post *Hampton*.
 - (d) Counsel for RWL interpolated that *Fleetwing* is authority for the proposition that RWL has to be given priority over RDR’s storage irrespective of any question of adverse effect. This is a long bow to draw. *Hampton* said that *Aoraki* reached the right decision – but the Aoraki Water Trust sought a massive 9,072,000 cubic metres of water per week of water for abstraction, hardly comparable to the RWL/RDRML situation.
62. In this case the evidence shows that there is no material adverse impact on RWL. Two thirds of the water which RWL obtains will still be available to it in a full RDR shutdown situation. Beyond that, and in terms of ‘partial’ water, RDRML’s evidence is that without storage the amount of partial water available to RWL will decline anyway because farmers and schemes

will build their own storage.¹⁴ This is corroborated by the various farmer and scheme evidence which you have heard, virtually all of which describes storage which the farmers and schemes have.

63. Furthermore, the Commissioners will note from the water exchange agreement which RWL has tabled, that the agreement can be terminated. If RDRML terminates the agreement, then whilst RWL will hold a consent, it is unlikely to be able to utilise it without RDRML's cooperation. This is especially as regards the partial water which relies on RDRML saying how much water it is not taking. In those circumstances, RWL has no expectation of ongoing partial water.
64. In the end, Counsel for RWL agreed that if the Commissioners accepted RDRML's proposition that resource consent for storage as a use is not required, the derogation argument would drop away leaving the reasonable use argument (which appears to be primarily connected to the proposed flood flow take).
65. RDRML could be forgiven for wondering whether any issue of trade competition arises given that water from the RWL ponds may well be a prospect for south Canterbury irrigation which clearly has its eye on Rangitata water, but that would be speculation.
66. In my submission, the water exchange consents are no bar to the grant of the resource consent applications before you. Conditions regarding the water exchange are not necessary and are strenuously opposed by RDRML.

Reasonable use

67. The key plank of RWL's argument on reasonable use appears to be that Policy 4.53 of the LWRP would be redundant if storage were not a 'use'. This is not correct. The policy clearly relates to consents to abstract (i.e. take) water for irrigation. Although it is difficult to contemplate when a change to a take consent might be required to convert from run of river to storage it is entirely possible that a condition of a consent might impose a condition which requires changing.

¹⁴ Evidence of Ben Curry, at 8.8.9.

68. Further, as discussed, the policy applied to takes of water for irrigation. Even Mr Rooney acknowledged that when water taken by RDRML is not used for irrigation, it is used to generate hydro-electricity generation. That use is not restricted (and any restriction would, it is submitted, be contrary to the National Policy Statement for Renewable Electricity Generation). Any reasonable use restriction on irrigation would probably simply increase the amount of water available for hydro-electricity generation.
69. Policy 4.53 is not in play here, or is not, at least, the foundation of reasonable use restrictions which RWL argues for.
70. This is the case in respect of the storage itself (without the flood flow take) and the flood flow take.
71. Within this context, Mr McIndoe raised concerns about PDP's modelling underlying the resource consent application. On this I note that:
 - (a) The PDP Hydrology Assessment (PDP, July 2016) submitted with the AEE provides a detailed description of the model setup, model assumptions and input data in section 5.1 and 5.2. Mr Veendrick refers to this information in paragraph 7.1 of his statement of evidence. This includes a description of all the model components including the supply (from the Rangitata and Ashburton River), storage, soil moisture balance, description of irrigable areas, land use, soil type, climate data etc. Plots of daily and cumulative irrigation volumes are provided in Appendix F of the hydrology assessment.
 - (b) The s 42A report from Graeme Horrell (pp 139-142 of the ECan s 42A report) describes Mr Horrell's review of the model and concludes that "I agree with the MATLAB model assumptions and input data, model calibration using measured irrigation data from 5 farms and model selection of final calibrated parameters."
72. Thus Mr McIndoe's concerns are not supported by the consent authority's expert reporting. No further information on the supply-demand model was requested by ECan on this, nor was it raised during the expert hydrology caucusing in which Mr McIndoe took part.

