

**IN THE MATTER OF the Resource Management Act  
1991**

**AND Of a notice of motion under  
section 149T(2) to decide proposed  
Plan Change 7 to the Regional  
Plan: Water for Otago (referred to  
the Environment Court by the  
Minister for the Environment under  
section 142(2)(b) of the Act)**

**OTAGO REGIONAL COUNCIL**

**Applicant**

Hearing Commenced: 08 March 2021 held in Dunedin

Court: Environment Judge J E Borthwick  
Commissioner Bunting  
Commissioner Edmonds  
Environment Judge P A Steven (observing)

Appearances: P Maw and M Mehlhopt for Otago Regional Council  
D van Mierlo for Aotearoa New Zealand Fine Wine  
Estates Limited Partnership  
L Phillips for Beef + Lamb New Zealand Limited  
P Williams for the Director-General of Conservation  
K Reilly for Federated Farmers of New Zealand Inc.  
H Atkins and L Ford for Horticulture New Zealand Limited  
C R Perkins for Landpro  
H Atkins and L Ford for Horticulture New Zealand Limited  
K Reid for McArthur Ridge Vineyard Limited, Mount  
Dunstan Estates Limited, Strath Clyde Water Limited  
R Dixon for Minister for the Environment  
M Baker-Galloway for Otago Fish & Game Council and  
Central South Island Fish & Game Council  
P Page and B Irving For Otago Water Resource Users  
Group  
P Anderson for Royal Forest and Bird Protection Society  
of New Zealand Inc  
J Winchester and S Lennon for Te Rūnanga o Moeraki,  
Kāti Huirapa Runaka ki Puketeraki, Te Rūnanga o

Ōtākou, Hokonui Rūnanga (Kāi Tahu Ki Otago) and  
 Waihōpai Runaka, Te Rūnanga Ōraka o Aparima, Te  
 Rūnanga o Awarua (Ngāi Tahu Ki Murihiku) and Te  
 Rūnanga o Ngāi Tahu (collectively Ngā Rūnanga)  
 P Page & B Irving for Clutha District Council, Waitaki  
 District Council, Queenstown Lakes District Council,  
 Dunedin City Council and Central Otago District  
 Council (the Territorial Authorities)  
 J Welsh for Trustpower Limited  
 H Rennie for WISE Response Society Inc

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## NOTES OF EVIDENCE TAKEN BEFORE THE ENVIRONMENT COURT

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## MR MAW OPENS

The Otago Regional Council (**Council** or **ORC**) is at a critical stage in its freshwater planning. The current freshwater planning framework in Otago is acknowledged as no longer being fit for purpose. It is a product of its time,  
 5 being prepared prior to the National Policy Statement for Freshwater Management 2020 (**NPSFM**). A new NPSFM compliant framework is required and the Council is committed to having that new framework in place by 31 December 2023.

10 The Council is due to notify a new regional policy statement in June 2021. This will include, as objectives, the long-term visions for freshwater in the Otago region. These long-term visions are currently being developed through engagement with communities and tangata whenua. They will express the aspirations of communities and tangata whenua for each FMU, or part FMU.

15 This will provide the foundation for freshwater management in the new land and water regional plan (**LWRP**) and set the basis for identifying values, setting environmental outcomes and environmental flows and levels required by the NPSFM.

20 The Council has committed to notifying a new land and water regional plan by 31 December 2023. The Council science team has created a number of dedicated work streams and has focused on building capacity in order to meet this deadline.

25 In the meantime 312 Deemed Permits<sup>1</sup> and approximately 235 other water permits, representing a significant proportion of primary allocation in Otago, are due to expire. Without an intervening planning response, those permits will be renewed within a pre-NPSFM planning framework and where the expectation on the part of Applicants is that a permit will be granted for a long duration.

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The critical issue for the Council is that the new LWRP developed through a community-driven National Objectives Framework (**NOF**) process, is not

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frustrated by the grant of long-term water permits in the interim. Plan Change 7 (PC7) is the intervening planning response required to ensure that the outcomes of the community-driven NOF process can be effectively implemented within an appropriate timeframe.

5

I now turn to the purpose of PC7. The purpose of PC7 is to allow for an efficient and timely transition to a new land and freshwater management regime that gives full effect to the NPSFM. It establishes an interim planning framework to facilitate the cost-effective and efficient assessment of resource consent applications for the replacement of deemed permits and for the take and use of freshwater.

10

The need for an interim framework stems from the following interlinked issues. First, historically high levels of water taking in parts of the region and an allocation framework in the operative Regional Plan: Water (**Water Plan**) that does not prioritise first the health and well-being of water bodies and freshwater ecosystems. Inadequacy of other aspects of the planning framework in the operative Water Plan in terms of giving effect to the objectives and policies of the NPS-FM 2020. An operative planning framework that has created challenges for Ngāi Tahu ki Murihiku, including in relation to notification decisions and the extent to which consideration of Kāi Tahu rights, interests and values has been able to influence decision-making. Lack of understanding about the current state of Otago's pattern of land use and freshwater resources, and the effect of water takes on these resources when viewed through the lens of the new NPSFM. Uncertainty around the planning framework, including environmental outcomes and limits that will be established in accordance with the NPSFM in the new freshwater planning framework that is to be notified by 31 December 2023. The pending expiry of a large number of water permits and growing demand for water prior to the new freshwater planning framework becoming operative by 31 December 2025.

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These issues were highlighted in Professor Skelton's investigation of the Council's freshwater management and allocation functions and led to the Minister for the Environment making recommendations to the Council under

section 24A of the Act to prepare a plan change by 31 March 2020 that will provide an adequate interim planning and consenting framework to manage freshwater up until the time the new discharge and allocation limits are set, in line with the requirements of the NPSFM. The Minister encouraged  
 5 consideration of a narrow plan change that provides for the relatively low cost, and fast issuing of new consents on a short-term basis, as an interim measure until sustainable allocation rules are in place and noted that those consents could, for example, be for a maximum term of five years, or until the new LWRP becomes operative, whichever comes first. It was also suggested that it may  
 10 be beneficial to include these provisions in a stand-alone plan change.

In response to the Minister's recommendations, the Council agreed to prepare and notify by 31 March 2020 the Water Permits Plan Change (**PC7**).

15 PC7 was notified on 18 March 2020 and then renotified by the EPA on 6 July 2020 after the Minister called PC7 in, having considered it to be part of a proposal of national significance, and directed that it be referred to the Environment Court for decision.

20 The objective of PC7 (as recommended to be amended by Mr de Pelsemaeker) has been set out in my paragraph 11.

To implement this objective, PC7 (as notified) proposed a two-tiered consenting pathway by which applicants can apply for a resource consent to replace an  
 25 existing deemed permit or water permit that expires before 31 December 2025 either as a controlled activity, or where they cannot meet the controlled activity conditions, as a non-complying activity.

At its core, the controlled activity pathway is intended to allow existing activities  
 30 to continue for a short period (six years) without exacerbating the effects on the environment until the new NPSFM compliant planning framework is in place.

Longer term consent durations are disincentivised through strong policy direction to only grant resource consents for six years, or 15 years in limited

circumstances recognising that there may be “true exceptions” whereby a six year permit would be inappropriate.

5 The framework seeks to enable the transition to long-term sustainable management of freshwater by reducing the risk of further environmental degradation through avoiding the re-allocation of paper allocation; limiting the quantity of water allocated in resource consents issued in replacement of existing water permits to the quantity of water that has been used in the past; the requirement to carry over minimum flow, residual flow or take cessation  
10 conditions on existing consents as consent conditions on any consents that replace existing water permits; and discouraging further investment in irrigation expansion until a new NPSFM compliant planning framework is in place.

15 PC7 does not seek to give full effect to the NPSFM. It is a holding measure that allows existing activities to continue for a short period of time without increasing the effects on the environment until the new NPSFM-compliant land and water plan is in place. This will enable those activities to be reassessed under the new NPSFM-compliant framework rather than long term decisions being made under the current Water Plan, which is acknowledged as not being  
20 fit for purpose of not giving effect to the NPSFM.

It is also acknowledged that there are significant challenges associated with promulgating a plan change that has the effect of rolling over existing resource allocation for a short period of time. However, the alternative of not acting now  
25 may well result in a situation where any new land and water plan that gives full effect to the NPSFM is unable to be implemented in a timely manner. When weighing those risks, it is submitted that PC7 is the most appropriate option at this point in time.

30 In the remainder of these submissions I address first, the legal framework and the key legal tests relating to PC7. I then provide an overview of the key issues for determination at this hearing in the light of the submissions and evidence, and the Council’s position in relation to those issues. And finally, I touch on the evidence to be called by the Council.

So starting now with the legal framework and the key legal tests. PC7 has been prepared in response to the Minister's recommendations and in accordance with the RMA statutory framework as it applies to a regional plan change.

5

On 8 April 2020, following notification of PC7 by the Council, the Minister for the Environment exercised his powers under section 142(2)(b) of the Act and called in PC7, having considered it to be part of a proposal of national significance, and directed that it be referred to the Environment Court for decision.

10

The relevant tests for the Court when considering this Plan Change are set out in section 149U(1). The Environment Court must apply clause 10(1) to (3) of Schedule 1 as if it were a local authority; and it may exercise the powers under section 293; and it must apply sections 66 to 70, 77A, and 77D as if it were a regional council.

15

In addition, the Court must have regard to the Minister's reasons for making a direction in relation to PC7; and consider any information provided to it by the EPA under section 149G. Part 11 of the RMA applies to proceedings under s 149U, except if inconsistent with any provision of the section.

20

So I now touch on the Minister's reasons for referring PC7 to the Environment Court. In accordance with section 149U(1)(a), the Court must have regard to the Minister's reasons for making the Direction.

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1010

25 "Have regard to" requires the decision maker to give genuine attention and thought to the matter.

30

26 In the Direction, the Minister stated that PC7 is a proposal of national significance because:

a) The issues the plan change aims to address have aroused widespread public concern or interest regarding their actual or likely effect on the environment, as indicated by the Skelton Investigation;



b) The plan change involves or is likely to involve the significant use of natural and physical resources while managing the impact of that use on the environment;

5

c) The plan change affects or is likely to affect areas of national significance noting that Otago freshwater catchments provide a habitat for a suite of nationally important non-migratory Galaxias taxas;

10 d) The plan change is part of the ORC's programme to give effect to the National Policy Statement on Freshwater Management;

e) There is also a relationship between the matter and the National Policy Statement – Renewable Energy Generation (NPS-REG) given that that  
15 Trustpower, Contract Energy and Pioneer Energy hold either deemed permits or other water permits in relation to renewable energy generation;

f) Failure to implement the plan change has the potential to result in significant and irreversible changes to the environment;

20

g) The plan change is or is likely to be significant in terms of section 8 of the RMA given it is likely to be of high interest to Iwi because of the significance of freshwater management to Māori; and

25 h) The plan change will affect more than one district given that it will apply across the whole Otago region.

27 The Direction states that calling in PC7 as a part of a proposal of national significance and referring it to the Environment Court for decision would:

30

(a) assist the Council by allowing its staff to focus on developing the proposed Land and Water Regional Plan; and

(b) avoid potential delays associated with the Schedule 1 process of the RMA that could complicate the development of a new Land and Water Regional Plan.

5 Information that has been provided to Court by EPA

28 Where a matter has been called in and referred to the Environment Court for decision, obligations are placed on the EPA to provide certain information to the Environment Court.

10

29 In accordance with the Act, the EPA has provided to the Environment Court:

(a) The notified version of PC7;

15

(b) all information received by the EPA that relates to PC7, including the s32 report;

(c) the submissions received by the Council and the EPA on PC7; and

20

(d) a report prepared by the Council on the key issues in relation to PC7 (Key Issues Report).

Legal requirements under section 66 to 70, 77A, 77D

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30 The relevant legal requirements under section 66 to 70, 77A, 77D are set out in Appendix 1 for the Court's reference. I do not propose to take the Court through each of these requirements, but rather focus on the key tests at issue including the requirement to give effect to the NPSFM, the National Policy Statement for Renewable Electricity Generation 2011 (NPSREG) and the  
30 National Policy Statement for Urban Development 2020 (NPSUD).

31 I also address the principles of the Treaty of Waitangi.

32 I then go on to address the relevance of the Minister’s recommendation and the Skelton Report to the Court’s consideration/determination of the plan change.

5 Application of NPSFM to PC7

33 PC7 was publicly notified by the Council on 18 March 2020, re-notified by the EPA on 6 July 2020, and submissions were lodged when the NPSFM 2014 (amended 2017) was in force.

10

34 On 5 August 2020, the Government gazetted a number of documents as part of its ‘Action for healthy waterways package’, including the NPSFM 2020, which came into force on 3 September 2020 and replaced the NPSFM 2014 (amended 2017).

15

35 Clause 4.1 of the NPSFM 2020 provides that “[e]very local authority must give effect to this National Policy Statement as soon as reasonably practicable”. In accordance with section 80A of the RMA, the Council must notify a freshwater planning instrument, where that instrument has the purpose of giving effect to the NPSFM 2020, by 31 December 2024.

20

36 It is submitted that PC7 does not need to give full effect to the NPSFM 2020. Rather, the Council must give effect to the NPSFM 2020 as soon as is reasonably practicable.

25

37 The situation before this Court with respect to the introduction of the NPSFM 2020 ‘mid-process’, is not new, and has occurred before with previous iterations of the National Policy Statement for Freshwater Management.

30

38 In *Ngati Kahungunu Iwi Incorporated v Hawke’s Bay Regional Council* the Environment Court held that the applicable national policy statement in that case was the National Policy Statement for Freshwater Management 2014 (which came into force following the Council’s decision on proposed change 5

to the Hawke's Bay Regional Resource Management Plan, but prior to the Environment Court hearing the appeal on 3 and 4 December 2014):

[16] Since the Supreme Court judgement in EDS v NZ King Salmon Co Ltd [2014] NZRMA 195 there has been an increased awareness of the need to consider the hierarchy of planning documents, and the degree of control those documents have over the required or permissible contents of the documents ranking below them. Plainly, the senior document is the RMA, and immediately below that are the National Policy Statements (NPS). In this case, this is the NPSFM which came into force on 1 August 2014 and, with some transitional provisions, revoked the 2011 version from that date. ... (Emphasis added)

39 Similarly, in Hawke's Bay and Eastern Fish and Game Council v Hawke's Bay Regional Council the High Court considered the question of which freshwater policy statement ought to be given effect to, following an appeal and the referral of a provision back to the decision-maker for reconsideration (in this case a Board of Inquiry). The Court acknowledged that the effect of its direction for reconsideration meant that the Board of Inquiry would have given effect to the NPSFM 2011 in relation to most of the Plan Change, and to the NPSFM 2014 in relation to the specific issue referred back to it:

[183] As the Freshwater Policy Statement 2014 will be the operative Freshwater Policy Statement when the Board reconsiders Rule TT1(j), the Board should give effect to that policy. This approach:

25 (1) recognises that the Executive wants the Freshwater Policy Statement 2014 to be implemented as promptly as possible; and

(2) best reflects the requirements of s 67(3)(a) of the RMA which requires the Board to give effect to any national policy statement.

30 [184] Accordingly, the Board should, as part of its reconsideration of Rule TT1(j) invite the parties to make submissions on the meaning and effect of the Freshwater Policy Statement 2014. I appreciate that this direction will mean the Board will have given effect to the Freshwater Policy Statement 2011 in relation to those parts of its report that have not been challenged and give effect to

Freshwater Policy Statement 2014 when re-writing Rule TT1(j). This unfortunate but unavoidable consequence arises from the fact the appeal I have had to consider focuses primarily on Rule TT1(j).

(Emphasis added).

5

40 By contrast, in *Horticulture New Zealand v Manawatu-Wanganui Regional Council*, the High Court held that on appeal, the Environment Court was not obliged to give effect to the National Policy Statement for Freshwater Management 2011:

10

[98] It is convenient to start with Horticulture NZ's submission. Section 55 requires a local authority to make amendments to plans required to give effect to any provision in the NPSFM that affects a plan. Those amendments must be made either as soon as practicable, or within the time specified within the NPSFM (if applicable), or before the occurrence of any event specified in the statement. That provision is responsive to the NPSFM, as is s 65(3)(g) which provides that a regional council is to consider the desirability of preparing a regional plan when the implementation of a NPSFM arises, or is likely to arise.

15

20

[99] It is also important to bear in mind that the Environment Court's jurisdiction is functionally limited. It is confined by the scope of appeals, and in turn further limited by the scope of submissions and further submissions. I agree with Mr Maassen's submission that the Environment Court does not sit in an executive plan-making and plan-changing role. That is the local authority's role.

25

[100] In this case the NPSFM was gazetted only after appeals and s 274 notices had been filed. I consider that the Council (and the Court) was not obliged then to attempt to give effect to the NPSFM in the course of the appellate process. The NPSFM contains its own implementation timetable, including a series of default steps where it is impracticable to complete implementation of the policy fully by the end of 2014. I accept this is such a case. As the implementation guide associated with the NPSFM notes, "implementing the NPSFM will take time, will involve new approaches, and will not necessarily be achieved in one step".

30

[101] Policy E1 of the NPSFM anticipates decisions being made by regional councils. Implementation must be undertaken using the process in Sch 1.37 Notification and consultation is a key part of that process. There is no  
 5 justification for that to be short-circuited through a hurried implementation exercise in the course of a party-confined, and jurisdictionally confined, appellate process that commenced before the NPSFM was gazetted.

[102] I do not, therefore, find that the Environment Court erred in failing to  
 10 consider the extent to which the POP gave effect to the NPSFM in the paragraphs complained of. Implementation of the NPSFM will need to be addressed in accordance with its own terms, and under Sch 1, separately. Should the Council fail to give effect to the NPSFM, then the appellants may seek declaratory relief from the Environment Court under Pt 12 of the Act, or  
 15 seek judicial review in the High Court.  
 (Emphasis added)”

So in short, two contrasting approaches with respect to the High Court, which I will now go on to address in terms of which ought to be preferred by this Court.

20 **THE COURT: JUDGE BORTHWICK**

It’s funny because my margin note reads: “Are these cases actually contrasting?” I don’t know; I haven’t read them. I don’t know. It might actually turn on – it may be fact specific. So anyway, I’ll let you continue. I take it you’ve got a bundle of cases?

25 **MR MAW:**

Where did we get to with that? We have an electronic bundle given the size of it and we can make that available. And if there are some particular cases, we could have copies of those printed.

**THE COURT: JUDGE BORTHWICK**

30 Just those two –

**MR MAW:**

These two might –

**THE COURT: JUDGE BORTHWICK**

– just those two of particular notice, of interest. But anyway –

5 **MR MAW:**

Yes.

**THE COURT: JUDGE BORTHWICK**

– you tell me where you're going to go.

**MR MAW:**

10 Very good. So, in relation to the Environment Court's rationale for not  
 considering the evidence it had before it on the relevance of the new national  
 policy statement (which was upheld by the High Court on appeal) was that the  
 new national policy statement "only came into force long after the POP [being  
 the Proposed One Plan] was well advanced". Further, Kós J emphasised the  
 15 limited jurisdiction of the Environment Court and the fact that it does not sit in  
 an executive plan-making and plan-changing role.

1020

20 42 In my submission, the approach taken by the High Court in the first of  
 the two High Court cases is preferable and ought to be followed here.  
 The High Court's approach in that case best reflects the requirements of  
 s 67(3)(a) of the RMA, but is also more consistent with the purpose of  
 the Act, being to promote the sustainable management of natural and  
 physical resources. And further, in contrast to the second High Court  
 25 decision, this PC7 process is far less advanced than that process where  
 it had been on appeal and the referred back, this hearing being the first  
 hearing of submissions on this plan change, and I would say by contrast  
 here, the Court is sitting in an executive plan-making role with respect to  
 PC7, there having been no other decisions made on submissions to  
 30 date.

43 Accordingly, to the extent that there is scope to do so, this Court should  
strive to give effect to the NPSFM 2020. In saying that, it is important to  
acknowledge that the NPSFM 2020 is in many respects a significant departure  
from previous iterations of the national policy statement, particularly in respect  
5 of the manner by which the document is implemented.

44 However, the extent to which it is reasonably practicable for PC7 to give  
effect to the NPSFM 2020 is confined by both the limited scope/subject matter  
of PC7 and the scope in submissions. Council accepts that unless and until  
10 certain implementation steps have been followed, the NPSFM 2020 cannot be  
fully given effect to. Those implementation steps are set out in Part 3 of the  
NPSFM 2020 and involve comprehensive procedural requirements for regional  
councils when making decisions on how to give effect to that document. Many  
of these processes require substantial tangata whenua and community  
15 engagement by regional councils. Given the confines of the PC7 process, the  
implementation steps in Part 3 of the NPSFM 2020 are not directly relevant to  
the Court.

45 A key aspect of the NPSFM 2020, and a departure from the previous  
20 iterations, is the hierarchy of obligations set out in Objective 1 and required by  
Policy 1. One of the key changes in the NPSFM 2020 is the further elevation  
and articulation of the concept of Te Mana o te Wai. Te Mana o te Wai has the  
meaning set out in clause 1.3 and is described as a fundamental concept,  
encompassing six principles along with a hierarchy of obligations. The six key  
25 principles are first, mana whakahaere; kaitiakitanga; manaakitanga;  
governance; stewardship; and care and respect.

46 The hierarchy of obligations is enshrined in the only objective in the  
NPSFM 2020, which I have set out in paragraph 46.  
30

47 In addition to the articulation of Te Mana o te Wai in clause 1.3 and the  
objective, the Council must engage with communities and tangata whenua to  
determine how Te Mana o te Wai applies to water bodies and freshwater  
ecosystems in the region. Accordingly, while it is possible to initiate action



intended to give effect to the NPSFM, it is submitted that it is not possible to fully give effect to the true intent of the document until such time as the local approach to giving effect to Te Mana o te Wai (as required by clause 3.4) has been determined. This necessarily has a bearing on the extent to which PC7  
5 can give effect to the NPSFM, also acknowledging the scope constraints for these processes.

48 There are 15 policies in the NPSFM. It is submitted that PC7 is a step towards giving effect to the following policies, in so far as they are relevant.  
10 First. policy 1: Freshwater is managed in a way that gives effect to Te Mana o te Wai, noting the meaning given in clause 1.3. Policy 3: Freshwater is managed in an integrated way that considers the effects of the use and development of land on a whole-of-catchment basis, including the effects on receiving environments. Policy 7: The loss of river extent and values is avoided  
15 to the extent practicable. Policy 9: The habitats of indigenous freshwater species are protected. Policy 10: The habitat of trout and salmon is protected, insofar as this is consistent with Policy 9. And policy 11: Freshwater is allocated and used efficiently, all existing over-allocation is phased out, and future over-allocation is avoided. Now in relation to policy 11, I would note that PC7 goes  
20 some way to implementing that policy but it doesn't go so far as phasing out all existing over-allocation, given the process that needs to be followed to determine the appropriate level of allocation available for the freshwater resources and that process will follow as the implementation steps take place with respect to the new land and water regional plan.

25

49 PC7 is intended to provide an interim regulatory framework for the assessment of applications to renew deemed permits expiring in 2021 and any other water permits expiring prior to 31 December 2025, the date by which the new LWRP (which is being prepared to give effect to the NPSFM and scheduled  
30 to be notified by 31 December 2023) is expected to be operative." I'll just interpolate there, it may appear that a two year period is a relatively short period between notification and a plan becoming operative but that's a reflection of the new freshwater planning commission process as opposed to the current two

step process. It's anticipated that the time between notification and a plan being operative will be much shorter."

**THE COURT:**

5 So this plan will be referred to the commission?

**MR MAW:**

Correct. "The interim framework is important to ensure that the Council can implement the NPSFM-compliant provisions of its new LWRP in a timely  
10 manner, without being constrained by the allocation and taking of water under numerous water permits with long-term durations.

50 Ultimately, a decision-maker (in this case the Court) is required to give effect to the NPSFM 2020, to the extent that there is scope within submissions,  
15 noting the constraints of the confined nature of the PC7 and the subject matter therein.

51 As an interim framework, PC7 is not designed to fully give effect to the NPSFM. Rather, it seeks to ensure that the outcomes of the NOF process can  
20 be effectively implemented through the new RPS and LWRP."

I turn now to the NPS for renewable electricity generation.

52 "PC7 must also give effect to that policy statement to the extent that it is  
25 relevant. This national policy statement sets out the objective and policies for renewable electricity generation under the Act" and I've set out a relevant part from the preamble.

The relevance of that preamble was considered by the Court in *Carter Holt*  
30 *Harvey v Waikato Regional Council* and I've set out the relevant passage there. And the objective from that NPS is set out at paragraph 54.

"The NPSREG requires (amongst other matters) first for decision-makers shall recognise and provide for the national significance of renewable electricity

generation activities, including the national, regional and local benefits relevant to renewable electricity generation activities,” and that’s Policy A.

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5 “Decision-makers shall have particular regard to the maintenance of the generation output of existing renewable electricity generation activities can require protection of the assets, operational capacity and continued availability of the renewable energy resource,” and that’s Policy B.

10 And that regional policy statements and regional and district plans shall include objectives, policies, and methods (including rules within plans) to provide for the development, operation, maintenance, and upgrading of new and existing hydro-electricity generation activities to the extent applicable to the region or district set out in Policy E2.

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The requirement for decision-makers to have particular regard to the above matters, can be contrasted with the requirements in Policy A that decision makers shall recognise and provide for the national significance of renewable electricity generation activities and Policy D that decision-makers shall, to the extent reasonably possible, manage activities to avoid reverse sensitivity effects on consented and on existing renewable electricity generation activities.

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It is relevant to note that the NPSREG itself recognises the tension that can sometimes exist between renewable electricity generation and matters of national importance as set out in section 6 and other matters in section 7 of the Act.

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Given the wording of the NPSREG, particularly the terms "to recognise", "provide for" and "have particular regard to", it is considered that the NPS-REG, to which effect must be given, is not particularly prescriptive in managing this tension. Rather, the NPSREG is worded at a "higher level of abstraction" such that the Council has a greater degree of flexibility as to how it implements the NPSREG in its region than it would if the NPSREG was framed in a more

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specific and unqualified way. And I note there a passage from the Implementation Guide for that NPS-REG.”

5 In terms of the application of those provisions in the context of Trustpower’s submission, my flag that I do address that in relation to one of the issues to be determined further on in my submissions.”

The third NPS to give effect to insofar as it’s relevant is the NPS for urban development.

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“The NPSUD came into force on 20 August 2020, after PC7 was notified. A key objective of the NPSUD is that New Zealand has well-functioning urban environments that enable all people and their communities to provide for their social, economic, and cultural wellbeing, and for their health and safety, now and into the future. Part 4 of the NPSUD includes timeframes for implementation. Every tier 1, 2 and 3 local authority must amend its regional policy statement or district plan to give effect to the provisions of the NPSUD as soon as practicable. There are also timeframes within which tier 1 and 2 local authorities must comply with specific policies including those relating to intensification, the development of a future development strategy (FDS), Housing and Business Development Capacity Assessment (HBA) and carparking. Notably, there is no requirement to amend a regional plan.

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In relation to the NPSUD requirement for Councils to ensure that there is sufficient development capacity, it is noted that Schedule 10A.4 of PC7 only applies to the replacement of existing permits. If new permits are required to provide for growth, then these would be assessed under the rest of the Water Plan, but subject to Policy 10A.2.2 of PC7 requiring a consent duration of 6 years. It is submitted that a consent duration of 6 years would enable councils to meet their obligations under the NPSUD to ensure that there is adequate existing development infrastructure in the short term and would not impede their ability in the medium term to identify funding for infrastructure to support development of land identified in the long-term plan.”

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And again, on this issue, I address in the key issues part of my submissions, the relevance of this NPS to the submission lodged by the territorial authorities.

I now deal with the principles of the Treaty of Waitangi. “Section 8 of the RMA  
5 requires the Council to “take into account” the principles of the Treaty of Waitangi (Te Tiriti o Waitangi) when exercising functions and powers under the RMA in relation to managing the use, development and protection of natural and physical resources.

10 In cases under other legislation, the Courts have identified the following principles of the Treaty. The first, the two parties to the Treaty entered into a partnership, and therefore must act reasonably and honourably towards each other and in utmost good faith. The Crown must make informed decisions which will often require consultation. The Crown must not unreasonably  
15 impede its capacity to provide redress for proven grievances and the Crown must actively protect Māori interests.

The obligation to “take into account” is a requirement to weigh the principles of the Treaty with all other matters being considered and, in coming to a decision,  
20 effect a balance between the principles and all other matters. However, the principles do not necessarily prevail over the other matters that local authorities must “recognise and provide for” or “have regard to” under the Act.

Although the application of section 8 is fact-specific, the Courts have identified  
25 specific obligations for local authorities to enable active participation of Māori in dealing with resources of known or likely value to Māori; to engage with tangata whenua in good faith; to see mutual reciprocity and benefit, where possible; to endeavour to protect resources of importance to Māori from adverse effects; and to take positive action to protect tangata whenua interests, which will at  
30 times oblige councils to initiate, facilitate, and monitor consultation.

A detailed analysis of the principles of the Treaty and their application under section 8 of the Act is set out in Appendix H of Mr de Pelsemaeker’s Evidence in Chief. How the principles of the Treaty of Waitangi have been taken into

account in the development of PC7 is also set out in Mr de Pelsemaeker's Evidence in Chief at paragraphs [127] to [142].

5 As set out in the evidence of Kāi Tahu ki Otago, the ORC is now working in partnership with interested papatipu rūnanga to ensure that the new RPS and the new LWRP appropriately address cultural rights and interests and values. In the absence of PC7 there is a very real risk that the outcomes of that partnership approach will be frustrated by the granting of long-term water permits. The granting of long-term consents would foreclose the ability to  
10 change the status quo in freshwater management in the catchments that are dominated by the deemed permits for another generation.”

I move now to the relevance of the Minister's recommendations and the Skelton Report. “Section 24A of the RMA provides the Minister with the power  
15 to investigate and make a recommendation on a local authority's exercise or performance of any of its functions, powers or duties under the Act.

Pursuant to section 24A of the Act, the Minister engaged Professor Skelton to investigate whether the Council was adequately carrying out its functions in  
20 relation to freshwater management and the allocation of resources. Professor Skelton's report highlighted that one immediate issue facing the Council was developing a fit for purpose planning framework ahead of the expiry of deemed water permits on 1 October 2021. Professor Skelton considered that interim measures were necessary. He recommended, among  
25 other things, that the Minister initiate the necessary legislative process to change the date for expiry of the deemed permits in section 413(3) of the Act from 1 October 2021 to 31 December 2025. This, in his view, would ensure that the replacement consent applications are assessed against a robust policy framework.

30

The Minister considered that there was an urgent need to ensure that an interim framework is in place but was not in favour of changing the RMA to extend the date for expiry of the deemed permits. In response to Professor Skelton's recommendations, the Minister formally recommended under section 24A of

the RMA that the Council” and I’ve set out the relevant passage there. I’ve also set out at paragraph 72, in relation to his recommendation regarding an interim planning framework, that which the Minister also stated.

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“The Minister’s recommendations do not fall within the matters listed in section 66(1) of the RMA that the Court must act in accordance with when considering a change to a regional plan or the matters listed in section 66(2) that the Court must have regard to when considering a change to a regional plan. Therefore, the Court is not required to consider the Minister’s recommendations when considering PC7.

10

However, despite not being a mandatory consideration, it is submitted that the Court can, and should, have regard to the Minister’s recommendations when making a decision on PC7. It is well-established that section 66(2) of the Act does not create an exhaustive list of matters to be considered. The High Court has held that regard may be had to nonbinding national policy documents as relevant background material, even if those documents do not have any status under the RMA.

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The Minister’s recommendations are relevant background material to PC7 and should be given weight accordingly. The power of the Minister to investigate and provide recommendations to local authorities is an important component of the Minister’s function to ensure that the RMA is properly implemented. Although recommendations made by the Minister under section 24A of the RMA are not binding, they carry significant weight. Their importance is demonstrated by the consequences for a local authority if it does not act on a recommendation given by the Minister. In such circumstances, the Minister can appoint, on such terms and conditions as the Minister thinks fit, one or more persons to exercise of perform all or any of those functions or duties in place of the local authority or direct a regional council to prepare a regional plan, change to a regional plan or variation to a proposed regional plan to address the issue. The regional council must then act in accordance with this direction when preparing the relevant instrument.

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In the context of PC7, there is a close link between the Minister’s investigation into the Council’s performance of its freshwater management and resource allocation functions; the Minister’s recommendation that the Council prepare an interim plan change to provide a framework for the processing of water permits  
5 until the LWRP becomes operative; and thirdly, the Minister’s reasons for directing PC7 be called in and referred to the Environment Court for decision.

Given the close link between the Minister’s recommendations under section 24A and the Minister’s reasons for making the Direction, and the fact that the  
10 Court must have regard to those reasons when considering PC7, the Council submits that it is appropriate for the Court to place weight on the Skelton Report and Minister’s recommendations when considering PC7.”

I now turn to address the key issues for determination by this Court. “There are  
15 two overarching for the Court’s determination that have been raised in submissions and evidence filed on PC7. First, whether an interim planning framework is required; and secondly, if an interim planning framework is required, is PC7 the most appropriate option?

20 These two overarching questions give rise to several key issues for the Court’s determination. These issues are outlined below together with the Council’s position in respect of each issue. I acknowledge that this is not an exhaustive list and parties may frame the issues for determination differently.

25 Some parties disagree with the basis for PC7, including the findings of the Skelton Report and the need for the Minister’s recommendations and consider that there is no need for an interim framework. Other parties agree with the basis for PC7 but consider that it does not go far enough either in relation to providing a simple and cost-effective consenting pathway for consents with a  
30 short duration; or in terms of environmental protection.”

So dealing with the question of whether an interim planning framework is required. “In his Evidence in Chief, Mr de Pelsemaeker sets out five significant resource management issues that PC7 is seeking to address. Whilst each of



these issues are addressed in evidence of the parties and are therefore addressed below as topics, it is the combination of these issues that has given rise to the need for the Plan Change. Therefore, it is not necessary for the Court to make a determination on the presence or legitimacy or significance of each issue identified, but rather the question is whether there is an issue that needs to be resolved and can the current planning framework be relied upon to resolve that issue until a new LWRP is notified? Put another way, is a change required to the status quo in the interim?

10 So is there a resource management issue that needs to be resolved? The deficiencies in the current framework are discussed in the Key Issues Report, the Skelton Report and the evidence of Mr de Pelsemaeker, Ms Bartlett, Ms McIntyre and a number of other expert witnesses.

15 These deficiencies are well summarised in the evidence of Ms McIntyre where she considers that the Water Plan framework is inconsistent with the higher order direction for managing freshwater, or hampers the ability to give effect to that direction, in the following ways. First, it does not recognise and address over-allocation, and the approach to setting flow and allocation regimes is  
20 inadequate to protect instream values; second, there is an apparent priority for consumptive use over instream values, with only narrow provisions, in policies and rules, to consider the effects of abstraction on natural and cultural values; third, in consent decision-making, there is a strong focus on effects at the abstraction point and inadequate consideration of effects, including cumulative  
25 effects, on the broader freshwater system. Hydrological and ecological information is often inadequate to assess such broader effects; fourthly, policies incentivise increased use and increased dependence on water consumption; and fifthly. policy on consent duration gives inadequate direction and provides an expectation of long consent terms.

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There is an urgent need to develop a new freshwater planning framework to implement the new NPSFM. The outcomes of the NOF process will result in the setting of new environmental outcomes, the use of other or additional instruments and setting of new standards and limits to address these outcomes.

The replacement of 312 deemed permits and approximately 235 number of water permits expiring before that time, will take place before the new framework is in place. There is a history and expectation of long-term consents being granted under the Water Plan. Given the deficiencies in the Water Plan,  
5 it is the Council's position that the replacement of permits under the existing Water Plan framework is likely to frustrate achieving the environmental outcomes that will be set in the new LWRP in a timely manner.

Mr Ellison and Mr Whaanga consider that it would also undermine the  
10 rakatirataka and kaitiakitaka of Kāi Tahu by foreclosing the ability to change the status quo in freshwater management in the catchments that are dominated by the deemed permits for another generation.

The Council agrees with the position of Nga Rūnanga that it is important that  
15 long term decisions on the deemed permits are made in the context of a new planning framework that gives effect to the NPSFM rather than the existing one. This importance is also recognised in the submission and evidence on behalf of the Minister for the Environment.

20 If there is a resource management issue that needs to be resolved, the next question is can it be resolved under the existing framework? Several parties have raised the issue of whether an interim planning framework (as provided by PC7) is necessary on the basis that the current planning framework under the Water Plan can be relied on. This is in part because parties consider that  
25 until a new LWRP is developed, consent applications under the Water Plan should be assessed directly against the NPSFM under section 104(1)(b) and any concerns about "locking in" decisions for the life of the LWRP can also be addressed by reviewing resource consents.

30 In relation to the NPSFM, the Council must only have regard to any relevant provisions of the NPSFM when considering applications for resource consent under section 104 of the Act. By contrast, PC7 must give effect to the NPSFM.

The question of how much weight should be given to the objective and policies of the NPSFM will vary on an application by application basis. However, many of the policies in the NPSFM have more relevance to plan-making than resource consent applications, which will necessarily go to the weight that is ultimately placed on those policies when assessing a consent application.”

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**THE COURT:**

Can you just pause there a second? Why do you say that in your second sentence, paragraph 89 starting with “However”? I’m just struggling with the sentence, that’s all.

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**MR MAW:**

Oh right. So the submission that I make is that when you read the policies in the NPSMFM, they are more directed to a Council’s plan-making function in terms of the language used within them such that when considering by contrast, resource consent applications on a case by case basis, they are more difficult to apply. The concern then is that given decision makers in the context of resource consent applications only have to have regard to those policies, it’s somewhat easier to put them to one side or to perhaps apply less weight to those policies given the way in which they’re expressed.

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**THE COURT:**

Only have regard to under s 104?

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**MR MAW:**

Correct.

**THE COURT:**

141(c). Yep. And your question there is will it – it’s only to have regard to the provisions of the NPS on a case by case, on the resource consent application context. Where that policy hasn’t been articulated in a water plan or in the new land water plan, what then are the Council’s – what weight – what informs the

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outcomes what is left to be determined on the case by case or is uniformed by a regional plan of action, if you like, with the water plan?

**MR MAW:**

5 Yes.

**THE COURT:**

Unarticulated safe to the extent that the applicant may wish to articulate on a resource consent application?

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**MR MAW:**

Yes. So the translation of those policies into regional plans which are then applied in the consenting context where those policies are given their colour and their more direct meaning.

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**THE COURT:**

Okay.

**MR MAW:**

20 I think, picking up at paragraph 90: "When assessing a consent application under the Water Plan, regard will need to be given to the hierarchy of obligations in Objective 1 of the NPSFM and whether granting a particular application will prioritise first, the health and well-being of the relevant water bodies and freshwater ecosystems, second the health needs of people, and third the ability  
25 of people and communities to provide for their social, economic and cultural well-being, now and in the future. The objective of the NPSFM is not concerned with a single activity or waterbody, but rather with an integrated approach to freshwater management. The policies, in particular Policies 1, 3, 5 and 11, also support an integrated approach to freshwater management, rather than dealing  
30 with those issues on a consent by consent approach" for the reasons that we just expanded on. "It is submitted that this is likely to be difficult to determine on a case by case basis" as in a consent by consent basis.

In the absence of an NPSFM-compliant planning framework, it will be difficult to assess resource consent applications and how they might implement Te Mana o te Wai and the hierarchy of obligations in the Otago context.

5 Accordingly, it is submitted that reliance on an assessment of the objectives and policies of the NPSFM in resource consent application under the Water Plan does not impact the necessity for the interim framework set out in PC7.

10 Further, consent reviews under the Act are subject to a number of limitations. Section 128 of the Act enables the Council to initiate a review of consent conditions in specified circumstances, including for a purpose specified in a condition of consent, or where certain rules are made operative (ie, rules relating to maximum or minimum levels or flows or rates of use of water, or  
15 minimum standards of water quality, and in the Council's opinion it is appropriate to review the conditions of the permit in order to enable the levels, flows, rates or standards set by the rule to be met).

20 However, the exercise of a review power under section 128 does not allow the consent to be terminated, nor can amendments to consent conditions have the effect of preventing the activity for which the resource consent was granted in the first place.

25 Ms McIntyre agrees with Mr de Pelsemaecker that reliance on consent condition reviews will not be effective in making significant changes in freshwater management in catchments which, following the setting of limits, are found to be substantially over-allocated or where significant changes to minimum flows or other measures are required to give effect to the NPSFM.”

30 **THE COURT:**

Just pause there a second. I'll have to reread Ms McIntyre's evidence but presumably, she gives reasons for that at her paragraph 80?

**MR MAW:**

Yes.

**THE COURT:**

You are hoping.

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**MR MAW:**

Yes.

**THE COURT:**

10 Okay, just reminding you we'll take a break at 11 o'clock so perhaps if we finish at your last paragraph, make it 96?

**MR MAW:**

Yes. So a number of parties – so this is moving onto the balance of these  
 15 submissions if an interim planning framework is required, is PC7 the most appropriate option? “A number of parties support the need for and intent of PC7 in providing for a transitional framework until a new NPSFM-compliant / fit for purpose framework is developed. However, parties raise concerns about whether, as drafted, PC7 achieves that intent. Key issues raised are:  
 20 Is the controlled activity rule efficient and effective? Is the non-complying activity rule sufficiently robust? How should social and economic effects be weighed when considering PC7? Should there be a restriction on irrigation expansion? What should the data period be for calculating the rate of take and volume of water? How should the framework apply to hydroelectricity  
 25 generation? How should the framework apply to community water supplies? How should the framework apply to damming?”

Now, again I reiterate, that's not an exhaustive list of the issues but those having considered the evidence, cover the majority of what I consider to be the  
 30 significant issues. Other parties will continue to address or add issues to that list as this hearing develops.

**THE COURT:**

And in relation to these issues, are you – is that intended to cover the schedule as well?

**MR MAW:**

5 Yes, so I pick up – on the way through a number of these issues, dovetail them to the schedule itself so the schedule is relevant to probably half of the issues which are flagged on that list in terms of how the schedule actually deals with or accommodates particular activities.

10 **THE COURT:**

Because one of the issues, am I right in thinking one of the issues for the schedule is between parties on the schedule is how to clean up, if I can put it that way, clean up the data on the schedule in relation to the schedule.

15 **MR MAW:**

Yes, it is and it's so paragraph E there in terms of the data period, that could easily be brought into the data period and the quality of data. That is a live issue.

20 **THE COURT:**

Yes, yes, yes. It is, okay. All right. Well, we'll take a break for 15 minutes.

**COURT ADJOURNS: 11.00 AM**

25

**COURT RESUMES: 11.18 AM****MR MAW:**

5 So, before the tea adjournment, we had just outlined the key issues that are to be addressed in the balance of the submissions, and we worked through the list on paragraph 96. There is an additional issue that hasn't made it to that list, if I could just flag that now. So at paragraph 96, if you were to add in after the second issue, after the B issue, a B1 or a BA which is: "Should the needs of existing water users be recognised in PC7, and if so how."

10 So, the first of those issues that I addressed at my paragraph 97 is, is the controlled activity rule efficient and effective?

15 "97 The controlled activity pathway is designed to be an efficient and cost-effective option for applicants to continue their activities without exacerbating the effects on the environment until the new LWRP is in place.

20 98 Parties have raised concerns with the efficiency and effectiveness of the rule achieving this purpose and amendments are sought to enable a more cost-effective pathway. However, this must be weighed against the risk of further environmental degradation. The Council is open to amendments to the controlled activity rule provided those amendments better achieve all of the outcomes sought by PC7.

25 99 Some submitters also contend that the proposed controlled activity rule in PC7 has little utility due to the requirement to also obtain resource consent under the Water Plan (which is to be assessed as a restricted discretionary activity) and that most applications to replace deemed permits are expected to be lodged before the rules in PC7 become operative. However, it is submitted that the controlled activity rule for short duration replacement consents is  
30 efficient and appropriate.



100 PC7 is intended to provide an interim regulatory framework for the assessment of applications to renew deemed permits expiring in 2021 and any other water permits expiring prior to 31 December 2025.

5 101 The rules in PC7 took immediate legal effect on and from notification as they are rules that protect and relate to water. Rules with immediate legal effect must be complied with.

10 102 This means that on and from notification of PC7 (and until PC7 becomes operative), activities must be assessed under the rules in both the operative Otago regional plans and PC7. Activities may require consent under either the relevant operative plan, PC7, or both. Once PC7 becomes operative (and forms part of the Water Plan), activities will only need consent under the relevant operative provisions.

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103 Applications for water permits to replace deemed permits expiring in 2021 and any other water permits expiring prior to 31 December 2025 that are controlled activities under PC7 (i.e. they meet the relevant conditions, including that the application is for a short duration – no more than 6 years) may require  
20 consent under the Water Plan for a more stringent activity status.

104 It is anticipated that most applications for water permits to replace deemed permits (that generally expire in October 2021) will be lodged with the Council by 1 April 2021 (or 1 July at the latest). This is so that these consent  
25 holders can gain the protection of section 124 of the RMA, which provides that if a resource consent is due to expire and the consent holder applies for a new consent for the same activity at least 6 months before the expiry of the existing consent, that the holder may continue to operate under the existing consent until all appeals on the new consent are determined. If applications are lodged  
30 3 months before the expiry of the existing consent, it is within the council's discretion to allow the consent holder to continue to operate.

105 Accordingly, it is expected that most of the applications for the replacement of deemed permits will be lodged before PC7 becomes operative and will need resource consent under both the Water Plan and PC7.

5 106 Where resource consent is required under multiple plans, the most stringent activity classification applies to the processing of the consent application. This means that applications for a short duration consent that meet the controlled activity rule in PC7 but require consent for a more stringent activity status in the Water Plan, will ultimately be processed as the more  
10 stringent activity status.

107 Some submitters have raised this issue in evidence, and contend that this means the controlled activity rule in PC7 has little utility. However, PC7, and the controlled activity status afforded to the relevant application, will still be  
15 relevant to the decision on a consent application.

108 Section 104(1)(b) provides (relevantly):

(1) When considering an application for a resource consent and any  
20 submissions received, the consent authority must, subject to Part 2, have regard to:

(b) any relevant provisions of:

(vi) a plan or proposed plan

25 109 The test of "have regard to" in section 104(1) requires the decision maker to give the matters genuine attention and thought (but not necessarily accept them), and give them weight as is considered appropriate.

110 The question of weight to be given to the proposed objective and policies  
30 of PC7 and the operative objectives and policies of the Water Plan will ultimately be determined by the decision-maker on any consent application. However, there are a number of established principles that should be used as guidance when determining the weight to be given to the PC7 provisions.

111 There are two aspects to weight. First, the weight to be given to the provisions of PC7 and second, the weight (or strength of direction) of its individual provisions.

5 112 Relevant principles that apply to the weight to be given to proposed objectives and policies include:

(a) The Act does not accord proposed plans equal importance with operative plans, rather the importance of the proposed plan will depend on the extent to which it has proceeded through the objection and appeal process.

(b) The extent to which the provisions of a proposed plan are relevant should be considered on a case by case basis and might include:

(i) the extent (if any) to which the proposed measure might have been exposed to testing and independent decision-making (and the level of objection/challenge to the proposed provisions);

(ii) circumstances of injustice (including to the applicant and to parties opposing a proposal);

(iii) the extent to which a new measure, or the absence of one, might implement a coherent pattern of objectives and policies in a plan.

20 (c) In assessing the weight to be accorded to the provisions of a proposed plan each case should be considered on its merits. Where there had been a significant shift in Council policy and the new provisions accord with Part 2, the Court may give more weight to the proposed plan (particularly where the operative Plan was not prepared under the RMA).”

25

Perhaps if I can interpolate there. The situation here is that we’re dealing with a plan change which is amending a planning framework that doesn’t give effect to the current NPSFM, so my submission would be that additional weight should and can be applied in the same way as the earlier cases were providing greater weight to a proposed plan prepared once the RMA had been enacted compared to the plans in place pre the RMA.

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Now, I’ve set out the objective of plan change 7 in paragraph 113, and it’s important to note that the objective set out there is the notified version of the

objective. It should have been the objective as amended by Mr de Palsemaeker and by submissions in relation to it are referring to the objective as recommended to be amended. So, if you just note that that text should be replaced with the objective from the amendments from Mr de Palsemaeker.

5 1130

**MR BUNTING:**

Which one? Is it (inaudible 11:30:03)'s reply evidence, is that the one you're referring to?

**MR MAW:**

10 So paragraph 113, so it should be the objective that's captured in the document entitled: "Proposed and changed 7 water permits, recommended amendments marked in as at 19 February 2021.

**MR BUNTING:**

Thank you.

15 **MR MAW:**

And at, also incorporates corrections as at 4 March 2021.

114 "The objective is implemented by three policies." In relation to consent duration, Policy 10A.2.2 directs that, irrespective of any other policies in the  
20 Plan concerning consent duration, the Council shall only grant new resource consents for the take and use of water for a duration of no more than six years. Policy 10A.2.3 directs that irrespective of any other policies in the Plan concerning consent duration that the Council shall only grant new resource consents that replace deemed permits, or expiring water permits, for a duration  
25 of no more than six years, except in certain circumstances, a consent may be granted with an expiry date of no later than 31 December 2035.

115 The policies in PC7 are highly directive in their nature. It is well-established in case law that policies:

Expressed in more directive terms will carry greater weight than those expressed in less directive terms. Moreover, it may be that a policy is stated in such directive terms that the decision-maker has no option but to implement it.

5 116 Whilst PC7 is in the early stages of the plan-making process, it is submitted that greater weight can (and should) be given to it in decisions on consent applications as it represents a significant shift in Council policy and is a critical first step for the Council to develop an NPSFM- compliant framework and it introduces a coherent set of highly directive objectives and policies.

10

117 Further, applications for controlled activities must be granted. This signals the Council's policy intent that activities meeting the conditions of the proposed controlled activity rule are acceptable and appropriate, such that consent should be granted (subject to conditions).

15

118 Once the controlled activity rule in PC7 becomes operative, any applications that are still being processed (i.e., under both the Water Plan and PC7) will be assessed solely under the new operative rule. This means that the relevant applications will be decided as a controlled activity. Further, at that point in time (and once PC7 becomes operative in accordance with clause 20 of Schedule 1 of the RMA) any new applications will be a controlled activity (provided the relevant conditions are met).

20

119 Rule 10A.3.1.1 also applies to applications to replace existing water permits that expire prior to 31 December 2025. Such applications are likely to be lodged once PC7 is operative. It is submitted that controlled activity status is appropriate for these applications to incentivise short-term consents and ensure that the new NPSFM-compliant framework to be set out in the LWRP can be implemented by the Council.

25

30

Is the non-complying activity rule sufficiently robust?

120 Some submitters, including Kāi Tahu ki Otago, have sought to strengthen the non-complying activity rule framework. Ms McIntyre states in

her evidence that experience to date shows that the policy direction to avoid long-term consents is not strong enough to be effective. Amendments are sought to the non-complying activity policy to ensure that longer term consents do not become the default but are only granted where the outcomes will be consistent with achieving the purpose of the RMA.