Dam break, sediment, and security in event of dam breach

73. On the issue of dam break, Counsel for RWL has tried to argue that there is insufficient information on the question of a cascade breach. This is not accepted by RDRML.
74. The following statement in the Dam Break report is the assessment of the Rangitata South storage in qualitative terms (section 6.4 of the dam break report):

The Rangitata South ponds are comprised of a number of different cells, each having different water levels. Initiation of a large scale breach of this type of structure would require the erosion of multiple sections of embankment and requiring time to develop. In both cases the time for any failure to develop, if it were to occur, means that it is likely that the peak of the Klondyke breach would have passed before the breach flow from these other structures develops. Therefore they would be sequential events and not additive and can be considered in terms of their own dam break estimated effects. This assessment would need to be confirmed by further detailed modelling as part of the emergency action planning, which would be developed during the design phase, and specifically for construction, commissioning, and operation phases of the storage. We note that such confirmation modelling happens as part of the detailed design/Building Consent process.
75. RDRML's experts agree that the potential cascade failure scenario for the RWL Irrigation Storages would need consideration. Consultation proved fruitless with RWL. Further modelling *may* be needed to clarify this, and whether triggering a dam failure of the storage ponds near Arundel needs detailed analysis or just an activation of their emergency planning with their inundation maps. This will form part of future consultation on this matter, potentially further modelling, and details of this will be required with detailed design and building consent process. The EAP will also need inclusion of this.
76. I laboured the cautious approach which RDRML has taken to dam safety in my opening submissions and will not labour that further. Mr Woods' evidence details the work undertaken to date and the work that will be undertaken for the building consent process. In addition to that, and as acknowledged by the engineering evidence (and reflected in the conditions) there is additional work to be undertaken if resource consents are granted and the consent holder implements the consents. There is a balance to be drawn between the work required at this stage to obtain resource consents, and the work which is more

appropriately dealt with at detailed design stage, and in my submission that balance has been struck in this case.

77. RWL made much of additional sediment being discharged from the sandtrap and the possible impact on the RWL intake. This issue was addressed by Mr Veendrick in his statement of evidence at paragraphs 10.9-10.10. He concluded that “considering that the additional amount of sediment discharged back to the river as a result of the proposal is negligible (0.6-1.4%) compared to the total suspended load in the Rangitata River it follows that the additional amount of sediment entering the RWL intake is negligible (and immeasurable) as well”.¹⁵ RWL did not refer to or counter this – as with other matters it simply tried to raise concerns – and the Hearings Panel has expert evidence to rely on it answering the concern raised.
78. Security for dam breach: to say there is a gap is disingenuous. My opening legal submissions laboured the cautious approach which RDRML has taken to the assessment of dam break issues. This is not a Clyde Dam situation where landowners would suffer damage more frequently than if the dam did not exist. Even in that context, the Environment Court thought such conditions were *ultra vires*.
79. As a safety net, the proposed consent conditions require *substantial* public liability insurance. No further compensation type conditions are warranted.

EVIDENTIAL ISSUES

Salmon angling

80. Salmon angling issues primarily arise in respect of the proposed flood flow take (I deal with the fish screen separately).
81. The Hearings Panel has heard extensive anecdotal evidence from salmon anglers. This has talked of the halcyon “good old days” (without specifying when those were) and many anglers have given talked about build up of finer sediment material at the river mouth although it is

¹⁵ Evidence of Bas Veendrick, at 10.10.

not clear over what time period there has been any sort of change, not what the true extent of this is. Any cause and effect relationship is unclear.

82. Although Dr Hicks proffered an opinion on this issue at the Panel's request, this appeared to relate to the existing abstractions. As the relevant conferencing statement clearly records,¹⁶ Dr Hicks was not engaged to assess the effects of the proposal on the coast. Mr Veendrick and Mr Cope agreed that the proposal is considered to have a less than minor impact on beach sediment budgets when compared against the existing state.
83. Other anecdotal evidence provided by salmon anglers is also difficult to draw any cause & effect conclusions from, whether that relates to the decline of the salmon run, sediment transport, water clarity or (slight) flow variability.
84. Dr Hicks' evidence confirmed that:
 - (a) As informed by CSIF&G, the sandtrap doesn't appear to be causing any adverse effects;
 - (b) The impacts of the takes (in terms of the flow regime) are not significant – because the “big guys” (floods of 1,000 cumecs and up) do the job and the river hasn't changed much;
 - (c) He accepts that there is a negligible effect on events to keep the river mouth open.
85. Beyond that, the expert evidence for the applicant (Dr Ryder) considers that there is no evidence to indicate that changes in water clarity, flow variability and habitat would occur as a result of the proposed flood flow take. The CSIF&G and ECan response is to query whether there is sufficient information on this rather than point to any evidence to the contrary.
86. The submitters have every right to present their passionate beliefs to the Commissioners, but the Commissioners will need to, in my submission, make their decision based on the *evidence* which they have heard, and there are some straight facts which must be acknowledged:

¹⁶ JWS – Sediment Transport and Geomorphology – 19 March 2018, at 6(a) (p 3).

- (a) The RDR opened in mid-1945 and has operated since then.
- (b) Until the BAFF was installed in 2008, rightly or wrongly the RDR abstracted its take from the Rangitata River with no fish screen in place.
- (c) The BAFF has been in place since 2008. It may not be 100% effective but it has screened salmon smolt to some extent in the ten years that it has been operating. Mr Webb said that 5-25% of 1.1 million smolt enter the race, with a third returning to the river which must surely be better odds than the 60 years which preceded the BAFF.
- (d) The salmon run is in decline. This is a world-wide and South Island wide phenomenon.
- (e) Numbers of salmon produced by submitters, which start at 1993/94, show variability in numbers since then (Table 2 attached to the presentation of the South Canterbury Salmon Anglers Assn and the Salmon and Riparian Support Trust). The number was highest in 1993/1994 when the RDR was not screened.

87. As with the descriptor that was oft used in this hearing, it is submitted that any changes are likely to be 'subtle' and certainly highly unlikely to affect the outstanding characteristics for which the WCO was made.

Fish screen performance

- 88. This occupied much hearing time.
- 89. There is no dispute that a new fish screen is desired. The argument centres on what monitoring / verification conditions or procedures should be in place regarding the new fish screen, and the period of time to deliver the new fish screen (with a range of 1-3 years).
- 90. RDRML proposes a suite of conditions which are reasonable, which are supported by expert evidence, and which are largely agreed amongst experts. It does not agree with a condition which replicates some of the words in clause 10(2) of the WCO or which imposes a percentage efficiency target. 3 years to have the fish screen up and running is realistic given the size of

the screen, the level of investment, and the modelling and commissioning procedures required to get the screen up and running.

91. CSIF&G's comments on conditions insert an exposure time limitation of 60 seconds. It is not clear why it has inserted this given that Mr Morgan's estimate is that the exposure time is 100 seconds. This is not warranted in any event – the NIWA Guidelines do not address exposure time.
92. The challenge for the Hearings Panel will be in settling the conditions of the fish screen in a manner which all parties find acceptable, as the sooner the fish screen is consented and the terms and conditions of any such consent are beyond dispute, the sooner the fish screen can be built.

Maori cultural values

93. Te Runanga o Arowhenua supported by Te Runanga o Ngai Tahu has maintained a fundamental or principled opposition to the resource consent applications. This is their right as kaitiaki. However, it does not follow in resource management terms that consents should be refused. There is no right of veto.¹⁷
94. Arowhenua say that there is an impact on the mauri of the Rangitata River. This is acknowledged by the applicant's evidence (Mr Mikaere deals with the question of mauri extensively in section 7 of his evidence). To this extent there is agreement.
95. Mr Mikaere's view is that the impact on mauri is less than minor. Mr Russell yesterday agreed that the impacts of the 10 cumec take are very subtle. Again, there appears to be agreement to this extent. It is the acceptability of these impacts that they differ on.
96. Related to this, Ms Waaka-Home's evidence raised concerns about the impacts of the proposed flood flow take on river clearing, river morphology and river mouth openings. I submit that the evidence from the experts at this hearing (including that of Dr Hicks for CSIF&G on these issues) would have provided Mw Waaka-Home with significant comfort on these

¹⁷ See *Te Runanga O Ngai Te Rangi Iwi Trust v Bay of plenty Regional Council* [2011] NZEnvC 402; *Ngati Ruahine v Bay of Plenty Regional Council* [2012] NZHC 2407.

issues, with the large floods (the “big guys” in Dr Hicks’ words, or the “disturbance events” in Dr Ryder’s words) still doing their job.