121 Whilst the Council does not agree with the mechanism suggested by Ms McIntyre, it does see value in strengthening the policy to ensure framework to ensure that the non-complying activity rule will only apply in situations that “represent a “true exception””.

**THE COURT: JUDGE BORTHWICK**

Are you going to be talking about true exception?

**MR MAW:**

Yes we’ve had some discussions about that.

15 **THE COURT: JUDGE BORTHWICK**

I’m sure you have, so say I have that witnesses – I mean it would be unusual to have a policy that says you can have a non-compliant party. It’s in itself an unusual approach.

**MR MAW:**

20 Yes, when I, and I put to through exception in adverted commas there, the wording of the policy ought not refer to true exceptions per say, the policy needs to be more clear in terms of what it is seeking to achieve, a policy can’t and shouldn’t just be referring to true exceptions. So there’s, there’s a live issue as to how the policy could or should be strengthened in terms of adding to that and  
25 that’s something that I intend to explore with witnesses on the way through this process.

**THE COURT: JUDGE BORTHWICK**

Is it because the language of true exception may be confounding the issues that arise in relation to this particular policy as might also be inclusion of no

more than minor in the policy text itself also confounding what it is that they're actually trying to achieve here. Because ordinarily, non-complying activities, activities that are sitting outside, it you like, you know controlled, restricted, discretionary activities all those activities that are permitted. Now they may well  
5 be activities which effects are minor but they're generally sitting outside the provision for activities in policy, is that not right?

**MR MAW:**

That's correct.

**THE COURT: JUDGE BORTHWICK**

10 Yes. So there's two elements, there's the narrative of two exceptions is perhaps confounding parties and witnesses but also, what is this, is it appropriate in fact to have a policy that says: "We providing activities of no more than minor effect" and then you know you're going to have challenges with me in terms of what does that mean in a water context where the effects are often not manifest,  
15 either individually – generally they're not at manifest individually but manifest cumulatively over time and over space so what did that mean?

**MR MAW:**

Yes that will, that will develop on the way through.

**THE COURT: JUDGE BORTHWICK**

20 Okay so you're just saying, Council recognises there's a problem or potential problem and the solution, it hasn't come to but is going to be explored?

**MR MAW:**

Yes, yes and I think in terms of signalling at this point the Council's position, the Council's position is that they're non-complying activity policy needs to be  
25 strengthened to ensure that it's not readily available to applicants seeking to renew permits. The precise way in which that is articulated will need to develop.

**THE COURT: JUDGE BORTHWICK**

Yes and perhaps the question is whether you are actually having a policy for non-complying activities or more generally a policy which is implemented by a rule for non-complying activities. So in other words the policy itself is not a  
 5 policy for activities that are non-compliant so that is part of the language difficulty which is emerging in relation to that, particularly provision.

**MR MAW:**

Yes and the challenge of having a really directive policy in a situation where you're dealing with an, I was going to say a true exception but something that  
 10 you're not actually able or not able to prescribe in the policy and perhaps a shift that the policy needs to shift back into more of an outcome in terms of the outcome that its seeking to achieve rather than dealing with matters which might usefully be captured in the rule itself, so the balance between policy and rule is one which may be worthy of further consideration and you'll see the language  
 15 between the rule and the, that non-compliant policy there is quite some similarity there, there may be some benefit in stepping back and separating out again the outcome that that policy is driving at, ensuring that the rule is sufficiently clear about, about how it's achieving that outcome.

**THE COURT: JUDGE BORTHWICK**

20 Yes. That might be – okay, all right.

“How should social and economic effects be weighed when considering PC7?”

122 Various submitters have expressed concerns about the impacts of PC7  
 25 on the well-being of rural communities and the inequity caused by PC7. Concerns are also expressed about the uncertainty that PC7 creates for future productivity and investment. The Council acknowledges those concerns.

123 The RMA and the NPSFM, seek to manage resources in a way which  
 30 enables people and communities to provide for their social, economic and cultural wellbeing. However, this is not regardless of ecological considerations.



This is illustrated by the wording of Part 2 of the RMA and the hierarchy of obligations in the NPSFM.

124 As set out in the evidence in reply of Mr de Pelsemaeker, one of the  
 5 intentions of PC7 is to caution against further investment in water use until an  
 NPSFM-compliant freshwater regime has been established under the new  
 LWRP, thereby reducing the potential economic impacts of transitioning to this  
 regime. This is to ensure that:

1140

10 (a) People will not overinvest without long term certainty around water  
 availability; and

(b) Investments, that would otherwise be made between now and the new  
 LWRP coming into force, will not become redundant.

15 Should the needs of existing water users be recognised in PC7, and if so, how?

125 A common theme in the evidence of some parties is that PC7 does not  
 give sufficient recognition to the water needs of existing water users. In their  
 view, the quantities of water allocated in replacement consents should be based  
 20 on alternative methodologies that calculate reasonable water needs for efficient  
 use. A number of alternative approaches are proposed including the use of:

(a) the Aqualinc Guidelines for Reasonable Irrigation Water Requirements  
 in the Otago Region (2017) ;

25

(b) the reasonable use test set out in Schedule 10 in the Canterbury Land  
 and Water Regional Plan ;

(c) methodologies that determine volumes based on existing infrastructure  
 30 and provide for sufficient water during dry season ; and

(d) methodologies that calculate the Rate of Take Limit and Monthly and  
 Annual Volume Limits for allocating water in replacement consents by

considering both historic water take data and models for estimating reasonable and efficient use .

126 As set out in the evidence of Mr de Pelsemaeker, the Aqualinc  
5 Guidelines and Schedule 10 of the CLWRP can result in different outcomes in terms of their effect on catchment-scale allocation and source water body (or downstream bodies). Methodologies that set allocation rates and volumes based on reasonable and efficient use (ie, irrigation needs or water demand) could in some instances result in allocated rates of take or volumes that are  
10 higher than the rates of take or volumes of take historically recorded.

127 Further, methodologies for calculating the consented rate of take and volumes using historic water take data of “reasonably good quality” is generally less complex and more cost-effective than applying methodologies for  
15 estimating reasonable and efficient use based on irrigation demand.

128 The Council does not support amending Schedule 10A.4 and replacing the proposed methodologies with methodologies calculating reasonable and efficient use based on irrigation needs or water demand, as the Schedule 10A.4  
20 methodologies for calculating the Rate of Take Limit and Monthly and Annual Volume Limits allocated in new consents based on historic use data, better achieves the following outcomes that support the short-term, interim nature of PC7:

25 (a) Providing plan users with methodologies that are based on clear procedures and standards that are simple to apply and not open for interpretation, allowing a lower cost for processing applications for resource consent;

30 (b) Avoiding further increase in water abstraction (compared to historic use);  
and

(c) Avoiding the reallocation of unused allocation.

129 The Council is however, open to further discussion between experts on how the Schedule 10A.4 methodologies may be refined and improved in order to achieve the outcomes in paragraph 128 above.”

5 Whilst I flag that I come on to deal with the date range for data later on in the submissions, the Council and its witnesses are open to engaging in the expert conferencing in relation to schedule 10A.4. A number of issues have been raised in evidence that would benefit from conferencing of those experts, but through the lens of the outcomes that the plan change is seeking to achieve.

## 10 **THE COURT: JUDGE BORTHWICK**

The evidence is going to be taken as read and particularly in relation to the first three weeks of this hearing, the evidence has been read and I have dived into other evidence for the common stages of hearing there would be, it is not clear to me yet whether or not the Regional Council is saying that the Aqualinc guidelines are relevant. I understood, and I have forgotten the name of your witness, I'm sorry, it's either Mr Wilson or – Mr Lesley. Mr Lesley. There are three pillars. I'm going to read (inaudible 11:44:38), the applicant's evidence, the schedule at PC7, and also the Aqualinc methodology. So, it seemed to me that he thought Aqualinc methodology was a relevant consideration but it is not actually there in the plan change, so I'm not sure whether that was important or not. What its status is, or whether that's actually part of the underlying concern by parties, is that well here is a relevant consideration, but it is not one which is formally actually in the plan change so therefore the status will wait to be accorded to it is unclear and that's, you know, that uncertainty is driving, if you like, some of the submissions. I'd just like a response on that.

## **MR MAW:**

Yeah, so the Aqualinc guidelines are not part of the methodology set out in the plan, and conceptually, the methodology should be seen as the gateway into the controlled activity role in the sense that if you put the data of historic use into the or through the method and the methodology, it will produce a series of rates, annual volumes, et cetera. So that's the entry condition, one of the entry conditions into the rule. There are then a number of matters to which the

Council has reserved its control and one of those matters is the efficiency of use. So, as I understand matters, when it comes then to considering the utility of or the appropriateness of the conditions of consent, when the consent's being processed, the question of efficiency of use and demand will be considered at that point. So it's not being considered as an entry condition, it's something which sits down in terms of one of the matters to which Council has control. But it's not prescribing and the plan change, precisely how that matter of control was going to be implemented on the consent by consent basis. 'Cos that will depend on the applications that are being put forward.

10 **THE COURT: JUDGE BORTHWICK**

Do we actually have the Aqualinc methodology tabled in evidence?

**MR MAW:**

That is a good question.

**THE COURT: JUDGE BORTHWICK**

15 It is a good question. We've received at least 2,000 pages of evidence together with 2,000 plus other pages of documentation so you'll forgive me if I say I don't know where to lay my hands on it if in fact it's actually there.

**MR MAW:**

20 I'll have to come back to you on whether it's in the bundle at this point or – no, it's not in the Common Bundle. Whether it's attached to anybody's evidence, I can't answer that question for now.

**THE COURT: JUDGE BORTHWICK**

25 Well I'm just flagging that as an early issue, isn't it? Because everybody's interested in the Aqualinc guidelines in that you all know about it. And so that will be of importance when you come to frame your questions and cross-examinations.

**MR MAW:**

It's possible.

**MR PAGE:**

(inaudible 11:47:44).

**MR MAW:**

Page 23, CB1640.

5 **THE COURT: JUDGE BORTHWICK**

And presumably, it's flagged as a document in the memorandum provided by yourself, Regional Council, or by Mr Page as a document which is discussed in evidence.

**MR MAW:**

10 Ms Mehlhopt can helpfully address you on that.

**THE COURT: JUDGE BORTHWICK**

Ms Mehlhopt?

**MS MEHLHOPT:**

15 My understanding, your Honour, is that there was a request from another party to have that included in the common bundle. I can't, sorry, I can't recall the party.

**THE COURT: JUDGE BORTHWICK**

But that, I think your submission is that that guideline may increase, may decrease the application rate and volume, is that right?

20 **MR MAW:**

Yes, but within the, in the context of the controlled activity pathway, below the limits that are set by the methodology processing historic use data.

**THE COURT: JUDGE BORTHWICK**

25 So, if their methodology results in an uplift or an increase in the rate or the volume which has been sought in terms of the application, that wouldn't be available or open to the consent authority to impose it as a condition, is that what you're saying?

**MR MAW:**

Correct, it wouldn't be available to increase. It could be a tool that the Council uses to decrease allocation below that, which the methodology calculates.

5 All right, onto the next topic, and that is:

“Should there be a restriction on irrigation expansion?”

130 Some submitters have raised concerns about the restrictions proposed  
10 with respect to the expansion of irrigation area.

131 Mr de Pelsemaeker addresses this in his evidence in chief and evidence  
in reply. He recommends amendments to Policy 10A.2.1 and a new restricted  
discretionary activity to enable irrigation expansion where investments were  
15 made in infrastructure prior to the notification of PC7.

132 The Council's position remains that it is appropriate for these restrictions  
on the expansion in irrigation to remain in all other circumstances. In particular:  
1150

20 (a) Any efficiency gains associated with infrastructure upgrades should, as  
a first priority, return that water to the waterbody;

(b) There remains a risk of water quality degradation from increased nutrient  
losses associated with irrigation; and

25

(c) Further investment in irrigation expansion is likely to increase the  
financial and economic risk for water users, especially in catchments where  
there may be a need to reduce allocation or water use or achieve a reduction  
in contaminant losses in the future.

30

What should the data period be for calculating the rate of take and volume of  
water?

133 Some submitters have raised concerns with the date range for data used to calculate the rate of take and volume of water for replacement consents.

134 The Council has recommended some amendments to Schedule 10A.4  
5 with respect to these dates and has sought to align the date range with the requirements to meter water takes pursuant to the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 (amended 2020).” And that is an issue addressed in the Council evidence in terms of the appropriateness of the various date ranges.

10

How should the framework apply to hydroelectricity generation?

135 Trustpower is seeking amendments to PC7 for hydro-electricity generation activities on the basis that the proposed rule framework does not give effect to the NPS-REG (among other things).

15

136 As set out in the Mr de Pelsemaeker’s reply evidence , exempting hydroelectricity generation activities from PC7 altogether is not appropriate because:

20 (a) Hydroelectricity generation schemes can involve a variety of activities including impoundment, diversions, takes and discharges of water, some of which may have a significant impact on the source water body from a hydrological and ecological perspective (due to the scale of the take) and a cultural perspective (i.e. the transfer of water from one catchment to another).

25

(b) There is a need to take a longer-term perspective on the impacts of climate change on freshwater bodies; and

30 (c) The need to ensure that hydro-electricity generation schemes will make the transition towards the freshwater management regime established under the new LWRP in a timely manner.

137 Mr de Pelsemaeker acknowledges the NPSREG and considers that further relief for hydroelectricity generation within the PC7 framework may be

appropriate if it were to be demonstrated that the application of Schedule 10A.4 would significantly impact on the continued operation and viability of hydroelectricity generation schemes.

How should the framework apply to community water supplies?

5

138 The territorial local authorities seek that PC7 is amended to either:

(a) Make better provision for community water supply takes within the framework of PC7 (option 1); or

10 (b) exempt water takes that are required for community water supplies from the PC7 framework altogether and continue to manage these under the existing Water Plan framework (option 2).

139 Ms Kohere and Mr Ensor for the Minister for the Environment support a  
15 carefully qualified exemption from strict consent durations for drinking water supplies through amendment to proposed Policy 10A.2.3.

140 The Council does not support the exemption of community water supply  
20 takes from PC7. However, there may be merit in making better provisions for community water supply takes within the PC7 framework.

141 The health needs of people (such as drinking water) is a second priority  
25 in the NPSFM hierarchy of obligations. However, these takes must still be managed in a way that provides for the health and well-being of water bodies and freshwater ecosystems. Further, community water supplies do not only supply water for human consumption and sanitation, but also for a wider range of other purposes such as rural and stock purposes, irrigation, watering of gardens and car washing. Evidence from the territorial authorities suggests that these uses cannot be separated.

30

142 It is submitted that it is appropriate that community water supplies are included within the PC7 framework as this will provide the best way forward to ensure a freshwater management regime that ensures Te Mana o Te Wai is achieved in a timely and efficient manner. However, Mr de Pelsemaeker has



noted that the application of Schedule 10A.4 to drinking water supplies could be considered.”

**THE COURT: JUDGE BORTHWICK**

You mean could be considered or needs further consideration?

5 **MR MAW:**

Needs further consideration would better capture it, yes. He’s open to improving the schedule to capture community drinking water supplies.

**THE COURT: JUDGE BORTHWICK**

10 Yes, and then you’ve got that technical question of where you’ve got (inaudible 11:55:14) infrastructure which is providing an array of uses –

**MR MAW:**

Yes.

**THE COURT: JUDGE BORTHWICK**

– one of which is drink-water, yes.

15 **MR MAW:**

And that is the key reason why those takes do need to be captured by the PC7 framework, just given the breadth of uses that are taking place.

How should the framework apply to damming?

20 143 PC7 captures damming activities authorised by a deemed permit. The damming of water is often likely to cause hydrological alteration with impacts on downstream water bodies, water quality and a range of values, including recreational, ecological, landscape and cultural values.

25 144 Due to the scale of effects caused by damming activities and in light of the direction set in the NPSFM, the Council does not support exempting damming activities from the PC7 framework or providing for longer consent terms for these activities. Managing the replacement consents for these activities within the framework proposed under PC7 and only granting a consent

for a short duration will allow for these activities to be reassessed under the new LWRP framework.”

**THE COURT: JUDGE BORTHWICK**

5 So one of the issues with the dams is consent to take water or to dam and impound the water. The other issue is the renewal of ageing infrastructure and that’s where the tension arises, is that right?

**MR MAW:**

10 It does. There’s a live issue in terms of the question of whether a long-term permit is required in order to ensure necessary financial investment in the infrastructure, to ensure that it’s able to be operated safely into the future.

**THE COURT: JUDGE BORTHWICK**

Yes.

**MR MAW:**

15 That is something I wish to explore with some of the witnesses on the way through.

**THE COURT:**

Yes.

**MR MAW:**

20 But the Council’s position is that because of the effect of dams on a waterway and the significant effect they have in terms of altering the hydrological setting, they do play a significant role in setting a flow and allocation regime. If dams are consented for a significantly longer period of time, the variability for Council then to adjust or alter the flow regime through its new water and land plan may be compromised or frustrated, and that is the key concern in terms of the impact  
25 of long-term consents for damming.

**THE COURT: JUDGE BORTHWICK**

And here you're not talking about dams which might be associated with hydroelectricity. Well you may be, I'm not sure.

**MR MAW:**

5 It's capturing all dams.

**THE COURT: JUDGE BORTHWICK**

Capturing all dams, including those dams being used by a primary sector to impound water for irrigation and (inaudible 11:58:00) purposes, is that correct?

**MR MAW:**

10 Yes.

**THE COURT: JUDGE BORTHWICK**

And those structures, physical structure, that's a (inaudible 11:58:06), is that right?

**MR MAW:**

15 It depends where it is. So whether it's an in-stream or an off-channel dam, it would be a different set of consent requirements. But insofar as the damming is captured, it's the dams covered by the deemed permits. I'll just check that I've got that right – yes it is. So it's not... There are number of deemed permits that authorise the dam that are damming permits. It's the replacement of those  
20 permits that this plan change seeks to capture by this six-year consent limit.

**THE COURT: JUDGE BORTHWICK**

Your previous comment as to: "It depends on where it is, on the bed of a river or not," –

**MR MAW:**

25 Yes, I –

**THE COURT: JUDGE BORTHWICK**

– that's for land use consent, or something else?

**MR MAW:**

– in the bed of the river it would be a section 13. Use of the bed of the river, that's a land use permit, yes.

**THE COURT: JUDGE BORTHWICK**

5 That's a land use permit?

**MR MAW:**

Yes.

**THE COURT: JUDGE BORTHWICK**

Okay. Yes.

10 **MR MAW:**

Getting there.

**THE COURT: JUDGE BORTHWICK**

And so there will be permits issued under section 13 for the physical infrastructure for the dam, correct?

15 **MR MAW:**

Yes.

**THE COURT: JUDGE BORTHWICK**

Which won't have a time duration, or may have a time duration?

**MR MAW:**

20 Those in the – I think damming is one of the restricted 35-year –

**THE COURT: JUDGE BORTHWICK**

135 year?

**MR MAW:**

Yes.

**THE COURT: JUDGE BORTHWICK**

And so is part of the issue – and it may not be but in terms of those mining licences now deemed permits, you’ve got the physical infrastructure itself has been authorised – what, under the mining permit, or...?

**5 MR MAW:**

Yes, although there will be some interplay with the Building Act in terms of whether they also require a building consent as being a large dam or not. So it’s going to be dam-specific, and that’s one of the issues that I’ll flag, I’ll be looking to explore with witnesses in terms of that interplay.

10 1200

**THE COURT: JUDGE BORTHWICK**

Yes, okay, well I’m flagging it too, then. The interplay between the Building Act, other regulations which govern the safety and lifespan of each of the physical infrastructure together with the water permit is something that we’re interested  
15 in. Undoubtedly, it will be explored by witnesses and other parties in cross

**MR MAW:**

Yes, well hopefully by the end of the hearing we will have some further clarity. Right, so those were the issues that I’ve flagged in opening, and I just reiterate there will be other issues on the way through. So parties should be welcome  
20 to frame the issues in their openings as they see relevant to their cases. Finally, I touch on the evidence that the Council will be calling in support of the plan change, of which there will be seven witnesses.

“145 The Council will call seven witnesses to give evidence in this hearing:  
25

(a) Roderick Henderson, providing expert evidence in relation to hydrology in the Otago region.

(b) Dr Richard Allibone, providing expert evidence in relation to native freshwater fish fauna in the Otago region.

(c) Dr Antonius Snelder, providing expert water quality evidence in relation to the “State of Lake and River Quality in the Otago Region” report prepared by Land Water People Limited.

5 (d) Dr Julie Everett-Hincks, providing evidence in relation to the Council’s science work programme between the release of the results of the investigation of Professor Peter Skelton into the Council’s use of its freshwater management functions and the upcoming notification of the new LWRP.

(e) Simon Wilson, providing expert evidence in relation to the methodology contained in Schedule 10A.4 of PC7.

10 (f) Sean Leslie, providing expert evidence in relation to the methodology used to calculate water use and water permit limits when processing applications under the Water Plan, and the proposed methodology under Schedule 10A.4 of PC7.

(g) Tom De Pelsemaeker, providing expert planning evidence.”

15

So, it just set out to flag the appendix to the submissions, just contains the legal framework within which the regional plan is to operate in. I don’t intend to take you through that. That’s just the, describe as the standard framework applying to a regional plan. I’ve highlighted the difference here given that we’re dealing with a call in earlier in my submissions. So those are my submissions, may it please the Court. I’m happy to answer any questions if...

20

### **THE COURT: JUDGE BORTHWICK**

Just have a seat, and I will just race through any notes I have made. So as I indicated, you know, thousands of pages of evidence plus other documentation are either attached to the evidence and/or attached to the Common Bundle. The Court has particularly focussed its (inaudible 12:04:44) these three weeks. So, just by way of a broad comment, don’t expect the Court to know your case, counsel, as you might know your case. It would be unreasonable for it to have that expectation of the Court. And assist the Court when putting questions in cross-examination by directing the Court to obviously the appropriate pages. But if we’ve not picked up anything accurately or are yet to understand the point that is made, is being made, be patient. There are thousands of pages of document which the parties have asked us to look at. But what is of news of

30

me, rather short plan change. There's not much to it, but it has generated large debate. So, be patient is the first point. Second point is that some of the witnesses, well, they like numbers and so it will be really interesting to – it will be important for counsel to think about cross-examination for witnesses whose evidence is based on numbers. So, Mr Leslie, Mr Wilson, Mr (inaudible 12:05:59) are examples of witnesses whose evidence is largely numeric. How are you going to put yourself on a platform or on a level platform of play that the Court can follow the direction of travel, particularly where the witnesses are not necessarily looking at the same data set or the same case examples. Again, I flag it for your consideration, probably as something that you actually need to be talking about before yourself before you get into cross-examination. Otherwise, you lose the impact of your cross-examination. So bear those two things in mind. I certainly think that's something you can co-operate over.

**THE COURT: JUDGE BORTHWICK TO MR MAW:**

15 Q. I did have a couple of questions, though. Paragraph 94 page 30, you are addressing section 128. You are also addressing it at paragraph 93, so paragraphs 93 and 94. And a concern held by the regional concern is over the effectiveness of a review under section 128. You note there it doesn't allow the consent to be terminated and nor can the amendments to consent conditions have the effect of preventing the activity for which the resource consent was granted in the first case. The question that I have for you is, what impact if any can a review have on the reliability or efficiency of irrigation infrastructure in particular?

20 A. Yeah, so section 131 of the Act picks up the relevant consideration of the effects on the viability of the activity, so any effects on efficiency, on the reliability of, in this context, water for irrigation would get picked up when considering the viability of the activity. And the way that the argument has typically unfolded in relation to consent reviews is that whilst you may have a plan which has set some new limits, so a new flow regime comes in, the Council then tries to review the conditions of the permit to impose that new flow regime and the argument often put forward by abstractors is that the new flow regime will affect the viability of the activity for which consent is granted in terms of the reliability of water supply, and that's a

relevant matter that needs to be taken into account. And that can be an impediment to a new flow regime coming down into the conditions of a consent. It's relevant through, through section 131 and the viability.

5 Q. Thank you. I had a question of clarification at your paragraph 125, page 37. And sub-paragraph D. And you have probably already touched upon that, but your methodology that you're referring to in PC7 for calculating the rate of taking the monthly and the volumes are looking at historic water, but they're not necessarily looking at the methodology and schedule is not looking at the reasonable and efficient use, but is a matter  
10 which is relevant in terms of the matters for which the Council is exercising control?

1210

A. Yes.

Q. Okay.

15 A. So it's not an entry condition it's the –

Q. Not an entry, okay.

A. We like to it an exit condition but it's a condition of a matter of control.

Q. Understood. And I suppose by way of just a general comment on your paragraph 119 in here you're talking about the incentive of, how to  
20 incentivise short term consents. To put it in layman's terms, that controlled activity role, that's a lever isn't it? It's what some of the levers that one can exercise in a plan context to bring about behavioural change sometimes or to bring about goals or an objective and here it's possibly both certainty the goal and the objectives will have short term consents  
25 by making it attractive to apply for the controlled activity.

A. Yes, the intention is to provide certainty that the outcome of applying for a controlled activity will be precisely or understanding what's going to come out of that process in the context of a controlled activity are guaranteed that a consent will be granted in contrast with other activity  
30 statuses.

Q. So there's a – it's proven not effect to date because we've got an operative plan which has an IDA rule and a discretionary activity rule which has, undermined might be the right word, undermined it's effectiveness of the controlled activity rule, people are just simply given



all of that and the water plan are just simply applying for a non-compliant activity, that would be right?

A. Yes so there's two things going on there, one is the effect of two planning regimes, ones a plan change at the moment and there's just no way around that. We've looked long and hard at that but from a plan change perspective it is what it is. The second issue is the strength of non-compliant activity policy and whether that's seen at the moment to be not at the, not pitched at the right level because of the applicants that are coming in, that can seep into, to achieve the longer-term permit.

10 Q. Yes.

A. So again, it's –

15 Q. And so in terms of that lever analogy, it's whether or not you have sufficiently incentivised the controlled activity rule and disincentivised going for something outside of the controlled activity rule and that's also where debate is?

A. Yes and of course the minister is still pursuing a prohibited activity in terms of the second of those levers so in the sense that there's two elements, there's the control – there's the incentive and the disincentive of the carrot and the stick, in a sense.

20 Q. Okay, all right. I thought the minister might get back from that but I might have – You have stepped back from that?

**MR BUNTING:**

Yes.

**THE COURT JUDGE BORTHWICK TO MR MAW:**

25 Q. I thought so. I was thinking I must have picked that up wrong in the 2,000 pages of evidence, but yes he has. But certainly has, understandably as the minister of planning the case is to think of the level of disincentive going down that route and that's the lever analogy again.

A. Yes.

**CROSS-EXAMINATION: MR BUNTING**

Q. I've got just one or two, if I may. We were provided I think towards the end of last week there was a deemed permit status, a spreadsheet showing where applications have been made or that are waiting application. Is it possible to get any indication from those that have been made as to what terms are being sought, to give us some idea of those? You probably can't answer that question now I know that but –

A. No I can't ask it right now but I could perhaps have one of the Council witnesses provide an answer to that question, I would suggest tomorrow, when (inaudible 12:14:12), so I'll flag that as something –

**THE COURT: JUDGE BORTHWICK**

Q. I know your planning witness had some statistics but undoubtedly the updated –

A. Yes.

Q. – was a month ago.

A. Yes.

**CROSS-EXAMINATION CONTINUES: MR BUNTING**

Q. Para 113, if I can find that. Yes, about the objective. You said the objectives been amended now by Mr de Pelsemaeker, can you just talk to how the notified objective relates to this now in terms of where we're at?

A. So the notified objective is not relevant for the purposes of my submissions so the text in my paragraph 113, the quoted text should simply be struck out and replaced with the objective. Let me just... It should be replaced with the wording in the new –

1215

Q. In the new, in the replacement one, yes.

**THE COURT: JUDGE BORTHWICK**

There's no – I don't think any parties actually or submit as actually wanting that original objective.

**MR MAW:**

Not that we can recall.

**THE COURT: JUDGE BORTHWICK**

Right. What do you mean, in terms of that it's still at the Court to go –

5 **MR MAW:**

Yes, yes.

**THE COURT: JUDGE BORTHWICK**

So the question from the Commission is whether it's open to the Court to endorse the objective as notified, as it was (inaudible 12:15:46).

10 **MR MAW:**

I think it, it would be open, if you were, in terms of the scope. The scope is the bookends between what was notified, and the changes sought by submitters, it would need to be an evidential foundation in support of retaining the notified version which of course there is assessment through the section 32 et cetera.

15 But from a jurisdictional perspective, there would be scope to retain.

**CROSS-EXAMINATION CONTINUES: MR BUNTING**

Q. But the Council's position, it's the amended one that is now at play?

A. Yes, the Council's position is the amended version of the objective is the version that it is pursuing.

20 Q. My next question really related to the three matters that Mr de Palsemaeker said he was open to further consider, I think to do with electricity generation, community water supplies and dams. How is it – does he have any idea, do you know, how you might progress such discussions?

25 A. He considered those issues when he prepared his reply evidence and was not persuaded that there was an answer immediately available from that evidence. He wanted to hear that evidence and hear responses to questions both from the Court and under cross-examination in order to assist whether there was a drafting solution that he might then be able to

proffer to the Court in terms of some further reply evidence, which has been signalled in the last week of the hearing in terms of the response to matters as they arise through the case. The purpose or the reason I've flagged within the opening submissions that there are I think three of these issues is to signal to other parties that insofar as they have drafting solutions that might address those issues, they should come forth and share those solutions as soon as possible. And it may play out through the cross-examination of Mr de Palsemaeker as well.

5

Q. And my last question related, her Honour raised a point when you talked about the dates of the assessment of the data.

10

A. Yes.

Q. Was the actual interpretation of the data, which seems to be quite a major issue between some of the technical experts. So that presumably is an issue that should be on the table as well?

15

A. Yeah, it is a live issue and it's captured in the list of topics for the expert witness conferencing noting the comments from the Court in relation to the specificity or otherwise of those topics. But the – and you will have see, if you've had a chance to read some of the hydrological evidence, there is a live issue in terms of how what I'd describe as atypical data might be used within the methodology. So the Council's approach is that the atypical data, so spikes above consented levels, above a margin of error for example, simply get removed from the data set. Other hydrologists have a different view as to whether that data should be otherwise modified and included or excluded. To me, that's a matter which would benefit from some caucusing amongst those witnesses.

20

25

Q. So the plan change as drafted doesn't seem to address that issues. It seems to be a pretty key issue? Maybe it does in terms of the, what needs to be considered, but in terms of the approach that might be adopted in terms of data interpretation?

30

A. Yeah, the methods –

Q. User percentiles and that sort of thing, which seems to be what happened now.

A. Yeah, the methodology should be addressing what's happening with that data being removed, so the methodology is saying it, as currently drafted,

that rates will take above the thresholds is removed from the data set. One of the competing cases recommends some adjustments to the methodology to include that data, but to adjust it in a different way. So, it is a live issue and in terms of the Council's position, it is seeking to achieve the methodology that is able to generate an output that is objectively ascertainable each and every time the model or the method is run. So the – one of the challenges in terms of what to do with atypical data is one of subjective interpretation and that's perhaps the very thing the Council is seeking to avoid in terms of the methodology that it is putting forward.

1220

Q. So that is something that the experts could discuss further at the conference?

A. Yes.

15 Q. And try and reach some understanding?

A. Yes, and insofar as the outputs of that can be run in an objective way, then that's certainly something that the Council's open to considering in terms of refining the schedule to make best use of the data that is available.

20 **THE COURT: JUDGE BORTHWICK**

Well, those are the questions from the Court. Thank you for your submissions and we are ready now to proceed to your first witness, but I suggest we take the luncheon break before we do.

**COURT ADJOURNS: 12.23 PM**

25

30

**COURT RESUMES: 1.34 PM**

**MR MAW CALLS**

**RODERICK DONALD HENDERSON (AFFIRMED)**

Q. Do you confirm that your full name is Roderick Donald Henderson?

5 A. Yes.

Q. And that you are a hydrologist at the National Institute of Water and Atmospheric Research?

A. Yes, that's correct.

10 Q. And you have prepared a statement of evidence in chief dated 7 December 2020?

A. I did.

Q. And you have the qualifications and experience set out in paragraphs 3 to 9 of that statement of evidence?

A. I do.

15 Q. Are there any corrections that you wish to make to your statement of evidence?

A. No.

Q. Can you confirm that it is true and correct to the best of your knowledge and belief?

20 A. Yes.

Q. If you would like to proceed now with a summary of the key points from your evidence to assist the Court.

**MR HENDERSON:**

25 Your Honour, in discussion with counsel, I suggested that my summary at pages 4 and 5 was the best that I could do and probably not productive of further condensation. Would you like me to read those out?

**THE COURT: JUDGE BORTHWICK**

30 I'm in your hands. I suppose the thing that witnesses and counsel need to bear in mind is, you know, we read the evidence, but quite often what we think is of importance to witnesses just because of the tone and tenor of the brief may not actually be what is important to the witnesses. So that is what is really

important, that if there are key messages that you are wanting the Court to understand that you tell us: "These are the key messages." It's not a summary per se, it's key messages I want you to hear. I would also add sometimes a summary is good because there are so many briefs of evidence, and it assists  
5 the Court to have its mind or memory jogged.

**MR HENDERSON:**

Well, perhaps I'll briefly cover off these points. First of all, Otago's diverse climate, this is at page 4 item 16, extremely variable climate and hydrology from Southern Alps to the Central Otago to the coast. Very wide range of catchment  
10 yields, if you like, from very, very weak catchments in the Southern Alps to extremely dry ones in Central Otago. This poses certain challenges to water availability and reliability. Water use pressure, perhaps not surprisingly, water use consent, so concentrated in the dry parts of the region, that's water use is dominated by surface water, different from some other parts of New Zealand.  
15 More than 90% of the consents by maximum rate are from surface water. In terms of data, I think at point 24 that river flow data are the best way to assess a water resource but cannot be collected everywhere needed for a variety of reasons. So, data is always a limitation when we're doing water resource assessments. There could always be more data. Often, we would argue  
20 there's not enough, but that's a difficult argument to make when decisions are pressing. Water metre data as opposed to water flow data collected in river are also an important aspect of understanding the hydrology but are not sufficient to fully describe water use, because the quality assurance issues and unmeasured aspects of water distribution systems, and I list those in number  
25 26, things such as leakage and by wash and return water from the irrigation systems, that either are unmeasured or get put into waterways and then taken again and measured twice or perhaps three times. And I guess item 27, that we have made, I would say, very good progress in the last year and a half to two years, working with a group of experts on how to describe the hydrology of  
30 the Manuherekia as a particular case study of Otago water, probably one of the more complex ones. And we have arrived at a situation where we have a working model that the experts at least involved are quite happy with now. Tools are available to address Otago's water resource issues, and these range

from national models of hydrological statistics, water budgeting, using water metre data and river flow data, and detailed rainfall runoff and water system modelling. Choosing appropriate methods with recognition of data limitations, assessments can be made for Otago rivers to inform the immediate future issues. And complex catchments such as the Manuherekia, the work done to date by a number of parties is part of Council studies and water use applications, can form the basis of catchment-wide understanding. Now, I note that some of the work in coastal and North Otago rivers is now getting older and might benefit from some updating. And I think the key point is the last one, that uncertainties increase as the methods used rely more on national models and less on measured data. These limitations are due in part to data availability and partly to the, I'd say the Council's timeframe. Perhaps it's the minister's timeframe, but nonetheless the timeframe that's being worked to here. That would be my summary.

**15 THE COURT: JUDGE BORTHWICK:**

Right, thank you. So Commissioner Bunting has some questions.

**QUESTIONS FROM THE COURT: COMMISSIONER BUNTING**

Q. Yes, if I may. Just following up on that last point you made, can you turn to paragraph 81 of your evidence, please?

20 A. Yep.

Q. Which relates to more (inaudible 13:42:09) investments and so on. In the last sentence, you say: "However, the time constraints imposed on the Council," can you just expand on that? Time constraints for what?

25 A. Well mainly, I guess, I'm thinking of the time constraint of the deemed permit expiry as of October this year. So that, that's, I'm not being the expert in planning, but my feeling is that the subsequent – that that process and the subsequent planning processes that flow from it are somewhat condensed in terms of time. And while we have in the region some very long hydrological data sets, we also have areas where the data sets are partial and intermittent as they have gaps. And I'm not sure that  
30 the time available, which I think is in the order of 'til 2023 or possibly 2025, is really sufficient to materially add to those data sets in a way that would



be, certainly in terms of water, of hydrology, that would make a huge difference to our understanding of the hydrology.

Q. So what's happening at the moment? Is there a programme in place to supplement the existing data?

5 A. I think one of the other Council witnesses will talk to the current science programme, but I mean flow recording is ongoing with the current flow recording network, and also as you'll hear with the water quality data collection, as well. So, things haven't stopped, it's simply that more could be done. But I mean I'm sure you've heard that from scientists before,  
10 that more can be done. And it's a question of priorities and budgeting and so on.

Q. So where do you think you're at in terms of a desirable level of information? Or is that too hard to answer?

A. We're partway through a contract with the Council for a region-wide  
15 assessment of water resource and as part of that, we've been taking some of the national models and updating them and fitting them to Otago exclusive data. And we have achieved some improvements and uncertainty as a result of that process, so that's a plus. The question always with all data used in these settings is whether the uncertainty is  
20 acceptable to the parties whose activities are going to be constrained by the findings. And whether they feel the uncertainty is such that more should be done or whether it's acceptable to them. And that varies from party to party, but all of this is the sort of culmination of, well, since 1992, 40 years of various decisions in Otago about data collection and so on.  
25 And I, we have to make the, I feel we have to make the best of what we currently have. And that's what we're, NIWA's trying to assist the Council in doing that through a contract. And as I mentioned the Manuherekia study, we've been doing a similar thing with a group of experts who are experienced in that catchment and have worked in the past for various  
30 parties over the last 15 to 20 years, in fact, some of them, and know quite a lot about it. So, there is knowledge available, but I think the collaborative process has certainly made us able to get ahead in that particular example so that hopefully we have a hydrology basis there that

parties will take as a foundation rather than arguing about the last litre per second at a particular site.

Q. So do you think what's there at the moment is adequate?

5 A. I feel like it has to be and that you make, that Council will need to make decisions based on what the best available data which is, as I describe this hierarchy of suitability, if you like.

10 Q. Thank you for that. I have just one or two other things. At para 64, if I can, this is coming down to more localised information about metre data and removing sections of data that seem to be results of gaps. There's a term that we've seen that we're not quite sure what it means called "legitimate overtaking". Is that something you're familiar with?

A. Not really. I – yeah, no, I'd have to step back from detailed discussion of metred activity and how Council sees it.

Q. Okay, someone else might be able to help there.

15 A. Yeah.

Q. There seems to be, just reading the evidence of different experts, in terms of you know sort of sanitising the data, if that's the right term, differences of views about what should be in and what should be out. Is that a fair assessment, that there are differences of views between various experts about how to do that?

20 A. Yes, there seem to be. I haven't – I've read a little bit across Mr Hickey's evidence, possibly another couple. And I think there is room for interpretation when you come to this sort of, these sort of data. It's very hard to tell on the face of it whether a particular data series is all good or whether parts of it are less reliable without, and this comes back to my understanding of river hydrology, that we have checking measurements that we do in the river. We measure the river independently from time to time and make sure that the way in which we're producing flow data is still consistent with the configuration of the riverbed, et cetera, et cetera.

25 30 In the case of water metre data, whether it be pipe flows or open channel flows, I'm less clear on the procedures that are put in place to verify the numbers that come from metres. And so, I think you probably have to direct that question about metre data quality to others. I do note in the work that I've been doing, I have arbitrarily set a limit on two times the

maximum consented rate so that I, if data were larger than that, I would remove them. And then I had a procedure for estimating what any metre with missing data was probably doing by looking at all the other metres in the catchment. I haven't been challenged particularly on that methodology for my hydrology assessments.

5

Q. Sure.

A. So I've, I mean, that's just the way I've chosen to deal with it, but I'm not aware, I don't, I'm not aware of an accepted code of practice when it comes to dealing with water metre data and I have a feeling that it's variable around New Zealand and there probably could well be room for some standardisation of the way in which these things are done across the country. But I'm not aware of what moves are being made in that direction. I guess that impetus for that lies with MFE, but.

10

1350

15 Q. So your focuses have been more on using the data, sanitising it, whatever the term might be, in terms of the hydrology –

A. Yes.

Q. – more so than the takes we use for irrigation and –

20

A. Yep because I, I wanted to use the metres to tell me what's come out of the river so that I can add it back to what's measured in the river and come back with an understanding of what the total hydrology is and if possible, what the natural behaviour of the river was because if you have that series you can then model other scenarios, it's much more satisfying to take 40 years of reasonable data and model a bunch of scenarios on it than to use a very short record if you don't have to.

25

Q. Okay thank you. And I had one last question which might be highly technical, you refer your evidence to a programme called GoldSim.

A. Right.

30

Q. And you just, you haven't actually said what GoldSim is, can you just give us an idea?

A. It's basically a simulation package that allows you to build, to take building blocks of water in a catchment and route them, connect them to each other so that the water's going, well down hill and so on but connecting the right streams and the take points and so on and it also contains

irrigation modules where you can simulate the application of water to irrigated land, determine quite a lot by what area you say is available and that's the model that was used I understand, 12 years or more ago to model a Manuherikia and we've in our collaborative group picked that model up again, virtually re-written it. That's all be done, most of that works been down by Ian Lloyd of Davis Ogilvie and the other hydrologists that I mention here have sort of had an oversight of the inputs and outputs and consulted, well Ian's consulted with us when he needs guidance but he's done most of the work on that.

5

10 Q. And is it generally accepted that it's a reliable tool?

A. Well it hasn't been, since we've done this work it's only really been presented to the Council at the moment as a draft report and in some scenario generations I understand it hasn't been exposed to the scrutiny of other parties as yet but I think there are expectation as hydrologists is that it will be made open to people to test and use.

15

Q. So is it catchment specific or is a bit more general application?

A. The GoldSim sort of technology has wider application because how you build, how you use the building blocks is – but how we put them together this time is catchment specific to the Manuherikia, yes.

20

Q. Okay.

### **THE COURT: JUDGE BORTHWICK**

Q. Just following on from Commissioner's questions, we've heard a lot in evidence about the Manuherikia catchment but that as I understand it's one of one catchment out of about 140 catchments, is that your understanding as well?

25

A. Yes.

Q. Of which there are far fewer freshwater management units, I think something like five with a number of those having sub-units.

A. Yes.

30

Q. So it sounded like that in terms of the hydrology and water metering data that that catchment has a better record than other catchments, am I right in thinking that or are there other catchments that are as advanced as Manuherikia?

A. I would put that slightly differently.

Q. Okay.

5 A. Saying that the Manuherikia has more challenges than most of other  
Otago catchments and I possible – I accept that in my evidence I've sort  
of equated with the Taieri as – for complexity of water movement and  
redistribution and management of storages et cetera. From my limited  
10 experience on three other Otago catchments, the Lindis, Cardrona and  
Arrow, they were must simpler than being more or less, much more simple  
drainage networks, far fewer significant tributaries not so many water  
takes, very few redistribution systems such as the Manuherikia race  
system and so the data, the water take data in those catchments were  
subject to similar issues but when those were dealt with it was much more  
feasible to reconstruct a natural hydrology based on adding metered data  
15 back to the river and that's what I've done on the Cardrona and the Arrow  
and we, other people did the Lindis but I picked up on that when we were  
at the hearing so yeah, the Manuherikia is just more challenging. I don't  
think the metered data per se are not better or worse than anywhere else  
but the whole network and the way it's put together and the way in which  
water gets out of races and back into other streams does make it much  
20 more difficult to deal with.

Q. Difficult to deal with but is it something that you have a good basis of  
knowledge about from which you can construct a model. I'm not quite  
sure where – this is where the evidence of other witnesses is going?

A. Yeah –

25 Q. The system can be replicated in a model with some degree of confidence  
or reliability.

A. Yes, definitely, has been.

Q. And has been, yes.

A. Yes.

30 Q. And so that's one catchment and I think you're saying Arrow and  
Cardrona, Arrow Cardrona and Lindis are far simpler catchments in terms  
of the movement of water within the system which is represented by that  
catchment also able to be modelled or has been modelled.

A. Yes.

Q. But we've got another 136 other catchments and where are we with those because this plan change is actually dealing with those as well.

5 A. So some have data, flow recorders and rivers. They all to the extent that any place in Otago has water metre data, they all have water metre data of I think it's larger than five litres per second takes or whatever so ones that have a hydrological record and water metre data would be potentially be susceptible to the same approach that I've taken and others have done in Lindis, Cardrona, et cetera.

Q. Is that a bespoke model or is that more inputting into your national model?

10 A. No, that's bespoke modelling.

Q. Bespoke modelling.

A. They all have – they all are covered by the national models, of course, which give us – so one level of national models is simply statistical and gives numbers such as mean annual low flow an estimate of mean annual  
15 low flow and estimate of mean flow, an estimate of how many times the flow exceeds three times the medium, that sort of ecological flush and flow concept so national models for those with some uncertainty around them. They also all have – oh no, I won't say that – some of them have output from our rainfall model, particularly Manuherekia but that can be  
20 available for the rest of Otago as well. In the Manuherekia, we calibrated our model, in the rest of Otago, it's running in an uncalibrated manner so that's another source of – and there you end up with 40 years of hourly flow simulations everywhere in the catchments so everywhere in the region which can be analysed individually to give statistics, et cetera, and  
25 then there's the coming down to actual data collected in the region and bespoke systems, as you said. So that's the sort of hierarchy of things and I – our proposal or discussion with ORC for the region wide one for the land and water plan was that some FMUs and or rohe in the case of Clutha Mata-Au could perhaps be dealt with at the national model level  
30 or some slightly better version than that calibrated to Otago which we have been in the process of doing but that others had pressures such that, pressure and complexity, such that the bespoke model was the way to go.

Q. Okay, and in that you'd include, I think you said Lindis and what's also referred to as MAC was in the evidence, Manuherekia, Arrow, Cardrona, where bespoke models are warranted.

A. Yes.

5 Q. And they may or may not be warranted outside of those catchments, is that right? Or no determination made?

A. We haven't been in detailed discussions about other catchments. It's more been at the FMU level and we've got a draft report with ORC at the moment which is only talking about the hydrology at this stage, there's  
10 other aspects to all of this, the ecology and water quality impacts and that sort of thing which I have to stop short there and say, well that's outside my space. But some of those things are being considered, albeit sometimes mainly at a very general level.

1400

15 Q. I just want to check one more thing. You talked about the FMUs and the sub-FMUs or (inaudible 14:00:28). Are you also talking about, the best bait models will pertain as to a whole FMU or parts of the FMU? Or how will it? Yeah, I mean, it's not clear to me, it will be in the evidence somewhere, whether for example Manuherekia is its own FMU or is part  
20 of a wider, large FMU? Could it first answer that question, is Manuherekia part of its own FMU or is it part of a much wider FMU?

A. Manuherekia is a rohe of the Clutha FMU. So that covers the entire Manuherekia catchment from the junction with the Clutha at Alexandra. The Taieri is its own FMU, and so their bespoke model would cover the  
25 whole FMU if you were to build something that was operative from Taieri Mouth up the valley. That might be – that would be quite a challenge. It might be more – we haven't discussed this at all, but it may be more productive to perhaps divide the Taieri into the main Taieri that goes up through the gorge and the, oh I can't remember the name of it  
30 now, where the hydro stations are. That because they operate sort of quite differently. The rest of the FMUs in Otago are many catchments each.

Q. Are what, sorry?

- A. So many small to medium catchments each, except the Clutha which obviously has New Zealand largest river running through the middle of it, so that makes – the Clutha flow tends to dominate everything you look at, but actually there are many issues on the side. Tributaries that have their own problems as well. So, while we understand, and I've mentioned in here we've got from the Southern Lakes at least 90 years of good hydrology courtesy of power investigations and so on. There's many other smaller tributaries down the Clutha that we don't have very much information at all. Others where we have some, like Nevis, because of power generation or irrigation use. Others, Pomahaka who's its own record, partly because of water resource, partly 'cos of flood issues and so on. So, it's very variable as you move around the region how much information you're going to have to, at your disposal for a particular problem.
- 5
- 10
- 15 Q. Do you know, and you may not because the discussion hasn't been had, where you got a very large catchment like the Taieri or Clutha, the Clutha itself has been divided into smaller sub-catchments. Were there any models for a smaller sub-catchment would be talking to another model in a different part of the catchment? So, in other words, in the case of
- 20 Manuherehia, is that a closed system or is that an open system which is open to other hydrological inputs at least. There will be other inputs, but hydrological inputs at least?
- A. No, it would be feasible to have a Clutha model that had sub models that dealt with individual tributaries.
- 25 Q. It would be feasible?
- A. Yes, it would be.
- Q. Have you talked about whether that's actually what Otago region's thinking about, having a model with its own sub parts? Or not.
- A. I'm not sure our discussion shave got really to that level of detail yet.
- 30 We're, with this current contract, we're concentrating at the best way to do a region-wide assessment and after that, we expect there'll be subsequent discussions about, okay, but what about the Taieri and you know, we should do that better perhaps and so on. But we haven't got to that yet. And the Manuherehia is, between us, is sort of an example of



what could be done. And I understand from talking to other parties that some of the work has already been done on aspects of Taieri hydrology that, as part of applications for consents in the past and so on, and some of that work may be available to be adapted as well as we have been with  
5 Manuherikia and using the GoldSim or picking up the GoldSim model and revamping it.

Q. All right.

**THE COURT: JUDGE BORTHWICK**

Those are the Court's questions. Now counsel are going to ask you some  
10 questions and certainly may ask follow-up questions as a consequence of the Court's questions as well. Mr Winchester.

**MR WINCHESTER:**

Yes Ma'am. I was first on the list. I had rather given notice for Mr Henderson and Dr Allibone on a back-stop basis, pending what came in in the evidence-in-  
15 chief in other parties.

**THE COURT: JUDGE BORTHWICK**

Yes.

**MR WINCHESTER:**

Having had a look at all of that, I wish to seek leave to withdraw my notice of  
20 cross-examination for Mr Henderson and also for Dr Allibone.

**THE COURT:**

That's fine. All right.

**THE COURT: JUDGE BORTHWICK**

And in terms of "being ready" that you warned us about before lunchtime, I have  
25 let Ms Baker-Galloway know that I would be withdrawing. So, I understand she is ready.

**THE COURT: JUDGE BORTHWICK**

She worked through the lunchtime.

**MR WINCHESTER:**

Thank you, your Honour.

**5 CROSS-EXAMINATION: MR WINCHESTER – NIL****THE COURT: JUDGE BORTHWICK**

So Ms Baker-Galloway, we're with you.

**MS BAKER-GALLOWAY:**

Yes Ma'am.