97. Enhanced access to the margins of the Rangitata River is a positive aspect of the proposal which accords with Maori cultural values regarding the trails of old.
98. Mr Russell emphasised the importance of korero or conversation in the ongoing relationship between Arowhenua and RDRML. RDRML has proposed engagement conditions.¹⁸ These were opposed but RDRML has retained them. The conditions do not compel Arowhenua to engage but certainly provide a pathway for the korero or conversation that Mr Russell referred to. The existing MOU envisages regular meetings between management of the Runanga (particularly the Mataitai Group, that Mr Russell referred to) and that of RDRML. RDRML is keen to explore korero opportunities over the range of issues associated with this application and the RDR in general.
99. The consent process and the resource consents proposed have acknowledged the relationship of Arowhenua with the Rangitata River through the engagement process, and the range of conditions proposed to address cultural values. These include:
 - (a) Engagement over the draft reports (landscape, monitoring, ecological refuge) required by the land use consent;¹⁹
 - (b) Cultural monitoring at construction time;²⁰
 - (c) Recognising the relationship of Arowhenua with the land through conditions for karakia, input into the landscape treatments and design and construction of a pou whenua;²¹
 - (d) The Accidental Discovery Protocol;²²
 - (e) Ongoing engagement in relation to the storage pond;²³
 - (f) Engagement over the draft reports regarding the works in the river, water quality and other management plans.²⁴

¹⁸ Land use consent, conditions 23. CRC170657, condition

¹⁹ Land use consent, condition 23.

²⁰ Land use consent, condition 18.3.

²¹ Land use consent, condition 18.5.

²² Land use consent, conditions 19.0-19.2. Also addressed in the CRC consents.

²³ CRC170657, condition 44-49.

²⁴ CRC170657, condition 49A.

100. Whilst Arowhenua do not support the proposal (as is their right), RDRML has nevertheless listened to the concerns expressed and accommodated these as far as possible.
101. In summary, it is submitted that the impact on cultural values is not significant enough to warrant the refusal of consents on the basis of cultural values, and that the relationship of Arowhenua with the Rangitata River is recognised and provided for by the applicant, including through the consent conditions proposed.

Rafting/kayaking

102. Dr Rankin went to great lengths to say why RDRML's analysis of the impacts of the proposed flood flow take on recreation were stated too broadly, and understated impacts on available flow bands.
103. RDRML's evidence on this is clear. As Mr Greenaway says:²⁵

It is important to note that the changes in availability of flow bands for recreation are unlikely to occur in contiguous periods. For example, the availability of the 100-125 m³/s band (identified through consultation as of interest to kayakers below the RDR intake) is currently available on 8.4 days per summer season (4.6% of the time) between the RDR and Arundel, with a loss of 1.1 days. This may be represented by many periods of hours or minutes, and includes night-time flows. **The coincidence of a recreational user and the availability of such narrow and occasional flow bands is quite low.** If a kayaking opportunity is within a period of 10 hours of good light over 24 hours, the average availability of a flow of 100-125 m³/s drops to 3.5 non-contiguous days per season and the loss to 10.8 hours. If this flow band occurs on a rising flood, which river users should avoid, the flow availability further decreases.

104. When questioned, Dr Rankin by his own admission agreed that the length of time that flow bands are going to be passed through are "fleeting". This bears a striking similarity to the word used by Mr Greenaway that any changes are "subtle".

²⁵ Evidence of Rob Greenaway, at 30.

105. Perhaps the most telling response as to impacts on recreational use as a result of the flood flow take, was the response by Grant South whose business relies on the lower Rangitata River. When asked about impacts by Cr Couch-Lewis about impacts on him and his business, he replied that "it wouldn't affect me, I can operate at a range of flows". The Peel Forest Outdoor Centre (who Dr Rankin and Grant South confirmed were the most frequent users of the lower Rangitata River) have withdrawn their opposition to the flood flow take and did not appear.
106. The evidence before the Hearings Panel is relatively consistent that changes in flow bands in the lower Rangitata River will be subtle. In my submission the evidence is clear that any such effects are minimal and acceptable.

Cumulative effects

107. Cumulative effects will be a consideration for the Panel on the proposed flood flow.
108. Counsel for CSIF&G referred to the *Infinity Investments* decision. In that decision, the Environment Court essentially founded a decision to decline consent on the basis of cumulative effects on evidence of declining trends in the relevant water body. Its clear findings were that:

Finding on Health Indicators

[265] Our finding on the health indicators is that while the proposed Infinity abstraction is likely to result in only a small incremental effect over and above the ecological health indicators which currently exist, that increase in the volume of water taken **is likely to be a further negative impact on an already detrimentally affected and deteriorating river ecosystem.**

109. In my submission, the evidence in this case does not go so far as to substantiate a detrimentally affected and deteriorating river ecosystem.
110. Dr Meredith has continued to raise concerns without pointing to any science or data himself that contradicts Dr Ryder's view. As I said in my opening submissions, Dr Ryder has considerable experience with the Rangitata River over a long period. His evidence was accepted by the Special Tribunal during the WCO process on various matters such a flows

required to sustain biomass production,²⁶ and he also gave evidence regarding the RDRML abstractions when its current resource consents were granted. His evidence and that of Dr Hicks is in my submission essentially in agreement regarding the flood/disturbance events in the river being the major influence, and the ability to monitor/measure fine sediment build-up as a result of the proposed flood flow take.

111. In this case, Dr Ryder has examined evidence of declining trends and has found none. He has acknowledged the declining salmon run, but it does not appear to be in dispute that this issue is wider than the Rangitata River and attributable to various causes. (Moreover, the proposed fish screen cannot be ignored in this context).
112. Dr Hicks' evidence was that "I don't see it as heading towards a tipping point in terms of it not being braided". He did not indicate that other potential morphological changes were significant, indicating that the fine sediment monitoring could be a "short sharp" burst and if there were no measureable effects it could be discontinued.
113. My submission is that there is little disagreement that any potential changes to the Rangitata River as a result of the proposed flood flow will be subtle, negligible, or less than minor. The question is the significance of these if they do occur.
114. On the key issue raised by Dr Hicks *related to the flood flow take*, which I submit is fine sediment deposition, RDRML has agreed, and proposes, conditions to develop a monitoring regime. The question of monitoring for bedload sediment / morphological change is much wider. RDRML is not opposed to this, but has not devised an appropriate condition. If such a condition were imposed on the flood flow take consent, the information it could yield over time would appear to be a significant benefit to a range of interests including recreational and angling interests.
115. On the basis of Dr Ryder's evidence, and with the sediment monitoring conditions proposed, I submit that the Panel can be satisfied that it is appropriate to grant consent to the proposed flood flow take. However, acknowledging submitters' concerns that a 35 year term is too long, RDRML suggests that a more suitable term would be one which aligns with its existing consents through until 2042.

²⁶ Special Tribunal Report, at 48.

116. Many submitters mentioned flow sharing, and CSIF&G has gone to the extent of assessing two alternative 1:1 flow sharing regimes. Dr Hicks doubted that these would be of any value. If however, the Commissioners consider that a flow sharing proposal is more appropriate than the flood flow take as proposed, RDRML invites the Commissioners to consider whether consent should be granted to a 5m³/s abstraction between 132.6 and 142.6m³/s on a 1:1 flow sharing basis. It has drafted a condition for the Commissioners' consideration in this regard.