**10 CROSS-EXAMINATION: MS BAKER-GALLOWAY**

Q. I just want to go to the first page of your evidence for starters Mr Henderson and again I'm just upskilling myself about the different models that are referred to as well just to figure out which ones are most relevant. Now at your paragraph 8 you talk about your collaboration of  
15 the low-flow model of New Zealand and the mean flow model of New Zealand. Can you just put those in context of the models you were talking to Commissioner Bunting about before if they're the same as that national model or, yes?

A. Okay so the low-flow model and the mean flow model of New Zealand  
20 are models that only estimate a single statistic. For the low-flow model mean annual low-flow, for the mean flow the mean flow of the river, they estimate them everywhere in New Zealand, the answers are available on a website that never hosts or several various places, people have access to those for the last 10 or 15 years probably and you can go on a map  
25 and click on a river and get that estimate of that statistic. So they are the high level model, I guess in my hierarchy of models, they're fitted to a national data set and they work within Otago. I have used them, so the Manuherikia blue book, I can't remember the date but I used them to do

estimates for mean annual low flow for campground and that at the – there's a letter at the back of that that has estimates based on those.

Q. And so the mean annual low flow that the low flow model does, that's the naturalised mean annual low flow?

5 A. Yes.

Q. Now that's, there's something I'm going to be asking further questions about is the relevance of the naturalised mean annual low flow, just so that we've got it on the record and you just summarise for the Court your definition of what a naturalised mean annual low flow is?

10 A. Okay so naturalised means the river as we understand it would've been without any human interference and based on the best available data that we have so I'm not including potential future climate change or any past climate change but we don't really identify past climate change in our records so that's off the table. The mean annual refers to taking the  
15 lowest seven day mean flow across each year and averaging those across the period of record. And so that's the statistic and it's widely used in biological assessments in rivers as some sort of lower limit or – but I would refer to it more as an indicator of the low flow condition of the river and given it's, I just, it is, because it's an average, then there are some  
20 number that have flows more. It's not exactly normally distributed, so the proportion of those two is not always 50-50, but not a million miles from 50-50, often. So it is the middle low flow estimate.

1410

Q. Thank you, that was helpful. I think it's at one of your paragraphs, you  
25 refer to the water balance of the Manuherekia. It might be paragraph 71? Yes, your paragraph 71 where you talked about difficulty in achieving a water balance.

A. Yeah.

Q. Can you just help us out with what that term means?

30 A. It's sort of a water accounting term, I suppose, that we, do we understand how much water is coming into a catchment and what's happening to it, and subsequently how much water is going out of it? And do those ins and outs actually equal each other as far as we can determine, within some uncertainty obviously. And that proved difficult for the

Manuherehia, but there's a lot of reasons for that, and two major ones are the already-mentioned water metre and redistribution systems and their issues of leakage and so on. And the other is a significant uncertainty on how much rain falls in a catchment in New Zealand and that's not only an  
5 Otago problem, that's a universal problem. It's very difficult to actually get really good estimates of how much, what your inputs are.

Q. If there's abstraction?

A. Before abstraction, even if no abstraction, it's very hard to get an estimate of how much rain falls on a catchment.

10 Q. And when the model, whatever model it is, is being used to identify the MALF, if that's difficult to achieve a water balance, has that estimate of MALF just got a bigger margin of error around it?

A. From the high level statistical models, no, because they are basically regression models based on measured data from catchments all over the  
15 country, and the MALF is measured in a river. So, and the rivers that we use are those for which human intervention is minimal. So, we have measurements of actual mean annual low flow, we match those to catchment characteristics and one way or another and we develop a regression model that says, okay, for this river here that we've got no data  
20 for, this is our estimate of MALF based on that regression relationship. So that's not effected by whether we understand the rain or whatever. But when we come to, say, trying to run a rainfall runoff model, where the model receives an estimate of rainfall all over the catchment, routes it through the various tributaries and down the mainstream and produces a  
25 flow at the bottom, and then we take that time series of flow and estimate a MALF from that. Then that is affected by our understanding of that whole sequence, and when that sequence includes uncertain rain and redistribution and storage of water, then those uncertainties can become perhaps too large.

30 Q. So in that situation where you're doing a bespoke model and that's tricky, how much assistance do you get from the national low flow model in that regression you described between like and like?

A. Let's say, so take the Cardrona where we had a flow record part way down the catchment at Mount Barker and we had water metre data, then

the national model doesn't assist at all. It's an independent estimate of mean annual low flow, if you like, so it was one from the national model. There's one from looking at data recorded in the actual catchment and trying to do that water balance of, well we measured this much water at the flow recorder and upstream of it, this much water was taken away. So, we add that back to the flow record and that's our naturalised estimate.

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Q. Oh, so I think what you're saying there is in your summary that you read out –

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A. Yes.

1415

Q. – where you said in your paragraph 24, that river flow data are the best way to assess the water resource so that's basically what you're saying isn't it, where you've got real data, that gives you the most reliable –

15

A. Yes, it's a preference, yes.

Q. – an estimate of mean annual low flow, any other hydrological indices you want?

A. Yes.

20

Q. So my next set of questions are going to reference some of Fish & Game's evidence, so if Mr Henderson could be helped to get that folder from behind him? I'm not sure which folder in order it will be in, not sure how they're organised. Volume 1 apparently. And in volume 1, the first brief I'd like you to have handy is Mr Pharrell's evidence. So if you go to I'll just get you to the right page, if you go to page 31 of Mr Pharrell's evidence, just let everyone catch up. And then from page 31, that's where his appendix starts, if you just turn over to where you see policy 10(a)(2) to (3). Can you see that?

25

A. Yes.

30

Q. And just so you understand why I'm asking you these questions, this policy that directs when a noncomplying application might be appropriate in a policy sense and there's already been some talk this morning about the fact that several submitters have sought more certainty and direction in this policy so what's one proposal from Fish & Game is that instead of the words in A, subparagraph (a) being the direction, which as you'll see

we've deleted reference to "no more than minor effects on hydrology", which is what's relevant to yourself; rather than that policy simply saying "no more than minor effects on hydrology" as one of the exceptions, Fish & Game has proposed a table which you'll see there as well and I'm

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1420

Q. What I have got is a handy file of all of the relief everybody has ever sought in relation to this proceeding so I can go from there and we're just trying to connect to the databases, court databases so just bear with me

10

for one second.

**MS BAKER-GALLOWAY:**

Meanwhile with Mr Henderson can read ahead.

**THE COURT: COMMISSIONER BUNTING ADDRESSES**

**MS BAKER-GALLOWAY (14:20:28)**

15 **CROSS-EXAMINATION CONTINUES: MS BAKER-GALLOWAY**

Q. So now I'll just check before I ask all these questions, did you read Dr Hays' evidence prior to today?

A. Yes, although –

Q. So, just so you know these, this arises out of Dr Hays' recommendations, if we were to a specific threshold that acts as the proxy for no more than minor hydrological effect, this is the proposal from Dr Hays so he's, they'll deal with the first column which is abstraction from service water bodies with a mean flow of less than 5 cumecs, so for those small rivers, if you like, the proposal is that the minimum flow, if the minimum flow is less than 90% of mouth that's a more than minor hydrological change or hydrological effect, would you agree with that?

20

25

A. I have some difficulty with a minor or major or significant hydrological effect because my possibly limited and fairly numerical approach to hydrology is that it is about how much water there is whether naturally or after abstraction or downstream of a damn or whatever and to say, I don't think, I hope I've never said that say a 10% reduction in the flow is

30

significant or whatever, in terms of the hydrology it's simply is the hydrology. The effect of that reduction in flow on in stream values or any other set of values is my understanding of what, if you like, is what the RMAs about in terms of water and the hydrology itself is fairly silent, in my view, on the significance or otherwise of those changes. They simply are the hydrology, whether pre-development, post development or whatever. So I'm, I mean I could also argue about whether 5 cumecs is a small stream or a large stream and depending where you are in New Zealand and in fact depending where you are in Otago you could have an argument on those grounds as well. So I find it difficult from my hydrological and perhaps overly analytical view of things that I don't have a lot to comment about significance of effects.

Q. So what we're grabbing with, the starting point of this policy as notified was the words and I'm putting it, I'm going to leave out the irrelevant words to your area of expertise so the starting point was: "No more than minor effects on the hydrology of the surface water body," so that was that this policy began with when it was notified, many submitters looked at that and said: "Well that's just a bit too loose, I'm sure we can be clearer than that about what a 'no more than minor effect on hydrology is'. Let's take the guesswork out of it and try and quantify it." So if, I guess if there was to be a hydrological threshold set in this policy to set a threshold of no more than minor, how would you approach it?

A. Yeah.

**THE COURT: JUDGE BORTHWICK**

I thought the answer was he couldn't answer.  
1425

**MS BAKER-GALLOWAY:**

He couldn't.

**THE COURT: JUDGE BORTHWICK TO MR HENDERSON**

Q. Because a hydrologist will tell you what the change is.

A. Yeah.

Q. The effect of change is – might be for a different witness altogether, a different expert, is that right?

A. That's right, that's correct.

Q. And then that expert will also tell you what the significance of that effect is. So that's why this objective is kind of a, the policy rather is a kind of a  
5 puzzling one using those words. Yeah.

**CROSS-EXAMINATION CONTINUES: MS BAKER-GALLOWAY**

Q. So I guess what I – if you were just looking at the words in paragraph A in that policy, and they're struck out, but would you actually delete any  
10 reference to: "No more than minor effect on the hydrology," would you delete those words?

A. Yes, I think I would argue that they don't have a place in that discussion, mostly, that yeah.

Q. Thank you, that's good. That's helpful. Putting aside your view about  
15 whether or not these thresholds reflect something that you could say as a hydrologist that's minor or more than minor or otherwise. On the basis of the data, and the models that you took us through before, it would be possible wouldn't it, for any given water body to calculate whether or not those thresholds are breached or not?

20 A. Yes, you can estimate, for example, the mean flow from a range of models depending on what you have available for a particular water body, yep.

Q. So in terms of proposing something that provides a clear way forward, a clear threshold and that's practically able to be implemented or assessed,  
25 we would be able to do that in the context of Otago if these types of triggers were put into the plan?

A. Yes, we can make estimates of the, of a number of flow statistics anywhere in Otago if required.

**MR PAGE ADDRESSES THE COURT – EVIDENCE ON SCREEN (14:27:58)**

30 **THE COURT ADDRESSES MR PAGE – COMMON BUNDLE (14:28:13)**



**CROSS-EXAMINATION: MR PAGE**

Q. Mr Henderson, do you have your own evidence in front of you?

A. Yes, I do.

5 Q. Could you look at page 12 where you will find figure 3? And in that figure 3, you've identified the rohe that we are dealing with?

A. Yes.

Q. And you've been discussing with previous questions. And then Manuherekia rohe is in a bright blue, between the yellow Taieri and the greyish Dunstan rohe. Do you see that?

10 A. Yes.

Q. Now, the pattern of green stars you've identified as showing the location of consumptive consents, right?

A. Yes.

15 Q. And perhaps the highest concentration of consumptive consents is in the Manuherekia, would you agree with that?

1430

A. On the face of it, the Dunstan perhaps looks even more concentrated but at that, it's hard to tell, but certainly there's concentration there.

20 Q. And we don't know from this figure which ones have already been replaced and which ones fall within the ambit of plan change 7, do we?

A. No. I wouldn't know, not as far as I'm aware anyway.

Q. So when you were discussing I think with Commissioner Bunting, the MAC catchments, Manuherekia, Arrow and Cardrona. Arrow and Cardrona fall into the Dunstan rohe? Is that right?

25 A. Not sure about the Arrow, that might be in the upper lakes, I'm not too sure about –

Q. You're not sure about that?

A. I'm not sure where the boundary lies.

Q. Okay.

30 A. Cardrona's certainly, pretty sure, within the Dunstan.

Q. Cardrona's certainly there?

A. Yes.

Q. And do I understand your answers to questions that a hydrological model exists for both the Cardrona and Arrow which you are satisfied is inadequate basis for decision making at least in terms of hydrology?

5 A. Yes. There's perhaps – well, hydrological model in the general sense we've been discussing so these are a time series of the naturalised flow at the flow recorder constructed from measured flows and take data. So it's that level of model, not as comprehensive as the Manuherekia one.

10 Q. But in terms of there being a hydrological information base for renewing the permits in Arrow and Cardrona, are you satisfied that the Council has enough?

15 A. I can't really answer for Council on that. I can say that I've provided hydrology to the level that I've been able to for input to the Council process but I couldn't say and I haven't been informed by Council, my client that is, as to whether that hydrology in the end was adequate or it left something to be wanting or whether there were other matters that they really would've like in there but didn't find.

Q. Do you have an instruction or an engagement from the ORC to do anything more with the Arrow and Cardrona?

A. No.

20 Q. Now, also in the Dunstan catchment, we have the Lindis and that's already been reconcented hasn't it?

A. Yes.

25 Q. And we have the main stem of the Clutha and did I understand your evidence that there is a hydrological information base for decisions in relation to the Clutha?

A. Yes.

Q. But is your concern about adequacy of information in the Dunstan rohe really about the number of tribs which feed into the Clutha for which there might be relatively little work yet done by the ORC?

30 A. Yes, there will be – I've not dealt with the breakdown of tributaries that the ORC use – 140 catchments, whatever it was, but I'm sure there are many of those for which there is very little actual measurement and then for those we'd need to use a more approximate model, if you like.

Q. Do you have an instruction from the ORC to build hydrological models for any of the tributaries to the Clutha in the Dunstan rohe?

5 A. The current contract that we have with them is a regionwide assessment and as part of that, we are examining currently the statistical estimation methods and making them particular to Otago but we don't have any brief from that at the present time to construct a more detailed model along the lines of say TopNet or GoldSim for any other catchment in Otago.

1435

Q. Okay. Turning to the Taieri Rohe then.

10 A. Mhm.

Q. The hydrological pattern of the Taieri River is currently managed by Maniototo Irrigation Company through their water permits, isn't it?

15 A. I couldn't really answer that, I'm not that familiar. I mean, I know there are a number of players in the Taieri that influence the flow, but I'm not aware of any dominant, or the dominance of various players or who they are, in fact, apart from Trustpower.

Q. In your figure 3, in the yellow area marked as the Taieri rohe, you can see there is five stars immediately to the left of the T in the word Taieri.

A. Yes.

20 Q. Do you recognise that as being the approximate location of the Loganburn Reservoir?

A. Yes.

Q. And Loganburn Reservoir is operated by the Maniototo Irrigation Company, is it not?

25 A. I'm not aware.

Q. You don't know?

A. No.

30 Q. You're aware that the Maniototo Irrigation Company is obliged to release water from the Loganburn to maintain minimum flows at Paerau and Waipiata?

A. No.

Q. You don't know that?

A. No.

- Q. Are you aware that schedule 2(a) of the Operative Regional Plan Water has minimum flows set for Paerau and Waipiata?
- A. I'm not familiar with the current regional plan for the Taieri.
- Q. You don't know what the minimum flows are?
- 5 A. No.
- Q. And you don't know that they are the same as in Maniototo Irrigation Company's consents?
- A. No.
- Q. Do you have an instruction to build a hydrological model for Taieri  
10 between now and December 2023?
- A. Not to my knowledge.
- Q. How long is the GoldSim model for the Manuherehia taken to build?
- A. Many months, possibly a year of time between the various, with the various consultations of experts and Ian Lloyd's time put into it.
- 15 Q. And a group has been formed called the Manuherehia Technical Advisory Group, hasn't it?
- A. Yes.
- Q. And that contains representatives of the permit holders as well as the people that you mention in your evidence?
- 20 A. Yes.
- Q. So you've had the benefit of working with people such as Mr Hickey and Mr Roger Williams who actually operates the Falls Dam?
- A. Indeed.
- Q. And that level of co-operation has assisted the construction of the  
25 GoldSim model, hasn't it?
- A. Yes.
- Q. And gives you confidence that it's likely to be adopted and accepted by the permit holders?
- A. That might be a step too far. I, as someone's question, possibly  
30 her Honour, that I'm happy that hydrological experts are in accordance about the GoldSim model, but I would wait on the various of them exposing it to their clients before I was going to say that all those clients would be happy with it. I don't, I don't know the answer to that question.

Q. The GoldSim model hasn't been presented to the technical advisory group for sign off, hasn't it?

A. Sign off, probably not. It has been discussed at, I understand, at team meetings, yes.

5 Q. But at least from your point of view, you are satisfied that in its current form, it now provides a hydrological basis for decision making in that catchment?

A. Yes.

1440

10 Q. And tell me, does GoldSim for the Manuherikia assume the presence of the damns?

A. The dams are built into the model and can be turned off or on to some degree as I understand in order to, for example, simulate what would happen if the dams weren't there. I don't think we've got very far down exploring that route yet but the dams are part of the model, yes.

15

Q. Now, sorry to do this to you Mr Henderson but I want to take you back to the Lindis and I'm expecting that Commissioner Edmonds might throw something at me in a minute for doing that but you'll remember the circumstance of the Environment Court hearing the Lindis case, the argument was – or one of the arguments was concerned the appropriate minimum flow for the Lindis, wasn't it?

20

A. Yep.

Q. And the contenders were 900 litres per second or 550?

A. Yes.

25 Q. And you presented the surface hydrology evidence for the Otago Regional Council in supporting 550 didn't you?

A. I presented the evidence.

Q. Yes.

A. And they supported the 550.

30 **THE COURT: JUDGE BORTHWICK**

Q. Sorry, you presented the evidence and I didn't catch the last –

A. I presented the evidence and the Council supported the 550.

**CROSS-EXAMINATION CONTINUES: MR PAGE**

Q. Now, one of the dynamics of the Lindis case was that there was a specific water take proposal that could be test through the hydrological model that was created for the purposes of that hearing wasn't it?

5 A. Yes.

Q. And you were able to model the effect of relocating the existing race network downstream in the Lindis and to replaced with a series of inground galleries, weren't you?

A. Yes.

10 Q. And you were able to model the impact if that on the hydrology of the river right from above the first take right down to the confluence?

A. That's correct.

Q. And you were able to model the different take points, the effect of those different take points and the different rates of take on the duration of low flows in the catchment?

15

A. Yes.

Q. And weren't you able to demonstrate by comparing the different take points and the rates of take that in fact 550 litres left more water in the river for more of the time than the higher minimum flow of 900, with the different take scenario added into the model?

20

A. Yes that's an important distinction, the –

Q. Yes.

A. – 900 with one set of take points and 550 with a different set of take points.

Q. Yes but doesn't, from your point of view, that demonstrate the benefit of having specific take scenarios model an understanding of what the hydrological impacts of each take scenario might be?

25

A. Yes.

Q. And do you anticipate that the same benefit but accrue in the Manuherikia if there was a specific scenario presented for you to model the impact of in terms of the relative positions parties might have about minimum flows?

30

A. Yes.

Q. And you know don't you that the Manuherikia catchment, consents all of them have been lodged and are sitting with the Council now?

A. I understand that to be the case, yes.

Q. Wouldn't it make sense to you, as a hydrologist, to be evaluating the hydrological impact of the proposed take permits when assessing the effects of different minimum flow scenarios?

A. Yes.

5 1445

Q. I just have a question to you about the proposition that my friend Ms Baker-Galloway put to you from Dr Hayes' evidence, do you remember that?

A. Yes.

10 Q. And she put to you two thresholds for evaluating what more than minor, or what more than minor means, by reference to percentages of MALF, do you remember that?

A. Yep.

15 Q. Do you know whether Dr Hayes was talking about naturalised MALF or observed MALF?

A. No, I've read his evidence, but I don't recall which, whether he made that distinction or not.

20 Q. Well, let me put a hypothetical to you. Let's assume that Dr Hayes was talking about naturalised MALF. Would percentages of naturalised MALF tell you anything about the hydrological alteration of your proposal against a status quo?

A. No.

Q. No?

A. No.

25 **THE COURT ADDRESSES MR PAGE – REPEAT QUESTION (14:46:22)**

**CROSS-EXAMINATION CONTINUES: MR PAGE**

Q. If we're talking about percentages of naturalised MALF, would a percentage of changed naturalised MALF tell you anything about the proposed change to the status quo? And I can ask –

30 **THE COURT ADDRESSES MR PAGE – CLARIFICATION (14:46:43)**

**CROSS-EXAMINATION CONTINUES: MR PAGE**

A. Perhaps I should add assuming that the status quo is the result of various effects such as abstraction and storage management.

Q. Yes.

5 A. And not natural, as it were.

Q. Yes. Because in many of Otago's catchments, the current 2021, as they are today, hydrological patterns of those catchments are quite different to their naturalised flow characteristics, aren't they?

A. Yes.

10 **THE COURT: JUDGE BORTHWICK TO MR HENDERSON**

Q. So just following up from that last question, do I take it that, and I might have picked this up wrongly, that hydrologists can talk about naturalised flow in one of two ways. One is talking about a river which is in its natural state, that is to say it is not impacted by surrounding land use or activities in terms of the taking abstraction diversion of water.

15

A. Mmm.

Q. So water's in the natural state, both land and water together to get to the natural state.

A. Mmm.

20 Q. And we can talk about naturalised flow in that context. So that's one meaning. The second meaning of naturalised flow is a calculation, if you like, which hydrologists can do to best guess what that natural flow would've looked like, but for changes to water quantity and surrounding land use patterns. Is that right?

25 A. I –

Q. Are you talking about in two different senses?

A. I think I would reserve the word "naturalised" for the manipulation of recorded data to give an estimate of what the natural behaviour would've been. And in the other situation where there are no human influence, if you like, I simply would refer to it as natural flow.

30

Q. Natural flow and naturalised flow?

A. Yes.



Q. And so counsel's last question, that was a question pertaining to natural flow or naturalised flow? What did you understand it to be and what was your answer?

5 A. I understood it more to be about the assessing a river and its flow data in an altered context where there had been an altered context for a long time and sometimes courts take that status quo as the base case and proceed to look at differences from that base case. Other times, they don't. So, that's, as I understood counsel, to be referring to any, quite a few Otago rivers actually and Manuherekiā would be a good example  
10 where the record of hydrology at the longest flow recorder in the catchment at (inaudible 14:50:02) is affected by manipulation of flows since it began in the 1960s so it's hard – and that's why all the effort has gone in to trying to trying to establish what the catchment might've looked like without all of that to assist I guess anyone who wished to see how  
15 things might've been and how they might be different.

Q. And that's your naturalised flow?

A. And that's the naturalised flow series, yes.

#### **THE COURT ADDRESSES MR PAGE (14:50:44)**

#### **THE COURT: JUDGE BORTHWICK**

20 Q. Did you understand the question?

A. Yes I think so, so that –

Q. No, I –

A. I think so.

Q. – it's me I don't think I do, you see, I understand natural state flows and I  
25 understand naturalised flows but I don't understand the question. So perhaps if you could tell me what your answer was pertaining to?

A. So there's quite a lot of emphasis in EMPS and so on about setting these limits and Ms Baker-Galloway referred us to a set of suggested clauses and so on, whether the flow is more or less than five cumecs and so on  
30 and those describe hydrology and probably I assume they're meant to describe a natural hydrology.

Q. Natural not naturalised?

A. Or naturalised depending on the data that you're dealing with when you come to discuss a particular river and then the proposed these like, 90% of - it's acceptable to allocate 10% of the mean annual low flow for example or it's acceptable to have a minimum flow that's 90% of them, you know, these sort of numbers and they refer back to estimates of natural and I think Mr Page's comparison was or contrast was: "What does that tell you about a river is effected and has been effected for a long time, what is that 90% or 10% or anything tell you about the current state of the river and changes that a plan change might make to those if you were to leave some version of the status quo in place and make minor modifications."

Q. And so that's the modification to the current status quo, the hydrology?

A. Yes.

Q. And it's not actually looking at the percentage change to either a naturalised hydrology or the natural flow of the river?

A. That's right.

Q. Yes, okay no I understand what you're saying.

#### **QUESTIONS FROM THE COURT: COMMISSIONER BUNTING**

Could I ask a question? It was to do with the status of the applications for consent, deemed permit. I thought you said that they'd all been applied for but I might –

#### **MR PAGE:**

In the Manuherekia, yes.

#### **THE COURT: COMMISSIONER BUNTING TO MR PAGE**

Q. Because the table we've been given shows there were 44 awaiting application. Is that – I'm just seeking clarification on that.

A. Well, my instructions are that they've all been applied for now. I'm not sure what the problem is with the data that you have is but I can check with my clients if that's the case.

Q. Okay. Would you mind doing that, just – yes. We were provided with some information I think late last week, saying that –

A. I'm aware of that and I have questions for other witnesses about the accuracy of what you've been provided.

Q. Okay.

A. Thanks very much. Thank you, your Honour.

**5 THE COURT ADDRESSES COUNSEL – ANY QUESTIONS ARISING**  
(14:54:05)

**QUESTIONS ARISING: THE COURT: JUDGE BORTHWICK – NIL**

**RE-EXAMINATION: MR MAW – NIL**

**QUESTIONS FROM THE COURT: COMMISSIONER EDMONDS – NIL**

**10 QUESTIONS FROM THE COURT: JUDGE BORTHWICK – NIL**

**WITNESS EXCUSED**

**COURT ADJOURNS: 2.54 PM**

**COURT RESUMES: 3.17 PM**

**MR PAGE ADDRESSES THE COURT (15:18:05)**

**MR MAW CALLS**

**RICHARD MARK ALLIBONE (AFFIRMED)**

5 Q. Can you confirm that your full name is Richard Mark Allibone?

A. Yes.

Q. And you are a director and principle ecologist of Waterways Consulting Limited?

A. Yes.

10 Q. And you prepared a statement of evidence-in-chief dated 7 December 2020?

A. Yes.

Q. And a statement of evidence in reply dated 19 February 2021?

A. Yes.

15 Q. And you've set out your qualifications and experiences in paragraphs 3 to 14 of your evidence-in-chief?

A. Yes.

Q. Are there any corrections that you would like to make to your evidence-in-chief or your evidence in reply?

20 A. I have two small typos I would just like to fix. On page 11 of the evidence-in-chief paragraph 40, on the second last line it reads: "And seven of the Otago fish taxa have either..." Can we replaced "either" with "the", so it reads: "Have the CD qualifier."

Q. Thank you.

25 A. And the second correction is in paragraph 42 on page 12. At the end of the third sentence it reads "ranking", it should read "ranked". Just -ed, not -ing, thank you.

1520

**THE COURT: JUDGE BORTHWICK**

30 Q. Sorry, which line was that?

A. Section 42, line 3.

Q. “Ranked”, not “ranking”?

A. Yes.

Q. Okay.

**5 EXAMINATION CONTINUES: MR MAW**

Q. Thank you and subject to those corrections, do you confirm that your statements of evidence are true and correct to the best of your knowledge and belief?

A. I do.

10 Q. Now, I understand you've prepared a summary of the key points covered in your evidence and your evidence-in-chief?

A. I have.

Q. If you could please state that for the Court and then remain for any questions from the Court or from my friends.

15 A. Okay. Your Honour, I'll start from paragraph 4 on the summary.

1521

**THE COURT: JUDGE BORTHWICK**

Paragraph 4, not 21? Okay.

**MR MAW:**

20 The summary from which the witness is reading hasn't been provided to the Court. It's a summary he's prepared.

**THE COURT: JUDGE BORTHWICK**

Ah.

**WITNESS:**

25 Ah. Sorry.

**THE COURT: JUDGE BORTHWICK**

Okay. Less than helpful inasmuch as firstly, it shouldn't be an opportunity to address new evidence or to provide new evidence, and of course that's the problem that the parties in the Court are going to have.

**MR MAW:**

It is a summary from his evidence and his evidence in reply –

**THE COURT: JUDGE BORTHWICK**

I see.

5 **MR MAW:**

– but capturing the salient points, and we do have written copies available if that would assist.

**THE COURT: JUDGE BORTHWICK**

10 Yes. Who wants a copy? Everybody? Everybody wants a copy. Have you got copies so you can distribute those please? Thank you.

**MR MAW:**

Yes.

**THE COURT: JUDGE BORTHWICK**

This will be a fast 10 minutes. Three minutes a page.

15 **WITNESS:**

Yes. This is by far the longest of the summaries that will follow from the balance of the witnesses.

**THE COURT: JUDGE BORTHWICK**

20 All right. Well we're in Judge Allibone's hands. If you can start reading from the summary?

**WITNESS READS SUMMARY**

25 "Native freshwater fish fauna of Otago. The number of recognised native freshwater fish species and indeterminate taxa in Otago is 31 taxa. The present day taxa can be split into 15 (inaudible 15:23:01) species that migrate to and from the sea and 16 taxa that complete their full life history in fresh water. 15 of

the taxa are also classified as threatened and this includes 13 non-migratory galaxiids and one closely related mudfish.

5 The fish distribution maps in my evidence-in-chief have been provided to provide geographic context in terms of the distributions of threatened fish. The maps do not indicate any priority for management. In addition, I did not note in my evidence-in-chief the data quality issues that are present with the fish survey records, in particular, the difficulty with determining historic data from current data and the accuracy of the data at the fine scale of stream reaches.

10

The key threat to non-migratory galaxiids is predation and competition by or with introduced Salmonids. Habitat loss via habitat alteration and/or water abstraction has local effects and is a serious threat to mudfish. Water quality is a limited issue aside from areas where low flows or intensive agriculture may create detrimental conditions. For migratory species, loss of fish passage is a significant issue causing range contraction.

15

For 13 threatened non-migratory galaxiids, four occur in the periphery of Otago with their main population centres outside Otago. Of the nine Otago taxa, two occur in areas of high levels of water abstraction and irrigation and significant interactions occur. For other taxa, water abstraction occurs within their geographic range but interactions are more limited.

20

The evidence of other experts – other experts have provided indicates varying degrees of support for my listing and prioritation of threats to the non-migratory galaxiids species. Dr Olsen agrees with the list and Dr Dunn agrees in part, but considers hydrological alteration by human activities to be the greatest threat to non-migratory galaxiids.

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I agree with Mr Dunn that extreme hydrological alterations are a concern and can lead to extirpation of non-migratory galaxiid populations. Dry stream reaches or stream reaches flooded by reservoirs will not support non-migratory galaxiid populations. However, the effects of less extreme hydrological

alteration of non-migratory galaxiids are complex and some flow alterations are used to protect non-migratory galaxiids. While plan change 7 will not establish residual flows and remove dry reaches, these drying reaches are often important features that protect galaxiid populations and these flow alterations should be addressed individually.

There are two factors I would reiterate with respect to the assessment of threats presented by water abstraction versus salmonids or introduced predatory fish on non-migratory galaxiids. A, the first is the reversibility of the two threats. The effect of water abstraction can be reversed by removing abstractors and halting the abstraction, whereas salmonid removal is significantly more challenging. The second reason I consider salmonids are a greater threat to the non-migratory galaxiids in Otago is that salmonids are present over a much greater area of Otago and this greater geographic range increases their potential to impact on non-migratory galaxiids. Galaxiid taxonomic issues are still to be resolved and we have limited knowledge of the general ecology of approximately half the taxa.

Knowledge limitations are more significant when assessing environmental tolerances and the effects of water abstraction. I have undertaken work for the Otago Regional Council since 2018 and as part of this work, I have reviewed the state of ecological data available for ORC for the planning purposes. Included in this review process has been the habitat models for the Arrow, Cardrona, and Manuherekia catchments. That found the Manuherekia Galloway and Cardrona habitat models would both benefit from being updated and for the Manuherekia, an additional model would be appropriate for the Omakau reach of the Manuherekia River. Habitat preference occurs for various species, eg, trout. Also required updating in habitat for invertebrates and algal species needed to be modelled.

The state of ecological data is also varied. Some key areas have little, limited current data. For example, the lower Cardrona River has little recent sampling. Recent work have undertaken at the Cardrona River found previously unreported (inaudible 15:27:40). And also located longfin eels that have not



been recorded in the Cardrona River in the New Zealand Freshwater Fish Database records since 1992. This does demonstrate the NZFFD does not always provide sufficient or up-to-date fisheries data. I did not list caveats about the NZFFD data in which evidence in chief, in my opinion, general distributions of most non-migratory galaxiids are reasonably well-known.

However, there remain taxonomic issues to address and at the scale of individual streams, the fisheries data is variable in quality. In addition, some of the NZFFD records should be regarded as historic rather than representing up-to-date presence, absence, and abundance of data for fish in a water body. With respect to the habitat modelling as presented in 2018, I would consider this an overly optimistic assessment of the state of knowledge in the MAC catchments.

With respect to habitat modelling, I agree with Dr Hayes' evidence outlining recommended habitat modelling methods and that the existing habitat models need to be reviewed and updated to account for the age of the models, whether they follow best practice and use up-to-date habitat preferences for a range of aquatic taxa not just fish. I expect there will be significant requirement for updating, replacing, and adding to the habitat model resources available to ORC. This leads me to support Mr de Palsemaeker's opinion that we are lacking information, the existing data is patchy and at times relies on historic fisheries data.

While the ORC has previously commissioned habitat models, these will need updating and I expect additional models will be required for establishing the water management regime in the Land and Water Regional Plan. With respect to fish screens, I maintain the importance of screens is less for non-migratory galaxiids than for migratory or (inaudible 15:29:40) species. This is because only a portion of the non-migratory fish population will be exposed to the entrainment out of water take whereas the majority of all of the individuals of migratory species are exposed to entrainment into water races. I note that recent research has provided important information on the movement of larval non-migratory galaxiids and provides important information for any screen

requirement assessment. The PC7 process does allow time for fish screen requirements for non-migratory galaxiids to be better understood before setting consent conditions for water takes.

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Flushing flows: I agree with Mr Cole that flushing flows are desirable and have ecological benefits however flushing flows can only be provided by rainfall events and in central Otago rainfall events are often unpredictable in their occurrence.

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Minimum flows and allocation limits should be used together to protect ecological values and the two have different roles. The minimum flows are set to prevent unacceptable ecological impacts due to the abstraction induced low flow. Water allocation has a role in preventing flat lining of river flows and providing for flow variation that can improve habitat conditions and refresh a stream during summer low flow periods.

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Water allocation at annual, monthly or other durations can be used to adjust flows and account for variation in fresh events desired.

## 20 **THE COURT: JUDGE BORTHWICK**

Q. When I read your evidence and I understood your evidence but, when I first read your evidence-in-chief I had wondered what issues are in the plan change, as understood by the Regional Council or as brought to light be submitters, what issues was your brief actually addressing so it's telling me a lot about galaxiids but for what purpose?

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A. There was some, particularly one statement in Professor Skelton's saying – report sorry, not evidence, that said that the plan as it currently is being used represents a threat to non-migratory galaxiids in Otago so part of it was to inform the Court that as a sweep that non-migratory galaxiids, it concerns two species, not all of the species so the distributional info overlaid with the water attraction info where the sites are, it's there to demonstrate that while there is an issue it centres around Central Otago roundhead and Clutha flatheads. The other nine or 10 species however

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many you sort of designate because we haven't got the taxonomy 100%, are less exposed water attractions so Plan Change 7 and the water plan process that goes with it, if you're worried about threatened non-migratory galaxiids it's not all of them and the use of the lumping them all together as a: "They're all at threat," is incorrect in my opinion. It's two species that are exposed to a lot of water attraction impacts, effects, not the whole sweet. So it's again it's just trying to clarify where the issue lies, both geographically and in terms of which species are most vulnerable.

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Q. And you mentioned flatheads and what was the other one?

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A. Central Otago roundhead is the most threatened or – it occurs all of its populations essentially occur within the footprint of irrigation areas or abstraction areas then Clutha flathead is the other one. And the rest much less a degree of interaction with water attraction.

Q. So this brief was responding to something that Professor Skelton had said just providing more detail around the statement that he had made?

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A. In part, yes. I notice in one point in the ORC's description it also mentioned, sort of reiterated, Professor Skelton's comment about threats to non-migratory galaxiids and just, yeah, just clarify, clarification that it's not all the threatened non-migratory galaxiids that are subject to significant interaction with water attraction. I guess the other reason for talking about salmonids is again to, while this is being put up as one of the issues for Plan Change 7 either for or against is that to my opinion it's the salmonids that are a bigger threat, the water attraction is an issue but there are other issues that we could address and make substantial gains in terms of reducing the threat.

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Q. Okay, and so with that clarification in mind, how does this plan change respond to that or does it in fact not respond to that because it doesn't need to respond to any particular issue to deal with non-migratory galaxiids?

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A. I think there we're actually grappling with two issues. One is how you manage non-migratory galaxiids and for some parts of Otago that has a really strong relationship with water attraction management because they're in the same spots. Other parts of the non-migratory galaxiids

management are outside the water traction areas and it's a simply a fisheries management issue so that's one bit. The other part of plan change 7 is the part you would've addressed with the comments on the habitat modelling is how we understand the catchments in ecological terms for trout, invertebrates, native fish, algal species and the habitat modelling in the ecological flow development is what plan change 7 will allow us to improve but at the moment, we've got to the stage with the Manuherekia where we have habitat models linked to GoldSim and a lot of information now on how habitat will change with flow but for catchments like the Taieri, we have one habitat model that was built in probably 1999 around the middle march area and the rest of the catchment has no habitat modelling or information that we can relate flow changes to changes in habitat so for that catchment we need to a fair bit more. Same with the Cardrona where we've been trying to replace a 1999 habitat model with a more up-to-date one that we understand so that when it comes to a hearing process, we can explain that model to the commissioners and we can present it to stakeholders this is what's actually going on so that's the other part of where I'm coming – plan change 7, it gives the time to develop these models, rather than doing consents when we don't understand the catchments and the grounding consents on what we hope is okay with not a lot of understanding of ecological change with flow change.

Q. And so moving on into the future, is it your understanding that under the land and water plan, which now will be an integrated whole of catchment mountains to the sea (inaudible 15:38:09), which isn't necessarily be a lineal concept as I understand it, approach, that when linking to a minimum flow, that the habitat modelling itself links to a model of the hydrological conditions within a catchment, correct?

A. You can do. What we've done in the Manuherekia is first off as far as Mr Lloyd and I are aware, where we've managed to link a quite a hydrological water allocation model GoldSim and it predicts flows and now we can – the habitat models provide an output of at this flow you get x amount of habitat for the species at this point in the river, we can link that to the GoldSim outputs and generate real time series, because

GoldSim works for 47 years of flow data. For each day on that 47 years, we can generate now the habitat available to a suite of species at about 70% of the river length, and we can sum that up and see how changes occur through time. Now, we've never done that before. Normally you would just take the habitat model and say at one cumec, we'd start to lose habitat quite rapidly for this particular species and that's the one we value, we don't want to go below that point and you would look at a duration curve in the river and say oh, we only get to one cumec say four or five days a year or we would get naturally to one cumec 40 or 50 days a year in summer and you'd weigh up the and decide where you'd put the minimum flow, balancing that natural flow regime that the hydrologists give you, and the habitat you want to keep for the particular species of value. That make sense?

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15 Q. Yes. When you say "natural flow", you mean naturalised flow, so that's a calculation of the volume of water?

A. Which goes back to what Mr Henderson was discussing earlier today. If it's a river with – in its natural state, it would just be the flow as it is. If it's been modified, yes you go to a naturalised – or ideally you go to a naturalised flow if you can, and the Manuherikia is an example where we're struggling to get the flow naturalised. So you might not link it back to a natural flow; you would simply say at these particular flows we're meeting a habitat target for a particular species that we desire.

20 Q. So, that kind of sounds like business as usual but quite sophisticated, we're looking at minimum flows, we're looking at you know habitat output as it correlates with those minimum flows, what's that got to do with Te Mana o te Wai and putting health of the water first, the water, not as a resource or a commodity but water first?

25 A. I think if you put aside the heavily abstracted catchments and you looked at the ones that are basically unmodified or lightly mortified you're look at it and say well this is the river in it's natural state and it provides a Te Mana o te Wai, if we alter it well this much in terms of the flow regime we're doing a small amount of alteration in the habitat available for the species. Remember the models are habitat models, they're not models

- of abundance of the species, we're telling you how much habitat they have, they may or may not fill that habitat but anyway then you look at it as for Te Mana o te Wai and say okay well we haven't deferred far from the natural so we're probably still supporting that you know, life supporting capacity in general values. The tricky bit is it's not a cut off at a certain point where you don't meet it, it's going to be a gradual sort of – well the end point of no water you're definitely not meeting it, natural flow you definitely are, somewhere in the middle of this come together you decide no, no, no and sort of not meeting to yes we are. And it struck me when looking at these sort of things it's very easy to write the rule, you know, life supporting capacity and so on, you have to get a river very dry before it's not meeting any life supporting capacity and that Te Mana o te Wai sort of, it's a concept but how we fit that into a gradual sort of change in how the river supports life is a difficult call. And then when you move to the heavily abstracted catchments where you've got a lot of existing use you can point to this flow looks good for meeting the Te Mana o te Wai requirements but that is an infraction, let's say 50% of the existing use and then you have a problem about how you manage, how we've got too much water been taken from the river potentially to meet that objective.
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- 20 Q. Yes so and with that in mind, what involvement with the Regional Council in conceptualising of a policy way what does Te Mana o te Wai means if that's your starting, possibly at any point as well?
- A. I've had none.
- 25 Q. None? Who in the Regional Council's been having those discussions that you are aware?
- A. You'd have to check with Mr de Pelesmaeker.
- Q. Okay. So you haven't been approaching catchment models and you've given the example of Manuherikia with an outcome with the fundamental concept of Te Mana o te Wai in mind, that hasn't then reset what you are doing or thinking around –
- 30 A. No what we've been trying to do at Manuherikia is just develop a model that works that we're happy with –

Q. A model of what though, I mean a model's just a methodical representation of the environment which depends – which is making a prediction, isn't it?

A. Yes, it is.

5 Q. A prediction in this case about naturalised flows?

A. The GoldSim models makes a whole suite of predictions, not just natural – it doesn't actually go to naturalised flow. It deals with the water run-off you get from rainfall, and then the amount of water you need to irrigate the existing irrigation and allocation blocks, and it has a storage module  
10 in there for how much water you've got stored that you can feed into irrigation or to the minimum flow. And then it provides at no point (inaudible 15:44:35) river, the flow at that no – say confluence of tributaries, both the inflowing tributary and the upstream main stem, so that you've got flows at points in the river that we can then link to the  
15 habitat model. And because tributaries are at distinct points and so are the takes, you can say from this take to the distributary the flow is x. So in that three kilometres of river we've got say a cumec, and we know from the habitat model how much habitat it predicts is present at a cumec. So we can sum that along the river but what we've got is basically we're trying  
20 to build a model that all of the tag agree represents the river as best we can, and then when the Manuherekia reference group says "this is what we want the river to provide in terms of habitat or particular values", we say well, if you want to have an excellent trout fishery for instance in this reach, you'll need about this much water. Or if you go above this flow, in  
25 fact you don't get any more habitat because some of the habitats of a certain flow will plateau, so you add more water, you don't get more habitat and we can say "well here's the maximum you get". So once you get the values from the community, whether it's in MRG or FMU process with community objectives, then you go to the model and say: "You're  
30 looking for these things, here's where you get them, at these flows." So what we have is the model to inform the community then, and users, this is how you get what you want to get to or this is the trade-off. So if you have this, because it's linked to allocation, the GoldSim one in particular, if you want a really high residual or minimal flow, that means less water

available for out of stream use. So there's the – you know, you've got x amount of restriction on your irrigation, so you can weigh up the options. So the whole GoldSim model is a scenario tester and if we do this, what we get in terms of habitat? Or if we do this, what do we get in terms of irrigation reliability? And how do we balance them, where's the sweet spot, is there one that meets both the ecological objectives and the out stream ones? And the reason we've spent a lot of time on it is because it's obviously a crucial decision process for Central Otago water users and environmental interests, iwi, that we get this right, so we built probably the best model we've ever done to address that and that's taken, yeah, a couple of years.

Q. Remind me again because I'm not sure to what extent this is well covered or well described in the evidence but undoubtedly unknown to some people in this room, what does this modelling is a representation of the naturalised flow or something else?

A. The GoldSim, what it has is it runs a whole stream a different flow scenarios. We have one flow scenario which is called Falls Dam Full.

Q. Falls Dam so Manuherehia?

A. So basically it's water flows in, it has to flow out it's got no storage and then we have no irrigation so that's our baseline basically taking no water out, we're not storing any water and then we can run a status quo scenario which is basically the river as it is today with the –

Q. When you say "as today" and again, forgive me, is as today complete with the existing land users surrounding land users?

A. Yep.

Q. And so your model, your model is making predictions about the flow in the river which is an element of hydrology that you know, I'm not quite sure whether it's substrate or bed of the river or whatever, but anyway, flows in the river, you're making a prediction as set in this surrounding land use?

A. What it does is it tells you about seven or eight blocks of irrigation allocation so this patch like Chatto Creek or Thomsons Creek, it will tell you this is how much water is available for use in here, under this scenario, and it will link to the – we have the irrigation area in that



catchment plotted, modelled, from Groundtruth's real irrigation information so we know how much water it needs. So if we're only getting say 40% of it, it will tell you the reliability supply and it will tell you what's left in the river. Now, the model we've run at the moment for about eight different scenarios priorities the minimum flow so it's got a range of minimum flows campground that it has to meet and then everything else has to be adjusted and as this model runs, the irrigation use for instance is reduced as the flow drops so you maintain the minimum flow. Now at the moment, the model is there, it's developed, we're all pretty happy with it, now we just need to answer the questions the community wants in terms of what scenarios they want to see running it.

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Q. Is that model a complete answer to the MPS? Because it's been – I think you're articulating it as if is and I put to you again, if it's all about minimum flows and ecology, then why would we need an MPS?

15 A. Oh no, I – okay, it doesn't answer it all and one of the – and it depends really again how complex you make that scenario as well and what objectives you're looking for and how well we can relate an objective, our community objective to the models we can do, and there are some gaps in terms of – one of the things we see in the model is for instance is trout habitat. It basically doesn't increase at the campground where the flow recorder is. When you get above two cumecs it seems to flatten out, and you can add more and more water and you get any more trout habitat. But invertebrate habitat increases through the whole flow range, so essentially it says the bigger the flow the more food you've got; you don't get more fish. So if the community objective is just a bit of trout habitat, you can get it at two cumecs. If they want a big trophy fish, then you would actually go to a much higher flow because they get more food. And that's reflecting also the health of the rivers; the more invertebrate and life you've got in it you would say the more it meets that Te Mana o te Wai.  
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30 But again it becomes a very – it says "conceptual" or judgement call on where you say enough meets it, or you've taken it too far below a line to say it doesn't meet that, because there's no set range for it to be in.

Q. So if the community view was that you wanted to take, I don't know, nitrates from a level of toxicity grade D, whatever that's equivalent to, and

bring it up to grade A under the MPF, that you were going to allow 30 years for that to happen but in the meantime you had to move from D to C and that had to happen within the next 10 years, how would that then impact on the flow regime? How would your module respond to that?

5 A. It wouldn't.

Q. It wouldn't?

A. Its not a water quality model, it's a –

Q. Because its not a water quality and it's everything to do with the surrounding land.

10 A. Yeah.

Q. So then, that's what I'm getting at. The model isn't the complete answer to everything in this MPS is it?

A. No, no it's not.

Q. No, because the MPS makes it clear that you're interested in land and water integration.

15 A. Yep.

Q. Okay so the model is the answer to what question?

A. It's based around habitat, how much habitat is available to organisms and about water allocation for out of stream use. It can show you the balance between those two factors as you change the scenarios.

20 Q. Right but it doesn't actually then factor in the impact of land use, the land activities on, say water quality?

A. No it won't do that.

Q. That which must impact on habitat or maybe not so much habitat but species abundance and all the rest of the stuff that we might be interested in.

25 A. Again that depends very much on the on land management.

Q. Yes that's what I'm asking you.

A. What I'm saying, if you wanted to adjust some of that it might be riparian fencing or it depends very much where your nutrient issues are coming from. If it's direct stock access to a stream then you respond by fencing, if it's nitrate percolating through ground water then it's an irrigation application issue which you would, you know have to adjust. If it's phosphorus coming from overland flow, it's border dyke and and flood

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irrigation is probably – a moving to spray irrigation, not just for efficiency but for reducing phosphorous run-off might be the thing. So, yeah, it becomes a difficult thing to address, depending on just where your nutrient or your water quality issues are arising.

5 Q. Well the proposition I'm putting to you is it's not – those land use issues are not the issues which are addressed under the model that you're talking about, the Manuherikia.

A. No and it's never been intended to.

10 Q. But it's never been intended to but there are wider questions under the MPS and those questions would be, would go to water quality and land use wouldn't they?

A. Yes.

Q. Okay, well that's helpful, thank you, that is helpful.

#### **QUESTIONS FROM THE COURT: COMMISSIONER BUNTING**

15 Q. Just coming to the plan change we've got here, Plan Change 7?

A. Yes.

#### **WITNESS REFERRED TO PLAN CHANGE 7**

20 Q. You've produced evidence and at the end of your response reply evidence you talk about significant requirements for updating, replacing, adding to the habitat so on and so on. Is that for the – more to do with the land plan, water plan that's coming up or how do you distinguish between what's required for this plan change which is –

25 A. For this plan change, given we're running with basically just rolling things over for six years. What I mean is during that six year period it gives us time to develop the models we need for the final, you know, the land and water plan, that under the – using the current models is not particularly valid or they just don't have them so the six year period gives you a grace period to develop new models or check the existing ones are still valid. And then when you do the after the six year period, when you're granting  
30 new consents, you have a much better basis, better plan, better informed by appropriate modelling that can then do a much better process –

Q. So that's the focus of your evidence.

A. Yep.

Q. Just looking at the drafting, current drafting over plan change 7, have you looked at that to see whether your evidence has any significance in terms of say the matters of control?

5 **THE COURT:**

Any clearing on the matters of control?

**WITNESS:**

So you're meaning plan change 7, not the –

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**COMMISSIONER BUNTING:**

Yes.

**WITNESS:**

15 No, my evidence is aimed at part of the rationale behind plan change 7 is to give us time to develop the tools to do the land and water plan. It's not about the decision or how you assess consent under plan change 7, a lot of it, it's more about giving us the time to get it right.

20 **COMMISSIONER BUNTING:**

Well, that was my interpretation. Thank you for confirming that, thank you your Honour.

**THE COURT:**

25 So those are our questions. Who is – Mr Winchester.

**MR WINCHESTER:**

I'll just briefly address the Court.

30 **THE COURT:**

Oh no, you've already foregone.

**MR WINCHESTER:**

I have intent to withdraw my cross-examination of Dr Allibone but I was listening to his views on Te Mana o te Wai and certainly, I accept that they're at the invitation of the Court. I didn't detect from his written evidence that that would be a matter he might opine upon. I just really want it noted for the record that I  
5 will not cross-examine Dr Allibone on the basis that he said he had not been asked to give a view on Te Mana o te Wai for the purposes of the regional council's planning, that was –

**THE COURT:**

10 Would that be correct Dr Allibone?

**DR ALLIBONE:**

Yes.