Reasonable use of water

117. For the reasons already outlined, it is submitted that the grant of resource consents to the storage pond alone (without the flood flow take) does not fundamentally alter the current RDRML abstraction, given that the abstraction is not a straight irrigation take.
118. It is really the proposed flood flow take, which gives rise to the arguments put forward by submitters in opposition, which question the use of the water which RDRML seeks. Mr Curry has endeavoured to articulate the company perspective on this more fully in his supplementary statement of today's date.
119. The submitters' desire for certainty in this context is understandable but should not distract the Commissioners. Each of the uses indicated by RDRML is signposted in key strategic planning documents and the Commissioners will need to take a strategic and forward-looking view if these uses are to be delivered on:
- (a) **Reliability:** improved reliability of supply is given strong recognition in the policies of the Canterbury Regional Policy Statement (**RPS**). Policy 7.3.8 looks to improve efficiency in the allocation and use of fresh water, including by recognising the importance of reliability in supply for irrigation. It is also recognised in Policy 7.3.10.
 - (b) **Increase in irrigated area:** this is also signposted in the RPS. Policy 7.3.10 on the harvest and storage of fresh water recognises this (along with the very buffers against a reduction in reliability or irrigated land area which RDRML's evidence has addressed in respect of a buffer against climate change and increased minimum flows):

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.

- (c) **Regional water distribution:** the storage proposal (enhanced by the flood flow) will contribute to the attainment of the regional concept for water harvest, storage and distribution set out in Schedule 16 to the LWRP, which has active expression through Strategic Policy 4.8 of the LWRP.
- (d) **MAR and TSA:** the use of these is signposted in Policies 13.4.9 and 13.4.12 of the LWRP as one of the measures to improve overall water quality within the Hinds catchment (along with the initiative to reduce nitrogen losses).

120. These strategic initiatives do not come at the expense of environmental values. As I outlined on 26 April 2018, plan provisions are in place to manage nutrient discharges at a farm level. Any uses for regional water distribution, or MAR/TSA will require further consents. But as I said in opening, it is axiomatic that water must be available for these uses to materialise at all.

CONCLUSIONS

Commissioners' decision

121. The Commissioners have three suites of applications before them relating to:

- (a) The fish screen;
- (b) The storage pond;
- (c) The flood flow take.

122. The consents associated with the fish screen (discussed at the outset) are independent of the storage pond and the flood flow take and should be granted. The challenge will be in deciding on the form that consent should take as regards the period to have the fish screen in place and the terms and conditions of that resource consent. As discussed, the sooner that is settled, the sooner the fish screen can be built.
123. Beyond the fish screen, RDRML seeks consents for the storage pond and the flood flow. However it is open to the Commissioners (but is not RDRML's wish) to grant consents for the storage pond but not for the flood flow take. I note that the evidence concludes that such a decision would have considerable implications on the efficiency of the pond and its ability to provide for other future opportunities as identified in the Canterbury Water Management Strategy.
124. The Commissioners may also consider the various options which have been canvassed by submitters in respect of the flood flow take and so have the option of granting, for example, the flood flow take on a 1:1 flow share basis. Again, this is not RDRML's preference but is an option open to the Commissioners.
125. If this is a case where the Commissioners reach a decision in principle, but wish to receive further information, or seek further conferencing between parties to narrow matters such as condition wording, an interim decision might be desirable. Again, this is not RDRML's wish but is an option open to the Commissioners.

Grant of consents

126. The water storage facility which will strengthen the security of supply and reliability for existing irrigation schemes serviced by the RDR, and buffer them against future regulatory and climatic risks.
127. It will anchor a significant storage facility in mid-Canterbury which may help deliver integrated storage and water delivery throughout Canterbury by facilitating supply to South Canterbury. This is an outcome which is reflected in strategic policy 4.8 of the LWRP and Schedule 16 to the LWRP.

128. The proposal will also facilitate environmental initiatives such as targeted stream augmentation and managed aquifer recharge. These are expressly recognised as desirable within Plan Change 2 to the LWRP.
129. RDRML has taken on board the concerns raised throughout the duration of the hearing and responded appropriately in the Reply Version of conditions. Consents to all applications should be granted on that basis.

DATED at Ashburton this 4th day of May 2018



Vanessa Jane Hamm

Counsel for Rangitata Diversion Race Management Limited