15 **MR WINCHESTER:**

So he explicitly said that and he also has explicitly, and I think correctly, and I'll make submissions on it said that what is important is not just an ecological assessment but one which is overlain with values and that was the interchange he had with your Honour so I'll just leave it at that but I wanted to have that on  
20 the record with your leave.

**THE COURT:**

No, absolutely because I think these issues are important. Te Mana o te Wai being foundational to the MPS is important also because from memory,  
25 although I have looked at the MPS, I haven't looked – the last I looked at it with this in mind but now the foundational element is tracking or should be tracking through all plan and provision not – would that be right? Pretty much as we said in Southland. It's (inaudible 15:57:53) everything that we are doing here to the extent that it's actually intended to.

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**MR WINCHESTER:**

Indeed, both procedurally and substantively, yes.

**THE COURT:**

All right, thank you. Ms Baker-Galloway, oh no, Ms Williams.

**CROSS-EXAMINATION: MS WILLIAMS**

- 5 Q. (Inaudible 15:58:14) speak from where I'm sitting. Dr Allibone, thank you for explaining, I guess, the purpose of your evidence as being about the rationale for the plan change, rather than perhaps addressed to the plan change. And I do appreciate that in relation to – you're really scene setting in terms of the freshwater fisheries and species that are in the Otago region and providing some background to the Court in terms of the fact that we do have an Otago – this suite of – I'm going to call them
- 10 non-diadromous, because that's the term that's adopted by Dr Dunn but non-diadromous galaxiids species which some people call non-migratory galaxiids species, and they're probably reasonably interchangeable of terms but just clarifying that up front. So looking at your evidence, whilst you haven't prepared it perhaps to support Plan Change 7, there are two
- 15 aspects of the plan change which are certainly relevant to the Court's consideration of which I would like to discuss with you and the first of those is the application of the minimum flows in schedule 2A where those flows are in the current schedule but are not yet, I'll put it this way, operative because there was a requirement that either there be
- 20 agreement of all current consent holders that the minimum flows could apply to them or it was awaiting for the expiry of deemed permits in October of this year. So considering that those minimum flow figures are currently in the plan, those are not picked up by Plan Change 7 and would not be continued through, can you tell me what your view is on that?
- 25 A. Well that's kind of difficult to give an answer to. One of the issues that comes to mind straight away is that it depends because there are minimum flows set on a number of rivers and some of those have been set relatively recently, probably following some reasonable guidance and that also in areas where deemed permits in particular are uncommon if
- 30 you went to South Otago it's very going to be little change.
- Q. So those ones I understand would continue, what I'm thinking of I think it's particularly in the Taieri and the Manuherikia where there are existing minimum flows in the plan but they are not applicable currently.

- A. Okay well the Manuherikia can give you an answer that simply the minimum flow is relevant for almost all of the year if ever relevant, because its set at Ophir –

**THE COURT: JUDGE BORTHWICK**

- 5 Q. Sorry, because it's set at?
- A. Sorry, because it's set at Ophir but the minimum flow (inaudible 16:01:35) 820 litres at Ophir, part-way down the Manuherikia. Now when we're discharging water from Falls Dam to feed the four main irrigation takes, that's Blackstone and Omakau which are upstream of Ophir and there are
- 10 two downstream the Manuherikia take and the Galloway take. Now as long as Galloway and Manuherikia are being supplied with more than 820 litres a second, then you're always going to get 820 litres flowing past the minimum flow site. So if say Manuherikia's taking a cumec and Galloway 1,400, well that's got to be at least 1,400 – sorry, 400 at
- 15 Galloway, 1,400 passing Ophir. Now, but the moment the Manuherikia uses maintain a 900 litre a second minimum flow voluntary at Galloway as well, which exceeds the minimum flow so if we carry on with the status quo and the voluntary minimum flow, the status quo will continue. The minimum flow is irrelevant for the Manuherikia. For the Taieri, I'll take on
- 20 board what Mr Page was asking before about the control of the Maniototo Irrigation Company and how they, it would come down to how they supply water possibly and I really would have to sit down and have a real careful think through any further on your question.

**CROSS-EXAMINATION CONTINUES: MS WILLIAMS**

- 25 Q. Do you accept that given that these are flows which are in the plan now and which any current consent holder should have been anticipating would be applied and indeed what you're telling me, some of them have voluntarily being applying them and a little bit more, do you accept that it is appropriate that that be something which carries on through for a
- 30 controlled activity under Plan Change 7?
- A. Not sure that's my place to say yes or no to honestly.
- Q. All right, if you don't want to answer that's fine.

A. Well, just not sure it's quite how –

**THE COURT: JUDGE BORTHWICK**

Q. Well you could frame it in ecological terms, what is the ecological down side if there is any, there may not be, to imposing the minimum flow on every applicant for renewal, either deemed permits or replacement permits within one of those given catchments where there are permanently flowing?

A. Okay. In the Manuherikia it's not going to make any equilateral change from status quo because they exceed the minimum flow.

**10 CROSS-EXAMINATION CONTINUES: MS WILLIAMS**

Q. But that would be provided that they do at least maintain the status quo?

A. Yes, the only way that it would, in common sense to me in the Manuherikia, that they won't meet the minimum flow as if they're on full restriction like Falls Dam is empty and you're in a drought condition because the only time you don't put water past Ophir if its not supplying Manuherikia Irrigation Company and Galloway, that basically means you've run out of water in Falls Dam and you're in a drought. So but that stage the minimum flow is also irrelevant because you're in drought conditions where everyone is off, even the deemed permit holders who are not subject to the minimum flow probably have no either to take anyway or so little it's become irrelevant.

1605

Q. But remembering that of course the deemed permits will have expired so they will be subject to something, this is the question is should they be subject to the minimum flow?

A. Ideally, yes.

Q. Okay, thank you and similarly under Taieri?

A. Yes, if we're on the same logic,

Q. The other aspect that I want to talk with you, explore with you Dr Allibone is that currently deemed permits have a priority system so that for deemed permits, mining privileges that were granted earlier in time, they always take priority over mining privileges deemed permits that were granted



later in time no matter where they are in the catchment and so particularly where you have a higher priority take deemed permit which is lower down the catchment, that means that lower property takes higher up the catchment are required to allow a certain proportion of water to continue to flow to ensure that the higher priority deemed permit has sufficient water and you're nodding so I'm just going to say that you agree with that?

5

A. No I understand the situation, I've dealt with the priorities so I was nodding about understanding your question and yes, you're right in that sense where you've got a downstream holder with first priority and they could, as I understand things, request other permit holders to turn off to supply their water. However, the alternative applies as well, if the deemed permit holder with first priority is at the top end of the stream, he can take all the water and everyone downstream is not getting any and if the plan change changes that so that they have to share evenly then that priority will then disappear and you'd share and it would depend again if there's any watering sharing agreements amongst the users on how they deal with that resource so it's, there's a theoretical one kind of what you've presented and the real world might be kind of different.

10

15

Q. So just thinking about Plan Change 7 and as described by Mr Maw in his submissions this morning, the intention for the controlled activity is that this would be a continuation of existing activities without exacerbating effects on the environment, so that's, that's, what are the controlled activity pathway is intended to maintain, the status quo. If you have a change in priorities because they are not rolled over as part of Plan Change 7, does that affect your answer?

20

25

A. I think I'll stick with it depends very much on there might be a consent framework that the people are working with but there will also be user agreements on how they may share that so it's very hard to know. I'm not good with planning side of this, how this would pan out, you know in terms of operationally what users would do when the priorities are not there or and how they operate them now may not reflect always how the priorities are –

30

Q. So let's put to one side what users are doing, let's just think about what users rights currently are. So that's saying that they have priorities and they're exercising them?

A. Yes.

5 Q. Yes and that's the current hydrology of those streams/water bodies, the current ecosystems of those streams/water bodies is accustomed to those priorities isn't it?

A. I'm uncomfortable with the word "accustomed" but yes.

Q. It's what they know, if I put it that way.

10 A. Okay, yep.

Q. If you then introduce a degree of variability by not maintaining those priorities you don't actually know what that change in flow is to, what effect that is going to have on the ecosystems and the habitats, do you?

A. Well that's a yes and a no, I'll explain that to you –

15 **THE COURT: JUDGE BORTHWICK**

Q. Sorry, you say what?

A. It's a yes and a no in a sense.

Q. It's a yes and a no, okay.

**CROSS-EXAMINATION CONTINUES: MS WILLIAMS**

20 A. Because in some ways you're talking about a very sort of narrow window you could say of what's going on, this year for instance we've had a very wet January and all the irrigation as far as Ophir and Manuherikia was off for a month. So at that stage the streams are flowing completely natural, the priorities and bits are irrelevant because no one's taking. So the

25 priority issue comes into effect when you have a low flow and then water is not available for all users. So some of the times the change or lack of priorities will do no change to the flow and it depends on the rainfall and water use. On a dry year, yes, depending on how the users depend, decide to operate, the change in priorities could change how the flows

30 change down the river sites. So when you say the "community is not used to change", I wouldn't accept that because some years are very different from others. And what we've been modelling (inaudible 16:10:16)

GoldSim is exactly that; wet years, dry, years, average years. And how it compares to the baseline really varies but on a wet year there's very little change.

1610

## 5 THE COURT: JUDGE BORTHWICK

Q. Just as a matter of interest, do you know anything about whether or not holders of deemed permits are actually exercising those priorities, or not? Because we hear – we've seen it referenced but I don't think we've seen it landed anywhere in the evidence, in a way which the Court could understand as to the scale of significance of those priorities (inaudible 16:10:49), if in fact they're exercised now?

10

A. You'd have to ask – other party – I get some feelings some are operated, some more enforced than others but there's also quite a bit of water sharing at times. So I think other parties would be best to answer that and it might be a case-by-case. My experience with deemed permits is – and issues about that date back 20 years when I've seen real angst over who has water, but I couldn't tell you the situation today. I'd...

15

Q. For any catchment?

A. No, I mean it's not something I deal with, how the irrigators decide to manage the takes among themselves.

20

Q. The who?

A. I don't deal with how the irrigators manage the –

Q. Ah, okay. Okay.

A. – that allocation issue amongst themselves.

25

Q. Oh really? And so is it accounted for in any model that you've ever seen?

A. No. Things like the GoldSim doesn't, 'cos it treats things as blocks, and it depends very much on how you construct your model. If you could go to the really detailed level you could say yes, take point A here on the stream has priority, so we have to get... Just as Ms Williams has suggested, we have to get water to that one, regardless of what's upstream but downstream we might get none. But you have to have a really complex model to put priority into it, and every take point modelled with its priority assigned, which we can't do for various reasons.

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**CROSS-EXAMINATION CONTINUES: MS WILLIAMS**

Q. Dr Allibone, I understand that in the Manuherekia catchment, one of the consents, the current deemed permits which certainly does have a higher priority is the Manuherekia Irrigation Company race, which is, as you've described, at least part-way down the catchment, if not towards the lower end of the catchment, and I understand it's below the minimum flow?

A. Yes, it's below the minimum flow site, yes.

Q. So there is a potential for an impact there, isn't there?

A. Yes. My understanding is, and again subject to parties confirming, this is, that the four main takes on the Manuherekia ration evenly, and we'll have to check that with the irrigators. So if this water storage in Falls Dam drops, and so they have to go to 75% take, all four of the big users take a 25% cut. So as I understand it, Manuherekia in that scenario are not operating a priority and saying: "We'll keep 100%, the rest of you guys can take the cut." They're not doing that as I understand things, but that would be best put to Manuherekia Irrigation Company.

Q. So you would agree then that it would be important for the Council to continue control over the rules or operational procedures of relevant water allocation committees that exist for the catchment?

A. I don't deal with that and I don't know how much control the Council has on the water allocation committees.

1615

**CROSS-EXAMINATION: MS BAKER-GALLOWAY**

Q. So as with Mr Henderson, I'd like you to have Forrest and Bird's – my client's evidence Fish & Game, I'm not looking for a new job – in front of you please and go to Mr Farrell's evidence again thanks.

A. Well, I'm not sure I have his evidence. I've got Mr Trotter's, Dr Haze's and Mr Cole's.

Q. Oh it'll be in the – is that the same folder? So if you go to past page 31 of his evidence and then there's the appendix.

A. Yes.

Q. And then flick over a couple of pages till you get to policy 10(a)(2)(3).

A. Yes.

- Q. So just to help you understand why I'm asking you these questions, this is the policy that's intended to provide direction about when non-complying consents might be appropriate so consents that are for longer than six years or for more water than currently used, in a nutshell. And one of the issues that some submitters have is that the policy could be much clearer in its direction about the acceptable thresholds of effects. What is said is notified is that under paragraph A is that activity might be appropriate if it has no more than minor adverse effects on the ecology of the waterbody. So it's no more than minor phrase that I'm interested in discussing with you. As you've explained in your evidence, habitat modelling in Otago, you need more time or your recommendation is more time is needed for the relevant habitat models until they're fit for purpose. Is that a fair summary?
- 5
- 10
- A. Some places, yes. Some places we're good, some places, we're yeah. The models exist they just need to be updated in terms of the habitat preferences used, some places there's no models so you have nothing and some places like the original Lindis model, the model is just uninterpretable and you can throw it out and start again so the Lindis I hope is a one off aberration in that sense but so there's a series of issues, some we can step straight to, some we can't.
- 15
- 20
- Q. And you've agreed with Dr Haze you're both reasonably on the same page in that regard in terms of work being required to update the models so that they provide a more reliable outcome, answer.
- A. Especially for the older models. I mean, when you look at what I did personally back in 2008, 2007 for the Council, we were just modelling fish habitat. These days we do invertebrate and algal species so you look at the whole food web as well as the fish so there are old models that are still valid models but haven't modelled all of the things we would today, they're really easy to update. Then there is a place with no models and there are places with models that just – they don't fit best practice so you'd want to do them again.
- 25
- 30
- Q. So if we had a policy directive that required no more than minor adverse effects for this interim plan change, if that was assessed on a case by

case basis, there's no guarantee these models that are fit for purpose to make that assessment, is there?

A. No one of the things is that we tend to do the models for the big rivers, we don't do it for every little stream, it would be just impossible, we would  
5 do it for something that runs you know, 50 litres a second, there's a mean flow, never mind a MALF is 10 or something. So, we use modelling for the big rivers and the important places. For the small streams and little flows, you're just going to come up with some much simpler method and that's what the 2008 Beca report was suggesting as well.

10 Q. The what sorry?

A. The 2008 Beca report that Dr Haze refers to the draft minimum flow guidelines or whatever it's called.

Q. The draft – well let's get it right for the record. The draft national environmental standard for ecological flows.

15 A. Thank you. For very small streams and small takes, you don't go to much effort, for big rivers and high value areas you go to a lot of effort to get it right so it's a moving sort of target this one in terms of what's – what you do for what places.

1620

20 Q. Yes. So let's jump into Dr Haze's evidence then. So this is Dr Haze, this is another expert for Fish & Game and I'd like you to go to paragraph 46 of his evidence.

**WITNESS REFERRED TO DR HAZE'S EVIDENCE, PARAGRAPH 46**

25 Q. So again, just a bit of back story. Instead of using a test of "no more than minor effects on ecological values", for the purpose of this plan change, what Fish & Game are proposing is a proxy for that "no more than minor ecological effect" and instead just using the degree of hydrological alteration with reference to MALF. And this is – as you'll see in paragraph 46, Dr Haze has taken this in part from the recommendations  
30 in that draft National Environment Standard on Ecological Flows. And for example at paragraph 47, it proposes as a trigger that for rivers that have a mean flow of less than five cumecs, the trigger be a minimum flow of less than 90% of seven day MALF and an allocation of more than 20% of

MALF would trigger that “no more than minor” threshold. Would you agree with that as a trigger for a “no more than minor” threshold?

A. So below that threshold you think we would undertake work to assess things?

5 Q. Well the context it’s proposing is to set a quantifiable objective threshold in the policy, rather than “no more than minor”.

A. Certainly I think 90% of MALF and above would be – conservative’s not the right word but pretty safe in terms of if you’re fluctuating, reducing the flow that amount, yes you’re not going to have a significant change. Once  
10 you go below that you may not have a significant change, but – yeah, you could use that as a cut-off and be reasonably comfortable that things would be, yeah, good.

Q. Dr Haze’s words in 47 are that: “Those restrictions would,” “If you breached those, would potentially have more than minor effects on life  
15 supporting capacity, ecosystem health, mahika kai and fisheries amenity values.

A. Yes. I think it stretches it a little bit, in that the “potential” is the key word there. And 89%, how much different is it from 90? We couldn’t measure. If you go to 50% you’d probably – you would notice it, for some species.  
20 If I took the Manuharekia as an example, where we’ve modelled the trout habitat in the lower river, the mouth is estimated to be around 3.9. Now you can drop the river to around two cumecs, that’s nearly 50%, and that habitat proportion for them hasn’t changed. It’s changed the food available to them, possibly, by both the drift rate and the amount of habitat  
25 for them but the habitat for the trout hasn’t changed. So, it depends very much on how the individual habitat preferences respond, or habitat use changes with the flow and the shape of the river, but 90% is fairly safe. Where it becomes problematic below that varies with species and river type. So, I’d be happy with 90% as a cut-off.

30 Q. So just to be clear, the 90% is for rivers with a mean flow less than five cumecs?

A. Yes.

Q. And then the next paragraph down: “For rivers with a mean flow greater than five cumecs, the recommendation is minimum flow trigger of 80% of MALF and allocation of 30% of MALF as the trigger.” “The threshold.”

5 A. On the littlest comfortable, not because I don’t want to be correct, because I’m just not experienced working with the bigger rivers. You know, we spend a lot of time in wadable streams rather than things the size of the Clutha and that. So I’d reserve judgement on that one if I could, please.

1625

10 Q. And my last set of questions is just in relation to just picking up a comment of yours in your summary at paragraph 10 and it makes, this is in relation to how manage species interaction between salmonids and galaxiids and your paragraph 10 in your summary agrees and confirms that PC7 will not establish residual flow and remove the drying reaches that are

15 currently excluding salmonids from some galaxiid populations. You do agree though that there are other, there’s other work in play between the relevant statutory agencies to address species interaction that’s ongoing?

A. I’m not privy to the conversations between the Department and Fish & Game.

20 Q. Okay well that’s fine, that clears that up. You do agree that leaving a river to run dry is not the only way you can continue to exclude salmonids from galaxiid populations, you can have imposition of artificially constructed fish barrier, can’t you?

A. Yeah they’re not as easy to put in as you’d like sometimes, I mean you’d

25 need some fall, a good barrier either needs a, well a natural one you’ll find will have to be about three metres high, now if you’ve got a stream of low gradient, getting a three metre high barrier into it and if it doesn’t have the bank slope either you end up creating a very large reservoir which is not what you want so it’s technically challenging and yeah, there are some

30 spots where it’s, areas you might like to put in a barrier in, a physical barrier but it’s not feasible because of the river morphology. In say a highly mobile braided riverbed, you’re not going to try it at all, so it’s just horses for courses.



Q. If the, leaving the river in a case where it continues to run dry from time to time, that could also have an adverse effect on the non-migratory galaxiids in terms of food production, invertebrate food production, compared to restoring flows?

5 A. Well that's an interesting one. There's only one study done on galaxiid sort of food consumption, Dr Alex Yurin, one of the guys sort of supervised for my PhD work years ago did work in Sutton and Stoney Stream on the Rock and Pillars and his conclusion from the galaxiid work after three years was they consume about 30% of the invertebrate  
10 production in the stream. The other 70% just accumulates and hatches as insects and flies off to be eaten by spiders or whatever so they utilise, in his experiment the only one that's been done or study, relatively small amount of the invertebrate production so if you halved it you may not impact on them at all because they're not tied strongly to that invertebrate  
15 production in terms of maintaining their population abundance and health. Conversely trout on the other hand they used 100% plus of the production. So, you would impact on trout as you reduce the invertebrate diversity because they (inaudible 16:28:31) galaxiids, maybe not. It depends on the scale of that reduction.

20 Q. But if you were managing a river for its overall health, if there's been a vision set in terms of Te Mana o te Wai, it's preferable to restore meaning flows isn't it rather than leave them de-watered?

A. Yes unless they're natural drying reaches, yes.

**CROSS-EXAMINATION: MR ANDERSON – NIL**

25 **CROSS-EXAMINATION: MS IRVING**

Q. Good afternoon Mr Allibone. I would just like to start with a point made in your summary document, in particular paragraph 6 where you discuss the habitat lots in relation to mudfish and just wanting to clarify what we're talking about there. Does that relate to the image at page 17 of your  
30 evidence-in-chief?

A. Did you say page 17 or...?

Q. Yes, page 17 I think it's figure number 4.

- A. Okay, partly, it just means the wetlands on that south bank of the Waitaki are vulnerable to willow encroachment and issues like that. They're not vulnerable to water retraction although I did find out late last week that there's a management plan in place being operated by environment Canterbury for the area and yeah looking to manage habitat issues for the populations there so I suspect they're reasonably well looked after.
- 5
- Q. And do you know if any of the permits in that area are deemed permits or permits subject to plan change 7?
- A. No.
- 10
- Q. I'd like to talk about, I suppose one of the key themes in your evidence around gaps in knowledge in relation to fish. I think at paragraph 81 of your evidence-in-chief you talk about establishing research programmes taking sort of two to three years in your experience, is that correct?
- A. Yes.
- 15
- Q. And is it true that those research programmes can be affected by weather conditions from season to season?
- A. When I'm talking about spawning and timing and bits and pieces, no. If you were talking habitat modelling stuff and low flow, yes, yes. That gets problematic.
- 20
- Q. Is that one of the challenges you faced in say the Cardrona catchment or the upper Manuherekia recently?
- A. The – yes, certainly the flow modelling issues have been difficult to deal with because we've had flood events yeah.
- Q. And so that type of issue would tend to extend the period of time required to gather the information you need?
- 25
- A. It can do, or you just decide if it's important that after flood event, you go back and you have another go. Rather than waiting for another year, if you had a flood in January, you go back in February and start again, rather than abandon it until December the next year. So it's a bit of a choices in how much money you – or what you think the weather's going to do, but – yeah.
- 30
- Q. Presuming the flows behave themselves and you can get the type of characteristics you need to do your assessment?
- A. I think for the most part, if you have to do it, you will get it done.

Q. Right. Can you recall when the regional council have said they'll be notifying the land and water plan?

A. I believe it's 2023.

5 Q. December 2023? So would you expect all of the research programmes take two to three years to be completed for notification of that plan?

A. Yes, I expect that's what we're going to have to do.

10 Q. You also talk about a range of data sources that you've utilised for assessing ecological values. Fisheries database, the Otago Regional Council state of the environment monitoring to the extent that it covers the areas you need?

A. I think I mentioned so where it doesn't cover the areas and the database has covers a lot but it has issues with historic versus current data.

Q. So the state of the environment monitoring is of zero assistance to you?

15 A. Not zero but when you have eight sites for the whole of the province, it's only going to assist in local areas.

Q. It's part of the equation?

A. Yeah, but it's not a big part.

Q. And the survey work undertaken by applicants for resource consents?

A. That's all part of what you can pull into the picture.

20 Q. And your own eDNA data that you're producing?

1635

25 A. That is a – it's a science project you could say at the moment that is being developed and it will, you know, what we're doing at the moment is developing the genetic markers so when you take a water sample you have appropriate marker to detect what's up stream. So it's ongoing and I do it as a voluntary contribution to it as I cruise around, NFV I believe and other parties are working on sort of a more funded approach.

30 Q. So there's I suppose a rang of data that we have at the moment that we will pull together and you say that there's more research that you will do in the coming years that will feed into the consent process and to the plan change process?

A. I would hope so yes.

Q. And in essence those sources of data will be the same?

A. So by the same you mean?

Q. The same data will be used to inform the land and water plan as well as renewals of consents?

A. I would assume so, yes, it wouldn't –

**THE COURT: JUDGE BORTHWICK**

5 What do you mean “the same data”? Sorry, I'm a bit confused.

**MS IRVING:**

Well the same sources of data, your Honour. The fisheries data bases, fish survey work that's done by the Council or applicants on consent.

**THE COURT: JUDGE BORTHWICK**

10 So it's a proposition that there's going to be no additional research?

**MS IRVING:**

Correct.

**THE COURT: JUDGE BORTHWICK**

15 Q. Is that correct, there is going to be no additional research from here to, I don't know –

A. No.

Q. – 2025 or –

A. I believe the Council has a plan to undertake more work.

Q. You understand that they have a plan?

20 A. Yes and Dr Evered Hinks will address that.

Q. Okay.

**CROSS-EXAMINATION CONTINUES: MS IRVING**

Q. But my point is that that information will be used both in relation to the plan and in relation to resource consents.

25 A. I expect so.

Q. I'd like to talk about flow management and at paragraph 95 of your evidence-in-chief, have you got that paragraph?

A. Yep.

- Q. So in that you talk about the range of tools that the Council uses to manage water use. Can you tell me what of those tools are being utilised in Plan Change 7?
- 5 A. Of the top of my head, I think the instantaneous rates of takes, the monthly and yearly allocations.
- Q. And no minimum flows?
- A. That would depend on the consent conditions, if for new –
- Q. For replacement of deemed permits.
- 10 A. Yeah I'm not quite sure I can answer that honestly, I haven't, I've read the plan change but I'd want to go back to it further and get it correct.
- Q. Okay. In your experience in resource consent renewals that you've been involved with, is it routine for those to be granted subject to minimum flows where they exist?
- A. Yes.
- 15 Q. Is it routine for consents to be granted subject to residual flows where they are necessary?
- A. Yes.
- Q. Is it routine for consents to be granted with instantaneous take limits?
- A. Yes.
- 20 Q. Annual volumes?
- A. Yes.
- Q. Monthly volumes?
- A. I don't do anything for setting them but I recall them going onto consents at times, yes.
- 25 Q. So for the most part all of the tools that you list in your paragraph?
- A. Are used when they can be, yes.
- Q. Now I'd like to talk briefly about galaxiids, I'm going to call them non-migratory galaxiids. I understand in answer to question from my colleague Ms Williams, that you consider the Clutha flathead and the
- 30 Central Otago roundhead to be the key species that are likely to be affected by consents renewed under Plan Change 7?
- A. Yes.

Q. And in light of your understanding about their existing distribution, the habitat that they occupy, would you consider their habitat to be critical habitat?

1640

5 A. Given they're nationally threatened species, yes, all that habitat would be critical.

Q. And in your view we should protect that critical habitat?

A. Yes.

10 Q. I understand from your evidence that you view salmonids to be the most significant threat to those non-migratory species?

A. To all of them, yes.

Q. Would you agree that habitat such as Thomsons Creek in the Manuherekia is the type of habitat that we need to be protecting?

15 A. Yes, in light of a quick discussion with Mr Hickey earlier today and particularly in some survey work we did in February, it has some very good populations of Central Otago roundheads, according to what's been told to me.

Q. Are you familiar with Laheys Creek?

A. Yes.

20 **THE COURT: JUDGE BORTHWICK**

Which creek, sorry?

**MS IRVING:**

Laheys Creek.

**THE COURT: JUDGE BORTHWICK**

25 Where's that?

**WITNESS:**

It's spelled L-A-H-E-Y-S. It's a tributary of Chatto Creek in the Manuherekia.

**MS IRVING ADDRESSES THE COURT – DISCUSSED IN REBUTTAL EVIDENCE (16:41:08)**

**CROSS-EXAMINATION CONTINUES: MS IRVING**

Q. And Laheys Creek as I recall has roundhead galaxiids in it?

A. Central Otago roundheads, yes.

5 Q. And their habitat is being protected, I suppose, at the moment by the absence of a residual flow, to continue to exclude salmonids?

10 A. Yeah. For the benefit of the Court, Laheys Creek is one that I've worked with the applicant on for a number of years. They have a take near the base of the Dunstan Range, which takes, during low flow periods, 100% of the flow, or almost; there's a bit of leakage. So downstream of the take, 500 metres downstream from the take, the stream is dry and it probably remains dry for I think about six kilometres. At the six kilometre mark we have some springs; some of them are possibly fed by leakage from the irrigation schemes, some just natural resurfacing of groundwater. And at the springs and downstream for – I've got to get a downstream limit but I suspect about 500 metres, maybe a little bit further, there's a population of Central Otago roundheads. And then we get into a slightly larger stream, it has a confluence with another tributary and we start to pick up brown trout in reasonable numbers and the galaxiids disappear. So there's a small population in a short section of spring fed stream and along that 500 metres there's the spring at the top and then there's a lot of groundwater inflows. And I believe Landpro gauged it at one stage at the confluence point, it's about 30 litres a second so it rises from zero to, in 500 metres, about 30 litres in summer. And yeah, sitting in there is a little population of roundheads that – yeah, there are trout upstream and downstream of them. They're upstream in Laheys Creek above the water take. The drying reach obviously has nothing and then we have trout downstream of them again in Chatto Creek itself. So they're sandwiched, so we call them "sandwich populations", stuck between trout upstream and downstream. That gives you an insight into it, I hope.

25  
30 Q. From your recollection – so the drying reach is believed to be induced by irrigation?

A. Believed to be. I question that a little bit in my own head because we've never done any gauging down the stream during normal flow periods and we see a lot of the tributaries coming off the Dunstan Range there, they

run across alluvial fans. So there'll be some losses to groundwater and that's the point where the spring is groundwater sourced, whether it's all irrigation and leakage from the race or whether it's some natural. Whether that groundwater – losses to groundwater across the alluvial fan is sufficient to dry it, whether it occurs, it hasn't been investigated. So there's some doubt on just how natural or unnatural the losses are across there.

5

Q. I digress slightly but there's a galaxiid management plan imposed as a condition of the resource consent for that creek, isn't there?

10

A. Yes.

Q. Staying with Laheys for a moment, I think Ms Baker-Galloway referred you to the evidence of Dr Haze and the idea of setting a threshold for minimum flows and allocation limits in waterways. Based on – and I think Ms Baker-Galloway said the minimum flow is between 80 to 90% of naturalised MALF –

15

A. Yeah.

Q. – depending on the size of the waterway and an allocation block of 20 to 30% of MALF, naturalised MALF. That's your understanding?

A. Yeah.

20

Q. Setting those default limits, would they have the risk of enabling salmonids' passage into currently isolated galaxiid habitats, in your view?

1645

A. Yeah it's one of the issues and it's the most problematic balancing issue we have here. To restore flows in some areas or to – yeah to what's been suggested there you end up putting the galaxiids at more risk and it's why again I classify the salmonids as more of a problem than the trout, you can play with the irrigation abstraction and reduce its impacts quite easily but in doing so you can let trout go into places that you don't want them be in and it adds this level of complexity to all of the, the water management decisions and again, why Central Otago roundhead is the most threatened, it sits on the valley floor in amongst the abstraction points and the trout and if you play with one, if you play with the irrigation abstraction without the predatory fish issue, you get outcomes you might not want in terms of protecting the fish. So that's again if you got rid of

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the trout you could deal with the irrigation any way you like because there wouldn't be a constraint but at the moment the interactions between irrigation and salmonids constrain how you can manage the water takes and sometimes you definitely don't want to yeah, put a residual flow in or a connecting flow of some of these population.

5

Q. In your view would enabling trout into the habitat of galaxiids be an adverse effect that was more than minor?

A. Yeah, yes.

10

Q. And would it be in direct contravention to policies in MPS around protecting the habitat of indigenous fish?

A. Yeah I can be pedantic and say no because you're protecting the habitat you're just not protecting the fish and that's one thing with the MPS when it says habitat all the time you can protect the habitat but can ruin the fish population. Letting trout in will be detrimental to the fish, it won't necessarily be detrimental to the habitat.

15

Q. Be a bit self-defeating to kill all of the fish but leave them with some habitat.

A. Yes exactly and that's, it's what the MPS says unfortunately.

Q. I'm sure Ms Williams will have something to say about that.

20

A. Well it does also say we have to be take into account threatened species so I think that would give us some cover there.

Q. Lastly I'd like to talk to you about habitat modelling. I just want to clarify before I ask you a few questions, you refer to habitat models in paragraph 32 of your evidence-in-chief, I think it's where you say there's 15 or so that you have produced?

25

A. Yes that's correct, I recall doing a few, yes.

Q. Actually it might be in your reply, sorry Mr Allibone. It's in your rebuttal evidence paragraph 32 and then you discuss them again in paragraph 50.

A. Sorry which was the first one?

30

Q. Paragraph 32.

A. Thank you, yes.

Q. So are those habitat models essentially the same, the ones you talk about constructing in paragraph 32 and then the ones that you discuss in paragraph 50 as requiring some updating?

A. Yes and no. I've done 15 as a Golder Associates contractor to the Council in, I think 2007, 2008. NIWA did a whole lot previously in sort of 2003 to 2005, and all of them need updating because none of them invertebrates and algal's taxa, and the older NIWA ones we're also not  
5 sure if we can get the raw data to re-run the models. It seems a third party might have it but NIWA don't always have it. So yeah, there's a mix of ones I've done and ones that NIWA have done.

Q. Right, so where they require updating additional of – additional curves, updating of the curves, how long does that take?

10 A. I can do, if they have at preference curves of the area we can do it in five minutes, the model run.

1650

Q. You also discuss in your evidence the challenges with the habitat model in the Lindis case. Can you explain to me what the issue was there?

15 A. The issues were multiple. For a start, the model was built in two places on the river. One a reach up near the upstream monitoring site, I can't recall the name, but anyway, on a stable flow section of the river. The other eight cross sections were built down on the losing reach by the Lindis crossing so they were split by several kilometres of river and some  
20 losing and gaining reaches. So when you look at the flow of the seven cross sections at the top, it'd be quite different to what it is down the bottom and yet all of the cross sections put together in the single model that said, say, for trout habitat, 700 litres a second is what we want. But it didn't say where 700 litres a second is in the river because – was it in  
25 the drying reach down the bottom or the stable flow reach up the top? And how the other thing with it, when they went and did the calibration, you do a set of cross sections, you go back twice to calibrate the model on different flows. When they went to the drying reach to do the last calibration, it was dry and I have no idea how they modelled zero flow  
30 because you don't know which – essentially, how that flow compared to upstream. When it went dry, it might've been a 400 litres upstream or a 200 litres upstream so how they marry –

Q. Litres of – sorry, metres upstream?

A. Sorry. There were seven cross sections about... Lindis crossing, I think it is which is well upstream of – no not Lindis crossing, it can't be. Near the... I'm just trying to remember the name of it. The upper flow recorder anyway, there's two flow recorders on –

5 Q. Lindis Peaks?

A. Lindis Peaks, thank you. And then there were eight down at Lindis crossing which is where the state highway crosses the lower Lindis and that is a drying reach, so it loses flow as you go through the reach. So that for a start violates one of the assumptions of the (inaudible 16:52:08) Hampson model. You're supposed to have the same flow at all cross sections. Putting across a drying reach meant that every reach downstream had a slightly lower flow than the previous one so that's a small violation you can account for but how you married up those eight lower cross sections with the seven upstream ones which are very different flow environment to come up with a single flow recommendation for a particular species was I think it would be called mind boggling to all of the experts as a commissioner I asked every expert how to interpret that model and they all said we have no idea and the other issue with it was that while we had a flow sort of flow habitat relationship that none of us understood, that wasn't related to the minimum flow point so because of that when you say oh the model says 700 litres a second is good for instance, you don't know whether that's 500 litres or 200 litres or a cumec at the minimum flow point to get that, there's no relation between that and a decision was about making a minimum flow amongst other things so you have a model that's totally unrelated to the minimum flow site. It's just unworkable. You cannot use it for a decision. And the fact that none of the experts at the hearing built the model or could explain it meant we had no one who could even interpret it. It was a very, very bizarre model that we've never seen anywhere else done like that and quite a few won't again.

30 Q. So as a matter of interest, is this a hearing you sat on as an independent commissioner –

A. Yes.

Q. – or was this the hearing in front of Commissioner Edmonds?

A. I was an independent commissioner for the Lindis plan change, the original –

Q. And do we know whether or not that change when it got to court or not?

A. – yeah. I believe they did a completely new model.

## 5 THE COURT: JUDGE BORTHWICK TO MS IRVING

Q. So what's the purpose of – you're going somewhere. And you're going to lose us unless you signal, start to now signal what your case is to put it bluntly. Where are you going with this?

10 A. Yes, well what I'd like to talk to Mr Allibone about is the need for the habitat modelling to be related to the flow conditions of the waterbody. In particular, we need to understand not just the minimum flow but also where water is being abstracted from the waterbody so that we can understand the relationship between the habitat.

Q. Because the theory of your case will be what?

15 A. Broadly?

Q. Broadly. Yes, broadly what is the theory of the case that in fact you can't have six year consents because?

A. Our theory of the case is in essence that plan change 7 is going to defer achieving environmental gains that can be achieved now.

20 Q. Well, I know that broadly, that's hyper-broadly. What's your theory of your case because you're running a case now in terms of minimum flows and takes, I think, is where you're going.

1655

25 A. Yes, and I think – as we talked about, as Mr Allibone agreed, Plan Change 7 doesn't seek to impose minimum flows.

Q. Mhm.

A. And it won't impose residual flows unless those conditions were already part of the deemed permit or resource consent that are being renewed.

30 Q. It will carry over minimum flows though, won't it? If already on a consent it will carry over, but it won't introduce any new minimum flows.

A. Correct.

Q. Some parties want it and that's a different issue, yes.

A. Yes.

Q. So where are you going?

A. And in deemed permits, predominantly there are no minimum flows and that's the majority of the consents that this land change will apply to.

5 Q. That's interesting. It's actually a matter for evidence, which – some of the background information that we're struggling with. I don't think we've got an impression, at all from this evidence, as to what consents are out there with minimum flows. So, good that you flag it because we're wondering what is the state of the environment. But anyway, where are you going? I really want to understand what your theory is because I don't follow the line of questioning or its relevance. If I don't follow it now, I won't follow it later.

10 A. Yes. So Mr Allibone talks about habitat modelling and whether or not it is a useful tool for assessing effects. And we say that it is but that it also requires a degree of detail about the flow regime that you are assessing, and that that requires not only minimum flows and residual flows but an understanding of the abstraction regime that will be affecting the water body and therefore the habitat availability within it.

15 Q. Just slow down a second. So, habitat flow – habitat modelling is relevant and important?

20 A. Yes.

Q. But it has to be related or related back to an abstraction regime, by which you mean under resource consent, presumably.

A. Yes.

Q. And a whole of catchment or subcatchment minimum flow, correct?

25 A. Yes.

Q. And residuals?

A. And I think one of the challenges that Mr Allibone encountered, perhaps, with habitat modelling during the plan change hearing was the lack of a detailed abstraction regime that allowed the habitat model to be related to flow conditions at the various points along the river.

30 Q. So your proposition will be that if there is no flow regime linked to an abstraction regime, so, minimum flow is attached to resource consents, therefore no meaningful link can be made to habitat. Is that your proposition? Is that where we're going? So therefore (inaudible

16:58:15) Plan Change 7 (inaudible 16:58:17) for all of our obstructors to pursue on a resource consent, minimum flow regimes?

A. Yes.

Q. Yes, I thought so. Okay, so that's the proposition?

5 A. Yes.

Q. Really, that's underlying your whole case, isn't it?

A. Yes.

Q. All right. Thank you.

**MR ALLIBONE:**

10 Your Honour, may I just add a bit to the question I answered before?

**THE COURT: JUDGE BORTHWICK**

Q. I've forgotten what it was.

A. Just with respect to Laheys Creek, just quickly. Ms Williams and Ms Baker-Galloway sort of talked a little bit about changing flows, and particularly the change with the priorities but also – and I mentioned in high flow years you don't get the drying reaches. One of the things I haven't done for Laheys Creek, because it's where I do some work, is have a look at it in a drying – in a wet year. We've looked at it in a dry year when we did the work; in a wet year, I don't know the state of that drying reach, whether it's still occurring or whether it's actually flowing through a summer in a wet year. So we have a sort of biased assessment in a slight sense, there.

15

20

Q. Okay.

A. Thank you.

25 **CROSS-EXAMINATION CONTINUES: MS IRVING**

Q. So we'll come back to habitat models and the discussion I was having with you about the utility of understanding the flow regime when you are completing your habitat modelling.

A. Well I think for a basic habitat model you just need to make the model. Then you – as long as you can relate it to a minimum flow site or an abstraction in terms of if you have a flow relationship between the two,

30

and/or the model applies to that reach, that's a key part, then you can just read off the model what you get, you know, in terms of habitat for different flows. So...

1700

5 Q. So, you need to understand either the level of abstraction that's affecting the reach you're assessing or the minimum flow that applies to that catchment?

A. Both, ideally.

**RE-EXAMINATION: MR MAW**

10 Q. Now just picking up on that last series of questions and the articulation of the case theory which may or may not have morphed into a question but I just want to understand your opinion on whether it is required in order to understand effects on ecology for there to be a consent application produced and I've put my question to you this way, can you use the model that's generated and run a series of scenarios through that model to understand the effects on, for example habitat quantity through the model that's constructed?

15

A. Yes, I mean it's just a model of how habitat changes with the flow. You can look at it under – as the river changes flow just naturally through the year. This is the habitat it (inaudible 17:02:05). It doesn't need an abstraction or anything. The model is a model, it's the question you ask it is the important bit I guess of what you want out of it.

20

Q. So you don't need a resource consent application in order to understand different flow scenarios?

25 A. No.

Q. The other matter on which I wish to ask you about relates to paragraph 97 of your evidence-in-chief and there you had a list of the tools that were available and in terms of impositions been put on consents under the current regime. Now in your experience when conditions are being framed you with respect to those matters, are they taking into account values that have been set through the MPSFM 2020 process?

30

A. Not to date because we haven't had the MPS 2020.

**QUESTIONS FROM THE COURT: JUDGE BORTHWICK**

- Q. Just two clarifying questions from me, I asked you a question about water quality and surrounding land use and I thought you said, and I may have picked it up wrong that: “Water quality does not impact on habitat,” but at your paragraph 43 of your evidence-in-chief you seem to say the contrary and I was just really wondering where you were landing with that?
- 5
- A. I refers to the fish and you will with water quality get issues like with nitrate toxicity if it is high enough so the habitat becomes un-occupiable when the water quality conditions are detrimental.
- 10 Q. But you could also get other impacts couldn't you in terms of a change in the micro-invertebrates available for fish for feeding if water quality is impacting –
- A. Yes.
- Q. – them then there's not food for the fish, there's not food for the fish then the quantity of the fish drops away and all those.
- 15
- A. Yes.
- Q. In fact, isn't there host of associated – there's a range of changes in water quality which may, by themselves or together, impact habitat conditions which –
- 20 A. Yes –
- Q. – in species habitat need to –
- 1705
- A. – probably not the habitat conditions but the – I probably got that slightly wrong there but just the water quality will impact on the flora and fauna of the stream and as the water quality changes you will get a response from that call it community which may be a reduction or in some cases an increase, depending on how they deal with the water quality change. Like extra nutrients, you'll probably get more algal biomass and microfbers. Whereas in fact the opposite happens with didymo; when you get very low phosphorous tends to bloom so the water quality issue will drive changes to the community as they respond and it may be toxicity or it may be a just a growth rate change or abundance.
- 25
- 30
- Q. So how are you using the word “habitat”? What do you mean by habitat?



- 5 A. Well, that's probably in that section 43 with the water quality, it probably should just say a reduction and abundance when you're referring to the fish it's possible through the water quality changes but what we don't know is how the galaxiids in particular respond. There's not a lot of environmental tolerance information for them.
- Q. No.
- 10 A. And as I said before, they're not necessarily food limited so you can see some changes in the invertebrates that may have no impact on them if they're not you know, food limited. So it's hard to quantify what the response would be to changes in water quality. Dr Dunn and I tried a bit of work in the upper Manherekia looking at temperature tolerances because we thought there was a limitation on the alpine galaxiid up there. It turned out that the threshold we thought was above their tolerance about 14 degrees, was exceeded in much of the river through the summer and they were still there so that's where our understanding is even one aspect of the sort of water quality tolerances is not wonderful (inaudible 17:06:48) one fish, so it's flagged as an issue. And as you say, it stems up through the whole community and we'd probably have better ideas that invertebrates, especially like mayflies and caddisflies, respond to water quality decline is that the water quality goes down, their abundance does which has impacts on the food web.
- 15
- 20 Q. Habitat you – are you defining habitat quite narrowly in terms of the space these things occupy?
- A. Yes.
- 25 Q. You are? As opposed to the conditions of that space?
- A. Yep.
- Q. That's actually important to know, isn't it?
- A. Yeah, just reading that again and I wouldn't put loss of habitat due to water quality, I would just put impacts –
- 30 Q. If you are defining habitat as the physical space, if you are defining habitat as the condition of that space which is required for abundance if I put it that way, it's quite a different set of considerations come into play.
- A. If you consider the water they live in as part of the habitat, then it is an impact on the habitat.

Q. Yes.

5 A. The change in the water quality. If you consider the habitat, the physical habitat in terms of the volume of water and the flow in the substrate of the stream, those sort of things, shape of the stream, then that's physical habitat and you could say that habitat in general includes water and the quality of that water. Yeah.

Q. Because even if you're talking about the physical habitat, so here change in flow –

A. Yes.

10 Q. – for example resulting in increasing water temperature, resulting in the change of conditions which may or may not be suited for that particular species, I would call that a habitat change, but I don't think you are. I think you're just talking – yes. You've got quite a narrow concept – in your evidence, I'm not talking about personally but in the evidence, the concept of habitat is actually quite a constrained one in terms of physical habitat.

A. For the most part, yes. That would be correct, yes.

20 Q. Okay. So one other thing that I want to just double-check with you. This just comes from your summary of evidence which you tabled this morning, paragraph 22. Now this probably is in your evidence but it's quite a neat little paragraph where you're summing up allocation limits and minimum flows being used together.

A. (no audible answer 17:09:18).

Q. And why they're used together.

25 A. (no audible answer 17:09:23).

Q. Yes.

A. Yes.

30 Q. If you have a minimum flow but without an allocation limit, so here it will be a significant question of clarification for the planners but if you've got a minimum flow but without an allocation limit, is what you're risking, particularly during the drier periods during the year, that abstractors will bring the river down to a flat line quicker and hold it longer. Is that the potential that you have, where minimum flows are imposed without an allocation limit also?

A. I'm trying to think of a place – how you wouldn't have an allocation limit. Because normally we – there's some sort of allocation limit.

Q. Well, PC7, some of the relief seems to suggest that to me.

A. Okay.

5 Q. Put everyone on a minimum flow.

A. Yeah.

Q. But what about the allocation limit, right? So I'm not quite sure where the planners are going with this.

10 A. So if – yeah, if we just take it that there's no allocation limit and people have just been allocated a – or given an instantaneous rate of take –

Q. Yes.

15 A. – then they can turn on their abstractions and draw the river down, all of them operating together, till they get to the minimum flow. Whether that happens quicker than if there's an allocation limit, I doubt it because of responding to the instantaneous rate of take. It's not the allocation limit unless... Yeah.

Q. Allocation limits you are using, you would say – therefore am I right in thinking you call allocation limits the daily (inaudible 1711:06) annual volume –

20 A. That's allowed to be taken, yes.

Q. – that's the allocation limit? Okay. So if you have the minimum flow together with those volumes, then you shouldn't be bringing the level rapidly down to a level where it has flatlined at the normal flow.

25 A. Yeah. I can't comment on the rate it would come down. My perception was – Dr Haze has a nice diagram of the minimum flow and an allocation limit showing some small (inaudible 17:11:34) exceeding the allocation limit, so you get some extra water in the stream. And that's again when I was supporting his sort of figure there, that an allocation limit can be used to allow some of those fresh events to pass through the system. If you  
30 have a big allocation you capture a lot of those freshers, if the infrastructure allows you to. But if – whereas if you've got a small allocation limit you get more freshers through, which is beneficial for the stream because it gets some extra water and a bit of flushing and it's just

cooler, maybe. Whereas a big allocation limit, you take a lot more of those small freshers, so it's...

Q. And again you may not know but where you have minimum flows imposed, are they correlated with proposed volumes on resource consent? So –

5

A. No.

Q. – methods in addition to the method that we see in PC7 or not? Don't know?

A. I don't know. I suspect not.

10 Q. Right, you suspect not? Okay.

**QUESTIONS FROM THE COURT: COMMISSIONER EDMONDS – NIL**

**QUESTIONS ARISING – NIL**

**WITNESS EXCUSED**

**THE COURT ADDRESSES COUNSEL – HOUSEKEEPING**

15 **COURT ADJOURNS: 5.12 PM**

**COURT RESUMES ON WEDNESDAY 09 MARCH AT 9.41 AM****THE COURT: JUDGE BORTHWICK**

Good morning, anything arising overnight?

**MR MAW:**

5 Two issues, good morning.

**THE COURT: JUDGE BORTHWICK**

Two issues, all right.

**MR MAW:**

10 The first of which is a correction that I'd like to signal to the amended version of  
the plan change document that was most recently filed by Mr de Pelesmaeker.  
That's the recommended amendments marked in as at 19 February 2021,  
incorporating the corrections as at 4 March 2021. If I can take you to page 6 of  
that document, the page numbers in the bottom left hand corner and there you'll  
15 see rule 10A.3.1A, if you turn over the page to what is page 7 but unfortunately  
there is not a page number there but it's the next page, sub paragraph B at the  
top of that page Roman (i), the activity meets conditions 1,2,4,6 and 7, there  
needs to be inserted Roman 5 into the group of cross-referenced provisions so  
insert 5 before 6 and Mr de Pelsemaeker will speak to that correction when he's  
20 called to give his evidence later today or tomorrow. The second issue that has  
arisen overnight, there's been some discussion between counsel as to the utility  
of cross-examining Mr Leslie and Mr Wilson in relation to the methodology  
ahead of the expert witness conferencing and Mr Reid will address the Court in  
relation to that discussion.

**THE COURT: JUDGE BORTHWICK**

25 Mr Reid?

**MR REID:**

Yes, may it please the Court. The discussion that have taken place overnight between Mr Maw and Mr Page and myself about just how to approach the technical issues or the –

**5 UNIDENTIFIED MALE SPEAKER:**

(inaudible 09:43:47) the technical issues underpinning –

**MR REID:**

– the controlled activity pathway which are in schedule 10,4A. So the issues around the schedule are really highly technical that they revolve around issues  
10 such as selections of data sets, time periods, how best to ensure accuracy is maintained of the record and so, any cross-examination of those witnesses at the moment is going to be highly technical and so my suggestion is that we defer cross-examination of those witnesses – hear from them today, but defer cross-examination of them until the expert witness, the joint statement is back  
15 following caucusing.

**THE COURT: JUDGE BORTHWICK**

Okay, that's your suggestion?

**MR REID:**

And I'll just, the only other thing I add is that my understanding is that good  
20 progress is being made already in relation to those issues amongst the experts.  
0945

**THE COURT: JUDGE BORTHWICK**

It's probably a good idea. I think as I reflected yesterday, some people like to  
25 talk in numbers and as opposed to words and it wasn't clear to us how you would approach your cross-examination and to be fair it's not actually clear to us as a, that the witnesses are using the same, where they're using words, using the same language in the same way. So for example, understanding what Mr Leslie and Mr Wilson is saying about percentiles is that what Mr McIndoe is saying about percentiles, actually I don't know and that should

not be the case at this point in time, that we don't actually know whether they're talking about the same thing in the same way. We don't know whether they have disclosed all of the data that they are relying on and assumptions around that data, whether they've even tested the assumptions around – tested those  
 5 assumptions and what impact those assumptions might have on their preferred methodology. Don't know that any of that's been disclosed.

**MR REID:**

No, I quite agree your Honour and that's, that's been apparent to counsel looking at it over the last few days particularly so.

10 **THE COURT: JUDGE BORTHWICK**

Which is to say don't know your witnesses are following the code of conduct for expert witnesses. Now that's pretty serious when you get to this stage, yes?

**ME REID:**

Yes.

15 **THE COURT: JUDGE BORTHWICK TO MR REID**

Q. And so any expert conferencing, you are obliged to be providing your clients or your witnesses a copy of that code. The Court will be expecting the evidence to come in in a way which is reflective of that code in terms of setting out what your starting point is as you start to move from data  
 20 facts, assumptions, where you're testing certainties, uncertainties and what impact that might actually have on the schedule. And that might, it should be, must be presented in that way as opposed to two sides lobbying for their preferred methodologies. For my part, I wasn't clear to what extend there is even an argument as between the Regional Council  
 25 and the primary sector apart from that as of detail and yet, I'm led to believe there are substantive matters. I wasn't sure so that was necessarily the case, I'm not sure whether OWRUG schedule, the OWRUG preferred methodology in the schedule is the same or different to Landpro. Some people think it's the same as Landpro, I'm not sure  
 30 whether it's different to Landpro. I can read Landpro and understand

Landpro what they're wanting, I wasn't entirely sure whether you can read Ms Dicey's preferred methodology and understand all of the steps and this is of course a point to make in relation to the Regional Council, seems to me one of the issues here are a lack of transparency. That is, is there

5 a complete record of the methodology, such that parties, whoever they are, when they're applying for resource consents can be certain that they know how the methodology is applied or is the case that all methodology's have a certain element of discretion and judgement and that – which involves a lack of transparency if you like and therefore a lack of

10 predictability, if you like, as to your eventual outcome under the schedule and actually under the competing schedules. So it's a comment about the competing schedules as well. Is it predictable, is it certain, if I was a farmer would I know that through the gateway as it's been called, the schedule, I could predict myself at my farm gate what the outcome would

15 be or would the outcome be different when I send it in to the Regional Council and that's a comment actually about all of the methods, we wonder whether there's quite a high degree of discretion and judgement being applied, whichever preferred method you go for. Is that appropriate for a rule, that it's not predictable? But I don't know, or have we picked it

20 up not quite the right way...

0950

A. Yes.

Q. Is that appropriate for a rule, that it's not predictable?

A. (no audible answer 09:49:58).

25 Q. I don't know, or have we picked it up not quite the right way? What I can say is what I want to know, before we use up our resources, is what are the issues and I think that the issues as between the competing methods.

A. Yes.

30 Q. So we're not going to use already stretched resources for this Court, where you have not turned your minds to what are the issues. Now we know that at least some of the issues are about cleaning up the data –

A. Mmm.

Q. – but is that the only issue?

A. Mmm.



- Q. So really, I am interested to hear from Wilson, Leslie, next but we want to know, and we will be asking them if you don't, what are the issues from their perspective? Where is the ground or the gap as between their schedule and methods preferred by other witnesses, bearing in mind that actually for some parties the answer is "reject the plan change". So it's not actually about picking up any of these methods but these are fall-back positions. So we actually want to know what are the issues. We don't want to be told "topics". I prefer it to be put as questions which the parties themselves have to answer, or witnesses themselves have to answer in an expert conference. Yes. So there is some ground, if not cross-examination but some ground to cover in terms of getting out of these witnesses where are the issues in relation to the methodology, not necessarily proposing a solution but why would they go to expert conferencing? What do you think about that?
- 5
- 10
- 15 A. Well is there ground, your Honour, for counsel working that out in advance in trying to come to an agreement where we can – about the issues that these witnesses – well, a series of questions perhaps for the witnesses and the other experts to consider and (inaudible 09:52:04) –
- Q. Well there's always ground and I have invited parties to this case to consider appointing their own – you know, I have said, you do not need to wait on the Court to initiate expert conferencing or mediation.
- 20
- A. No.
- Q. You can appoint your own resources and crack on and do that. But the key thing about working out the issues is that actually, you have to be informed by your witnesses. So this isn't about what lawyers think the issues are –
- 25
- A. No.
- Q. – it's about what the witnesses are telling you are the differences framed up as questions for the expert conference, so, in other words an agenda.
- 30
- A. Now we've spoken about that in detail in the notice of conference that we issued for this matter.
- A. Yes.
- Q. It's absolutely critical that it is not lawyers doing this, it is experts doing this, who can understand where are the gaps that need to be bridged.

A. Yes.

Q. I still don't have quite an understanding, a proper understanding yet as to the relevance of the Aqualinc method, other than it is a method that is considered. But again, what are the gaps between any of the preferred schedule methods and the Aqualinc method? What's the ground that needs to be travelled there; should it be mentioned in this plan? We don't know whether what is being suggested is that Aqualinc method should replace the schedule altogether; there should be no technical schedule as we have it. So forget Landpro, forget the methods in (inaudible 09:53:41), forget the method in PC7 but it should be Aqualinc. We don't know whether that's what's being suggested. So, as it happens, if you can work up a proper agenda –

A. Yes.

Q. – we do have Mr Ross Dunlop standing by and we could make him available. We've got to talk to him about it first though but we could make him available sooner rather than later.

A. Yes.

Q. We don't have –

**THE COURT: COMMISSIONER BUNTING**

20 Do you have a timetable?

**MR REID:**

I haven't discussed that with my friends, no but these are obviously – there's currently a schedule for the caucusing but it's not until April.

**THE COURT: JUDGE BORTHWICK**

25 Yes that's right, it's not, so – but Mr Dunlop is available now, so – I think.

**THE COURT: COMMISSIONER BUNTING**

(inaudible 09:54:29).

**THE COURT: JUDGE BORTHWICK**

Yes and we don't want to discover this stuff and if you can bring it forward, it should be brought forward, yes.

**MR REID:**

- 5 No, well I quite agree and it's just a matter of trying to assist the Court as best as we can.

**THE COURT: JUDGE BORTHWICK TO MR REID**

Q. Yes.

- 10 A. So, I mean my witness is Mr Davoren, who – I'm not sure of his availability to come. He's schedule to give evidence in Cromwell.

Q. Yes.

A. But he's planning to attend the caucusing and I'm sure could come earlier.  
0955

Q. Sorry, so your witness is Dr Davoren, isn't it?

- 15 A. Yes it is, yes.

Q. And he's giving evidence on this legitimate overtaking topic?

A. Yes well that's largely it's around spikes and data sets and – yes.

- 20 Q. So in terms of what happens next, very interested, we'll be very interested to hear from the Council's next two witnesses as to where they see the broad, where they see the gaps, the differences between themselves and the other parties in the room and so we can have a better orientation into the evidence of all of the parties. We can check through with Mr Dunlop as to his availability going forward, parties are to check through with their witnesses as to their availability over the next – starting now actually,  
25 moving forward are they available for expert conferencing. The direction will be that counsel, having been properly informed by their experts are to propose an agenda for an expert conference and we'll look to see how quickly we can bring that on, how does that sound?

A. That sounds excellent from my perspective, your Honour, yes.

- 30 Q. Excellent, thank you.

A. But just on the original issue I was raising which is the cross-examination of these witnesses Leslie and Wilson today, and also flowing on to a

lesser degree, Mr de Pelsemaeker, whether that should be deferred until after.

5 Q. One of the things, I need to talk to the panel but and again signalled yesterday is actually putting everybody on the same page as opposed to multiple witnesses on different pages proving different points with different data sets and different consents, how on earth do you think that's going to help?

10 A. Well, and that's my point your Honour, is that I just can't see cross-examination on these topics being at all helpful at this stage. It needs to be that the issues need to be rationalised.

15 Q. Yes well no, we don't disagree but that would come with a direction as to – well, that will come with a direction as to counsel conferring about how it is that they can illustrate the efficacy of the methods relative to using a common consent or consents, if you need to illustrate different things, and data sets. So, for example if there is a and there appears to be disagreement over which five year period, to illustrate the efficacy of the method over each different five year period which we have been provided for a single consent, so you've got the single consent, data from the single consent and running that data from the single consent through at least  
20 three different five periods that are in evidence so that we can see how things are changing if in fact they are changing.

A. Yes.

25 Q. How it is that witnesses are going to be testing the proposition by Mr McIndoe that, well look if you have a drought in five years then that brings your average down and then throws out whatever your results are reliant – resulting in an unreliable take of water. He might very well be true but how has that been responded to or how can it be responded to in conferencing, how do you test those propositions, easy to say and he could well be right but how is it actually being tested.

30 A. All right.

Q. So how so you think you'll go about that, actually getting – that of course is not really a matter for lawyers, it's actually a matter for experts, can you get yourself on the same page to be testing the efficacy of the different models and different approaches.

A. Well I imagine that can be done, it's an issue for the experts amongst themselves I would've thought and like your Honour's comments.

Q. Does anyone have a different view, Mr Maw?

**MR MAW:**

5 I don't have the answer.

**THE COURT: JUDGE BORTHWICK TO MR MAW**

Q. You don't have to have the answer.

A. In terms of the process –

Q. But what's the process?

10 A. I do see some utility in that unfolding and there of course challenges as to availability of data but it strikes me that the experts might usefully agree on a single data set against which they can test the various propositions through the lens of the types of consent applications that have either come in recently and being processed or – in fact that's probably the best  
15 dataset. So I'm confident that a dataset could be produced, against which propositions could then be considered and tested. In terms of the utility of proceeding on with the cross-examination today, insofar as the purpose of today is to identify and to tease out where the differences lie between the competing methods, I do think there's real value in that  
20 exercise today because that will inform the agenda for the conferencing. And so insofar as the purpose of either questions from the Court or the questions from counsel that assist with that purpose, I do see real utility in that. In terms of Mr de Pelsemaeker and the cross-examination of him, it's not just the method on which he's given evidence.

25 Q. No, it's not.

A. So there's a large portion of his evidence which I think would be able to be tested in terms of where we're at.

Q. Mmm.

A. But insofar as he's relying on the methodology being produced by the  
30 witnesses, I think questions to him on that might usefully follow some conferencing. But it does occur to me that it would be helpful to explore with him what his understanding is as to what *the schedule* is delivering.

So is it delivering a clear and certain and an objectively ascertainable outcome each time with the same set of data as put into it? Is that how he's understood the purpose of the schedule? Because again, I think that informs the job of the expert witnesses in terms of what it is they are seeking to produce in terms of that that schedule. So its purpose becomes important in that regard.

5

Q. So, I'm going to respond to that and then I'm going to come back to the question of the dataset, which is what I'm making a note about. One of the things that has occurred to us overnight would be quite useful for the Court to understand, is to understand whether or not your witness Mr Placemaker – how do you say?

10

A. Mr de Pelsemaeker.

Q. Mr de Pelsemaeker, works within the regulatory context of the Regional Council or is he a policy person? That's the first question and your response to that would be regulatory and consents or is he policy?

15

A. Ah, policy.

Q. He's policy and then the second question is this, it's to actually hear from somebody in consents in the regulatory team, whose responsibility it would be to administer this plan change, how they would administer this plan change. Because that's actually a very useful way for the Court to test, on the ground, to ground truth what the methods are, relative to how it would be administered. And of course it gets back to the Court's observation is, there are a certain amount of discretion and judgement being applied when the applications come in, or not. Is it certain on its face? Of course that question of discretion and judgement actually applies to all of the methods that we have seen to date, or are they all predictable? So, we thought it would assist us to hear from somebody who is actually within the consenting regulatory team, possibly the manager but only if the manager actually has planning experience as opposed to managing people, so is a planner as well. To understand how it is that they would administer that particular method; to also understand more broadly the issue of what is the scale of the problem actually facing the Otago Regional Council? We've heard all sorts of numbers around how many resource consents that are going to be applied for, possibly

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either by the end of this month if they are deemed permits or within  
 two years, and we're looking like something over 500 applications for  
 resource consent. What is the magnitude of that job? What people have  
 been appointed to the Regional Council consents and regulation team in  
 5 relation to that job? What are the timescales which are going to apply for  
 deemed permits? Are those the times – and the others, actually. If  
 they're all coming in under 124, what is the timeframes that apply to 124?  
 How are you going to approach it, on a catchment by catchment basis,  
 whatever that means, or are you going to approach it on the FMU – by  
 10 FMU basis, is that how you're going to be approaching it? What are you  
 doing in relation to the decision to come to the Court? Are you going to  
 defer and weigh on the decision for the Court? Actually, you probably  
 can for some time in terms of some of the timing under section 124 but it  
 won't, you know, not indefinitely I would not have thought. so we want to  
 15 have a better understanding of that because we wondered whether the  
 key issue – well, one of the, not just a controlling factor perhaps *the*  
 controlling factor is the sheer scaling magnitude of resource consent  
 permits which are coming the Council's way. If your team have now taken  
 up processing consents, are they available for the high level thinking  
 20 which has to go into the land and water plan.

1005

A. Yes and –

Q. So we're trying to get a better feel for that, I think that only at best we've  
 got a very high level feel, actually thanks some information has been  
 25 given to the minister of environment but provided to us on Friday. Or  
 even those deemed permits might be, you know your scatter plots don't  
 really give us a sense of where those deemed permits might be coming  
 in and from what catchment, or in the rules.

A. I have in mind precisely the person that I think could best assist with those  
 30 questions and that is the, the team leader of the consents team. I'll need  
 to on availability but it strikes me that the sooner you can hear some of  
 that information the, the better it could be in terms of understanding the  
 issue that is presented in this case. What I would be minded to do is to  
 see, just check on availability as to when that person could be called to

best assist the court with those questions and I have in my mind that this week would be helpful –

- 5 Q. It would be helpful, actually having something on paper would be even more helpful. So it's not, we're not wanting to add to the 2,000 plus pages of evidence considering we that we already have but we're really trying to feel more grounded in terms of the problem which this region is facing and how is that, yes trying to get a better feel for the scaling magnitude of this problem, yes.

**THE COURT: COMMISSIONER BUNTING**

- 10 Is there a plan?

**THE COURT: JUDGE BORTHWICK TO MR MAW**

- Q. Yes there must be, a management plan that is to say.
- 15 A. Yes and again the risk of giving evidence from the bar, picking for example the number of people in the consents team that's tripled over the last 18 months in terms of getting ready for the consent applications that are going to be lodged so there is a plan in place and the Council is resourcing itself to ensure it can process those consents in the, within the time constraints that the RMA presents. But in terms of the detail of precisely how that is to occur, I think that's better coming directly from the
- 20 witness.
- Q. Okay.
- A. So we'll look to get a brief of evidence prepared as quickly as possible and then have that witness made available to assist the court, again as soon as possible.
- 25 Q. Very good. Does anyone have any objection to that, the Court having a better understanding about the scale and magnitude of the problems being faced by the Regional Council, which isn't to say it's alone, actually every Regional Council is facing now challenges in terms of responding to the MPS for fresh water management and also the national
- 30 environmental standards but this Council has some unique problems in terms of the sheer number of deemed permits and replacement permits coming in. So has anyone got any difficulties with the Court better



understand the resourcing and the issues, Mr Page you look like you might have a problem.

**MR PAGE:**

No, not a problem, I encourage the Court to make the enquiry that you are pursuing with my friend. I was simply contemplating suggesting to the court that they make another direction which is that a map be produced of the applications that are already in and the applications that are yet to come because it seems to me from the evidence that you've got so far, there's real opacity around what the scale of the task is spatially as much as sheer numbers of permits.

**10 THE COURT: JUDGE BORTHWICK TO MR MAW**

Q. It is a spatial question you are right, we don't have a sense geographically. We hear a lot about Manuherikia as if it is the ID catchment which it's not and that, that's of concern to the Court, that its thinking be dominant can be dominated by a single catchment when there's upwards of 140 catchments in this region.

A. In your direction from the 28<sup>th</sup> of October the last year, the first thing that you asked for from the Council's evidence was a catchment by catchment analysis of what the resource management issue is and it seems to me that we're still grasping at that issue.

20 1010

Q. I see these things are very well known to counsel. It's not known to the court but it's known to counsel.

A. Well, speaking from OWRUG's point of view, OWRUG only knows about its own members' affairs and so we think we've got the thick end of the permits under control but we actually don't know what the rest of them are doing or where they are.

25

Q. Isn't that of interest, OWRUG, does that only represent primary sector interest in the Manuherikia catchment or is it representing interests outside of that catchment?

30

A. Oh, no, it's definitely outside of that catchment, Ma'am.

Q. What are the catchments?

A. It has members in the Dunstan rohe. It has members in the Alexandra basin area and in the Taieri catchments as well. So largely Central Otago, to be fair, not coastal Otago but certainly well beyond the Manuherekia catchment.

5 Q. So, that's not asking for a state of an environment, more like a state of affairs at the Regional Council, and that would actually help orientate ourselves better into the evidence as well.

**MR MAW:**

10 We shall get to work on that.

**THE COURT: JUDGE BORTHWICK**

Very good. All right. That answers your questions, Mr Reid. No, we don't need detailed cross-examinations on which methodology is to be preferred and why but we do need questions on what is –

15

**MR REID:**

Assistant with identification of the issue.

**THE COURT: JUDGE BORTHWICK**

– issue identification, what are the gaps we're trying to traverse.

20

**MR BUNTING:**

On this exercise, what I was unsure about was how is the methodology that you're talking about actually reflected in the plan change? So we've got these guys sitting in dark-filled rooms crunching the numbers and all that and they  
25 come up with an outcome. How is that then taken forward into the plan change document itself?

**THE COURT: JUDGE BORTHWICK**

Which is another way of saying, is the process to the application of the method completely contained within the schedule or are there other processes or  
30 sub-processes and exercise of discretion and judgments being made outside?  
Now, that doesn't just apply to the regional council but it's actually all methods.

To what extent are they completely documented, therefore, any farmer will know, talking about farmers in the main but any farmer will know that if they apply the methodology themselves, they have assurance, it is predictable what the outcome will be and it's not going to be massaged by the time their  
5 consultant gets to it under their method or the regional council gets to it under it. All right. Mr Winchester.

**MR WINCHESTER:**

At the risk of overcomplicating matters and it's one thing I am likely to do  
10 because this process does seem to be getting far more complex than it was originally intended.

My first observation is that I think that having some consenting information is critical and it reflects the conversation I had with my client this morning about a  
15 gap of information before the court. One other aspect of that which we haven't specifically addressed is an interpretation issue around the rule frameworks and plan frameworks which are being advanced as to how they might be applied by the consenting team and it may be abridged too far for the regional council consents person to orientate themselves with the different versions of rules or  
20 plan provisions which are being advanced and be able to express a view as to how they might be applied in a consenting context.

**THE COURT: JUDGE BORTHWICK**

Yes. It's really we're interested in that consenting context is how they might be applied. I don't know. Over to Mr Maw whether he thinks the person would be  
25 able to get their head around – I guess – who are the candidate methods apart from your own? The candidate methods would be what, Landpro, OWRUG . who else has put up a candidate method?

**MR WINCHESTER:**

30 My client, your Honour.

**THE COURT: JUDGE BORTHWICK**

Your client, yes.

**MR WINCHESTER:**

And Fish & Game.

**THE COURT: JUDGE BORTHWICK**

5 You've altered the schedule?

**MS BAKER-GALLOWAY**

I think Mr Winchester is talking more broadly than just a schedule.

**THE COURT: JUDGE BORTHWICK**

10 Oh, I see, right. Sorry, sorry, I am with you.

**MR WINCHESTER:**

Indeed, your Honour. It's not just to do with the methodology.

1015

15 **THE COURT: JUDGE BORTHWICK**

Q. Yes I'm with you, yes I was thinking, didn't think your client had but I was going to go with it –

A. With the methodology – yes, so it is more broadly, it's more around the mechanics of the rules, not necessarily the discrete issue of the methodology in the schedule, and as I said I am loathe to overcomplicate it –

20

Q. No, my gut feeling is that that's an issue for cross-examination I would have thought.

A. That's fine.

25 Q. Because we have, I think it's an issue for cross-examination, yeah, the – how clear and certain the objectives and policies are I think is where you're going to and therefore the rule itself, the limitation with the rule –

A. It's a mixture of the clarity and implementation of the policies and the rules that are being advanced, and I'm certainly content to put that to Mr de Pelsemaeker in terms of his methodology and the other planning witnesses, really the question is, whether that position can be rounded

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out from a Regional Council point of view in terms of their current practice and how they might apply –

Q. Because it seems to me that it is a major issue, in this hearing, the levers, where the controlled activity rule is even a lever, because it requires quite a bit of effort and then of course we see in some parties, minister would be the obvious example, take away the effort and make it the lever that it was intended to be, and then we can see other parties adding in more effort, well if you're gonna add in more effort why don't you just apply for a non-complying resource consent, so, is it that sort of issue that you're getting at, whether it – whether the – how much effort is required from an applicant?

A. Well it's, that is more a consequence rather than a driver although there is no small irony that parties are seeking to tip more into the schedule when they are complaining about cost and uncertainty, but I mean I don't have a witness in that area so that's just an observation from the bar.

Q. My sense is perhaps leave that for cross-examination, we can revisit in expert conferencing if we need to. Would that be about right?

**THE COURT: COMMISSIONER BUNTING**

20 Yeah I think it could be quite difficult.

**THE COURT: JUDGE BORTHWICK**

Okay, just so – for broader context, it is not uncommon for the court to make this direction, I can think of one case, Commissioner Edmonds was reminding me of this morning when she and I were sitting, again on a regional plan, not this region, where we asked to speak to the regulatory manager and we said: “Regulatory manager, how would your policy teams prefer policy and rules and (inaudible 10:17:55) work?” He said “they wouldn't”. He said they could not be implemented by the region, which was speaking volumes. So, you know, we had to do something else in that space because his team couldn't implement them. Why not? Because the two teams hadn't talked to each other, as it turned out the two teams hadn't talked to each other. So this isn't actually uncommon, and we would like to know more both in terms of the broad setting and workability of the schedule and yes, schedule, okay. So we'll leave it to

you to have a talk to who you need to have a talk to, let us know when something can be put on paper, scope out what you think would be useful for you to cover and come back to us about that, we can save up cross-examination, for another day, after expert conferencing, we'll talk to, my team  
 5 will be talking now to Mr Dunlop to see when he can be made available and where he can be made available, he has certainly read all of this evidence and is well aware of the competing technical issues.

**THE COURT: COMMISSIONER BUNTING**

10 (inaudible 10:19:05) the court will facilitate that conferencing is that –

**MR MAW:**

I think it would assist in terms of keeping focus on the issues in contention, just based on how the evidence seems to have gone apart rather than come  
 15 back together. So that would be –

**THE COURT: JUDGE BORTHWICK**

Counsel to confer and to advise when it is that they will have a chance to talk to their witnesses about the issues agenda, so it has to be informed by the  
 20 experts, and you can expect Mr Dunlop to be pressing into that space as well if he's not satisfied that he has a proper understanding of how you see, or your witnesses see what the issues are. Anything else we need to do? I don't think so –

25 1020

**MR MAW:**

Just picking up on the brief of the, the brief of evidence that will come from the Council's consents team leader, insofar as she has working knowledge that will relate to the Plan Change 7 as notified schedule and I think it would be helpful  
 30 to test how that's being used in practice because that's something in which there will be knowledge already, insofar as knowledge as to competing schedules put forward which she will have no working knowledge of those and she's not had to engage with those at this point in time so there could be quite

an exercise in terms of getting up to speed with the relative merits of competing schedules and I don't foresee a huge amount of benefit in the court receiving her assistance on that matter given that she won't have had any opportunity to really, to think about those competing schedules –

**5 THE COURT: JUDGE BORTHWICK TO MR MAW**

Q. Don't know about that, I mean inasmuch as if she picks up another schedule, I sit clear and certain on it's face or would she have to make enquiries as to the meaning of terms, is that all the information, would she have a sense of well that's, you know, if it comes in this way that's all the information I require or do I already know that I have to be making more enquiries so really its trying to gain an understanding of transparency and certainty.

A. At a principle level there is benefit in that discussion and picking up on the discussion much earlier today around a need for a certain an objectively ascertainable method that is repeatable irrespective of who uses it –

Q. It's a repeatable method, yes.

A. It strikes me that that is the thing that we should all be aiming at and I would have thought that that is what would best assist the consents team but let's hear from her about that.

Q. Because at the end of the day we don't want to make a decision giving you something which all consents then can't administer

**COMMISSIONER EDMONDS:**

Well it's just that we may need some counsel of guidance material that this, the consents team are actually applying and it would be useful to understand about that as well. There may not be or it might be on a website and available to everyone but I guess we just want to be clear what ruler they're running over things and whether that's publicly available and known.

**MR MAW:**

Yes and there is reference in the evidence that, it's before court in relation to the guidelines that assist with the current water plan and how the calculations

occur and Mr Leslie will be able to assist in relation to that in which perhaps provides a useful contrast in terms of what might best assist the Council and its consents team as a result of this process because I think there are, there have been identified some issues with the current process in terms of clarity or  
5 a lack of clarity in terms of a plan that is informing how the calculations occur. So again, Mr Leslie can perhaps just start that discussion today in terms of the current situation, the challenges with dealing with reallocation or allocation on renewal and then contrast that with what's being put forward here and in in terms of the method in schedule 10A. So that's probably as far as we can  
10 advance that discussion this morning but it has been helpful in terms of again clarifying the that are at stake in this proceeding. I know propose to move to the next witness for the Council and it's neither Mr Wilson or Mr Wilson, we have two other witnesses to appear before each of those are able to assist us on this topic, the first of which is –

15 **THE COURT: JUDGE BORTHWICK**

Dr Snelder.

**MR MAW:**

– Dr Snelder.



**MR MAW CALLS****ANTONIOUS HUGH SNELDER (AFFIRMED)**

Q. You confirm that your full name is Antonious Hugh Snelder?

A. Yes.

5 Q. And you are a director of Land and Water People Limited and a consultant researcher in the field of water and land resources management?

A. And you have prepared a statement of evidence in reply dated 19 February 2021?

Q. Yes.

10 A. And in that statement you've set out your qualifications and experience at paragraphs 3 and 4?

Q. Yes.

1025

15 Q. Are there any corrections that you wish to make to your statement of evidence?

A. No.

Q. Do you confirm that your statement of evidence in reply is true and correct to the best of your knowledge and belief?

A. Yes.

20 Q. Could you please now proceed to give a short summary of the key points from your statement of evidence and then remain to answer any questions from the court and from my friends.

A. ORC engaged my organisation to undertake a study of water quality state at river and lake monitoring sites in the Otago region using the most up to date available data from monitorings, the scope of the study was to evaluate water quality state and to grade each site relevant to attributes designated in the national policy statement for freshwater. That document which reports the results of that study is appended to my evidence.

30

**THE COURT: COMMISSIONER BUNTING**

Q. I suppose just an observation really, that you provided all that data but I think you said you've done no interpretation or anything like that of the data is that right?

A. That's correct.

Q. So it's just there for information at this stage is that right?

A. I believe so.

Q. It's not connected to anything to do with –

5 A. No.

Q. No okay, that's my appreciation so thank you for confirming it, thank you.

#### **QUESTIONS FROM THE COURT: COMMISSIONER EDMONDS – NIL**

#### **QUESTIONS FROM THE COURT: JUDGE BORTHWICK – NIL**

#### **CROSS-EXAMINATION: MS IRVING**

10 Q. Good morning Mr Snelder. I just want to start with understanding whether you're aware of whether the similar analysis that you've done was completed under the previous MPS. Because there were attributes obviously in the 2017 amended version of the national policy statement, do you know whether the Regional Council completed an analysis of the

15 water quality against those standards?

A. No I do not know whether they did.

Q. Okay so based on your knowledge is there much that has changed as between the 2017 and 2020 versions of the –

A. The attributes that have changed are some of the – appendix 2B

20 attributes, so the 2A attributes are the same, between the two versions of the MPS, the 2B attributes are new to the 2020 version of the MPS.

Q. Okay. I think as Commissioner Bunting mentioned you say in your brief of evidence that you haven't yet interpreted the results, they're simply an analysis of the data is that correct?

25 A. That's correct.

Q. And so, you haven't yet interrogated the results to understand the reasons for the various grades against those attributes.

A. No there's been no analysis of the relationship to resource use.

Q. Okay. Despite that the data itself helps provide us some insights doesn't

30 it?

A. Yes.

Q. Can I take you please to your appendix C in your brief of evidence, particularly table 6. Doesn't have a page number unfortunately.

A. No.

Q. It's the table relating to nitrate.

5 A. Nitrate yep, yes.

Q. I'd like to take a look at some of the key catchments from a deemed permit perspective, are you familiar with those?

A. Not in great detail but I have some understanding of the geography of Otago.

10 Q. Sure, so perhaps if we start with the arrow catchment.

A. Right.

Q. Fifth row down.

A. Yes.

Q. And we see there that it meets band A.

15 A. Yes.

Q. Perhaps moving down the page to Dunston Creek and do you understand Dunston Creek to be in the Manuherikia catchment?

A. Yes.

Q. Also band A correct?

20 A. Correct.

Q. Turning over the page, if we look at the Manuherikia catchment, those are all in band A?

A. Correct.

25 Q. And the following page, perhaps we look at the Taieri and once again we see that we are all in band A?

A. Correct.

1030

30 Q. So those results would help us understand or at least lead us to believe that with respect to nitrates, water quality against that measure is performing reasonably well?

A. So what that tells us, that attribute is nitrate toxicity.

Q. Yes.

A. So it's about the effect of nitrate on toxicity, nitrate has another effect which is to stimulate the growth of algae.

Q. Yes.

5 A. So these numbers are not necessarily, while they're in the A band in terms of toxicity so they have very low level of toxic influence, it does not necessarily mean that they aren't problematic from a algal growth perspective. To understand that in more detail, you would need to do some more analysis to really understand that.

Q. Yes and the periphyton assessment would assist with that would it?

A. Yes it does.

10 Q. So perhaps if we can go to table 2, your periphyton table, first page of your Appendix C I believe.

A. Yes sorry I'm just getting there.

Q. No that's fine.

A. Right.

15 Q. So my understand the periphyton attribute, we have a national bottom line between C and D?

A. Correct.

Q. And so if we look down the second to last column, we see there's more variability in relation to periphyton than perhaps with the nitrate measure?

A. Correct.

20 Q. So what kind of things contribute to variation in this attribute?

A. Right so periphyton is the response of the algae to the nutrient concentration but it also depends on a number of other factors including the temperature, the light available for plant growth and importantly in this case, flow. So the duration of time between flood events that wash the periphyton after is important and any changes in the flow that are caused by abstractions can increase that duration and therefore lead to more instances of periphyton getting to a biomass which is unacceptable.

25 Q. Do factors such as the presence of didymo influence the outcomes of this attribute?

30 A. Yes, well didymo is a type of periphyton so periphyton is a mixture of many, many things primarily algae and didymo is a type of algae. So didymo influences the biomass that's measured at sites where didymo is present.

- Q. Yes. Can I take you please to appendix C, table 8 which is the clarity table. Factors that might affect clarity would include a number of natural factors. Can I take you to the Dart at the Hillocks in that table by way of example. The Dart River at the Hillocks.
- 5 A. Yes.
- Q. Do you know where the Dart River is?
- A. Yes, I do.
- Q. Would you agree with me that the dart river, at least in part, drains Mount Aspiring National Park?
- 10 A. Correct.
- Q. And so we could or would suspect that the reason that Dart at the Hillocks is at level D is likely to be a natural factor?
- A. Yes.
- Q. Same might apply for the Invincible Creek at Rees Valley Road?
- 15 A. Quite possibly.
- 1035
- Q. If we go over the page to Thomsons Creek, you would agree that Thomsons Creek is in the Manuherekia catchment?
- A. I'm not familiar with Thomsons Creek, I'm sorry. I'm not familiar with that particular location.
- 20 Q. That's okay. Are you familiar with the Kaikorai Stream?
- A. In Dunedin?
- Q. Yes.
- A. I know its geography. I know of its geography.
- 25 Q. From a land use perspective, what kind of activities or behaviours would affect clarity?
- A. In an agricultural setting, stock access to the stream and the banks are an influence. Erosion, caused by that land use, obviously influences the amount of sediment that gets into the stream and affects clarity. In an urban environment, similar; land disturbance, leaving land bare, and erosion of the stream perhaps caused by rapid discharge of storm-water from urban development, urban land, et cetera. Those are the sorts of processes which lead to degradation in stream visual clarity.
- 30

Q. So talking then about the rural land uses and activities near the beds of waterways, are the risks associated with that in part dealt with by the stock exclusion and fencing requirements under national environmental standard?

5 A. Yes, I believe that's the intent, at least one of the intents of those regulations.

Q. I'd like to take you now please to your appendix C, table 20, which is the dissolved reactive phosphorous table.

**WITNESS REFERRED TO APPENDIX C**

10 **THE COURT: JUDGE BORTHWICK**

Sorry, where are we at? Table –

**MS IRVING:**

So, for the last two or four pages of the Appendix C, so the last pages of that document. Sorry, there aren't any page numbers, your Honour, so I can't –

15 **THE COURT: JUDGE BORTHWICK**

No. Hold on. I'll just see if I can get an electronic version.

**MS IRVING:**

It is the last four pages of the brief, your Honour.

**THE COURT: JUDGE BORTHWICK**

20 Just wait for the Court. All right, what's your question?

**CROSS-EXAMINATION CONTINUES: MS IRVING**

Q. Again I'd just like to discuss the reasons that we might see elevated levels of phosphorus. Can you explain those?

25 A. So, elevated levels of phosphorus may well arise from erosion. It's generally surficial wash-off which elevates it. So where there might be stock access to the stream or areas of erosion, that's a likely route for phosphorus to get into the waterway.

Q. Do you tend to see it more where irrigation methods are overland flow methods?

A. Correct.

5 Q. And so performance against that measure might be improved if we move to more efficient forms of irrigation with less run-off?

A. Correct.

Q. I have no further questions, your Honour.

**THE COURT: JUDGE BORTHWICK**

10 Q. In answer to the last question, are you suggesting that the only reason for overland flow is the use of wild flooding or of border dyke? I think that's where that question was going.

A. Oh, no, that's not my intent, no. Sorry, my answer was that overland – well, non-spray methods of irrigation are known to cause a higher wash-off than spray irrigation and therefore can increase the phosphorus wash-off to a greater extent. But phosphorus can be elevated through a simple – a response to rainfall from pasture that might be perhaps eroding, also to stock access to streams with erosion of the banks, et cetera. So there are a variety of mechanisms.

15

Q. Yes, it's a land use issue isn't it?

20 A. Yes. Yes.

Q. And so for example stock access to streams, stock access to critical source areas such as gullies and swales.

A. Yes.

Q. It's a result of applying irrigation water when the soil moisture content is already elevated. Consequently, even under irrigation and efficient irrigation, there is overland flow. There's a whole variety of it.

25

A. Yes, that's correct, yes.

Q. Yes, of which is to do with land use, the various activities taking place, the nutrients being applied and the methods of irrigation –

30 A. That's correct.

Q. – and the timing of irrigation.

A. Yes.

Q. So, quite a complex issue –

A. Correct.

Q. – not merely resolved by moving from border dyking to a spray irrigator.

A. No.

Q. Would that be correct?

5 A. That's quite right, yes.

Q. Okay. Anything else that you need to add to in terms of the questions put to you by counsel about the complexity of understanding nutrients, preferred pathways or other pathways through the environment?

10 A. Well I think you summed it up very well there. It is very complicated, and our understanding of those processes is not complete. But generally we do see a relationship between different types of irrigation and high, higher and lower phosphorus. So we do see improvements in phosphorus concentrations when irrigation is shifted from flooding type methods, wild flooding type methods, to spray irrigation. But you're quite right, it does  
15 depend on the practices as well, yes, and it's complicated.

Q. And is the new environmental standards regulating all those practices, just – even the ones that I've touched upon, or only one or two of them? What's the extent of its reach?

A. That's not really my area, so I won't try and answer that question.

20 Q. All right. Anyway, re-examination.

**RE-EXAMINATION: MR MAW – NIL**

**QUESTIONS FROM THE COURT: COMMISSIONER BUNTING – NIL**

**QUESTIONS FROM THE COURT: COMMISSIONER EDMONDS – NIL**

**QUESTIONS FROM THE COURT: JUDGE BORTHWICK – NIL**

25 **WITNESS EXCUSED**



**MR MAW CALLS****JULIE MARIE EVERETT-HINCKS (AFFIRMED)**

Q. Do you confirm that your full name is Julie Marie Everett-Hincks?

A. Yes.

5 Q. You are the science manager at the Otago Regional Council?

A. Yes.

Q. You have prepared a statement of evidence-in-chief dated 7 December 2020 and a statement of evidence in reply dated 19 February 2021?

A. Yes, that's correct.

10 Q. And you have set out your qualifications and experience in your paragraphs 3 and 5 of your evidence-in-chief?

A. That's correct.

Q. Are there any corrections that you wish to make to either of your statements?

15 A. No.

Q. Do you confirm that your statements of evidence are true and correct to the best of your knowledge and ability?

A. That's correct.

20 Q. If you could now proceed with a short summary of the key points from your statements of evidence-in-chief and then remain for any questions from the Court and from my friends.

1045

A. Thank you. Morena, your Honour.

**25 WITNESS DELIVERS PEPEHA**

My name is Julie Everett-Hincks. I'm a sheep farmer's daughter from South Otago, so this is where I was raised. I am the science manager here at the Otago Regional Council and I have been for nearly two years. I am  
30 providing evidence in relation to the Council's science work programme between the investigation undertaken by Professor Skelton and the upcoming notification of the new land and water plan.

The Council's science work programme or following from Professor Skelton's report a number of key areas were identified in which the Council could make improvements to its utilisation of its freshwater management functions.

- 5 This review will recognise that a significant upgrade of the planning framework was required in order to give effect to national direction and that rectifying the current lack of scientific knowledge in the region is necessary to provide a good, robust evidence base for a new land and water regional plan.
- 10 While the Council does hold some scientific data on the state of the environment, the data held by the Council does not identify and explain environmental issues including the causes and location and source and does not contain conclusions as to the significance in this regard.
- 15 In order to achieve the notification of the new land and water plan in two years, the Council has taken a number of prominent steps. These include taking a regional level precautionary approach and that is in simple terms, grouping the freshwater management units into four categories based on degree of modification from a natural state, in order to identify where further hydrology and scientific information should be prioritised.
- 20

Areas with complex hydrology and diverse pressures on competing values will be the subject of catchment specific modelling. Whereas catchment with less modifications will use these regional level precautionary models. The purpose of this approach is to ensure that the science, required science work will be sufficient to inform the development of the land and water plan in the timeframe that was given.

25

Further work is required as a result of the essential freshwater reforms, late in 2020 to create a detailed inventory and development of a monitoring programme. A representative estuary monitoring programme, fish surveys, fish passage, connectivity projects, a review of our primary contact programme to ensure compliance, additional attribute measures at a greater number of sites, this work will inform the development of the land and water regional plan to

30

ensure that it is consistent with and gives effect to the relevant higher order documents.

5 Increasing the capacity and capability of the science team through taking on –  
we've done that through taking on multiple additional team members. Professor  
Skelton's review in line with the previous independent report found that there  
was a shortage of approximately four to six full time equivalent scientists to  
carry out the work on practical hydrology and hydro ecology and he also  
referenced in that report a shortage of environmental monitoring technicians as  
10 well.

Following a reorganisation of the science team in May 2020, the Council have  
now created a structure similar to that recommended in previous reports. It  
means that once all of the positions are filled, there will be about 21 full time  
15 equivalents up from 9.4. While recruitment is ongoing and there have been  
additional challenges in terms of sourcing applied scientists at the right level  
due to higher demand within New Zealand and an ability to bring overseas  
scientists due to boarder closures, these new positions allow internal  
knowledge to be built and strong networks to be built with other Council's,  
20 Crown research Institutes, Universities and agencies to access national advice  
and knowledge.

It ensures the Council has much of the expertise required to inform the future  
development of the land and water regional plan and continue on with  
25 consistent and robust monitoring systems and regulative reporting, issue  
identification and interrelated management without having to rely on external  
consultants, short-term contracts and excessive cost to ratepayers. That's my  
summary Your Honour.

1050

30 **CROSS-EXAMINATION: MR MAW**

Q. Dr Everett-Hincks, do I take it from your first, or your paragraphs 3 and 4  
that your specialist expertise is in animal genetics?

A. And farm systems, agricultural sites.

Q. Yeah so in matters of – I see you haven't attempted to qualify yourself as an expert in giving expert evidence, you're giving evidence as a manager right?

A. That's correct.

5 Q. And so on matters concerning how a hydrological model should be built or an ecological model should be built for a catchment you defer to those who have that relevant expertise do you?

A. Yes that's correct.

10 Q. And that would include your predecessors in your current role Dr Olsen and Mr Hickey?

A. That's not entirely correct.

Q. Well, Dr Olsen's an expert ecologist?

A. Yes.

15 Q. And Mr Hickey has ecological qualifications and experience in preparing hydrological studies?

A. That's correct.

Q. So when they express an opinion about the time it takes to prepare hydrological studies and ecology studies you would defer to their advice?

A. Amongst others advice as well.

20 Q. Were you in court when Mr Henderson gave evidence yesterday?

A. Yes I was.

Q. And did you understand him to say that for the Arrow, Cardrona and Manuherikia catchments, the hydrological models exist to enable the Council to make decisions?

25 A. Yes I heard that.

Q. And you agree with it?

30 A. There's always a degree of uncertainty with any model. Models can be developed for almost anything for almost any degree of data that's available, it's how its – comes down to the level of risk that you want to accept with that model.

Q. Well is the Regional Council proposing to do any more work on the hydrology of the Cardrona Arrow and Manuherikia catchments before it notifies the Land and Water Regional Plan?

A. Can you please clarify with regard to work?

Q. Well, you've explained that all models contain risk.

A. Yep.

Q. And it's a question of how much risk the Council's prepared to accept in using models.

5 A. That's correct.

Q. Right. Mr Henderson told us that models exist for Cardrona, Arrow and Manuherikia.

A. Yes.

10 Q. Is the Council proposing to use those models in its preparation of the land in water regional plan?

A. Yes it is.

Q. It is thank you. Is the Council proposing to build similar models for other catchments?

A. Yes it is.

15 Q. Which ones.

A. Based on the categorisation we have done, on the Taieri FMU, the North Otago FMU and the Clutha Mata-Au main stem.

Q. Those three.

**THE COURT: JUDGE BORTHWICK**

20 Q. Sorry can you say that again? The – I didn't catch the models.

A. The – we believe that complex, there's complex hydrology issues and diverse pressures on competing values within the Taieri FMU, North Otago FMU, and the Clutha Mata-Au main stem.

Q. So, Taieri, North?

25 A. North Otago.

Q. North Otago and last place?

A. Clutha Mata-Au main stem.

Q. Yes.

1055

30 **CROSS-EXAMINATION CONTINUES: MR PAGE**

Q. But not for any of the tributaries of the Clutha Mata-Au?

A. It may be that we require more fine scale modelling in different areas. Can I please add that this is the approach we've adopted given the timeframes that we have been given.

5 Q. Does that work for the Clutha Mata-Au, main stem for the Taieri FMU and for North Otago FMU? Is that being done within the council or through external engagement?

A. We're scoping that work out currently we will make that decision as to whether that goes to external consultants.

10 Q. So do I take it that for Clutha Mata-Au, Taieri and North Otago that work hasn't even begun?

A. That's correct.

Q. What is the deadline for the delivery of that work to enable it to provide the basis for policy formulation in relation to those catchments?

A. Approximately the end of 2022.

15 Q. Now, let's talk about North Otago FMU for the moment. Are you familiar with the various catchments that make up that FMU?

A. Reasonably familiar.

Q. So we have the Waianakarua, we have the Shag or Waihemo catchment and the Kakanui catchment, and also the lower Waitaki, don't we?

20 A. That's correct.

Q. So each of those have separate hydrological characteristics and data sets, don't they?

A. Yes, they do.

25 Q. Nobody has been engaged to deliver hydrological models for any of those catchments yet and you're confident that could be delivered by the end of 2022?

A. As I mentioned, we have engaged with others to ensure that we have a regional precautionary approach model as a baseline for the whole region.

30 Q. Can you explain to me what that regional precautionary approach model actually contains?

A. It's based on a hydrology. It's a hydrological model that looks at what the natural state – I will put it in your Honour's terms from yesterday,

naturalised state for many of the modified catchments for those that haven't been modified, it will provide the natural flows.

Q. So we're not talking about constructing hydrological model that utilises actual take data from permits.

5 A. Can you please repeat that question?

Q. So you're not referring to a hydrological model that utilises actual take data from permits in each catchment?

A. No, that's correct.

1100

10 Q. Because the model for the Manuherikia that Mr Henderson was describing yesterday took two to three years to build didn't it?

A. I believe that's the case.

Q. So we simply don't have time for a model of that level of sophistication to be built between now and the end of 2022 for other catchments do we?

15 A. The Manuherikia I understand was an exception, probably the most modified and most complex catchment in the region and potentially New Zealand.

Q. But Mr Henderson described the Taieri FMU as being similar.

**THE COURT: JUDGE BORTHWICK**

20 Q. Did he? I'm not – that wasn't my recollection of his evidence, can you recall what he said about other catchments?

A. That wasn't my recollection either Your Honour.

Q. I thought the Manuherikia he described as the most modified, most complex both in terms of hydrology and also the – where water was travelling within the catchment as a result of modifications but the other catchments, and I thought he mentioned Taieri were simpler, relatively simpler even though there's modification there too. The hydrology and geohydrology or something, isn't that what he said or have I totally misheard him?

25

30

**MR PAGE:**

Well can I check his written evidence Ma'am because I had understood from his written evidence that he grouped Manuherikia and Taieri together as having similar complexities.

5

**THE COURT: JUDGE BORTHWICK**

Q. Oh you can check that, I'm just recalling a verbal response but if you could check and put that, actually put the evidence to the witness from the correct page if that's what you're referring to.

10

A. Your Honour we do understand the Taieri to be complicated, that's why we have taken the approach of undertaking fine scale modelling for the Taieri.

Q. But is it as complex as Manuherikia?

15

A. We are lead to believe that it is not quite but that we do not know.

Q. Okay yes.

**MR PAGE:**

Paragraph 70 of Mr Henderson's evidence-in-chief is the one I have in mind Ma'am.

20

**THE COURT: JUDGE BORTHWICK TO MR PAGE**

Q. Yes, what does he say there?

A. He says: "Two catchments where these approaches may struggles however are the Taieri and Manuherikia, both have significant water storage to provide water for irrigation if rivers are very low, both have extensive redistribution systems based on water races that have been repurposed from their original use for gold mining and both have a high level of water use by comparison with available water."

25

Q. All right and your question is? Based on that, how can this witness be confident that a model build will be available within two to three years?

30

A. Well by the end of 2022 Ma'am.

Q. 2022 yes.



**WITNESS:**

We will do all that we can to ensure that we can deliver according to the Minister's timeframes. What will be deemed the challenge is how much risk the Council and community and stakeholders can accept with models that aren't  
5 fine scale.

**CROSS-EXAMINATION CONTINUES: MR PAGE**

Q. In relation to the Taieri catchment, Mr Henderson wasn't able to help me with the current scheduled minimum flows for the catchment, are you familiar with those?

10 A. Not directly I'd have to refer to the plan.

Q. All right, and are you familiar with the Manuherikia irrigation company consents to operate the Loganburn Reservoir?

A. No that's not my concern.

Q. Has your team – the resource science team of the Otago Regional Council contributed to the preparation of the proposed regional policy statement?  
15

A. Yes we have.

Q. And that regional policy statement do you understand is to be notified in early June?

20 A. That's correct.

Q. And do you understand that part of what that regional policy statement is intended to address is the meaning of Te Mana o te Wai in relation to each of the FMUs?

A. That's correct.

25 Q. Nothing further Ma'am.

**RE-EXAMINATION: MR MAW**

Q. You had a question put to you in relation to whether there was sufficient hydrological information available to proceed to a plan change in respect of the Manuherikia catchment. Is it as simple as simply having sufficient  
30 hydrological information and then proceeding straight to a plan change or are there some other steps that need to be undertaken to get to the point of preparing a plan change or a new plan?

- A. Yeah I see that information as the foundation or the base from which all the other layers of data and information need to be applied, such as ecological values, cultural values, land use activity, mahinga kai site, so that is just merely the foundation from which everything else will be based for the MPSFM 2020.
- 5
- Q. So it's the hydrological component is perhaps one piece of a jigsaw, it's not the complete picture?
- A. That's correct.

**QUESTIONS FROM THE COURT: COMMISSIONER BUNTING – NIL**

10 **QUESTIONS FROM THE COURT: COMMISSIONER EDMONDS – NIL**

**QUESTIONS FROM THE COURT: JUDGE BORTHWICK – NIL**

**COURT ADJOURNS: 11.06 AM**

**COURT RESUMES: 11.27 AM**

15 **WITNESS EXCUSED**

**THE COURT: JUDGE BORTHWICK**

Okay so moving right along and you know we're going to get to your planning witness.

**MR MAW:**

- 5 Yes and I think that was – the best guess had him coming on at some point this afternoon so, he's ready and I think others in the room are too.

**THE COURT: JUDGE BORTHWICK**

Okay and I think we're just checking through to make sure that anybody else who might have needed him are also available or – yes.

**10 MR MAW:**

Yes the list was quite long from memory.

**THE COURT: JUDGE BORTHWICK**

Yes the list is long but we look to have everybody in the room. Okay, all right.

**MR MAW:**

- 15 So the next witness that I will call will be Mr Wilson. Just as he's making his way up to the front, I've had a discussion with my friends over the morning tea adjournment and I've offered to lead some further evidence from Mr Wilson to see if I can tease out the differences between the different methodologies that have been put forward in a way to both assist the Court and assist counsel. So
- 20 I'll start with that after he's given his summary and that may then avoid the need for any further questions by way of cross-examination or further explanation or it might not but it may assist with the task at hand.

**THE COURT: JUDGE BORTHWICK**

All right, thank you.

25

**MR MAW CALLS****SIMON SHIELD WILSON (AFFIRMED)**

Q. You confirm that your full name is Simon Shield Wilson?

A. Yes.

5 Q. And you are the manager for Regulatory Data and Systems at the Otago Regional Council?

A. I am.

Q. You've prepared a statement of evidence-in-chief dated 7 December 2020?

10 A. Yes.

Q. And a statement of evidence in reply dated 19 February 2021?

A. Yes.

Q. And you've set out your qualifications and experience in paragraphs 2 to 6 of your evidence-in-chief?

15 A. Yes.

Q. Are there any corrections that you wish to make to either of those statement of evidence?

1130

20 A. There are yes. Evidence-in-chief paragraph 25, the end reads: "Consumptive take greater – "

Q. Just pause.

A. Sorry. The last line reads: "Consumptive take greater than five litres per second." It should be: "Greater than or equal to five litres per second." And paragraph 33, paragraph 33 read: "Any values below zero litres are removed." It should be "at or below".

25 Q. Subject to those corrections do you confirm that your statements of evidence are true and correct to the best of your knowledge and ability?

A. I do.

30 Q. Now I understand you've prepared a short summary of the key points from your evidence, a copy of which will be handed around, if you could just proceed to give your summary once those have been delivered.

A. So my evidence covers the technical input into the development of schedule 10A4 of Plan Change 7. Along with Mr Lesley I was involved in the initial technical development of schedule 10A4 and PC7 before it was

reviewed by the Council's policy and planning team, the methodology in schedule 10A4 was designed to achieve three key outcomes, A) to ensure the applicants are not allocated more than their current water allocation, B) to ensure the applicants are allocated their actual water use and C) to provide a methodology which was simple to apply and not open for interpretation allowing for a lower cost of processing applications for resource consents. These outcomes support the short term interim nature of plan change 7. Schedule 10A4 uses water metre data collected by applicants in accordance with the consent conditions or the water metre regulations 2010 amended in 2020, to calculate the actual rates and volumes of water used. Schedule 10A4 is an objective and certain methodology with less room for subjective interpretation than the approach previously undertaken by the Council when considering water permit applications under the existing water plan framework. My evidence outlines how the method will work in practice and address some of the concerns raised. When an applicant's historic use is consistent then the proposed schedule 10A4 methodology will result in the applicant being allocated water reflective of their current use, if applied across the Otago region the methodology in this schedule will result in a significant reduction in the paper allocation currently assigned to deemed permit and water permit holders with allocation more closely reflecting actual water usage, and as a result of submissions I have made or support a number of amendments to the methodology – recommended or support a number of amendments and they are moving the date analysed to 1 July 2015 to 30 June 2020, amending the method for calculating the annual volume limit to reflect maximum annual volume as opposed to average annual volume, the introduction of rule 10A31A to allow a path for applicants with missing data, and amendments to allow for processing of applications when water metering was not required either by regulations or consent conditions. Overall my opinion is with the suggested amendments schedule 10A4 meets the outcome set out above.”

1135

**EXAMINATION CONTINUES: MR MAW**

- 5 Q. Thank you Mr Wilson. Perhaps if we could start by you explaining to the Court your understanding about whether the methodology in schedule 10.A4 includes all of the steps that need to be followed for that schedule to be applied.
- A. It does, yes and it was designed to do so.
- Q. So there's no black box that sits out to the side of the plan? The steps are – or the intention was to include all of the steps in the schedule itself?
- A. Yes.
- 10 Q. And you are confident that the schedule in its current form catches all of those steps?
- A. Yes. I think the only piece is whether the data is potentially – has gaps or there's missing data, which requires someone with understanding to look at that and spot that that's the case and that there may be a problem with applying the schedule and that the 10A3.1A might be appropriate. But other than that, the steps for running through the method are all in the plan.
- 15 Q. Now you will have had the benefit this morning from the conversation with the Court in relation to the differences between the alternative methodologies put forward by various parties in this proceeding. It would be of assistance to the Court and to counsel if you were able to tease out some of the differences between the Council methodology and the methodologies that have been put forward by other parties. And if it's a convenient way to do so, it might be worthwhile working through the differences that you've set out in your evidence-in-reply at your paragraph 5 as the basis for describing or discussing those differences.
- 20 Q. Certainly. So there is the issue around a reliability of supply, which is effectively the Aqualinc discussion, Aqualinc being a model to allocate your water limits based on what you will need to maintain your crops with a... Effectively, as I understand Aqualinc, you look at the area you're in and that gives you a rainfall figure. You look at your soil type, then you look at what you're doing and those three variables produce a final number. The key difference that I've identified in my evidence I guess is
- 25
- 30

that Aqualinc in an of itself doesn't deal at all with the available water in the river or the health of the river.

Q. Does the Aqualinc model deal with past or historic use?

5 A. So I think it's probably worth putting at this point that I'm not an expert in Aqualinc but my understanding is no it doesn't. It looks at modelled need.

Q. What's your understanding about how that modelled need is incorporated within the current planning framework? That may be outside of the scope of your expertise but is that model being used at present by counsel?

10 A. So, I think (inaudible 11:38:48) it's outside the scope of my expertise but I certainly discussed it with our consents team prior to writing my evidence, to confirm that what I had in there was correct. My understanding is that they take the numbers run by one of the Council's analysts of actual use, and for monthly and annual volume allocations they look at Aqualinc and then they take the lower of those two numbers  
15 generally.

#### **THE COURT: JUDGE BORTHWICK**

Q. Sorry, say it again? You take – yes, I didn't get that.

A. You take the historic use number.

Q. Yes.

20 A. You take the Aqualinc number, taking the one that's lower, but only for monthly and annual.

#### **EXAMINATION CONTINUES: MR MAW**

25 Q. Are there any other observations that you can usefully share in relation to the reliability of supply differences, or can you tease out perhaps where other methodologies are seeking to incorporate a reliability of supply component to the methodology?

1140

30 A. I don't think there's a lot to add on reliability of supply. I think key point for my perspective is that it's – Aqualinc is modelled need and doesn't include what's available to use. So doesn't – you can model that you need 2,000 litres out of the river but if there's only 1,000 litres in it, you're

not gonna get 2,000 litres to use despite what you've written on the consent.

Q. And just to be clear, the council's version of schedule 10A.4 doesn't include reference to modelled need.

5 A. No, it doesn't.

Q. Moving onto the next topic, system efficiency. Can you describe some of the differences that arise with respect to this topic?

A. So there was commentary from some other sets of evidence that the reductions that would come under schedule 10A.4 would cause systems to operate in an inefficient manner compared to how they do now and my response to that is that schedule 10A.4 is designed to provide applicants with the water that they currently use, particularly when we get into rate of take, in most cases comes up with a number which is higher than the 95<sup>th</sup> percentile that the council would generate under the current water plan although as I acknowledge that 95<sup>th</sup> percentile is a number generated in a report, not necessarily the final number that enters the consent. So the intention when the schedule was prepared was not to affect the existing system efficiency.

10

15

A. Correct.

20 Q. To the best of your knowledge, have any of the alternative models that had been put forward sought changes to the methodology to capture the concerns raised or are they just concerns raised without twigs to the method?

25 **THE COURT: JUDGE BORTHWICK**

So which method, your method?

**MR MAW:**

To the council, in terms of understanding where the difference between the method lies.

30 **EXAMINATION CONTINUES: MR MAW**

A. So there is one set of – or two sets of evidence that include specific set of recommended changes to the methodology. That's the – we call it the



Landpro method which is largely replicated by Ms Dicey, although with one or two differences. And I can run through the main differences if that's useful.

Q. I think that would be helpful.

5

**THE COURT: JUDGE BORTHWICK**

Yes.

**EXAMINATION CONTINUES: MR MAW**

Q. And if we have the document...

10

**THE COURT: JUDGE BORTHWICK**

Have you prepared something?

**MR MAW:**

No, I haven't. I've just –

15

**THE COURT: JUDGE BORTHWICK**

No, it's okay. we can go to our –

**WITNESS:**

I'm going to refer the Court to paragraph 30 of evidence in reply if that's...

20

**THE COURT: JUDGE BORTHWICK**

Should we also have in front of actually what Landpro is seeking?

**MR MAW:**

That's what I was looking for.

25

**THE COURT: JUDGE BORTHWICK**

Q. Okay, I just need to find that, rather than a brief of evidence. Are you able to talk to – and you may not have it in front of you but are you able to talk to Landpro relief and OWRAG relief?

30

A. I don't have it in front of me. I have the –

Q. We can get that for you.

A. – the seven points that I believe are different from schedule 10A.4.

Q. I just need to see it actually when looking at their relief, though.

A. Sure. Yeah.

5

**MR MAW:**

Ms Perkins' evidence, 5 February 2021.

**THE COURT: JUDGE BORTHWICK**

10 We should all have a copy of the (inaudible 11:44:20), which is an attachment to Perkins' evidence and attachment to Ms Davies' evidence.

**EXAMINATION CONTINUES: MR MAW**

1145

15 Q. Mr Wilson, do you have in front of you the version of the schedule with the marked up changes from Ms Perkins' evidence?

A. I do. So the first difference would be contained on, there's no page number but 10A4.1. Where on the second line you'll see the average actual maximum and the average has been removed, so for rate of take they're suggesting taking the highest rate of take at any point within the period analysed as opposed to the highest rate in each year average.

20

Q. And in your evidence in reply, you explained your reasoning for why you did not accept that was an appropriate amendment, can you just explain for the court your opinion in relation to that suggested change?

25

A. I don't that the changes is necessary, if you take the highest single figure then you're potentially picking up a one off data spike which is well above typical use. It's a more reasonable methodology to take the five highest points and average them and with rate of take you've got a very large data set to work from, means that in order to get their current allocation the applicant would only of had to of used up to their current allocation once each year.

30

**THE COURT: JUDGE BORTHWICK**

Q. Say that again.

A. So in order to get their current allocation, if they've used their current rate of take allocation at one point each year then under this schedule 10A4 they're going to get their current allocation back.

Q. As opposed to?

5 A. I guess what I'm saying it that there's plenty of opportunity to get enough data points to get something that's representative and if they are generally using their current allocation then schedule 10A4 will give them their current allocation.

10 Q. That's if they're generally using it and it hasn't been a dry year or a dry series of years?

A. Yes but again even in a dry year they only have to have got to that rate of take once.

Q. Once, okay.

**EXAMINATION CONTINUES: MR MAW**

15 Q. If you can step through then to the next difference with reference to the Perkins, to Ms Perkins' schedule.

A. Yeah so it's probably then the introduction of a method for auditing the water metre data and there's steps there around data gaps which we should probably address first. So the, currently under Plan Change 7 we say that if data gaps are identified as being an issue then you go back to rule, is it 10A3.1.A, so we recognise that the data gaps can be a problem and will have an effect on the effectiveness on schedule 10A4 but don't necessarily spell out a methodology for filling those gaps whereas Landpro are recommending a methodology to fill the gaps.

25 Q. And when you read that suggested methodology, actually I'll go back a step, so that the position from the Council was to say insofar as there's a data gap there needs to be some further interpretation of those gaps done and therefore, the new proposed restricted discretionary activity pathway was the appropriate place for that consideration?

30 1150

A. Yes.

Q. Whereas the methodology that Ms Perkins is putting forward attempts to solve the data filling cap within the methodology itself?

A. Yes.

Q. Now, when you read the suggestions to how the data gaps are to be filled, do you have any concerns around whether the way in which the gaps will be filled can be done in an objective manner?

5 A. I do, yes. I have two concerns which I cover in my evidence in reply around filling data gaps. The first one is that identifying gaps in data isn't as easy as it sounds and you need on the ground knowledge to work out when something's gone wrong, so you can have gaps for a number of reasons. For example, there are water users in Otago who disconnect their meters over winter so that the pipes don't freeze and burst. You wouldn't want to fill that data gap. It is a data gap that is reflective of what actually happened. So you'd require – while the council's team can look at a set of data and go "oh I think that's a gap", there's then a step that would require information from the consent holder and again, I don't process resource consents but I'd assume documentary evidence that would say why there was a reason for that gap and that it was actually a gap. Then I have concerns over the method that's been suggested for filling those gaps. So Landpro recommend taking the level of data at the start of the gap, the level of take at the end of the gap, averaging them and drawing a straight line in between which might work if the gap was an hour or two but if you're talking about weeks or months then I don't think that's accurate.

15  
20  
25 Q. So that is perhaps a question of appropriateness as opposed to whether you could objectively ascertain an answer from filling the gap in that manner?

A. Yeah well I guess the objective – well the subjectiveness comes into – you start getting into discussion over whether a gap is legitimate or not and different people might make different calls on that.

**THE COURT: JUDGE BORTHWICK**

30 Q. What do you mean by "legitimate"?

A. So in the sense of this, I mean that there is a gap because of equipment failure, so water has actually been being taken but the meter hasn't recorded it. But you then get into issues of equipment failures happen

and that's fine but how – what steps have been made to resolve the issue? And there are certainly challenges that consent holders have in getting service providers to do that work, so it can take some time but you'd want to start making a call on, I think in my evidence-in-chief, I have  
 5 someone with a five year data gap, for example, whether that's a reasonable data gap that you'd want to try and fill. And that's when you get into a subjective decision.

**THE COURT: COMMISSIONER BUNTING**

10 Q. So is that a question about “what is a data gap”, as opposed to “is it a data gap or is it something else”?

A. So there's the first bit which is “is it a data gap” as in, has something broken or is it just that while they normally take a lot of water in March, it was a wet March and so they didn't take water in March that year? So there's the process you'd go through to say “yes there's a data gap there”  
 15 then there's the process you go through to say “do we want to fill that data gap” and then there's the “how do we fill it”.

Q. And so for an expert conference, and I don't know, there may be large agreement on some of these elements but for the expert conference, the three questions would be: “What is a data gap?” “What data gaps need  
 20 to be filled?” “How should we fill the data gap?”

A. Yeah.

Q. Or “how should we fill” – that would be the sort of outputs I would expect to see?

A. Yes, yep.

25 Q. So and that's where the differences are also aligned with Landpro?

A. Yeah I think so for this one.

**THE COURT: COMMISSIONER EDMONDS**

1155

30 Q. So the question is how should we fill data gap, or is it *should* we fill the data gap and if so, how?

A. I think you can adopt a standard methodology for how you would do it but the first question for each gap would be should we fill it, and the question before that would be is it actually a gap?

Q. And that's where the disagreements are lying in relation to part of this?

5 A. Yes.

**EXAMINATION CONTINUES: MR MAW**

Q. The next topic that you raise in terms of differences is treatment of exceedences. If you could explain where some of the differences lie with respect to that topic, then that would assist.

10 A. Yeah, I can. So we're looking at paragraph 7.7 of the Landpro amended version. So the Council's notified version of schedule 10.A4 takes exceedances that are within the margin of error of the metre and rounds them down to the consented limit, and anything above the margin of error is removed. Landpro are suggesting... If I read the words: "Consider  
15 whether the exceedance is justified by reviewing if these are because of faulty equipment, flooding or other legitimate issues."

Q. So would that require a subjective assessment at that point?

A. Yes. I'd also, if I can – while flooding, for example, might be a reason why you've exceeded your consent limit and a valid reason for it that you  
20 wouldn't take any compliance action on, I'm not sure it's something that you should use to bump your consent limit up.

**THE COURT: JUDGE BORTHWICK**

Q. So what is the question, then? What question arises?

A. So the question I think is how exceedances should be treated.

25 Q. But the prior question is what is an exceedance.

A. I think an exceedance is clear from the data. You have a limit of how much you're allowed to take. If you're over that limit, it's an exceedance.

Q. And here are we just taking about rates of take or are we talking about volumes as well?

30 A. You – it can happen for rates and volumes.

Q. Rates and volumes.

A. It's much more likely to happen for rates.

Q. So we know what an exceedance is, and then the next question is – so what is an exceedance and you can answer that –

A. Yes.

5 Q. – but the next question is for an exceedance... I don't know, then what? What's your next question?

A. Well I think how should exceedances be treated. So the Council methodology is very simple: if they're over the margin of error, you remove them. You don't take them into account.

10 Q. And all of your methodology is under an RDA rule, isn't it, but Landpro is under a controlled activity rule. Is that how it goes? Where you've got a problem with data, you've amended the plan or are proposing amendments to this plan change to introduce new policy and a rule which is an RDA rule.

A. It's getting into the planning side of things –

15 Q. That's all right.

A. But I believe so.

Q. I think that's right, and then – but that's not – Landpro doesn't like that. Okay. How should exceedances be treated?

A. (no audible answer 11:59:20).

20 Q. Is an issue here that the Landpro method calls for judgement or subjectivity, yes, judgement?

A. Yes. So, exceedances are obvious to spot. They're a number above another number, but then they're calling for reviewing if these are because of faulty equipment, flooding or other legitimate issues. So you start getting into what is a legitimate issue, in order to be considered in calculating your limit. It's interesting that faulty equipment is listed there because faulty equipment can produce exceedances many times a consented limit, which aren't actually reflective of taking at all it's just the metre going haywire. And I, you know, my opinion is they shouldn't be included in a recalculation of a limit but there's a subjective element there in that you're going to have to have a conversation about it.

1200

**THE COURT: COMMISSIONER BUNTING**

Q. And the significance is it could bring up the historic uses?

A. Correct, so schedule 10A4 with its current treatment of exceedances is a – that’s a backstop safeguard to guarantee that it doesn’t come up with a number more than your current allocation. If you start including exceedances you might come up with a number that’s more than your current allocation.

Q. Okay.

**THE COURT: JUDGE BORTHWICK**

10 Q. Okay so the question about how should the treatment of exceedances under the methodology seems to be at least between ORC and Landpro questions to do with whether there’s an objective response of a subjective response required?

A. Yes.

15 Q. Or both?

A. Yes.

Q. Okay.

**EXAMINATION CONTINUES: MR MAW**

20 Q. Does that topic in terms of treatment of exceedances capture the terminology that has been used in some of the evidence around legitimate overtaking and I wonder whether you could assist with what that phrase or how that phrase is being used?

A. So probably various different ways, so I think that the first element is if I call it rather actual overtaking, so some exceedances are reflective of when the water user has used more water than they were allowed to use and some exceedances are reflective of equipment malfunction, so some of them don’t reflect actual usage. So there’s actual and then there’s legitimate in what might we want to consider if we were taking some exceedances into account versus what shouldn’t we consider.

30 Q. So when you think about what might be a legitimate overtaking and I wonder whether we might put a practical example around that so a permit



that authorises a maximum rate of take or an instantaneous rate of take of 100 litres per second.

A. Yes.

5 Q. If the margin of error on the metre is plus or minus 10%, a take of say 105 litres per second would be considered to be a legitimate overtaking based on the margin of error?

A. So yes, it's close enough that the metre can be inaccurate so they might actually be taking at the rate of take so you'd round it down to 100.

10 Q. So the way that the Council methodology works that 105 litres per second in that example would rounded down to 100 litres per second?

A. Yes.

Q. And then just teasing that out a little further, if the rate of, if the take was above 110 litres per seconds so beyond the margin of area on the metre, that data point would be removed from the data set completely?

15 A. Yes.

Q. And again that's where there's a difference in terms of how that exceedance is being used in the Landpro methodology versus the Council?

20 A. Yeah so I think if memory serves what Landpro are arguing is that if the reason for the exceedance was deemed to be legitimate then you would keep that data point in but round it down to the 100.

1205

#### **THE COURT: JUDGE BORTHWICK**

25 Q. So your last comment is in relation to exigencies above 10 cent for water taken by – within so exigencies above a margin of error. Landpro the basic proposition is if legitimate, whatever that means, Landpro would round down whereas exigencies above the margin of error, the region takes out the data set and the differences between rounding it down and taking it out of data set, why is that important?

30 A. I think I've argued in my evidence in reply that generally speaking for rate of take, I don't think it will make much difference. I suspect that we use the same filtered data set for volume calculations so I suspect what Landpro are looking at is the later volume calculations so you are adding

a 100 litres for that. Hundred litres a second stays in for volume calculations as opposed to removing.

Q. And do you agree with them, if you leave it in the dataset, albeit rounded down, if you leave it in, that's important for calculating volume?

5 A. (no audible answer 12:06:23).

Q. Or is that a thing that you need to test?

A. I think that's a question for discussion.

Q. That's the question for discussion. Then that needs to be played as a question for discussion too because you could be having a big debate about nothing much at all or you might be having a big debate about something fairly significant. So what do you reckon that question would be? Is there any material difference in terms of either keeping it in rate of take or volumes should exigencies be rounded down but left in the data set? Is that broadly the question?

10

15 A. Yeah, that could be a starting point for the question.

Q. There will be better questions.

A. And the immediate answer will be that it really depends on the data set. Some of them have a lot of exigencies. Some of them have very few.

#### **EXAMINATION CONTINUES: MR MAW**

20 Q. This might be a question for Mr Leslie but I will see whether you can assist. Is the timing at which there is an exigence an important consideration as well? So in terms of when during the year it occurs?

A. Generally speaking, no, under schedule 10A.4 but it does depend on the data set so if you had a data set which had gaps for two Marchs and then an exigence for a third March and March was supposed to be biggest of taking then it might have an impact. So you've got five Marches to look at, two of them are empty, one of them is well above the limit so you take it off. You've only got two Marchs left to look at and if that's when take most of their water then timing could have an impact.

25

30 Q. What about in the context of, say a spike, think of a maximum, instantaneous rate of take in a spike on a metre occurring, for example, not in the irrigation season?

A. So again that would feed the discussion around whether it was reflective of actual taking or reflective of equipment failure. So generally when you're looking at these records, you can spot a pattern of what they normally do but just because they normally do it, doesn't mean they always do it. Could've been reflective of the pump breaking and going haywire in the middle of winter as opposed to the metre recording a false.

5

Q. The next topic that you move on to consider is the calculation of the rate of take.

A. Yes.

10

Q. If you can assist by highlighting the differences in the approach suggested again by Landpro and the council's methodology and your opinion on those differences.

A. I think we covered some of that. Landpro are recommending taking the actual maximum rate of take, so the highest single point of data across the period analysed. The council methodology takes the highest point in each year and averages it.

15

1210

Q. So that can be converted into a reasonably sort of clear question of: "Should the maximum rate of take used in any water year be used or should the maximum rate averaged across the water years be used?"

20

A. Yes.

Q. And just to tease out the differences between those two situations, because it may well be that you simply can't resolve which it should be. But analysing a dataset might help highlight the differences and outcomes from applying those two different approaches. In terms of the work that the witnesses could usefully do, would it be possible to apply to a dataset, a common dataset, those two different approaches to examine the differences in output?

25

A. Yes, absolutely. That could be done relatively easily. I think my caution and comment would be that there is no typical dataset. So we could do that on a dataset and it would demonstrate a certain result but a different applicant might come in with a different set of data who would get a different result. So how you choose that dataset would be the challenge.

30

Q. Again, it might be a question for Mr Leslie because he, I recall, had attempted to do some of that comparative analysis between the two methods using a common dataset between the Landpro expert and the council's dataset, so I might explore that a little further with him.

5 A. Okay.

Q. Anything else in relation to the rate of take?

A. No.

Q. So we then move to the calculation of daily volumes. So what are the differences there with respect to the Council schedule and the Landpro schedule?

10

A. So it follows the same thing. The council's schedule takes the average of the – takes the highest day in each year and then averages them. Landpro takes the highest day across the entire dataset with the additional filter that Landpro are recommending leaving in some of the exceedances which might push up that highest day.

15

Q. And this is what you were talking about before in terms of the effect of the instantaneous rate of take on the monthly and then presumably the annual averages?

A. Yes.

20 Q. Is there anything else in relation to the daily volumes in terms of differences or is it coming back to that key difference in terms of whether it's the highest or the maximum recorded or the average that we've talked about?

A. It's coming back to that key difference.

25 Q. We move then to the calculation of monthly volumes. Are you able to highlight the differences in relation to that calculation?

A. So again, same as daily volumes. Council recommends an average of the highest month in each year, Landpro recommends taking the highest month across the dataset.

30 **THE COURT: COMMISSIONER BUNTING**

Can I just interrupt, have you got the copy of the – Mr de Pelsemaeker's latest recommended amendments there?

**MR MAW:**

Yes the 19 February incorporating 4 March corrections?

**THE COURT: COMMISSIONER BUNTING**

Q. Yes?

5 A. I believe that I do, yes.

Q. So 10A.3.1 is controlled activity, resource consent required, have you got that?

A. Yep.

10 Q. If you come to 10A.3.1.1, say 4, he seems to – has he taken out the average maximum and replaced it with a limited set, or am I reading that incorrect?

A. I think that is rather than defining average maximum in the text, he's saying the limit as calculated in accordance with schedule 10A.4 and then schedule 10A.4 will tell you that it's the average maximum.

15 Q. Okay.

A. At ...

1215

Q. But you said the average maximum didn't you?

A. Yes it is, it is the average maximum.

20 Q. So why's he crossed it out do you think?

A. You'd need to ask him, I think it's possibly just simplifying it so that if any changes are made they only need to be made in the schedule as opposed to earlier in the text.

25 Q. Okay thank you. Yes I see the schedules worded slightly different, that's...

A. That may be the reason then, I'm –

Q. Sorry Mr Maw, thank you.

**EXAMINATION CONTINUES: MR MAW**

30 Q. Perhaps Mr de Pelsemaeker can assist with that when he's giving his evidence. We move then to the calculation of the annual volumes, does that follow the same pattern in terms of the differences?

- A. It does with the exception that I agree with Landpro's submission on annual volumes and have recommended that we adjust the schedule to look at the maximum annual volume as opposed to – I guess the difference is, when you're looking at annual volumes you can't take the average maximum it's either the maximum or the average the notified schedule was the average, but I'm now recommending we change that to the maximum.

**THE COURT: JUDGE BORTHWICK**

- Q. Over any dataset period?
- 10 A. Yes so the highest year, yep.

**EXAMINATION CONTINUES: MR MAW**

- Q. Can you perhaps just tease out some of the reasoning behind that?
- A. Yes, so you'll see the detail in Mr Leslie's evidence but effectively that in putting the methodology into practice counsel found that the average volume was being reduced significantly compared to what would be recommended under the current water plan and that wasn't the intent. So we recommended the change.
- 15 Q. And so again it's – that's just a refinement to the methodology to ensure that the outcome is being achieved?
- 20 A. Yes.
- Q. Now the next topic that you address is the topic of the complexity of schedule 10A4, are you able to explain or to describe some of the differences which have arisen between the Council's version of the schedule and the schedule being pursued by other parties?
- 25 A. In terms of what Landpro have recommended, that would be more complex, not less.
- Q. And when you think about complex, what do you, what do you mean there so what are some of the additional complexity being added in that you are concerned about, you may have already covered this territory?
- 30 A. Yeah so there are points where you have to make subjective decisions and then with data gaps for example if you decided that a gap should be filled and had a methodology for filling it, you would then have to do that

which is extra work on the part of the data analyst. And again I should probably add that, if we're talking about subjective versus objective, even with a methodology that's somewhere – it's another place where two different people could come up with two different numbers.

5 Q. So we've been through the topics in your evidence in relation to the differences in the method, now I'm going to come and ask you about the hydroelectricity issues you've addressed shortly but stepping back in terms of the issues that were worked through and having now looked at the marked up version in Ms Perkins' evidence again, are there any other  
10 observations that you have in relation to the differences with a view to informing a question that might usefully be considered by the experts at the witness conferencing?

1220

A. So I guess the other question that might usefully be considered is the  
15 period of data to be analysed. I think – I've recommended a change and I think Landpro are in support of that change, but Mr McIndoe's expressed some concern about that period. So that would probably benefit from some conferencing.

Q. And in terms of the Council's version of the schedule, can you just explain  
20 your rationale for the date period that you have selected?

A. Sure. So it comes down to the water metering regulations and when consents of various sizes were required to have water metering installed. That is table 1 page 5 of my evidence-in-chief. In particular, with – so there are a number of consents where we've required metering before  
25 those dates but that doesn't apply to deemed permits. Deemed permits will have metering requirements as of the regulations, rather than on the individual permits.

**THE COURT: JUDGE BORTHWICK**

Q. Sorry, say that again?

30 A. So when a resource consent comes in, we might have taken a resource consent at five, at six litres a second that came in in 2014 and said "install metering now". So that individual consent had to have metering installed before the regulations but the deemed permits don't have that. They're

all metered under the regulations as opposed to an individual condition on their consent. And given that a large number of the applications we're talking about under PC7 are deemed permits, it's safer to rely on the regulations than individual conditions.

5 Q. And under the regulations, are they metered, or not?

A. It depends on the size of the take. So all takes at five litres per second or over need to be metered.

Q. Including deemed permits under the regulations?

A. Yes.

10 Q. Yes, okay.

A. The regulations apply to a: "Water permit that allows fresh water to be taken at a rate of five litres per second or more," is the wording from the regulations.

Q. So deemed permits will have been required –

15 A. Yes.

Q. – if they're taking more than five litres per second –

A. Yes.

Q. – to have a water meter installed –

A. Yes.

20 Q. – whereas all other permits, that's probably a condition imposed on a resource consent permit. Is that what you're saying?

A. It depends when the consent was issued.

Q. Yes.

A. So more recent consents will have it.

25 Q. Definitely.

A. Older consents –

Q. Won't.

A. – may not, yeah. And largely under PC7 we're dealing with older consents.

30 Q. Yes. Okay.

A. So coming back to Mr Maw's question, so I've based it off the dates in the regulations because that's when we're most likely to get complete dataset.



**EXAMINATION CONTINUES: MR MAW**

Q. So those are the dates by which every permit was required to have a meter, every permit about five litres per second?

5 A. Yeah. There's a – it's scales based on the size of the permit. So larger permits had to have them installed earlier and in fact for consents, or sorry, for permits between five and 10 litres, we won't quite get a full dataset but you still should get four years of data, because they were November 2016.

10 Q. In that context, does that lack of data for a year have any significant bearing on the output from the methodology?

A. Again it depends on the dataset. It's not ideal; having the full five years would be better but it comes back to if the use is consistent, then four years will get you their numbers.

15 Q. So that year just simply – it's not that it's fed in as a year of zero dragging down an average, it's just that water year is simply disregarded and any averaging over say four years instead of five?

A. Yes.

1225

20 Q. Any other observations in terms of differences or questions that might usefully be considered?

A. So it links in to the term of data we should use but the council's recommended looking at five years' worth of data and some other experts have said if you have a longer data set, you should look at the full data set so that's probably a question that could be discussed and then I don't  
25 know if you've framed this into a question but there is the issue around data quality and again a number of experts have raised what should be done if the metre records aren't accurate but I'm not sure if anyone's suggested an alternative.

**THE COURT: JUDGE BORTHWICK**

30 Q. So that's not gaps in your data. That's something else?

A. Yeah, so there's a requirement that your metre needs to be accurate to five or 10 per cent but what happens if it's not or what happens if you have spikes for example that aren't exigencies. So you can get spikes

that go over the limit but if you get spikes that don't look typical, periods that don't look typical but are within the limits.

Q. And Landpro doesn't answer that with this methodology?

A. I don't believe so.

5 Q. So this isn't a data gap. This is something else.

A. Yes.

Q. It's quite a large something else, isn't it in this case? Is it something else which could also come under the heading, "Legitimate overtaking"?

10 A. I think that the problem with data quality is that if data gaps are tricky to identify then data quality issues are a lot harder so we've put some safeguards in to deal with exigencies but if you start going down the road of the metre in record that I've provided as per the regulations doesn't actually reflect what I did, what's your alternative evidence and how do you deal with that? I think could quickly become a very big question, yes.

15 Q. But is your understand that nobody has actually proposing to do something about that question?

A. I haven't seen that, no. It would be more that's been presented as a criticism of using water measuring data at all.

20 Q. So is there a question whether water measuring data should be used at all? That's being seriously pursued by any technical witness and any planner?

A. I'm not sure I recall Mr McIndoe's evidence to that level of detail. I know he prefers Aqualinc but I don't recall whether he goes to that level of suggestion.

25 **EXAMINATION CONTINUES: MR MAW**

Q. In your evidence in reply, the final topic that you addressed was hydroelectricity generation.

A. Yes.

30 Q. Are there any recommended changes to the schedule that have been put forward in relation to hydroelectricity generation in term of differences that could usefully be explored?

A. The only one that springs to mind and I'm not sure it's a discussion for the technical experts, was a suggestion that hydroelectricity be excluded from the method in the schedule.

Q. That's more of a planning issue than a technical conferencing issue.

5 A. Yes, I think so.

Q. Now, we've spent some time working through Ms Perkin's marked up changes. Those are the Landpro suggestions. I'm just cognisant that there may have been some further differences as between the OWRUG witness Ms Bright and Ms Perkins.

10 1230

A. So the – sorry Ms Bright or Ms Dicey?

Q. It might be Ms Dicey in terms of the tracked changes.

A. Yep, the difference that I can recall and I don't have Ms Dicey's evidence in front of me but –

15 **THE COURT: JUDGE BORTHWICK**

Q. We will give it to you because it's important that you see what she's writing.

**WITNESS REFERRED TO MS DICEY'S EVIDENCE**

A. So page 85 of Ms Dicey's evidence.

20 Q. Are you looking at the narrative text or the provisions that she's –

A. The provisions.

Q. Okay, all right. Page 85?

A. Yep so the last page.

Q. Okay.

25 A. So Ms Dicey in point 3 is recommending granting the lessor the historic annual volume or the volume identified by Aqualinc to meet demand in nine out of 10 seasons.

Q. I'll just re-read that. So you think she's recommending the lessor of A or B?

30 A. I think so.

Q. I think so, okay well I guess we can ask her that.

A. I agree the wording is a little –

Q. Yes it's not right, yes. Okay.

A. And so the – that step wasn't included in Ms Perkins' evidence, Ms Perkins was take the maximum historic annual volume and Ms Dicey's is take the maximum historic annual volume or Aqualinc, whichever is less.

5 Q. Right, I'm just going to make a note that this pertains to identify the rate and volume for policy. Here it's amending a provision of the proposed plan. And it's to take the lessor of the history of annual use or Aqualinc?

A. Yep. I should note that that step is similar to the Council's method under the current water plan.

10 1235

**MR MAW:**

Just looking at – let's say page 83, 82 and 83 of the methodology for auditing water meter data in Ms Dicey's evidence, it's not immediately apparent to me the differences between the council's schedule and the schedule as amended  
15 by Ms Perkins, simply because it all appears to be new text, as in the differences aren't tracked in.

**THE COURT: JUDGE BORTHWICK**

This is the Dicey amendment, not Perkins?

**MR MAW:**

20 Yes, the Dicey, sorry. There might be some benefit in Mr Wilson taking some time over the lunch adjournment to work through some differences because it appears to me that there are some differences here that we might easily explore.

**THE COURT: JUDGE BORTHWICK**

25 Q. So one of the things that's not clear to me at all – I mean, I'm quite clear how Ms Dicey differs from the regional council. I'm not clear how Ms – not Ms Dicey, Ms Perkins differs, Landpro differs, I'm not clear whether in – whether how Ms Dicey differs from the regional council, is she recommending a wholly new method or is she recommending a method  
30 which is essentially the same as Landpro but she's using different words

to describe the same thing? And I wasn't clear about that. It doesn't really matter where this – if it goes in the plan. That's a legal issue, actually, for the lawyers. But is it the same as Landpro with a bit added on at page 85 or is it actually quite different from Landpro and again, different from the RC?

A. So I can take another look over lunch. My initial reading of it was that it was the same as Landpro with a bit added on. But I can certainly take another look at that.

**THE COURT: JUDGE BORTHWICK**

10 Okay. I realise we're running into lunch time now. Did you have any other questions on this because that – for me, that's one of the big questions, isn't it?

**MR MAW:**

No, that's – yeah, that was the last set of exploration in terms of just teasing out the differences between what's been put forward.

15 **THE COURT: JUDGE BORTHWICK**

Q. And this might have been what Mr Winchester was getting at earlier, you know, one of the questions for us is that, you know, this is a method to implement – it's part of the methodology to implement objectives and rules – objectives and policies and so, does it matter which version of the policy or objective that you are going for in terms of coming to a resolution on this methodology? So in other words, you know, given that methodology's implementing something else, does that something else have to be sorted? And of course, that's what the Court was touching upon in its minute saying: Well what's the problem that we're working on here? Do we actually need planners in the room to get their heads around the scope of that problem or does it not matter that the – to the extent that there are differences to yourself and Ms Dicey perhaps, it doesn't really matter what the objective in policy is?

A. I think it does matter.

30 Q. It does matter?

A. Yes. Because I think that some of these recommended additions to the – or amendments will be in the context of other objections to the plan change and might be written to support those other objections. So you need to know what the method is trying to achieve.

**5 THE COURT: JUDGE BORTHWICK**

This is why we said “leave it” but we can see what your problems in cross-examination is. But we have thrashed this question around in the office, when should we (inaudible 12:39:05) the expert conferencing on the schedule? Both before we even issued directions, it was a matter that we gave a real hard look  
 10 at, and then after we issued directions. But I can see the problems in cross-examining. Yes. So how are you going to approach that question? Does it matter? Intuitively it should matter but does it matter?

**MR MAW:**

I wonder whether as perhaps the first question that experts should be  
 15 articulating what it is, the objective or the purpose or the methodology as they understand it because that may actually explain then the differences of position or opinion in relation to some of the questions I’ve worked through today.

**THE COURT: JUDGE BORTHWICK TO MR MAW**

Q. Yes and again, it goes to the question of: “What is the problem that we’re  
 20 working on here, what is the outcome of this method?” Yes.

1240

A. Mr Wilson in his evidence repeated again this morning very clearly the purpose of the methodology from the council’s perspective, in terms of what the methodology was seeking to achieve, I don’t recall reading an  
 25 alternative set of outcomes from other witnesses in terms of what methodology was trying to achieve. It’s not that there might not be differences. There may well be differences but they don’t appear to have been articulated clearly and directly in a way where we can see where the difference arises and again in cross-examination, that was something  
 30 I was thinking I might usefully explore as a starting point, but I don’t see

any issue with having that as a starting question in terms of the conferencing.

5 Q. So are you thinking this in fact could be something that the technical folk could say if you're desired outcome is x this methodology, if it is y, this methodology?

A. Yes.

Q. Or in fact, x or y doesn't really matter, this is a recommended methodology.

A. Maybe it comes together.

10 Q. Yes.

A. I don't recall detecting or distilling from any of the evidence there was a difference in terms of wanting to achieve an objective under certain methodology but I might be wrong. There may be concerns or may be differences of understanding in terms of what the purpose of the schedule is and that just may provide the explanation for some of these differences.

15

Q. Okay, what is the purpose of the schedule and relative to that purpose, what are the outcomes, I guess we expect and again I'm not sure yet how Aqualinc fits into any of this. Well, no, I can see with the Dicey recommendations that there should be testing against or comparison against Aqualinc and pick the lowest of your schedule, or Aqualinc is the way to go. So that's also question whether that's – is it?

20

Q. The question is Aqualinc guideline is relevant for calculating all of the different categories, whether that's a test tool to compare against methodology, so – haven't explained it particularly well but stepping back, the council methodology doesn't rely on Aqualinc. Processes data and produces a result in relation to each of the different limits that is calculated. That's then an entry condition into the rule. The council consenting officer then has an opportunity to assess whether the amount of water which is applied for, even though it complies with the schedule is still a reasonable amount of water in light of the proposed uses and as I understand it, it's at that point that the Aqualinc guidelines are being used or they're a tool available to be used to say, "Well, okay, yes, we're applying for this much water. Is it actually appropriate to use that amount of water for what you're intending to use?" and that's picking up on one

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of the matters of control in the rule so it's not being used at the same point in time as the methodology to calculate those rates of take. It's being used to test whether the rates of take being used are appropriate in light of the use. So to frame that up in terms of question 4, the experts for their conferencing, it may be a question of should the Aqualinc guidelines be referred to in the methodology and that conceptually I think is what Ms Dicey is seeking to catch in terms of the entry condition adding an additional overlay that the amount of water sought is reasonable in accordance with those guidelines.

5

10 Q. Ms Dicey's going further than that because that becomes self-selecting, doesn't it?

A. It does.

Q. So is that a question for technical people? I guess it depends on the purpose of the schedule and the outcomes expected relevant to objectives and policies.

15

A. I was going to put that to Ms Dicey as opposed to a technical expert. I think it's a drafting issue and how it's being used conceptually, not technically a technical issue.

Q. Yes, but it could be for the technical folk to talk about whether the Aqualinc guidelines should be referred to at all in the methodology.

20

A. And that just may assist with the Court's understanding

1245

A. Yes and that just may assist with the Court's understanding of those guidelines and what they can and perhaps what they can't do.

25

Q. Okay.

A. So subject to some further consideration of Ms Dicey's steps which Mr Wilson will consider over the lunch adjournment. I think we're well – we're past (inaudible 12:45:25) half past 12 –

Q. Yes we'll start again at 2, so –

30

A. We'll start again at 2 and pick back up –

Q. – you can have some lunch, Mr Wilson. I was doing some homework. Sorry about that.



**THE COURT: COMMISSIONER BUNTING**

Yes, in terms of the expert conferencing, one of the differences that seems to come through in the evidence relates to the way in which the water – assessments are made under the water plan and we don't know, you know, the  
5 timeframe for that but presumably things will need to be assessed under the water plan and it's that process that the technical experts seem to have disagreements on as well, I don't know this is, I've stepped into a different area here.

**THE COURT: JUDGE BORTHWICK**

10 This could be getting into that brief to come, which is your regulatory (inaudible 12:46:10). Well what are they are going to be doing with these 500 applications?

**MR MAW:**

Yes. So at the moment, the consenting team is required to assess under the  
15 operative water plan and Mr Leslie's evidence steps through how the Council has put together a methodology to provide some input for the consent teams consideration but through the lens of policy guidance so, in terms of the operative plan there isn't a schedule that explains this is how you should do these calculations, there's a, it's at a much higher level of abstract – abstract is  
20 not the right word – it's at a much higher level in the policy in this method being created to respond to the policy and that's one of the gaps that Plan Change 7 is seeking to fill in terms of providing an objective methodology so that consent applicants know what is or what pops out of the calculation. Whereas at the moment there is a degree of uncertainty and some subjective input required to  
25 do that calculation. Insofar as it's relevant to this proceeding, the challenges with that methodology are relevant to the question of whether the methodology proposed is actually objective and behaviour will be ascertained objectively each time it's run and again, Mr Leslie is perhaps the best place to explain some of those differences. And that's then relevant for those parties seeking so let's  
30 just go back to the method that's currently being used under the water plan and somehow capture the essence of that in the schedule for plan change 7 which would have some complexities associated with inflicting all of those steps.

**THE COURT: COMMISSIONER BUNTING TO MR MAW**

Q. But my understanding was that there were differences between the experts and way the water plan approach is being undertaken and a lot of the evidence referred to that.

5 A. So insofar as there as differences in opinion about the current plan, I would submit they're not particularly relevant to consideration of the method and it's purpose under plan change 7, though those are arguments that will be had and presumably will continue to be had until such time as plan change 7 has made it's way through the process.

10 Q. So you're not suggesting that the experts should try and resolve those –

A. I'm not sure they can resolve the interpretation of the current water plan insofar as how that applies to applications that are currently in train.

Q. Okay.

A. A bridge too far.

15 **THE COURT: JUDGE BORTHWICK TO MR MAW**

Q. So we'll take the lunch adjournment, thinking by the end of the day though counsel can confer over their laptops about the series of questions, I think we've taken some detailed notes as to what those questions might be, and to propose an agenda for the expert conference. Now that may  
20 change, I don't know, change again when Mr Leslie comes to the table but we will see, yes.

A. Yes I think that should be able to be achieved.

Q. Now there's, am I right in thinking it's Landpro witness Ms Perkins, Ms Dicey are the key contenders if you like with the ORC, there's nobody  
25 else out there?

A. As I understand it at this point and other counsel might be able to assist

–

**MS IRVING:**

Mr Heller is the other witness that's talked about the mythology and the  
30 implications of it for the energy water supplies and I note that neither Mr Leslie or Mr Wilson have discussed Mr Heller's evidence. It's a slightly different but

related topic I think to the conversation my friend was so far having was with Mr Wilson.

**THE COURT: JUDGE BORTHWICK**

And I think you're right and I think the agreement was that we deal with territorial  
 5 authorities and hydrogenators separately so as not to confound and get bogged  
 down with what are really a completely different set of issues so we'll continue  
 to do that confidence that we've got time available for that and we'll be talking  
 to Mr Dunlop when we can reach him as to when he will be available so I'm also  
 expecting, so I'm expecting the three parties will have technical witnesses at  
 10 that conference, Landpro, OWRUG, your client and ORC, will have experts,  
 check your availability with your experts and we'll be in touch with you about  
 TAs and hydro at a later point in time.

1250

**MR WELSH:**

15 Afternoon your Honour. In respect of hydro I just wanted to clarify a point that  
 Mr Maw put to Mr Wilson. You will recall in Mr Mitchell's evidence he actually  
 raises a number of issues with the schedule that aren't planning related they're  
 technical issues and so I just thought I should clarify that that, because  
 Ms Styles, the planner relies on Mr Mitchell in respect of his technical advice so  
 20 he does raise a number of technical issues that haven't been addressed by  
 Mr Wilson, Mr Leslie or Mr Henderson. Mr Wilson's evidence only addresses  
 outages and a discussion around what is a non-consumptive take.

**THE COURT: JUDGE BORTHWICK**

Q. I will have to re-read what Mr Mitchell says but are those issues that will  
 25 only arise for hydroelectricity generators or are they just general issues  
 actually as to drafting?

A. I think they're, well if the schedule is applied to hydro they raise problems  
 for hydro –

Q. But are they particular issues for hydro that would not arise for territorial  
 30 authorities or I don't know, irrigators?

A. They could arise for territorial authorities –

Q. They could arise, okay.

A. – for example one of the issues just not in order of importance but unlike irrigation, hydro takes water at its maximum consented rate during the wetter months where irrigation doesn't do that. Now that might also imply to the territorial authority in terms of water supply as well, may not but it – so it's not purely a hydro related concern that he raises but they are matters that demonstrate in his opinion why the schedule should apply to hydro. But I just thought I should clarify that Trustpower's position isn't purely planning.

10 Q. No, do you want to have an opportunity to ask whether these are issues that – to explore with this witness whether or not the schedule, the next conference can be confined to matters of interest to the primary sector with hydro and TAs to be dealt with separately or – how do you want to go with this? –

15 A. Well that's –

Q. I just want to know if Mr Mitchell needs to be in the room.

A. – why I suggested to Mr Maw, sorry Ma'am. That's why I suggested to Mr Maw that hydro and the TAs be moved up the order because if there is some appetite from the parties and the experts to exempt hydro for example from the schedule then the experts needn't get into or Trustpower's experts need to get into the finer details around the schedule if they are exempted from that. So that's why I suggested that earlier –

Q. Did not need to get into it.

25 A. Yes.

Q. They don't need to get into the schedule if they're not –

A. If they're not part of it?

Q. Yes, okay.

A. If they are part of it and at the moment the RLCs position is a little bit agnostic or with hydro then Mr Mitchell does need to participate throughout given the concerns he's raised.

30 Q. Well you two can talk over lunch to see how you want to resolve that.

A. I just thought I should raise it, Ma'am.

Q. No I understand what the issue is.

A. Because it's not a correct characterisation that it's just planning related.

Q. Okay, thank you.

**COURT ADJOURNS: 12.54 PM**

5

**COURT RESUMES: 2.06 PM**

**EXAMINATION CONTINUES: MR MAW**

Q. Good afternoon, we'll pick up where we've left off, Mr Wilson. You've had a chance to cruise over the lunch break the recommendations from Ms Dicey in relation to the proposed methodology. Are you able to highlight to the court any differences between the methodology that she proposes and methodology put forward by Ms Perkins and/or the council?

A. Yes, I can. I found three differences either than the annual volume which we've already canvassed. The first is a slight difference in the process for dealing with margin of error and Ms Dicey says this will be specified on your consent, all latest verification if you can't find the specified anywhere use five per cent when the metre is located on the pipe take and –

**THE COURT: JUDGE BORTHWICK**

Q. Slow down.

A. Sorry, page 83.

Q. Page what?

A. 83, footnote 39.

Q. It's a footnote.

A. Yes.

Q. Okay so in the footnote 39.

**EXAMINATION CONTINUES: MR MAW**

A. I don't think it's particularly material difference. It probably more closely matches the notified version of plan change 7 but we've suggested an

amendment to simply discussions around the margin of error which is more close to what Landpro has suggested, which is just five per cent for pipe take and 10 per cent for open channel.

5 Q. Do those margins of error reflect the water metering regulations and the margins of error?

A. Yes, they do.

10 Q. The second one is that Ms Dicey doesn't specifically discuss what to do when there's no written limit. So deem permits, for example, will have a limit for rate of take but most of them don't have volume limits. So schedule 10A.4 specifies what to treat as the volume limit when there is no volume limit defined on the consent and I think Landpro matches that.

**THE COURT: JUDGE BORTHWICK**

Q. Landpro matches?

A. Matches the counsel's schedule 10A.4.

15 Q. Auckland Landpro match in terms of what to happen if no volume limit and that can be anything? Daily, monthly, annual?

A. Yeah, it's a different steps for each but it can be any of them. I believe Landpro do.

Q. If you could just take me to where Landpro says that.

20 A. So there's no page numbers but in their schedule 10A.42.2.

Q. I've got 10A.4.2?

A. 10A.4.2 then .2 below that.

Q. Yes. Okay.

A. And over the page, 10A.4.3.1 and over the page again, 10A.4.4.1.

25 Q. Okay. Any other differences?

A. So the only other difference and this one probably is more material is that Ms Dicey doesn't include discussion for a daily limit where Landpro and the council both do.

Q. So the daily limits are omitted completely?

30 A. Completely.

Q. Completely, yes, okay. Alright. Do you want to tease out what the differences might be in terms of those omissions?

**EXAMINATION CONTINUES: MR MAW**

Q. Yes, I wonder whether we might work through each of those and would be interested in your opinion as to the materiality of those differences.

A. Sure.

5 Q. So starting with the first identified difference.

A. Margin of error.

Q. Yes.

A. I don't think that's materially different. It's very likely to end up at the same place of five per cent.

10 **THE COURT: JUDGE BORTHWICK**

Q. Sorry, which is this? I didn't catch that.

A. Margin of error.

Q. The margin of error so that's your footnote 39?

A. Yes.

15 Q. Okay. Do we know why in Ms Dicey's evidence that's been omitted? Or that there is a difference there or do we not know?

A. I don't know. It does more closely match the council's initial drafting which at a second read through stood to be improved hence our recommendations.

20 Q. Okay. So there's a question here whether the footnote 39 in Ms Dicey's proposed method is a material change or not, probably needs to be discussed.

**EXAMINATION CONTINUES: MR MAW**

Q. So the second identified difference?

25 A. I think that's more material cause you start getting in to, say step 4, if any daily volume measurement exceeds the authorised daily volume constraint on the existing consent cap that daily volume – sorry I don't have – that quite follows but if you don't define what the limit is when there's no limit expressed then I'd assume you're only using if there's a  
30 limit expressed?

**THE COURT: JUDGE BORTHWICK**

Q. This is step 4H?

A. It applies to step 4, step 5 and step 6.

**EXAMINATION CONTINUES: MR MAW**

5 Q. So if you were to turn that into a question that you might usefully explore in conferencing, how would you frame that question?

A. I guess it would be how should the method deal with authorised limits where none has been set on the document or permit?

Q. That's the document or permit being replaced.

10 A. Being replaced, yes.

**THE COURT: JUDGE BORTHWICK**

Q. When you say authorised limits, so this is the rate of take and volumes, you're actually talking about both or what do you mean authorised limits?

15 A. I haven't seen a water take without a rate of take limit on it. It generally applies to volumes.

Q. So authorised limits (volumes where non specified on a permit)?

20 A. Yeah, your traditional deem permit will be for a number of heads of water which we can translate into litres per second but it doesn't include volume limits so we treat it as you can take it 24 hours a day, seven days a week, 52 weeks a year, in terms of calculating a limit.

Q. And you say this is missing. Why? What are you pointing to or what can't you see, for example, you can see in your own or you can see in Landpro?

25 A. So there are steps in Landpros and there are steps in my own that define what to do when there's no limit in the document and I can't see a matching step in Ms Dicey's.

1415

Q. I see, yes, right. It's the absence of the "what to do" step, okay. So – because if you haven't got those – that "how to fill in the gap" if you like, for the volume, then how do you implement this method?

30 A. Yeah, how do you work out what's in exceedance if you haven't defined what the limit is?



Q. Yeah, and for many deemed permits, this method is not going to be workable, is I think what your evidence is, it's just simply not going to work because for many deemed permits, they won't have those volumes?

A. Correct.

5 Q. Correct?

A. Yes.

Q. So it falls over at that stage?

A. Yes.

Q. And maybe it was intended to or maybe it wasn't. Yep, okay, all right.

10 **CROSS-EXAMINATION CONTINUES: MR MAW**

Q. And then the third identified difference?

A. So that is that I don't see a methodology for a daily volume limit and that's material simply in the – under Ms Dicey's method, you wouldn't have a daily volume limit.

15 **THE COURT: JUDGE BORTHWICK**

Q. And that's not step 4, because I'm obviously missing something here?

A. Well that's a good point. No, step 4 filters the dataset for daily volumes but then if you go to 15.85, step 1, it says: "From the last preceding five years of audited water metering data, determine the following:  
20 maximum rate of take, monthly volume and annual volume."

Q. I see, yeah, okay so that's where your dailies are missing is actually in your methodologies under 15.85.

A. Yeah so the steps 1, 2, 3, 4 and 5 are about filtering the data and then 15.85 is setting the limits.

25 Q. And so the question – can you reframe that again for the record or pose the question for the record, I don't mind who does it but what's the question about daily limits, should there be a daily limit?

A. Yeah I don't know, if we did frame one, I think it would be: "Should there be a daily limit?"

30 Q. Yeah.

A. And I think if you go slightly wider, Mr McIndoe probably raised whether there should be a monthly limit, as well, from memory.

**THE COURT: JUDGE BORTHWICK TO MR PAGE**

- Q. Yeah, and so that's, you know, one of the – it's troubling myself anyway, speaking for myself, is that Mr McIndoe's evidence is – his recommendations are not necessarily picked up by Ms Dicey, so
- 5 Ms Dicey does have a monthly limit, Mr McIndoe might very well have a different opinion about that. Yeah. Would that be fair? That'd be fair. Mr Page, is that fair? This is the time, really, to speak as well in terms of: have we actually understood the differences? It's not the time to keep quiet if you know that either the witness or the Court has not correctly
- 10 understood what the differences are between, you know, Landpro, OWRUG and ORC?
- A. Yes, we've been paying careful attention to the answers that you're getting and we're with the witness so far on what the differences are –
- Q. So you agree with the witness as to what those differences are, yeah?
- 15 A. Yeah well the matter that you were just addressing about whether Ms Dicey's method has a daily limit, my recollection is no it – no she doesn't because she doesn't see the need for one.
- Q. Okay, so these are not drafting mishaps, this is intentional?
- 1420
- 20 Q. Yes.
- A. Yes. And I understand – to assist about why that is, is the way that the water monitoring regulations work are effectively a daily limit anyway. Because although takes – the permits are expressed as instantaneous takes, ie, litres per second, that's not that the monitoring regulations
- 25 monitors. It monitors daily takes. So if you've got an instantaneous – so if you've got a daily record from the regulations, that's how the instantaneous take is back-calculated. So –
- Q. So what would be the question coming out of that? Well, is it sufficient to say should there be a daily limit?
- 30 A. Yes, well that's an appropriate question, or is any purpose served by a daily limit is another way of expressing the same problem.
- Q. What is the purpose and should there be one?

A. Yes. It was my understanding of the regulations in Ms Dicey's evidence is that the combination of an instantaneous take in the water monitoring regulations effectively gives you a daily limit by default.

5 Q. Mmm, and is it an issue, and I don't know whether it is: what is the purpose of a monthly limit and should there be one? Because here she seems to have a monthly limit.

A. Yes.

Q. Yes.

A. Well that's a fair question because –

10 Q. Well I don't know, because in that sense her evidence might not align with Mr McIndoe's.

A. Yes.

Q. And she may actually have a good reason not to pick up on everything that he says but to go in a slightly different direction.

15 A. Yes. No, your Honour's right about that and –

Q. Yes, so what's the question? Where is your case going on the monthly? That there should be a monthly and this is the methodology?

A. Yes. Well, Ms Dicey's evidence is that there should be monthly limits, and I know that Mr McIndoe has a different view. So to resolve that, the question will need to be posed for them to consider and report back on.

20 Q. Well I don't know about that. Is Mr McIndoe going to be in this expert conference? Is this even an issue if that's what your case is?

A. Yeah. Ms Irving should answer that, I think.

**MS IRVING:**

25 I think that the difference – or Mr McIndoe's evidences are really around the efficiency measure, and what role that may or may not play in the schedule. So to that extent I think yes, Mr McIndoe needs to be involved in the discussion of methodology and whether or not – where efficiency sits in that. So, he deals with how does the schedule stack up against the efficiency criteria and I

30 suppose the question that I recall Mr Maw asking of Mr Wilson earlier was how – or the operation of the schedule as a gateway with a matter of discretion associated with efficiency, or whether the schedule itself tackles the efficiency

question. And in that sense, Mr McIndoe has provided evidence on the efficiency question. I think he would want me to participate in the conferencing.

**THE COURT: JUDGE BORTHWICK TO MS IRVING**

5 Q. Yes and to be fair, Ms Dicey's actually saying the methodology should tackle the efficiency question –

A. Yes.

Q. – because that's what she says at page 85.

A. Yes.

10 Q. The question is the role of Mr McIndoe in this expert conference. Has he actually got a role to play on that as beyond the Aqualinc methodology, that is, matters to do with this – the schedule methodology, and I don't know.

15 A. Yes. I mean, I think that he does, because he also looks at how the period of time that you select for the monitoring data may influence the outcome of those kinds of issues.

Q. Yes, yes, he does. And so the question for the monthlies though, because here Ms Dicey's evidence is clear, that there should be a monthly limit –

A. Yes.

20 Q. – he has a different view and I've noted that.

A. Yes.

Q. He didn't know where it went because Ms Dicey is – you know, the case for your client is that there should be monthly limits.

A. Yes.

25 Q. So do we have to spend time asking ourselves whether there should be monthly limits?

30 A. Well I think for the purposes of OWRUG's case, no. Mr McIndoe of course appears as an expert and expresses his opinion on that point. So, he might just say well look I don't think you need one and people shrug their shoulders and that's it.

Q. Well, that's good but what's the relevance to your case?

A. Well, I'm saying I –

Q. It's not relevant.

A. – no, not from our point of view, no.

Q. Okay but to be clear, I now need to now have you on the same page as everybody else. Has this witness articulated what are the principal differences between OWRUG and ORC, and I guess Landpro as well, and has this witness posed generally the questions that need to be asked and answered in an expert conference? Your answer to both questions?

5 1425

A. Yes, I think – yes they have with respect to the irrigation issues. I think I've raised before lunch that there hasn't yet been a conversation about the implications of the scheduled method for those other water uses and I think particularly for territorial authorities, there's still some work to be done on those question but – or to bear in mind that we need to look at the implications of each of those steps for the alternative water uses that the schedule will apply to, and whether there is a different step required where we're dealing with other water uses.

10

Q. So to be clear, what are the other water uses besides from hydroelectricity and territorial authority community based water?

A. I'm not aware of any.

Q. You're not aware.

20 A. I think the only other one was snowmaking.

Q. Snowmaking.

A. It's just that I don't have clients that are interested in that topic.

Q. Alright and there's nothing else that I should about before referring this to expert conferencing?

25 A. Not that I know of.

Q. Okay. Alright. Thank you.

**MR MAW:**

That perhaps is a convenient to consider whether issues raised by the hydroelectricity generators and the community groups and potentially the snowmaking should occur within the caucusing on the questions we've discussed today as part of that discussion. I've been reflecting a little on that over the lunch break and formed a view it might be more appropriate to see where the schedule might get to in terms of its relevance to the primary industry

30

parties as a first step and then the question will be does that schedule then work for those other uses in light of those changes and if not, there may be some further adjustments or changes to the schedule could occur in a way that doesn't upset what's being breached in terms of primary industry that I rather  
 5 suspect it may complicate matters by introducing those experts in the first stage of conferencing. So I had in mind that we would have a first conference in terms of the primary sector interests and then as a second stage depending on where they reach, it may then be appropriate to ask the question now does the schedule work for the community takes and for the hydroelectricity generation?

10 **THE COURT: JUDGE BORTHWICK**

And insofar as that, the results of that primary sector conference doesn't need to come to court, if you like as soon as it's done it can be held on a file whilst Mr Dunlop then undertakes expert conferencing for the other two or three interest groups and then perhaps where the final overview as to where each of  
 15 those four interest groups get to. We don't need to see. You've got time to make adjustments as you might need to make adjustments in terms of those conference outcomes. How does that sound? Would that address your...

**MS IRVING:**

20 Yes.

**THE COURT: JUDGE BORTHWICK**

And also Mr Welsh behind you. None of this is perfect, Mr Welsh.

**MR WELSH:**

25 That was going to be my submission next Friday, Ma'am. Saved me a trip back. I think what Mr Muller said has some attraction because whilst Mr Mitchell does cover matters that primary industry people also cover in the schedule, he does, of course we were talking before lunch, come to that from a perspective of hydro so as long as there's an opportunity, if one needs to, to caucus, then I'm happy  
 30 if it is split and they come in later. I don't think it's efficient for our witnesses to be sitting there while they're talking about irrigation for a day or two, or three or four.

**THE COURT: JUDGE BORTHWICK**

All right. No, that's fine, that sounds good. We'll make that referral. Mr Dunlop is available. So when are your witnesses available?

5

**MR MAW:**

I understand they're available over the next couple of weeks so...

**THE COURT: JUDGE BORTHWICK**

So are we. Ms Irving, when are your witnesses available?

10

**MS IRVING:**

I need to drag out a large spreadsheet to remind myself. I've got a very colourful one that I'm working off but I can do that. They were mostly available for these three weeks so I expect that.

15 **THE COURT: JUDGE BORTHWICK**

Okay. Good. Who else do I need to ask? Ms Perkins is not here.

**MR REID:**

Dr Davoren as well.

20 **THE COURT: JUDGE BORTHWICK**

And Dr Davoren. Can you check with Dr Davoren?

**MR REID:**

He's widely available in the next two weeks, yes.

25 **THE COURT: JUDGE BORTHWICK**

He is available?

**MR REID:**

Yes.

**THE COURT: JUDGE BORTHWICK**

Good and you will let me know about your witnesses – no, they may or may not be required.

5 **MR WELSH:**

Sorry, it's hard to work out whether you were talking to Ms Irving or myself.

1430

**THE COURT: JUDGE BORTHWICK TO MR WELSH**

Q. I know.

10 A. Look, I had put to my witnesses that they had to keep that entire block clear, which did cause them some issues. So we will work around, Ma'am, what the Court requires.

Q. All right, okay so we'll make that reference and – we'll make that referral. We are available and we'll quickly convene that at the location which is  
15 convenient. Is it Otago or is it Christchurch? Dr Davoren is in Christchurch I think.

A. Yes we will –

Q. Ian McIndoe's in Christchurch.

A. I wonder whether we might just confer over the afternoon tea break in  
20 terms of venue and it's probably fairly evenly split.

Q. It probably is, yes.

A. And I should probably also check with Mr Wilson as to his availability because I recall something in the back of my mind about a parallel project that was being worked on but we'll sort that out between –

25 Q. You'll sort that out.

A. Yes.

Q. Let's get on to this as soon as we, as soon as we are able to, the  
30 constraint won't be the Court's and confer and file at 9 am this morning so in other words do it overnight, the questions for the agenda but it sounds like the questions that we have discussed are indeed the questions which are supported by all counsel who are going to participating on the primary sector case, yes.



A. Okay, we'll have those questions circulated in a joint memorandum to file first thing tomorrow?

Q. Okay, perfect and you need to consult, just put it through the lens of your experts as well so, it does sound like they've got the ball parameters but just make sure.

5

A. Yes if there's another question that needs to be added –

Q. Yes or a more nuanced question that has been posed, yes so we've got to make sure the experts are on board, good, all right.

A. The final topic that I was going to explore with Mr Wilson was just his comments in relation to the hydroelectricity generators because I know he's picked up on that topic in his reply and I invite Mr Wilson just to address or provide any observations in terms of the relevance of the schedule to the hydroelectricity generators, such that it might inform that second tranche of the conferencing.

10

15 **EXAMINATION CONTINUES: MR MAW**

A. Sure, this is paragraph 56 to 59 of my evidence in reply. I guess the main point I make there is that the schedule is designed to reflect what users are actually doing. If I can recall from Mr Heller's evidence the issue is that for hydroelectricity was that that doesn't necessarily reflect what they might want to do in future given wetter years and that's, that's a fair comment to make, we look at five years' worth of data and the rain fall in that data is what it is and it will reflect what hydroelectricity generators did in those five years.

20

Q. So the question of the date range insofar as it might apply to hydroelectricity generators might be a topic a question on which is conferencing may be predicated?

25

A. It might be and I guess one of the discussions might be what other data they have available.

Q. In terms then of advancing the questions for that second tranche of conferencing I respectfully suggest that counsel could confer on the questions for that as well once we reach that point in time.

30

**THE COURT: JUDGE BORTHWICK**

Yes, so that doesn't have to be at 9 am tomorrow morning, irrigations going to be big enough but you should confer with your experts on the topic of hydro, snow making and community, yes.

**5 EXAMINATION CONTINUES: MR MAW**

Q. So that was all I was proposing to do by way of leading the witness through, understanding the differences, there's one other matter that I do wish to cover with the witness and have him produce a further document in answer to one of the Court's questions yesterday as to the duration  
10 being sought on consent applications and there is some information about that and then it's captured in a report that I'll hand up and have Mr Wilson produce and then speak to. Do you recognise this document, Mr Wilson?

1435

A. I do.

15 Q. Can you describe it for the Court, please?

A. It's an updated copy of our deemed permit status report that's sent to MFE on a weekly basis and it's a copy that I ran at about 8 o'clock last night.

Q. Do you now produce that as exhibit Council 1?

**20 THE COURT: JUDGE BORTHWICK**

Q. Okay, so you ran it off at 8 o'clock last night and it's a copy of what, sorry?

A. A deemed permit status report that's sent to MFE on a weekly basis. So you had an earlier copy of it.

Q. On a weekly basis? And this is just a computer generated report, is it?

25 A. Yes.

**THE COURT: COMMISSIONER EDMONDS**

Q. So it should have yesterday's date on it?

A. Yes.

**THE COURT: JUDGE BORTHWICK**

Any objections, counsel, to that coming in? No objections, okay, so exhibit ORC 1 are the deemed permit status as of the 8<sup>th</sup> of February 2021.

**EXHIBIT ORC 1 PRODUCED BY CONSENT – DEEMED PERMIT STATUS 8**

5 **MARCH 2021**

**EXAMINATION CONTINUES: MR MAW**

10 Q. Now, there appears to be some additional information in that report dealing with consent duration compared to the previous iterations, can you step through that further information that is captured on the front page?

A. In terms of the changes?

Q. In terms of the terms for which consents have been sought.

15 A. So probably about halfway down the page there's a note that says a further 124 deemed permits currently have applications. Previously that was 104. The number who have applied for terms of six years or less has gone from one to six. You still have zero in the six to 15 camp. The consents with a term of more than 15 years has gone from 38 to 57 and consents with no expiry listed has gone down from 29 to 19.

20 Q. And in terms of those consents, 57 of them with a term of more than 15 years, is there some further work being undertaken to better understand the precise detail as to the durations being sought?

25 A. Yes. So, Mr Leslie will have some further numbers on either the exact duration being sought or putting them into some more specific buckets. He also has – there was a specific question yesterday around numbers since PC7 had been notified and he will have those. This is only looking at deemed permits and includes application from before the notification of PC7.

**THE COURT: JUDGE BORTHWICK**

Counsel, do you have any questions for Mr Wilson? No questions.

**CROSS-EXAMINATION: MR WELSH**

Q. I just had a point of clarification, Ma'am, for Mr Wilson around the ORC exhibit 1, Mr Wilson, Trustpower holds over 100 deemed permits and is seeking replacement consents for only four of those, how does your table or your document deal with those other hundred which Trustpower will let lapse?

A. So they are included in all the totals. They'd be included in the current 332 at the top and in all the totals going down. So there are currently 188 deemed permits with no application lodged would include the Trustpower numbers.

Q. So if that's the case, the current number which is currently shown as 332 in reality maybe something more like 230?

1440

A. In terms of what needs to be replaced, yes, but we're reporting on the current position in the consent database and those are current deemed permits which, while I'm aware of that intention from Trustpower, theoretically could have an application come in.

Q. Yes, because notice has been given to the ORC. You're aware that those permits would be let lapse?

A. All right.

Q. Thank you Ma'am, I just thought it was important to clarify that because that's quite a significant number of deemed permits that no witness has actually addressed today that are on the books but are actually going to lapse.

25 **THE COURT: COMMISSIONER EDMONDS**

Sorry, what number?

**MR WELSH:**

Sorry Commissioner, my understanding is Trustpower has about 107 but let's just say over 100 and is seeking replacement consents in respect of four races which constitutes about seven deemed permits for four races and therefore the remaining circa 100 deemed permits held by Trustpower will be let lapse from 1 October.

**CROSS-EXAMINATION: MR ANDERSON**

- 5 Q. I've got a couple of questions, in your summary of evidence from this morning, in paragraph 6 you refer to the application of schedule 10A4 as resulting in significant reduction in the paper allocation currently assigned to deemed permit and water permit holders?
- A. Yes.
- Q. With allocation more closely reflecting actual water usage?
- A. Yes.
- 10 Q. Now, in your methodology, you have used in the situation of deemed permits which only have an instantaneous take limit, you've applied those as being taken at that rate 24/7.
- A. To work out their limits? Yes, paper allocation.
- Q. Now, that's not an accurate reflection of what will happen in reality, is it?
- A. No.
- 15 Q. So if you have – the deemed permit was used for irrigation, it would only in fact be a small fraction of the 24/7 authorised usage?
- A. Certainly possible, yeah.
- Q. And so in that sense in relation to the deemed permits, because in your evidence you say that most of the deemed permits only have an instantaneous limit on them, they don't have that?
- 20 A. Yes.
- Q. So that would – if you're seeking to reduce the paper allocation for the deemed permits, isn't that a pretty big gap in the evaluation of that? Because there would still be a paper allocation for all those permits, it's not actually going to be used?
- 25 A. Well, I think that's what I specify in my evidence summary in paragraph 6 and certainly in my evidence in chief where the paper allocation of those deemed permits is significantly higher than what most of those deemed permits use and so using schedule 10A4, it will – they will get a number which is closer to what they actually use which potentially could be quite far from their paper allocation.
- 30 Q. Yes, so the paper allocation is still potentially much less than the actual usual. Sorry, the paper allocation is potentially much more than the actual usage?

A. Currently.

Q. Wouldn't a better way of going about doing it being work out what the average usage is actually going to be and then apply that through schedule 10A4 rather than the instantaneous maximum applied 24/7?

**5 THE COURT: JUDGE BORTHWICK**

Sorry, I'm not following this. So the goal of this schedule is to reduce the paper allocation?

**MR ANDERSON:**

Correct.

**10 THE COURT: JUDGE BORTHWICK**

And your proposition that you put earlier is that the paper allocation was not reduced in what circumstance? Where there's no daily, monthly or annual volume?

**MR ANDERSON:**

15 Where there's only an instantaneous volume, yes.

**THE COURT: JUDGE BORTHWICK**

Q. So the question therefore is what is to happen where there is no daily, monthly or annual volume and isn't there a method in the schedule for that? What's to happen if there's not one on it?

20 A. Yes, there is.

Q. There is one?

**MR ANDERSON:**

And the method is you assume it 24/7?

**THE COURT: JUDGE BORTHWICK**

25 I see what you're getting at.

**MR WILSON:**

Yes, because legally that's what they can do.

**CROSS-EXAMINATION CONTINUES: MR ANDERSON**

Q. So if the deemed permit was used for irrigation and let me know if I'm stepping outside your area of expertise, if the deemed permit was used for irrigation, would it be possible to work out what a proportion of that paper allocation would be?

5

A. I think there'd be a number of complicating factors in there, for example, where the deemed permit's feeding a water race or whether it's being pumped straight out of a river in a pipe take. We can work out how much on average people are using but that it's not quite what schedule 10A4 does but effectively schedule 10A4 is a method to work out how much water they're using.

10

Q. But it's not if it's based on an assumption which says that these takes are being used 24/7 when the reality is that they're not.

A. Well that's only the method used for excluding data so it's saying if they have taken more than they could have taken if they were pumping for 24/7 then exclude the data otherwise it's legitimate taking and consider it in your calculation of how much they're using.

15

Q. The problem is you're not eliminating the paper allocation because the paper allocation is still there. If you're working on an assumption of 24/7 use, you haven't removed the paper allocation.

20

A. That 24/7 use is only used for eliminating data. To be clear, we're only seeking to remove the paper allocation if it's not being used. So if someone is using their paper allocation then they would get their paper allocation back through the methodology.

25

Q. But the point you make in your evidence is that the deemed permits don't use the instantaneous take all the time.

A. In most cases there are 300 plus deemed permits and I haven't delved through the records through all of them.

**THE COURT: JUDGE BORTHWICK**

30 Perhaps a better way to ask your questions is to refer to the witness to the daily volume limit. The methodology for calculating the daily volume limit which is under 10A.4.2, in particular step 1 which is the methodology that is to apply, as I understand it to a deemed permit where there is no monthly and then to

explore whether your understanding about 24 hour seven days a week actually comes under that methodology or does it come under some other process or some other step?

**CROSS-EXAMINATION CONTINUES: MR ANDERSON**

- 5 Q. So in paragraph 40 of his evidence in chief – if you go to your evidence in chief in paragraph 40, in paragraphs 40 and 41 you note that: “while deemed permits have a rate of take, most do not have any volume limits. When calculating existing volume limits, the assumption is made that water can be taken 24 hours a day, seven days a week.”
- 10 A. Yes.
- Q. And then you go on to say: “in practice, most deemed permits do not take water this often. Their actual water use is much lower than their theoretical on paper allocation.”
- A. Yes.
- 15 Q. So what – if we are to apply that then your desired outcome of removing the paper allocation doesn’t work with respect to the deemed permits that only have a rate of take limit but not other limits?
- A. It does because they will through schedule 10A4, the limit on the replacement consent will be what they’ve actually used which is different
- 20 from the limit I’m calculating as the maximum limit on the deemed permit.
- Q. Sorry, you’ll have to go through that.
- A. So schedule 10A4 steps through a methodology which says: “your new limit will be what you’ve actually used.”
- Q. Yes.
- 25 A. So paragraph 40 only refers only to where there’s no volume limit spelled out at what level do we start removing data from our analysis? So legally, a deemed permit holder can take up to their rate of take, 24 hours a day seven days a week. Where they don’t do that then the limit on their replacement consent will be lower after it’s stepped through the
- 30 methodology.



**THE COURT: JUDGE BORTHWICK**

Q. Where they don't take 24 hours, seven days. Which is probably the height of –

5 A. Which will be the majority but I can't speak to all of them and there will be some that raise water on a relatively consistent basis.

Q. And so the clause that I put to you which is suggested that counsel should refer to just by way of example which is schedule 10A.4.2 methodology pertaining to daily volumes. Step 1 clause 1, it's actually in your text, it's attached to Mr Pelsemaeker's evidence. I'm going to call him Tom.  
10 That's – have you got that in front of you, the methodology?

1450

A. I do, yes.

Q. Yes, okay so is that assuming that you're going to be granting back 24 hours, seven days a week?

15 A. No, it's assuming that the water can legally be used 24 hours, seven days a week so when we talked about the filtering over over-exceedances, that sets your level for what an exceedance is. The methodology then carries on and says, and sorry you cut off everything above that line and the methodology then carries on and says your new limit is wherever you fit  
20 at or below that line.

Q. Okay so there's a legal exceedance limit and then there's (inaudible 14:50:42) but historically for deemed permits this is what you're using on a daily, monthly and annual basis.

A. Yes.

25 Q. And for most people it will not be 24 hours, seven days a week.

A. Correct.

Q. It just cant be.

A. Yes.

Q. Nobody irrigates that way that I'm aware but I might be wrong.

30 **MR ANDERSON:**

Thank you, I've got no further questions.

**THE COURT: JUDGE BORTHWICK**

So probably no issue if that's how it works, thank you. All right, I don't think we've got any questions do we? No questions, so thank you very much that was really helpful – no sorry, Mr Page you did, sorry (inaudible 14:51:10).

**5 MR PAGE**

I thought you'd invited questions about the exhibit.

**THE COURT: JUDGE BORTHWICK**

Q. Well yes or actually anything in general if some point that had been said that was not quite right you should be getting it right.

10 A. No we're in the odd position of mostly agreeing with what Mr Wilson said so far so.

Q. Okay good, the exhibit.

**CROSS-EXAMINATION: MR PAGE**

15 Q. Mr Wilson can I ask you to address the table on the second and third pages of exhibit ORC1, did you put this table together?

A. I didn't, it's a script written by Mr Leslie and then I ran it last night.

Q. Right okay well let me ask you questions about the column and if you don't know because you don't know how the script works just tell me.

A. Sure.

20 Q. The middle column has the heading: "Deemed permits awaiting application" do see that?

A. Yep.

Q. And my questions are directed towards what is included.

25 A. Yes so as I understand it and Mr Leslie may be able to give you a more detailed answer but it is consents for applications that have made it as far as the lodge so accepted under section 88. So it doesn't include received applications would be a number of the Manuherikia.

Q. Excellent, thank you, that was all I needed to know.

**THE COURT: JUDGE BORTHWICK**

30 Thank you, anything arising Mr Maw?

**MR MAW:**

No.

**THE COURT: JUDGE BORTHWICK**

5 All right, thank you. So thank you very much for your evidence. Sorry Ms Irving  
any –

**MS IRVING:**

10 No questions for Mr Wilson I'm just thinking about the feedback process for the  
conferencing and conscious of the fact that neither Ms Perkins or Ms Bright  
from Landpro and so won't have had the benefit of listening to the discussion  
that's occurred today and so in terms of getting them the list of questions and  
getting any feedback from them about whether those require additions or  
adjustments, whether it might be useful to give them 24 hours to listen to the  
audio from today and then provide any feedback to the conference list, we're  
not acting for Landpro but I'm just trying to think of –

15 **THE COURT: JUDGE BORTHWICK**

No I know, I know and I – no I know Ms Perkins is not here which in some ways  
is surprising because the ORC witnesses are here and that there's major  
differences in their approach. Which isn't your problem at all, you're just like,  
yes. What do you think?

20 **THE COURT: COMMISSIONER EDMONDS**

Wouldn't the transcript be better?

**THE COURT: JUDGE BORTHWICK**

25 The transcript would be better but transcripts not actually available for 48 hours.  
As I would've thought Ms Perkins should be sufficiently au fait with the  
differences now.

**MR MAW:**

Yes and the same would go for Ms Bright I would suggest, I mean they've read  
the Council evidence, they've put their own evidence forward they should

understand precisely where the differences lie. We should of course circulate the list of questions to them and provided they have an opportunity to consider that overnight I would've thought we should be in a position to file tomorrow morning.

**5 THE COURT: JUDGE BORTHWICK**

I still think file tomorrow morning, we'll get them to them overnight and perhaps signal there's somebody, Cathy if you could signal to Ms Perkins that it's coming.

**THE COURT: COMMISSIONER BUNTING**

10 And they just be given the opportunity to reserve the right to –

**THE COURT: JUDGE BORTHWICK**

They will anyway because the process is we will continue to work on those, yes. These things aren't cast in concrete, Ross will be in, will be working –

**THE COURT: COMMISSIONER BUNTING**

15 Because when we get to conferencing quite often there's a bit of an adjustment made.

**MR MAW:**

Yes and rightly so as they work through so.

**THE COURT: COMMISSIONER EDMONDS**

20 And if the date's set so that the transcript would be available for them to read before the (inaudible 14:54:54) that would be a help too.

**THE COURT: JUDGE BORTHWICK**

Also Mr Dunlop needs to read the transcript as well so it's not going to be before the transcript is here.

25 1455

**MR MAW:**

But in terms of capturing the topics on which there are differences, I would've thought they would be able to assist very quickly if there were something obvious missing from the list.

**5 THE COURT: JUDGE BORTHWICK**

Yes, no, I agree so still 9 o'clock tomorrow morning. It's not cast in concrete. These things change and change again as we work through the conference and certainly Mr Dunlop will be in charge of that process.

**MR MAW CALLS****SEAN WILLIAM LESLIE (AFFIRMED)**

Q. Do you confirm that your full name is Sean William Leslie?

5 A. I do.

Q. And you're a systems and information analyst at the Otago Regional Council?

A. Correct.

10 Q. You've prepared a statement of evidence in chief dated 7 December 2020.

A. Correct.

Q. And a statement of evidence in reply dated 19 February 2021.

A. Correct.

15 Q. You've set out your qualifications and experience in paragraphs 3 to 5 of your evidence in chief.

A. Correct.

Q. Are there any corrections that you wish to make to those statements of evidence?

20 A. Yes, in my evidence in chief, in paragraph 17 and again in paragraph 46, I refer to the maximum average rather than the average maximum.

**THE COURT: JUDGE BORTHWICK**

Q. Which line?

A. Paragraph 17 line 3.

Q. So it should read sorry?

25 A. It should read average maximum rather than maximum average. Sorry, not line 3.

Q. It's still not clear. If you read the line 3, "annual volumes presently reads, annual volumes from the water use analyse, or the maximum annual." Are we on the same version? That could be it.

30 A. I'm so sorry. Not paragraph 17, it's in paragraph 46 only.

Q. Okay.

A. On page 8.

Q. So second line, instead of maximum average it should read average maximum?

A. That's correct. Yes.

Q. Okay.

5

**EXAMINATION CONTINUES: MR MAW**

Q. Thank you. Are there any other matters for correction?

A. Yes. I repeat the same error in paragraph 24 of my evidence in reply.

Q. So line 3.

10 A. And line 7.

1500

**THE COURT: JUDGE BORTHWICK**

Q. Paragraph 24 line 7?

A. Yes.

15 Q. So: "average maximum not maximum average"?

A. Correct.

Q. Okay.

**EXAMINATION CONTINUES: MR MAW**

Q. And that was both on line 3 and on line 7 of that paragraph?

20 A. Correct.

Q. Any other corrections?

A. No, thank you.

Q. So subject to those corrections do you confirm that your evidence is true and correct to the best of your knowledge and ability?

25 A. Yes.

Q. Now you've prepared a summary of the key points from your evidence and a copy of that will just be handed around. I'll have you read your summary and then I'll put to you some questions on the document that Mr Wilson had just handed up.

30 A. I'm sorry, could I get a copy of that off you as well, I seem to have brought everybody else a summary except for mine to the table.

Q. Yes if you could proceed with your summary.

A. “My name is Shaun William Leslie, I have worked at the Otago Regional Council since 2008 in a number of roles which focused on the numerical analysis of performance monitoring data submitted to the ORC as the consent authority in response to conditions on resource consents. I developed a process for analysing water taken under resource consent as part of a broader work programme within the ORC. In response to a request from the consents team I adapted this process to provide a description of water take data for the consents team to consider in their decision making when preparing recommendations for resource consent applications on the regional plan water for Otago. A procedurally generated report provides information relating to the rate of take, daily volume, monthly volume and annual volume as well as information relating to the 80<sup>th</sup>, 90<sup>th</sup> and 95<sup>th</sup> percentiles for the rate of take. My involvement in PC7 was to provide technical input to assist with development of the schedule 10AA methodology which involved some further calculations added to the existing process and to provide feedback on how the technical detail was translated to policy. Additionally, I developed and maintained script automations that the ORC uses for assessing patterns in water taking to ensure that this is done on a reproducible and objective way. The evidence-in-chief and evidence in reply that I have provided the Court primarily covers the practical application of schedule 10A4 and attempts to provide some insight as to the expected results of its application compared to the method currently employed under the regional plan Water for Otago. My evidence demonstrates the need to remove a typical data from the datasets before they are processed as once this is done there is a high degree of consistency between the results produced under the water plan method and the method proposed in schedule 10A4 despite the fact the water plan method is subjective while the schedule 10A4 method is objective. In addition to that I touch on some of the issues involved in developing a method to implement and illustrate some examples where it is not the method that is flawed but the assumptions about the underlying data. Also examine the impact that flawed assumptions about underlying data



might have on any out of the box analysis, backed by anonymised data using real water metres and data that is routinely provided to the consents team to provide context for the decision making processes.”

1505

5 Q. Thank you Mr Leslie. Now Mr Wilson handed up a document, produced a document entitled *Deemed Permit Status*, the re-run deemed permit report re-run last evening and I asked him whether some further work was being done to understand the 57 consents for which a term of more than 15 years had been sought. He indicated that you might be doing some further work on that. Are you in a position to provide any further evidence in relation to the duration of consent sought or is that piece of work ongoing?

10 A. I'm in a position to be able to provide some insight. So I used the SQL script that the deemed permit status report uses as its basis, made some minor modifications to it so that it gave me the real data and I can tell you that there is one application – no sorry four applications with a term of one year. Six, yeah six applications with a term of six years. Three applications with a term of 10 years, 11 applications with a term of 15 years, 10 applications with terms between 16 and 20 years, 20 applications with terms between 21 and 25 years and 65 applications with terms of 35 years and these are applications that have been received or lodged with the Otago Regional Council since the Plan Change 7 was notified.

15 20 Q. Now were you here when Mr Wilson was answering some questions this morning in relation to some topics for conferencing that might assist, understand the differences between the various methods being pursued by parties?

A. Yes.

25 Q. Do you recall that I put a question to Mr Wilson about whether a data set could be constructed to test some differences between the methods in terms of what the actual, I guess, real life output would be under different methodologies?

30 A. Yes.

Q. Based on your knowledge and experience and understanding of the data sets that are available, could a data set be readily made available in order to test some of those differences between the methods being sought?

A. Potentially yes and some of that is addressed in my evidence for reply.

5 Q. And just picking up on that, for example, in your reply evidence you have analysed some 23 I think it was of the 42 or 43 records that the Landpro witness had relied on to examine some differences between the method?

A. Yes.

10 Q. And so in terms of practically being able to test those differences in conferencing, the data is readily available and you would be able to test and see the differences in the conferencing room?

A. Potentially, yes.

#### **THE COURT: JUDGE BORTHWICK**

Q. Landpro uses a different data set from you in –

15 A. They don't – it's my understanding they don't use a different data set from me but they use a different method of analysing the same data but also the pool of consents that they examined in their evidence was slightly different from what I examined in my evidence, so the consents that I examined in my evidence were a subset of the Landpro consents that met  
20 certain criteria that made trying to do a bulk analysis easier.

Q. And you set out the criteria in your evidence?

A. Yes.

Q. And by and large they're pretty straight forward sort of resource consents to be testing the methodology against, would that be fair?

25 A. Yes.

Q. I mean that's why you select the criteria?

A. Yes, yeah that's why I chose them.

1510

30 Q. So consents outside of those really straightforward sample. Should they also not be tested to see how the methodology would be applied to them?

A. Absolutely however doing any form of bulk analysis like – in my reply of it so I looked at – I think it was slightly over 400 so doing that kind of analysis becomes more difficult. For example, if you've got the situation we have

one resource consent one deemed permit that has two water meters associated with it, depending on the conditions on the resource consent, you have to look at the rates of take of potentially both water meter individually as well as the combined rates of take or volumes.

5 Q. You looked at 400 because Landpro had? Landpro's actually one of the cases that I hadn't read what their relief is but I have left off reading Ms Perkins evidence. You've looked at 400 because that's what they did or that's all for what reason?

10 A. The catchments that I looked at were based on the catchments that Landpro specified in their evidence. I did that because at that point it wasn't whether or not I was going to be able to get the information I needed from Landpro and also that I could compare my information and my methods to their information and their methods. So I took the starting point of just casting the – given those criteria casting the broader blanket possible that would capture as many of their perimeters possible so I could go back and do a comparison of their method to the method I currently employ or the methods that have been proposed or notified on the Plan change 7.

15 Q. So you're using the one data set?

20 A. Yes.

Q. And by dan set, what do you mean?

A. The method I employed downloaded from ORC's water metre database, downloaded the full length of the water metre record for each of those water metres. And then at my – the method that I currently use analyses the whole data set rather than just a subset of data set. So I performed my analysis and then applied method 10A4, so subsetting it so that it looked at the – for the – looked at the irrigation years as they were notified in the irrigation years according to Mr de Pelsemaeker's amendments.

25 Q. So what I would find useful is to have the methodologies tested as I think you've been endeavouring to do, test the methodologies against a number of scenarios both including the straight forward consent scenario one take one metre versus often what might happen which is two points of take more than one metre. So we can see how each of the methodologies are performing if I can put it that way. So one of the things

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that we're wanting to know is what scenarios? Can the experts agree what scenarios should be tested and what data sets might apply to test the scenarios. That I think involves direct communication to see how each of the, you know, the two groups which is Landpro and OWRUG are coming at I guess the community of interest whether it is the narrow community, this is a simple exercise, you know, it's a simple take or a simple consent versus much more complex scenarios which the method might apply to. So is it possible to actually talk to your counterpart witnesses to see directly, not by email, you know actually talk to people to see what is the most efficient/effective way of testing the different methods?

1515

A. Yeah absolutely. In fact we did receive from – as I said I started my analysis on the assumption that I wasn't going to get any information from Landpro or wasn't going to get the information from Landpro in time but we did receive the information about which resource consents and which water metres they had analysed in their evidence which enabled me to perform the comparisons that I did but there were water – there were scenarios that were examined by Landpro that included multiple resource consents across single water metres or single consents across multiple water metres which were, as I said, outside the scope of my selection criteria.

Q. And that's where I'm guiding you to –

A. Yeah.

Q. – is actually to get everybody be on the same page, what are the scenarios that we're examining because the Landpro scenarios it seems to me are valid scenarios if the method is to apply to them how well does that method then perform is the question, yeah. So that would need to be done, you know, in terms of equipping yourself before you go into an expert conference there would need to be that discussion, what are the scenarios that we are testing, you know, maybe against current consents if that's where – that's probably where the existing consents where the data probably exists especially for metering. What are the scenarios? What are the representative scenarios that we are testing and what

information needs to be provided and by when and to allow that, you know, the three parties to go away and do the testing?

5 A. I would add to that that we also need to agree on different consent uses as well, so for example we need to make sure that we have a supplementary take. For example included in whatever data sets we look at we need to ensure that we have a resource consent that we know is taking water for frost fighting and to cover off those sorts of scenarios so that we can have a look at what patterns there are.

10 Q. Good, well that sounds reasonable. So this is pre-conference engagement, absolutely critical, don't go to the conference and expect everything just to unfold, it won't, unless there's actually quite some degree of preparation done that I think involves communication, direct communication as between the witnesses to work out what is the data set and what are the case scenarios that are being tested and to ensure that  
15 they are representative of the, you know, the way that any one of those three methodologies may be employed going into the future. Does that sound like a lot of work or does it sound like, you know –

A. It sounds fair and reasonable.

Q. Fair and reasonable, good, okay.

20 A. As for how many hours of overtime would be having that discussion with my manager at a later date.

Q. So just putting some timeframe around that though, is that sort of like a, you know, by the end of the week job? Is it by the end of two week job? You know just then from your perspective not to worry about Landpro and  
25 OWRUG that from your perspective about how much time to get a defensible data set and, you know, suggestions about what is a data set and, you know, representative sample or case scenarios that you're going to be testing?

A. To be perfectly honest with you I'm not 100% sure.

30 Q. Well that'll be imposed.

**MS IRVING:**

Can I ask a question about that because I think you know we're familiar with a lot of the consents that have gone in that I think would pick up on the issues

that you're talking about so I suspect that between OWRUG and Landpro we'll be able to identify a suite of consents that perhaps cover the field in terms of the issues that might arise which we could provide to Mr Leslie to have a look at and see whether he has any others from his mother applicants that he'd like to throw in as well. But I don't think that's going to be difficult but we're dealing with this all the time.

**THE COURT: JUDGE BORTHWICK**

You don't think so, okay. Yeah, all right, you're happy with that, that those two parties go first and, yeah...

10 1520

**MR MAW:**

Yes, I think that's a sensible way forward and so far as other parties are aware of a consent that might be a little bit different. The frostbiting one strikes me as one that's important to capture one of those examples. It would be useful to have those suggestions, and I think it would be consent number and possibly the water meter record number. So I would simply invite other parties as quickly as possible. How realistically how quickly.

20 **MS IRVING:**

I think they can probably do it tonight.

**THE COURT: JUDGE BORTHWICK**

Right. Not just talking about infrastructure, we're also talking about within the primary sector also. Making sure you've got dairy, sheep and beef, making sure you've got grapes and frostbiting and not to kill it by information overload but it's just testing the veracity and effectiveness of the three methodologies.

**MR MAW:**

Yes, and I think optimistically it should hopefully flush out the differences in terms of what comes out but also test whether the method can actually be applied to the very consents that are going to be the subject of renewal.

**THE COURT:**

Yes, exactly.

**QUESTIONS FROM THE COURT: COMMISSIONER BUNTING**

5 Q. Just in terms of this process, in your conclusion to your reply evidence, you've put down three or four comments. It's on page 17. The version I have here. Have you got that there?

A. Yes, I've got it.

10 Q. So on 90, "You qualify quick and easy cost-effective solution where necessary data is available." Can you expand or tell us a little about where the data is not available and is that frequent occurrence or not? Do you know?

A. I've dealt with applications that have as little as one season of recorded data available and they were applications that were being replaced to renew for an existing activity. Obviously I can't analyse what isn't there.

15 Q. In your work, is the necessary data usually available or can there be a percentage that don't have a data and then what do you do?

20 A. I do have that information to answer that question but I don't have it on my fingertips right at the moment. Usually my response when I encounter a short data set is to complete the write up and then emphasise in my summary at the end of the document that the data has a lot of reliability because it's a short data set.

Q. Does that become a matter of disagreement between you and the application or whoever is processing the application? Consultant or whoever it might be as to how you deal with that situation?

25 A. I haven't had any feedback from the consents team that I can recall that would indicate that taking that approach is an issue or has caused any issues.

Q. So that's where you are.

A. That's the best answer I can give you to the question.

30 Q. Fair enough. That's okay and the second thing you say that may be using the method may not be flaws in the method where there's problems but flaws in the assumptions or the methods employed by whom?

A. By any party examining the data regardless of whether you're talking about Landpro's method, OWRUG's method or the notified version or Mr de Pelsemaeker's amendments or even my own version, every data analysis has assumptions built into it. The best you can do is try and minimise the assumptions.

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1525

Q. So is this something you've discussed at the expert conferencing?

A. I would expect so.

Q. Yeah, pretty important to try and –

10

A. Yeah.

Q. – get some understanding between the various experts. And para 92 you talk about percentiles. Do percentiles, are they applicable to schedule the new Plan Change method?

15

A. Not directly but it was my intention that short of directives otherwise that I would continue to provide them to the consents team because they provide additional context. Because if I just present you with a maximum average value that's just a number, it doesn't mean anything on its own but if you can see at a glance that the ninetieth, the ninety fifth percentile and the maximum average value are all clustering around the previously consented rate then you can see that there's a really good case to be made that the previously consented rate is, what's the word I'm looking for, applicable, descriptive, valid, justifiable, does that answer your question, sorry?

20

Q. Well so that's the information you would provide –

25

A. Yes.

Q. – even though it's – and that's the way you've operated under the current water plan 2?

A. Yes.

Q. And then the consents team take a decision based –

30

A. Yeah.

Q. – on the advice you give?

A. Yes.

Q. Okay well I just wanted to get some clarification, yeah, so thank you.



**THE COURT: JUDGE BORTHWICK**

All right so I'm going to say by the end of the week for that conferring to happen. Counsel having conferred with their experts to propose scenarios for testing under the three methods and also to identify an appropriate data set which is to be tested and the scenarios to include at least the different methods of irrigation and different land uses. I think it's probably broad enough to capture all of the main interests. I don't know, Mr Reid, is that okay? I can't actually remember what your witness is going to say about the schedule.

**MR REID:**

10 No that sounds fine to me.

**THE COURT: JUDGE BORTHWICK**

That sounds fine, yeah, okay.

**MR REID:**

15 Yes just that I'm not sure that frost fighting is inherently described as a land use but so long as that activity is captured that's fine.

**WITNESS EXCUSED**

**COURT ADJOURNS: 3.28 PM**

**COURT RESUMES: 3.50 PM****MR MAW CALLS****TOM WILLIAM DE PELSEMAEKER (AFFIRMED)**

5 Q. You confirm that your full name is Tom William De Pelsemaecker?

A. Yes, I confirm.

Q. You're the team leader freshwater and land at the Otago Regional Council?

A. That's correct.

10 Q. You've prepared a statement of evidence in chief dated 7 December 2020?

A. Correct.

Q. And a statement of evidence in reply dated 19 February 2021?

A. Correct.

15 Q. You've set out qualifications and experience at paragraphs 3 through 7 of your evidence in chief?

A. I have.

Q. Are there any corrections you wish to make to either of your statements of evidence?

20 A. Yes, I'd like to make a few corrections.

Q. If you can just step through those.

A. Absolutely. In a number of paragraphs, three paragraphs, I have made reference to number of catchments in Otago. That's in paragraph 33, 69 and 78. I just want to clarify that figure refers to the number of catchments that have water takes on them or in them. The actual number of catchments in Otago is much bigger than that but it depends on the way you classify them I guess as to how many there are and that's a more question for hydrologist really.

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**THE COURT:**

30 Q. So the point of clarification for paragraph 33 and also 69 and 78 is that where you say that 140 catchments, you're talking about catchments in relation to which there are existing permits to take water.

A. That's correct.

Q. But there are more catchments than that.

A. Yes.

**EXAMINATION CONTINUES: MR MAW**

Q. Are there any other corrections?

5 A. Yes. Also on paragraph 51 D of my evidence in chief, I refer to the term  
 “evapotranspiration” that should be evaporation. It’s on paragraph 51.  
 Paragraph 49, I state “ this network has large gaps with many of the  
 region’s ephemeral waterbodies.” I’d like to add to that also waterbodies  
 with drying river reaches that are not sufficiently monitored. I think that’s  
 10 an important point because those are one of our most challenging rivers  
 really in terms of doing hydrological and ecological assessments.

**THE COURT:**

Q. So I’m amending line 4 which commences “bodies” and then inserting  
 bodies and also waterbodies with drying reaches?

15 A. Yes. Correct.

Q. And then it goes on “not being monitored.”

**EXAMINATION CONTINUES: MR MAW**

A. On paragraph 108B, “the replacement of deem permits including deem  
 permits for the”, I’d like to add the taking discharge and then it goes on  
 20 damming of water.

1555

**THE COURT: JUDGE BORTHWICK**

Q. So can you read that first line of subparagraph B, so read the  
 replacement?

25 A. Yes.: “The replacement of deemed permits including deemed permits for  
 the taking, discharge and damming of water and water permits to take  
 and use surface and ground water connected to surface water where  
 those water permits expire prior to 31<sup>st</sup> of December 2025.”

Q. Okay.

- A. Then in paragraph 136 on the third line I make reference to clause 4B where that should be 4A and further down in that paragraph I have sentence starting: "Following clause 3 and clause 4A" again should add A as stated on the paragraph only refers to clause 4. Then on paragraph 238 I make reference to the 31<sup>st</sup> of December 2023 and that should be the 31<sup>st</sup> of December 2035.
- 5
- Q. So second to last line on page 72 should read: "December 2025"?
- A. Yep.

**EXAMINATION CONTINUES: MR MAW:**

- 10 Q. 2025 or 2035?
- A. 2035.

**THE COURT: JUDGE BORTHWICK**

- Q. 2035, okay.
- A. Footnote 10 which is, footnote 10 of my, in my evidence-in-chief on page 13, that can be struck out because it is superseded by evidence in reply where I acknowledge that there are deemed permits that authorise the discharge of water. And then the final correction in my evidence-in-chief is on paragraph 472 and there I make reference to, right at the bottom of the paragraph policy 10A.2.3.B, that should actually make reference to RMA section 140D(1)(B).
- 15
- 20
- Q. So read the last sentence, I think it's the last sentence – is it the last sentence you're talking about or the sentence before on paragraph 472?
- A. Yeah this is intentional as policy 10A.2.3.A sets the threshold required to be met under section 140D(1)(B) of the RMA.
- 25
- Q. D, I'm missing –
- A. 104 D.
- Q. D, okay.
- A. Yes. 1B.
- Q. All right.
- 30
- A. And then in my evidence in reply I've got two corrections. On paragraph 82d, currently the paragraph reads: "The amendments to policy 6.4 set out the matters for consideration" it should make reference

to policy 6.4.19. It's paragraph 82 subparagraph D, so it should make reference to policy 6.4.19. And then a minor typo on paragraph 187 on the third line I state: "the needs of exciting water users", and it should be: "existing water users."

5 1600

Q. Thank you and subject to those corrections, do you confirm that your evidence is true and correct to the best of your knowledge and ability?

A. I do.

10 Q. You've prepared now a summary of each of – a summary with respect to the evidence you've produced?

A. Yes.

Q. You can read that summary out or just hand a copy around.

15 A. Yes, thank you. I might bring it back right to the purpose of plan change 7: "purpose of plan change 7 is to establish an interim planning framework for the cost effective and efficient assessment of resource consent applications for the replacement of deemed permits and water permits for the taking and use of fresh water. While ORC is developing a long term NPSFM compliant planning regime for the management of land and water in its region. This interim planning regime must ensure that the transition  
20 towards the long-term planning regime can occur in an efficient and timely manner by providing strong policy direction on consent duration for applications to replace existing deemed permits and water permits expiring prior to 31<sup>st</sup> of December 2025 as well as applications for new water takes. Plan change 7 as notified initially proposed a two tiered  
25 consenting pathway by which applicants can apply for resource consent to replace an existing deemed permit or water permit expiring before the 31<sup>st</sup> of December 2025 either as a controlled activity or where they cannot meet the controlled activity conditions as a non-complying activity. I note that in response to submitted comments and concerns raised by experts  
30 I have recommended a third pathway where applicants who cannot some of the entry conditions of the controlled activity rule can apply for a short-term consent as a restricted discretionary activity. Plan change 7 further enables the transition to a long term sustainable management regime by reducing the risk of further environmental degradation through a number

of mechanisms which are avoiding the reallocation of paper allocation or unused allocation limiting the quantity of water allocated in resource consents for the replacement of existing water permits including deemed permits to the quantity of water that has been used in the past, a requirement to carry over minimum flow, residual flow or take cessation conditions on existing consents as consent conditions on any consents that replace those water permits and also finally by discouraging further investment in irrigation expansion until a new NPSFN compliant planning framework has been introduced. The need for the plan change stems from a number of interlinked resource management issues. First of all historically high levels of water taking in parts of the region and an allocation framework and the operative water plan that does not prioritise the health and wellbeing of water bodies and freshwater ecosystems. Secondly, inadequacy of water aspects of the planning framework in the water plan in terms of giving effect to the objectives and the policies of the NPSFM. Thirdly, a lack of understanding about our region's freshwater resources and the effect of water extraction on those resources. Uncertainty around the planning framework including the outcomes and the limits that will be established in accordance with the NPSFM and the national objectives framework and the new freshwater planning framework that is to be notified in December 2023 and then finally the expiry of a large number of water permits and the growing demand for water prior to the new freshwater planning framework becoming operative by the 31<sup>st</sup> of December 2025. The plan change has generated a large number of submissions, some of which were in support and others were opposing the plan change or requesting amendments. Key concerns raised by submitters are: social and economic impacts if only providing for short term consent durations, plan changes provisions, force of clawback on actual water use through how schedule 10A4 operates. The plan change does not achieve good environment outcomes or outcomes – or outcomes that are not as good as what the current water plan would do. The plan change fails to provide for a cost effective process, the use of the controlled activity pathway needs to be further encouraged while stronger and more certain thresholds need to

be determined for granting consents under the non-complying activity pathway, exempting specific activities such as damming, hydroelectricity generation and community water supplies from the framework of plan change 7 and the plan change does not give effect to higher order planning documents and is inconsistent with the water plan. In my evidence in chief and evidence in reply I have recommended a number of amendments to reduce the impacts of the plan change on water users that have recently undertaken or committed to investment in irrigation infrastructure, reduce the risk of a clawback on actual water use and improve the ability of existing consent holders to apply for consent under the controlled activity rule. I acknowledge that the plan change does not give full effect to the NPSFM 2020, however, I consider that the plan change with the proposed amendments goes some way to meeting various requirements set out in the NPSFM while enabling an efficient and timely transition towards a long term NPSFM compliant freshwater planning regime. So in my opinion, in doing so, the plan change actually achieves the purpose of the RMA. I am mindful that the amendments that I have recommended do not alleviate all the concerns expressed by submitters. As I have previously stated in my evidence in chief and evidence in reply I am open to further exploring either to considering the expert evidence provided by submitters during the hearing or to expert conferencing how the plan change provisions can be further refined to better achieve the plan change intended outcome. In my opinion there are four areas where further amendments could be considered. The first one is to make the controlled activity pathway more appealing without, however, creating a risk of further environment degradation. Secondly, strengthening the non-complying activity pathway, thirdly, make better provision within the framework of PC7 for higher priority takes and uses that provide for the health needs of people, recognising again PC7's intent to ensure that those activities will be carried out in accordance with the NPSFM compliant management framework of the new land and water plan within the lifespan of the plan." And then finally, amended schedule 10A4: "to better align the rate of take and volume limits determined under the schedule with historic water use, recognising the schedule's intent to

provide for a cost-effective and an objective method to calculate those limits.” I've got a final paragraph but I think that can be struck out because it is superseded by the evidence that Mr Leslie produced.

**QUESTIONS FROM THE COURT: COMMISSIONER EDMONDS**

5 Q. A just have a few high level questions to try and orient myself in terms of the water plan and the local situation. There's been only exposure I've had to those things was being on the Lindis minimum flow and the primary allocation and resource consent with Judge Jackson and Commissioner Borthwick which wound up towards the middle of last year so just to get  
10 myself a little bit orientated, we have schedule 2A –

1610

A. Correct.

Q. – which in the plan here somewhere and I note that some of the parties are suggesting that the schedule 2A minimum flows, I'm to having trouble  
15 finding my own scehdule 2A at the moment, page 363, I see I've got volume 1 and I need volume 2, sorry about that. Sorry what was that again, 363. Have you got 363 there or that part of the plan, schedule 2A?

A. I don't have the plan with me or the schedule but I'm quite familiar with it so.

20 **MR PAGE:**

(inaudible 16:11:44).

**THE COURT: COMMISSIONER EDMONDS**

Q. Thank you. So just looking at these various catchments that have got these minimum flows, is there a plan, some sort of spatial representation  
25 of what's covered in terms of these minimums flows, which water courses we're talking about, which waterbodies?

A. Yes we currently do not have within the plan a map that shows how those minimum flows are distributed because I guess that's what you're referring to like, basically a map of all the catchments –

30 Q. Yes, yes I didn't find one in the plan but I thought you might have one somewhere.



A. We have produced one a couple of years ago and I'm sure we can produce one fairly quickly for you.

Q. And so all these minimum flows were presumably they came in to the schedule 2A at different times?

5 A. That is correct. A number of these minimum flows were introduced with the plan and over the years since the plan was made operative we have undertaken a number of plan changes to introduce new catchments into the schedule, the last one is the Lindis although that's still going in process, Pomahaka, Waiwera I think Taieri at (inaudible 16:13:48) as well, were all minimum flows that were introduced subsequent, (inaudible 10 16:13:53) Creek is another one, (inaudible 16:13:54) so it's –

Q. I guess my next question was going to be in terms of the numbers of permits that there are in these waterbodies that are subject to the minimum flows, does the Regional Council have a database on which 15 ones are subject to the minimum flow in terms of consent conditions?

A. That can be fairly quickly produced, yes. We have done it but it is worthwhile updating, yes.

Q. So can you give me some sort of indication of what that might look like in terms of the percentages for example or, of consents or the, I suppose it 20 related into the instantaneous take volumes as well perhaps.

1615

A. In terms of your question as to how many consents have minimum flow conditions on them within those schedule 2A catchments, some more than others. I'm reluctant to make any definitive statements around that. 25 Like I said a while ago, I looked at the numbers. For example, I think from memory, the Pomahaka, I think over half of the consents there have minimum flows on them and others like the Manuherikia of the Taieri, from recollection it's much smaller number.

Q. I was trying to get some sort of gauge on how many people in the tent, if 30 you like, in terms of the minimum flow requirement and how many people were outside the tent.

A. It's very hard to tell you right now but like I said before we're happy to look into that and provide you with an overview or a table so to speak of schedule 2A catchments with number of consents and the with number

of consents that have schedule 2A minimum flows on them. I think that can be done.

5 Q. In relation to the ones that we're largely dealing with here, the deemed permits and the ones that are going to run out shortly and need renewing and those sort of things, is it possible to get a gauge on whether any of those have minimum flow conditions?

10 A. The issue with deemed permits and those especially relevant, I think for the Manuherikia has a lot of deemed permits and deemed permits do not have any conditions to protect environmental values so they would not have a minimum flow on them. It is only a replacement consent for those deemed permits that would get a minimum flow as a consent condition on them.

Q. So that's deemed permits but the other categories?

A. Being resource consents.

15 Q. Yes.

A. There would be in a minority in the Manuherikia catchment in terms of volume and also numerical when I say, refer to volume the volume of water taking, the majority of the water would be taken under deemed permits. They would not have a minimum flow on them as a condition of deemed permit. Some of the resource consents in the Manuherikia might have minimum flows on them. I'm aware that some of them supplementary minimum flows so some will have a minimum flow. The question is whether it's a primary or supplementary. I cannot give you a definite answer to that.

25 Q. Can you just expand on that a little bit for me in terms of the primary and supplementary allocation and the consent? How's that relevant in what we might be dealing with or is it not relevant?

30 A. It is relevant. Let's bring it back to basics. We've got, in our current water plan, a system that distinguishes between primary allocation and supplementary allocation. In one catchment we've got another type of allocation but I won't go into that because it will make it too complex. Primary allocation is basically allocation that gives you the highest surety of supply. It's typically taken by run of the river water takes although some of the deemed permits that provide for damming, they take water all the

time and they actually like water harvesting, they take run of the river takes but also high water flows but primary allocation is most reliable water. The schedule 2A has minimum flows in them and those schedule 2A minimum flows apply to all primary allocation takes so that can be resource consents within primary allocation or deemed permits because we also consider deemed permits to be part of that primary allocation.

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So primary allocation is really like a bucket of water that comprises the quantity of water taken by those primary allocation consents and the permits. We've also got a second type of allocation and that supplementary allocation and that allocation is granted in resource consents when there is no further primary allocation available, so in that case we will allocate water at higher flows. So those consents will be subject to a minimum flow higher than the primary allocation minimum flowing schedule to a – those minimum flows are set in schedule 2B. Those supplementary allocation takes are typically used for water harvesting at higher flows or for snow making as well when – because they take in winter when the flows are higher as well. So those are basically the two types of allocation under the current water plan. I think both are relevant in terms of Plan Change 7 because through Plan Change 7 and subsequently through the new land and water plan what we're trying to do is deal with the primary allocation and kind of come up with a sustainable allocation framework for primary allocation. That will have an impact on the bucket of water in primary allocation that is available through resource consents. Now supplementary allocation, the level at which we can allocate resource consents within supplementary allocation is kind of reliant on or is determined by the bucket of primary allocation. To give an example if we manage to limit the primary allocation we might be able to grant supplementary allocation at lower flows. What we're trying to do currently is to avoid competition between the two.

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**THE COURT: COMMISSIONER EDMONDS**

Q. Just say that again? I had missed the first part of that. Can you start that sentence again or that paragraph again?

5 A. Yeah so what we're trying to do in managing water is to try to avoid competition between the two takes. So we tried to avoid that supplementary allocation takes, tried to encroach on the water that is available to primary allocation users so that's under the current plan. Therefore we set the limits, the minimum flow limits, for supplementary allocation really high. If you managed to reduce the volume in primary allocation you might have an opportunity to make supplementary water more accessible. Bearing in mind that in the new land and water plan we also need to look after the values in the river as well.

Q. So coming back to PC7.

A. Yes.

15 Q. The relevance of this to PC7?

A. PC7 captures not only primary but also supplementary allocation takes. We also want to make sure that we don't look in long-term timeframes for applications for supplementary allocation because that again that framework for supplementary allocation will be affected by the plan review and it might look totally different under the new land and water plan.

Q. So just going to paragraph 4 of your evidence –

A. Yes.

Q. – where you talk about the requirement to carry over minimum flow residual flow or take cessation considerations on existing consents –

25 A. Sorry were you saying paragraph 4?

Q. Paragraph 4(c), it's on your page. I don't think these pages are number. In your summary, sorry.

A. Oh it's summary, sorry. Yes.

1625

30 Q. So I just wanted to know if you had a database or anything that listed out things that were listed to – that were subject consents that were subject to residual flow or take cessation conditions I asked you (inaudible 16:25:23) know about minimum flows before. I guess that that was in relation to the schedule 2A.

A. Yeah. I do not operate or administer the database. That would be possibly something that would be in the consents database and I'd have to refer that question to Mr Leslie perhaps or somebody from the consents team. Like I said before, I have –

5 Q. So you've taken advice from them in formulating –

A. I have taken advice from them and we asked to generate a table that looks like all the schedule 2A catchments, how many consents, how many had the minimum flow on them but I would before I hand anything to the Court I would like to have this updated and verified.

10 Q. So that's the minimum flow –

A. Yeah.

Q. – but you've also mentioned residual flow or take cessation conditions.

A. Yes. I am not quite sure whether we have in the database or whether we can abstract from the database an overview of all the consents that currently have a residual flow condition on them or a take cessation condition.

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Q. I guess I was just trying to understand what's the scale of what might be involved with that and where does it relate to?

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A. Yeah residual flow condition in the last couple of years have been regularly applied to resource consents. Minimum flows, in the plan we have a policy that basically states that where we have a minimum flow in the plan for a catchment that has deem permits we do not immediately put those minimum flows as a consent condition on those – on consents in those catchments. We will only do that unless the consent holders volunteer that or upon the expiry of deem permits in 2021. The reason why we're doing that is because we cannot impose those conditions on deem permits unless we get financial compensation and also minimum flows, the way they were, they don't really work unless all the consents in the catchment adhere to them. If you have some consents in a catchment with a minimum flow if some of those consents have a minimum flow condition and others don't there is still a risk that rivers will be drawn below the minimum flow because those consents that don't have the minimum flow as a consent condition, they can keep on taking when the minimum flow is reached. I also want to add that a minimum flow does

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not prevent the river from going below it naturally as well. But you really need to have all the consents or the majority of the consents at least when in a catchment adhering to a minimum flow before it actually works.

Q. So there may be some information in these things that you'd need to –

5 A. There may be some information, yeah.

Q. – check that out with the consent people. So we have a number of competing oppositions in terms of PC7 if I could put it that way.

A. Yes.

1630

10 Q. And I'm just a little puzzled by a couple of things and I thought that you might give me your take on them. So we have a proposition, I think, Ms Dicey's evidence, I don't know whether you might have that there, it's page 78, do you have that there now?

15 A. Yes. I was looking at Ms Dicey's summary in the main body of her evidence but yes.

20 Q. Page 78 and I'm just looking down 12.1.2 the permitted activities that she's proposing and then if you go down to 3 where we have any existing requirement condition or priority status applying to the exercise of this permit under this rule shall continue to be legally binding. Now, I just wondered if you could help me with understanding – with your understanding of any existing requirement condition or priority status, perhaps we could start with the priority status, what would you understand by that?

25 A. So that goes back to the deemed permits and I think I will summarise it but I might actually have a summary of what the priority status means in my evidence. I think I explain it in paragraph – maybe not, sorry. Priority status when the deemed permits were issued, they were given a priority and the deemed permit or the mining privilege –

Q. The old mining privilege is what we're referring to.

30 A. That was first issues got the highest priority, subsequent mining privileges had lower priorities and that was basically to protect the rights of the access to water for the holder of the mining privilege that was issued first. Those priorities are still on the mining privileges or the deemed permits stated, they're still stated on there. I am not quite sure to which extent

they are currently being exercised. They are actually not conditions to a mining privilege or a deemed permit, so my understanding is that Council cannot enforce these. It is a matter between consent holders as to whether that structure or that priority system is being adhered to. It might be that water users within a catchment have rationing regimes or flow sharing regimes that are different that are currently in place. So that's what the deemed priority refers to basically. If it would be applicable, I think Ms Dicey's intention would be to preserve this status.

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Q. And how might you do that then if you're suggesting this is all outside of the –

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A. It would be very difficult to do. We currently do not have policy in the plan that would support something like that or the setting of conditions. I guess you could make – you could impose consent conditions on new resource consents to replace deemed permits that basically establish a flow regime that mimics those priorities but I would assume that would only apply where all the consents or the consent holders in the catchment coming at the same time for new resource consent and agree to that as well.

15

Q. So you don't see priority as having anything to do with your primary and secondary allocation?

20

A. No.

Q. No? Nothing to do with that, you see it in terms of the mining privileges?

A. Yep.

Q. And other there any existing requirements of conditions that you can think of other than the ones that you've mentioned in terms of residual flows and cessation?

25

A. Some resource consents have conditions on them that they should cease water taking when other consents are being exercised so that could be an example of a flow cessation condition where you're required to stop taking when another consent in the catchment is taking. It might be often the consents held by the same person.

30

Q. I think I'm aware of some examples of those. So just coming back now to the DOC planner's evidence, appendix 1 I think it is, so that's the evidence of Murray Brass. So do you have that there?

A. Yes, I have, yep.

Q. So on page 2 of appendix 1 the submission refers to applied banding or some other suitable flow trigger to retain existing deemed permit priorities and then what we have recommended by Mr Brass is some new clauses. So I just wanted your opinion on these clauses, what you would understand by them and how you would see them being implemented.

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A. I fully understand where Mr Brass is coming from and I acknowledge the need, I guess, to protect instream values. Mr Brass, however, has also acknowledged in his evidence that it would be a complex and fairly difficult thing to establish coming up with some kind of a flow regime between different consents. It would be something that involve cooperation different consent holders. There's a risk that it kind of detracts from one of the intents of the plan change which is to provide for a quick and cost effective and easy process. So in a way it would make, especially when we put it on the controlled activity rule, it would make the controlled activity rule quite complex. So that's one thought. It's quite expensive perhaps. The other thing is the way the schedule works as well to some degree might actually help to address that concern. The schedule tries to estimate how much water is being taken on an instantaneous rate of take basis but also in terms of volumes daily, monthly, yearly. So what schedules does is it tries to come up with allocation limits that reflect the current pattern of taking, not 100 per cent, don't get me wrong. It will prevent that people with lower priority status will all of sudden ramp up their taking, either instantaneously or in volumes. So schedule might go some way in preserving the order between the different deemed permit holders. As I said before, you also before you establish that you also want to make sure that the priorities are actually still adhered to because if that isn't the case you upset the flow regime and I think there's a number of experts that have already, Dr Allibone was one of them that already have indicated that we need to be careful as well. More water is usually good but not always. In some cases, the current situation might actually help to sustain certain pockets of migratory galaxiids. I'm not saying that this is a good solution long-term but remember this is a very short-term plan change. It will be superseded by the new land and water plan which

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is to be notified – provisions will be superseded by the new land and water plan which will be notified by the end of 2023.

Q. So you're not a fan of what's proposed but I was trying to understand how you might work out what previous deemed permit priorities were and how you might not be able to easily do that or objectively ascertain what they are.

A. We can easily get them because they are stated on the deemed permit. So we have deemed permits at the ORC and the priorities between the different deemed permits are stated on them so that's not difficult. The difficulty is being sure whether those systems are actually observed by the deemed permit holders because we don't enforce priorities.

Q. Okay. So I don't know whether we've got an example of a couple of deemed permits that might illustrate what you're referring to. We may have in the evidence.

15 **THE COURT: JUDGE BORTHWICK**

Q. I think we have deemed permits which illustrate the licensing regime which has been carried over but I think the witness is saying they don't know whether individuals have exercised those rights as between themselves and other permit holders and I guess the question there arising if they have, is that on a continuous basis or was it just for a season perhaps, the dry year so I think it's what your evidence is, is that right?

A. Yes.

25 **QUESTIONS FROM THE COURT CONTINUES: COMMISSIONER EDMONDS**

Q. So just moving down my list, I'm nearly at the bottom of it. What I would like to have a look at now is the evidence for the plan MFE.

Q. ...is the evidence for the plan of MFE in terms of their suggestion on the controlled activity. So I am looking at page 33. So do you have page 33?

30 A. I do.

1645

Q. So the MFE witness has crossed out items B to I and now what's suggested as a suitable substitute is matters covered by the conditions of the existing deemed permit or water permit being replaced and I wanted your opinion as to what you think that might cover whether perhaps we could start by saying do you think that would be broad enough to cover all the items that you had under B2I?

A. It is probably too broad. You know in a way I can, again, Mr (inaudible 16:46:45) has a very valid concern. What he's trying to do is he wants to make the controlled activity rule more appealing, more attractive. The concern that I have with this particular proposal is that one of the key principles behind the plan change or two key principles behind the plan change is to avoid any further degradation and also to make sure that we do not reallocate paper water and that we actually bring the allocation and the new consent in line with historic use. I'm a bit concerned that these – that this recommended amendment would allow people to take more water and better utilise their existing allocation and in a way that would be losing – I mean the point of this plan change is to hold the line and I'm a bit concerned that we're not quite holding the line. But again he's got, you know, the intention behind it I am supportive of that which is to make sure that people instead of going for the non-complying rule get attracted to the control activity rule.

Q. So the next thing I wanted to ask you about was your restricted discretionary proposition and aspect of it. So if you could just find your page 61 I think that will be attached to your reply evidence? So I'm looking at B2, well actually I think you've got B1 but it's really B2 where you have – it's demonstrated in the application that and I guess I'm thinking well this is a threshold requirement for qualifying as a restricted discretionary activity, it's an entry point, so should be objectively ascertainable what it is you need to meet in order to be a restricted discretionary activity and I'm looking at your number 3, the environmental effects resulting from the use of irrigation will be reduced.

1650

**THE COURT: JUDGE BORTHWICK**

Sorry, Commissioner, what subparagraph are you on?

**THE COURT: COMMISSIONER EDMONDS**

This is page 61B and then it's got 1-1 but actually the settlement should be 2  
5 and then it's number 3 coming down so the first one's about buying  
infrastructure, the second one's about a more efficient use of water and the third  
one's about the environmental effects. Do you have that?

**THE COURT: JUDGE BORTHWICK**

Yep.

**10 THE COURT: COMMISSIONER EDMONDS**

Q. So I guess I just wanted to explore a little more how you would see this  
actually working because there's reductions and reductions, isn't there?  
There's no sort of scale on this so could be a minimal reduction.

A. It would rely on an assessment by an expert that demonstrates that the  
15 expansion which in many cases will be provided through a change in  
irrigation infrastructure that it has an overall net benefit on the  
environment. That could be either through avoiding runoff or that there is  
sufficient buffering between the irrigated area put in place compared to  
what previously there was from sufficient buffering from nearby  
20 waterbodies. It will be – it has to be done on a case by case basis.

Q. So early on you talked about having a net benefit approach so you're  
taking the environmental effects in the round, is that what you meant?  
And then you went onto talk about individual environmental effects.

A. Sorry?

25 Q. You mentioned individual environmental effects like buffering for example  
but before that you talked about a net benefit so I was trying to understand  
what you understood by this so it's quite a broad concept then, isn't it?

A. It is a broad concept. I think with irrigation expansion, if it constitutes a  
change from traditional, say, less efficient irrigation to more efficient  
30 irrigation systems, there are some potential benefits and there are some  
potential risks, like I said before, potential benefits could be a reduction

in run off which has a benefit in terms of you reduce e coli levels potentially in affected waterbodies but a risk is, and that is I think the evidence of Dr Olson kind of states that there is still a risk that there is increased nitrogen input as well from irrigation. So yeah, those – all those different risks and benefits need to be considered, I guess, within the application and adequately addressed.

**THE COURT: JUDGE BORTHWICK**

Q. Risks and benefits, what was that? All those potential –

A. Well, yeah, you have to do a – I would assume that whoever prepares the application looks at it in a comprehensive manner, you don't pick and choose and you say: "well it's going to reduce the risk of run off without looking at the potential for nitrogen leeching as well." So yeah, the intention behind the rule is really the broader intent behind the rule is that people that have started exploring irrigation expansion before the plan change was notified or before we started talking about it, they will want to maximise that and because they cannot currently apply under the controlled activity can, well they can, but then they lose that investment, they would be tempted to apply for a longer term consent under the non-complying rule for 15 years.

Q. I think we understand where this is coming from, probably don't yet understand what is meant by environmental effects much less how would you know or predict those with any confidence by 2035, so it's only a 15 year period. I mean, you've got an associated policy, yes you do, because you've amended 10A2.1 so and the policy is increase in irrigation area will result in a more efficient use of water but also there, environmental effects result from the use of irrigation will be reduced. How would you test that and is the language – is that appropriate language?

A. So if there would be any concerns around the wording of that I am happy to come up with alternative wording.

**THE COURT: COMMISSIONER EDMONDS**

Q. So I guess just looking at 2, you mentioned before holding the line was a phrase you used but increasing the area under irrigation, is that holding the line?

5 A. That is why we have specifically subparagraph 3 in there to make sure that the increase does not risk us to lose ground.

Q. I've come to the end of my list, it's nearly 5 o'clock.

**THE COURT: JUDGE BORTHWICK**

10 Q. I've got questions as well. I'm just going to hold you over on your oath. It just means that you're not to talk to Mr Maw or any other Council party or any other witness but you can talk to your kids. Just try and refrain discussing the case with anybody who's got an interest in the outcome or an interest generally, all right? We will see you back here at 9.30.

**QUESTIONS FROM THE COURT: COMMISSIONER BUNTING**

15 Q. Just a question if I may, you seem to have two requirements under that, where there's not a complete set of data –

A. Sorry?

20 Q. This is under this one that Commissioner Edmonds has just been talking to you about, it's just a restricted discretionary and under A3 it says: "where a complete set of data's not available", is that –

A. So the rule basically tries to provide for two circumstances where people cannot –

Q. So it's either/or is it?

25 A. It's either/or so for people that don't have a complete dataset that is required under schedule 10A4 and for people that have started or commissioned an expansion in irrigation infrastructure.

Q. So it's either/or?

A. Yes.

Q. Thank you, your Honour.

**30 THE COURT: JUDGE BORTHWICK**

So we're adjourned through to 9.30 tomorrow morning.

**MR PAGE:**

Just briefly, Ma'am, Commissioner, you were looking for a map of the minimum flow areas in the plan, it's appendix B to the regional plan, it's not reproduced in the common bundle but is available online.

**5 THE COURT: COMMISSIONER EDMONDS**

Thank you, Mr Page.

**COURT RESUMES ON WEDNESDAY 10 MARCH AT 9.30 AM****THE COURT: JUDGE BORTHWICK**

Good morning, anything arising overnight?

**MR MAW:**

- 5 Yes just an update in relation to the joint memorandum with respect to the conferencing topics and Ms Melhopt will provide an update in respect of that.

**MS MELHOPT:**

- 10 Morning your Honour, counsel have conferred overnight with their experts and we do have a joint memorandum of counsel setting out an agenda to provide to you this morning. It is signed by counsel for the Council, OWRUG and McArthur Ridge, it isn't signed by Landpro yet however the memorandum does incorporate the amendments to the agenda suggested by Landpro, so it is reflective of their conditions.

**THE COURT: JUDGE BORTHWICK TO MR REID**

- 15 Q. Okay so I'll look at that to see how well it accords with what we discussed yesterday and the other tasks that the court wants down prior to that conferencing in terms of you know agreement to the dataset and agreement on test scenarios and so forth and again, you know, I am very concerned as to the role of planners in this and I have expressed that now  
20 several times, particularly the ability to pick up on conference outputs where they're not necessarily present at the conference. There was one thing arising though overnight and it occurs to me and this affects you Mr Reid that you obviously think you're going to have a witness, Dr Daveron, at that conference but I don't actually have from you as directed any relief in a separate attachment if that is what you're pursuing.  
25 Can you please advise, is your client pursuing any relief, that is amendments to this plan change or are your clients seeking to reject the plan change, so really a bit of a moot point.
- A. The relief that we would be seeking, my clients would be seeking would  
30 be the relief that Mr Page's clients are promoting.

Q. Are promoting, okay. So it's Mr Page not Landpro?

A. Correct.

Q. Okay, very good. And then the second thing, that's very helpful so that's all I needed to know, I'm just going to go back to Ms Melhopt, Federated Farmers filed at my direction relief late Friday and that's obviously proposing something different again, I don't know whether they have a technical witness to support that relief, that is an expert or whether the, Ms Riley who I understand is an advocate, albeit a policy advocate, is going to be supporting that relief but should Federated Farmers be at that conference is the question for you, will they have an expert who's qualified to be at the conference in terms of the code of conduct. Have you thought about the role of FEDS here?

**MS MELHOPT:**

I haven't your Honour, I haven't turned my mind to that and I hadn't appreciated that they would necessarily be involved in the conferencing but –

**THE COURT: JUDGE BORTHWICK TO MS MELHOPT**

Q. So that obviously got quite a different approach again insofar as I think they're promoting something under the Canterbury Regional Council's plan which might be based on reasonable use as it seems to be the alternative to the Aqualinc approach on reasonable and efficient use so we've got two competing approaches. But I don't know whether they have an expert (inaudible 09:35:07) why experts are necessary is because they're non-partisan and they're qualified in terms of the Code of Conduct. So you haven't turned your mind to that?

25 0935

A. No –

Q. Because if Ian McIndoe must be there and I accept that he should be there because, you know, he's not just supporting the Aqualinc methodology but he's got something to say also about time periods and stuff, you know, which is generally relevant to the schedules.

30

A. Yes.



Q. Then should also somebody from Federated Farmers be there. So what do you think you can do about that? I mean it's not for you to pursue their case, they should be here.

5 A. Yeah I think we can confer with Federated Farmers or Ms Riley about that and have a look at what expert they do have supporting that –

Q. Supporting that.

A. – position.

10 Q. And if it's only Ms Riley then the parties will have to confer about her ability to be there given that I don't think she is – I think she's partisan and that's okay because she's advocating for Federated Farmers but whether that's okay in an expert conference is a total different matter.

15 A. And I think given the position of the other parties with their technical experts being involved in conferencing as opposed to their planning experts I think it would be appropriate to maintain the conferencing with the technical experts in the first instance.

Q. All right, well anyway it's something for everybody to think about because we probably want to have a collective view on who attends for Federated Farmers if it is not a person who is qualified in terms of the Code of Conduct and you'll come back to me over the course of the day?

20 A. Yes.

Q. And you'll file that memorandum with Ms Harlow?

A. Yes. We'll file –

Q. Yeah okay and we'll look at it at the break, yeah.

#### **THE COURT: JUDGE BORTHWICK TO MR ANDERSON**

25 Q. Mr Anderson?

A. There are two points arising from that. The first one you raised to Federated Farmers but also one that about (inaudible 09:37:10) response and Dougal McTavish and whether he also – he's qualified as an expert in matters which are sort of related but I'm not –

30 Q. Yeah but he's also that advocacy role as well.

A. He's qualified. In his evidence he's qualified himself as an expert. So I don't want to –

- Q. You know what the issues are. I mean don't get me wrong I understand that Mr McTavish that in the order sense of the word he would be probably recognised as an expert within his field but he's also advocating and so that's where the problem comes. Again it's something for counsel to confer. Again it's a question that, you know, yeah should he be present at the conference and that reminds me it's not just (inaudible 09:37:57) response but Southern somebody who also filed at my direction the relief that they were seeking but are probably self-represented I think.

**MS MELHOLPT:**

- 10 I believe so, your Honour, Southern Lakes Holding Limited.

**THE COURT: JUDGE BORTHWICK TO MS MELHLOPT**

- Q. Southern Lakes Holding Limited, self-represented. Now they're taking it probably again in quite a different direction from everybody else but they're self-represented.
- 15 A. Mmm.
- Q. All right, well I don't know. Again people should be present at the – at least for this witness should be present at this stage at this hearing to be able to put their questions. How do you think we should proceed?
- A. With the conferencing and the participation –
- 20 Q. With Southern –
- A. – of those parties in that conferencing.
- Q. Yeah.
- A. Given that they don't – Southern Holdings haven't lodged any evidence as I understand it –
- 25 Q. It's kind of a submission come evidence statement which –
- A. Yes.
- Q. Yeah.
- A. And they would have an opportunity to comment on the joint witness statement that was produced following the conferencing.
- 30 Q. Okay so you think just allow them to, all right. Well that's one way of handling it. Allow them to come in that way because the Court's not

bound by anything that the experts say, all right, because it's not a mediation.

A. And they would be entitled to speak to that in their submission that would provide to the Court.

5 Q. All right so that's Southern who otherwise – okay.

A. And just – sorry –

Q. All with Mr McTavish for (inaudible 09:39:42) what do you think?

A. Yes I know that he had requested to be present at the expert conferencing –

10 Q. He has, yeah.

A. – previously, there is – I do agree that there is an advocacy –

Q. Role, yes.

0940

A. – an advocacy role in that although he's addressing the technical aspects  
15 of the plan change so I think if we're restricting it to experts in that conferencing that would appropriate that he has the opportunity to speak to the joint witness statement and a presentation of their case at the hearing as opposed to being involved in the conferencing itself but why his response may have a different view on that but I don't understand that  
20 they're here to speak to that.

Q. So I guess we can advise of the expert conferencing and see if there are  
any other persons who say they're qualified to join or even if they're not  
qualified to join would wish to join and then what sort of protection around  
that or measure we can put around that given any advocacy role we would  
25 just play it by ears is what I'm saying. Anyone got any difficulty with that?  
No difficulty, okay. Thank you. Sorry, Mr Anderson why so we'll keep an  
eye on whys.

**MR ANDERSON:**

30 There's one other matter if I may. I would like to seek leave to put a late cross-examination notice in for Mr Hayes.

**THE COURT: JUDGE BORTHWICK**

Mr Hayes?

**MR ANDERSON:**

He's the fish and game fresh water ecologist. The question I want to ask him are related to Mr Allibone's evidence about (inaudible 09:41:29) populations of galaxiids and whether he's put in a flow table which he thinks is a good idea and I want to ask him some questions about whether or not the flow table will resolve an impact on the galaxiid that Dr Allibone had referred to and that hadn't arisen earlier so that's why I'd like to seek leave to do that.

10 **UNIDENTIFIABLE SPEAKER (09:41:53):**

Why it hadn't arisen.

**MR ANDERSON:**

In my mind. I don't want to say there was no evidence about that but until when he gave that evidence orally that's when I thought I'd like to test that against Mr Haye's on that point.

**THE COURT: JUDGE BORTHWICK**

I don't think there would be any difficulty with that. We're actually now ahead of time. So Mr Cooper would've picked up on that sitting at the back of the court. Did you get that?

**MR COOPER:**

Sorry, Judge. It's a bit hard hearing (inaudible 09:42:21).

25 **MR ANDERSON:**

I can raise that point.

**THE COURT: JUDGE BORTHWICK**

Somebody coming in on cross-examination giving a late notice but Mr Anderson's going to tell you about that.

30

**MR ANDERSON:**

Thank you, your Honour.

**MS MELHOLPT:**

Your Honour, one final housekeeping matter for the morning. We do have  
 5 hardcopies of the two High Court decisions that we were referring to in our legal  
 submissions regarding the NPS that we will provide to Ms Harlough this  
 morning for filing for you.

**THE COURT: JUDGE BORTHWICK**

Good and that's a reminder actually to all counsel for the bench at least one  
 10 hardcopy of the decisions that you're referring to. Otherwise I'll have to go back  
 to the office and print them off myself which is something that you can be doing,  
 not putting that one on me.

**QUESTIONS FROM THE COURT CONTINUES: JUDGE BORTHWICK**

Q. So we're back again with court's questions for you and there are already  
 15 questions for me and **(inaudible 09:43:21)** of just trying to understanding  
 again what is the problem that we're working on and as I see it. I want to  
 talk to you about your operative water plan. That's the first observation  
 and the change that's proposed is a change that pertains to the taking  
 and use of water, Is that correct?

A. Correct to the extent that it also captures deemed permits that go beyond  
 20 the taking and use of water. It also captures deemed permits for the  
 damming and the discharge.

Q. Yes. It captures damming and the discharge deemed permits as well.

A. Yes.

Q. And that's the use of water for the purpose of damming? In other words  
 25 impounding water behind a dam and discharge is discharge of water?

A. Discharges of water, often from dams you have discharges, releases of  
 water or it could be a by wash.

Q. By wash being what in relation to?

0945

30 A. I'm not an expert in the field but a by wash is basically where water is  
 taken into race, they want to maintain a certain flow within the race so any

excess water that is taken at the point of take is being discharged again into the source water body.

Q. Is that something that – I guess it depends on the spatial location of that by wash but is that something that could be a non-consumptive take is how some people refer to it?

5

A. From memory, there's a description of non-consumptive takes in our water plan and also in the water metering regulations. I cannot recall the exact wording but basically what it comes down to is that you take the water and discharge back at the approximate location.

10

Q. So there's a spatial element there.

A. If that doesn't happen then you actually get a localised dewatering in the waterbody and I wouldn't call it a consumptive take and it wouldn't be interpreted that way under the definition as well.

Q. Just remind, I didn't intend to ask you this, where did you get to in terms of those takes uses that are non-consumptive – are actually non-consumptive?

15

A. So all the takes –

Q. What was your recommendation?

A. My recommendation is that consumptive and non-consumptive takes are captured by the framework in plan change 7.

20

Q. And the rationale for non-consumptive is what?

A. For including them in the plan change?

Q. Yes.

A. Because a lot of the takes that are considered to be non-consumptive are actually strictly speaking don't meet the definition, also –

25

Q. What does that mean?

A. For example, if I may refer to the evidence of Trustpower, they talk a lot about non-consumptive takes but actually water is taken into a race and is taken out of the water body for a considerable distance. Also, I think it's important to consider the intent of the plan change which is to set us up for a new land and water plan within which we might have a new framework for managing non-consumptive takes as well. The whole water plan is under review. That means that we want to reconsider

30

current activities as soon as possible and bring them in line with the framework within the land and water plan.

Q. Okay. So I got myself diverted, so this is a water plan and primarily it's concerned with the taking use of water and may also be some deeming permits which concern the damming of water and also the discharge of water but primarily it's the interest here about the taking use of water. Would that be fair in terms of the submissions of the respondent?

A. Both because the reason for including damming as well is because often you have networks, irrigation schemes that operate under suite of permits some of which are damming, some of which are water and you want to consider them actually under the same framework.

Q. And that was what I was going to come to next. I don't have a sense from anyone's evidence to what extent does this plan or any regional plan provide for the integrative management of resources, natural physical resources and when, for example, Trustpower needs – or anybody needs to apply for further for a new resource consent or to rollover existing consents so a replacement consent, does that at the same time trigger a need also to apply for a land use consent associated with any, you know, the relevant land use activities and a discharge permit or can the water permits travel quite independently from those other activities, independently both – yeah independently as in at another time?

0950

A. That is definitely a risk that is – that currently exists.

Q. And why does it exist?

A. What I was going to say that there's definitely a risk that exists if we exclude certain activities from the Plan Change 7 framework –

Q. So my question was not about the plan change framework.

A. Yeah.

Q. My question's about your operative plan.

A. Yeah.

Q. I need to get a better sense as to what extent there was integrated management of natural and physical resources?

A. In terms of land use controls, we don't have any land use controls except where it affects or except where we talk about land in the sense of the

bed of a river. We have actually – I have to correct that. We do have some land use controls or land use rules relating to drilling of bores but that's about it. We are proposing under Plan Change 8 to introduce a number of land use controls as well. So we are trying to amend the plan to a small extent to give greater consideration of that integrated management in the interim while preparing a new land and water plan. But at the moment it is very limited.

5

Q. Both under this plan and any other regional plan that you may have. I understand you've got more than one regional plan.

10

A. We do, yes.

Q. You do. So how many regional plans do you have?

A. We have a regional plan air, a regional plan coast. We have a regional plan waste and a regional plan water. The intent is to basically consolidated the provisions currently that the (inaudible 09:52:29) management of waste and also management of water into a new plan that will also have a wider approach towards managing land. So the waste plan and the water plan will be consolidated into a new plan that goes beyond managing land as we currently do.

15

Q. And so for example your waste plan, which I haven't had a look at, that waste plan is it there where you would expect to find controls on the discharge of contaminants generally or are there none?

20

A. Only in relation to landfills.

Q. Only in relation to landfills, okay.

A. And a number of other discharges for example what we're doing now is reviewing the rules relating to the discharge of oil on roads.

25

Q. That's PCA?

A. That is PCA, correct.

Q. So let's forget about PCA.

A. Okay.

30

Q. Let's talk about what you're doing now.

A. Yeah.

Q. So I understand what the problem is that you're – this potential scale of the problem that you're responding to. So waste deals with landfills. The current regional plan for waste is concerned with landfills?



A. Primarily, yes.

Q. Primarily?

A. Yeah.

Q. Anything else or was it –

5 A. Like municipal landfills but also on farm landfills, smaller landfills, yeah.

Q. Anything else or was that about it?

A. That's from recollection.

Q. So in terms of the discharge of contaminants, is it your evidence that the extent to which this regional council manages the discharge of contaminants is under its regional plan waste and then it's confined to landfills on farm or in municipal areas?

10

A. Sorry could you repeat the question?

Q. To the extent that this regional council seeks to control the discharge of contaminants from, say, that's specifically what I'm interested in?

15 A. From water?

Q. From water, yeah?

A. Yeah.

Q. It does so under its regional plan waste and then only in relation to landfills whether on farm or municipal, is that what your evidence is?

20 A. Yeah so discharges from landfills are managed under the waste plan. Discharges from – point towards discharges or non-point source, discharges from rural activities are managed under the current operative water plan.

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25 Q. Is that done under chapter 7 of the operative water plan?

A. Correct. Chapter 7 includes the policies for managing discharges or water quality. Policies and objectives.

Q. To what extent does chapter 7 manage discharges from the primary sector?

30 A. I assume you've referred to non-point discharges.

Q. Yes.

A. They would be captured under the policies in 7B which are policies in general that apply to both point source and non-point source and then policies in 7D.

- Q. Are there any rules which pertain to sectors within the primary sector? So primary industries. For example, are there any rules which pertain to discharges from dairy shed use acknowledging that (unclear 09:58:30) dairying in Otago.
- 5 A. So the key rules that actually apply to the primary sector would be in chapter 12C of the water plan. We have again – we’re trying to update those through plan change 8. We have a number of rules in 12C that could apply to discharges from dairy sheds. An example of which would be 12C0 rules, some of the prohibited ones.
- 10 Q. Is it your evidence that there are no rules targeted at the primary sector? So if there’s a rule it only applies because generally speaking in a nonspecific sort of way the activity comes under that rule?
- 1000
- A. So are you referring to plan change 7?
- 15 Q. No. I’m trying to get a handle on how the Council currently manages in an integrated fashion, if it does at all, the taking use of water discharge and damming activities that are going on in this region.
- A. Yes at the moment we are not managing an integrated –
- Q. You’re not managing in an integrated fashion and why do say that, because that’s actually really important, why do you say that?
- 20 A. We have very limited provision in the plan or a policy that currently allow us to consider the land uses, specific land uses when it comes to assessing consents for discharges.
- Q. And what’s the problem with that, why is that a problem – I’m assuming that’s a problem because you’re – why?
- 25 A. The plan is basically the rules that refer to discharges, we’re currently effects based so we only look at what is the effect on the waterbody, the receiving waterbody, that is a, from a monitoring point of view that is sometimes very difficult from an implementation point of view as well so
- 30 as part of the new land and water plan we’re reviewing that approach and try to be a bit more proactive as well in that regard.
- Q. You say its difficult monitoring an implementation, why?
- A. The plan rules, a lot of the plan rules rely on a permitted activity approach which means that it’s the land holders responsibility to monitor the effects,

often, like I said we're trying to get to a more proactive way of managing the permitted activity, the effects based permitted activity approach often the effects are measured after the activity has taken place which makes it harder to go back or to react to that especially with discharges as well,  
 5 there is often a delay involved for example certain land uses, the effects of that could be leaching and the effect of that by the time nutrients travel through the ground – I am not an expert on this, I'm just –

Q. But you're in expert in policy writing though and so your response to the problem, you have to identify the problem and therefore what the  
 10 response is so that there is a delay in time and also spatially as to where that effect may emerge within the environment and the Council becomes aware of it when it arises, where this plan does not seek through resource consents anyway to manage the use of natural and physical resources, so that's the problem and in approaching it that way you are reliant on I  
 15 guess people in communities to be self-monitoring, am I within the ambit of the conditions and standards which are on this permitted activity rule, so the obligation is on the people in the community?

A. To a certain extent, the community, the land holders sorry, the land holders will monitor the effects of their activities, we still have the  
 20 responsibility to monitor the trends within the receiving waterbodies as well.

Q. But what I think what you are saying is that when there is a problem, it is after the fact and your ability to respond is reactive not proactive?

A. That is definitely a consequence of the current framework in the plan for  
 25 managing rural discharges.

Q. That's rural discharges and you, what would you, how would you describe a rural discharge?

A. A discharge?

Q. Yes.

30 A. That is the result of a rural activity, a rural land use, primary sector land use.

1005

Q. So we're talking about dairy shed washdown or are you talking about...

A. Irrigation.

Q. Washdown, irrigation, what else?

A. Land use in terms of whether it's dairy, sheep and beef, forestry.

Q. So it's the interplay between the land use and discharge. It's just not discharge by itself and your evidence is mostly these activities are permitted and whilst council has a responsibility to monitor the environment where there's change and an effect that is consequential upon change, so the change could be a change in water quality for example, and an effect that is consequential on that change at the moment, council's responses are largely reactive where those lands...

10 A. There is also the issue around uncertainty as well.

Q. Uncertainty and how would you describe uncertainty?

A. Uncertainty also for landholders because there's a lot of variables at play, rainfall might change leaching rate as well. So one moment, they could find themselves or discharges from run off, one moment they find themselves complying and the other moment not.

Q. And this is with the standards in the permitted activities.

A. Correct.

Q. And you wouldn't know moment to moment whether they're complying or not because it's self-regulation or self-monitoring.

20 A. Well, under the permitted rules, yes.

Q. Under the permitted rules. The only time you'd know there is a problem is if you actually had seen something in the environmental data which has been collected.

A. Correct.

25 Q. My impression and I might be wrong is that under this water plan you're able to apply for a take and use but it's not tied to also an associated obligation to apply for all other resource consents so the scenario, for example is this. I'm an irrigation company and I want to apply for take and use but it's not linked with any other land use consent that I might require or discharge permit that I might require as an irrigation company or in terms of the people to whom I'm supplying might require. So that there's no holistic assessment under this plan of the proposal but the proposals can come in in quite a disjointed fashion, is that right? Or am I wrong in thinking that?

A. Well, there is no mechanism in the plan that requires or encourages I guess landholders or consent holders to do so.

5 Q. So there's no mechanism in the plan that encourage or requires, I suppose where there is a proposal to take and use water, either by a large entity like an irrigation company or perhaps by an individual to apply at the same time for any associated land use or discharges or damming permits as may be required and it doesn't sound like they're particularly required. So is that right?

10 A. No, that's correct. Like for example, if you're landholder, you think you cannot meet the thresholds in the plan, you wouldn't be required to apply for the discharge consent at the same time as you apply for your water take.

Q. I see so is that a problem? Is that one of the problems that you're dealing with?

15 A. From a planning perspective it would definitely make it easier. Let me rephrase that. You'd probably achieve better environmental outcomes.

Q. Why do you think you'd achieve better environmental outcomes?

1010

20 A. I guess you could – there is a risk I guess if you consider different consents at different times for the same activity but for different aspects of that activity. There is a risk of inconsistency I guess in terms of the policies from which guidance is taken. There is especially the case if you would consider them under a different planning frameworks which is a risk now with the requirement to develop a new plan and the outcomes in the plans, the current plan and the plan that is to be notified are likely to be different as well.

25 Q. So the extent to which there is that integration of all uses, you know, the discharge damming land use and water permit applications, the extent that you can have an integrated application really does depend on the applicant volunteering –

30 A. Correct.

Q. – or coming to that themselves?

A. Correct.

Q. There's no policy imperative driving that approach?

- A. Correct.
- Q. And you can't require it?
- A. Correct. I do understand that there's, in a case law, I think a bundling principle which, yeah.
- 5 Q. And this plan doesn't bundle, if you like?
- A. No, no.
- Q. But other regional plans do bundle would that be fair?
- A. Possibly.
- Q. Have you had a look at other regional plans or not?
- 10 A. I have, yeah.
- Q. So I have just a specific question about fish passage. I understand that the MPS are clause 2.6 has a policy in relation to fish passage which is any regional council must include in the following fish passage objective or words to the same effect in its regional plan: "The passage of fish is maintained or improved by (inaudible 10:12:18) structures except where it's desirable to prevent the passage of some fish species in order to protect the desired fish species, their life stages or their habitats", (inaudible 10:12:28) been a fair amount of evidence about exactly that.
- 15 A. Yeah.
- 20 Q. Has the ORC or does the ORC propose to bring down that policy in its operative plan?
- A. We haven't taken any steps yet.
- Q. No steps, yeah.
- A. The idea is to have this policy or a similar policy in the new land and water plan.
- 25 Q. Is this policy relevant to Plan Change 7 or not?
- A. The issue is definitely relevant to Plan Change 7.
- Q. The issue is because there's lot of evidence about fish competing with each other.
- 30 A. The policy is relevant to an extent that you can take for example an application comes in, it is captured by Plan Change 7 under the RMA because it's a proposed plan you can have regard to the MPSFM.
- Q. Is this a matter that we should have regard to when deciding whether to impose your proposed controlled activity rule?

A. (no audible answer 10:13:47)

Q. In so far as you have reserve control over certain things of interest to fish?

A. Yes. So fish passage is one of the things that we can set conditions on under the control activity rule. Also under the non-complying activity rule we could consider that. I think it's definitely a relevant issue and it is one of the reasons as well as to why we extended the scope to damming activities as well. It is a requirement to provide for this under the MPSFM by capturing deem permits that relate to damming. We can make sure that when those activities are reconsented after being granted a short-term consent that we can align them with whatever measures that are – will be proposed and subsequently become operative in the new land and water plan dealing with fish passage.

Q. So just to paraphrase or reflect back what I think I've heard is that the retention of controls pertaining to fish passage when deciding whether to retain them or not, this NPS objective or provision is relevant to a determination of that matter.

1015

A. Mhm. Yep.

Q. Okay. Is there anything else in the NPS or indeed the NES which made the relevant to making a decision on proposed plan change 7 apart from fish?

A. I believe definitely the issue of efficiency, the idea of plan change 7 is really to provide for an efficient and cost effective reconsenting pathway. However, given that the NPSFM requires this to be efficient, not just in application but also in allocation of water, I think it's important that council should retain the discretion to where needed impose conditions on that matter.

Q. So this is efficiency in allocation or efficiency in use?

A. Both. Yeah.

Q. This is an allocative plan in so far as with all that's being done here, as many will be rolling over existing permits.

A. Yes, but an aspect of the plan change is to address allocation specifically unused allocation.

Q. Unused allocation. So what's NPS or NES provision dealing with allocation that you're referring to that you have in mind?

A. Policy 11.

Q. Policy 11. Okay. This is NPS?

5 A. Correct.

Q. Or the NES?

A. Correct.

Q. The NPS. Okay. What page? Have you got that there?

A. Page 9.

10 Q. Page 9. Okay, so policy 11 is also relevant when having a look at allocation in terms of, if you like, removing the unused allocation together with efficiency.

A. Yes.

15 Q. And is that one of the reasons why the council in terms of efficiency of use the council is mindful of Aqualinc method as being a relevant matter which it should be taken into consideration and a matter which would be relevant when looking under the matters of control, I guess?

A. Mhm.

Q. That's where Aqualinc comes back in.

20 A. That's where Aqualinc comes back in to however there is a tension. What we're proposing is to first and foremost align the new allocations with historic use. The Aqualinc guidelines, there's a risk that if you look at the need of a consent holder to apply certain volume or rate of take to his land, you'll end up with – if you apply those guidelines you could end up  
25 with a volume or a quantity of water that exceeds historic use. The reason for that is that sometimes people have not fully utilised their consented volume and then have consequentially not optimised their irrigated area. In some cases, people only irrigate certain paddocks at certain times of the year when the water is available. Aqualinc ignores that. It looks at a  
30 demand on a yearly basis. That is my understanding. There is an example I think in the evidence of Mr Simon Webb where his current use is below what would Aqualinc recommend and so we want to avoid further allocation as a precautionary measure, that's why we prioritise first looking at historic use.



1020

Q. Okay, with that said Ms Dicey's, I know Ms Dicey has a lot of methodological differences but one of the things that she proposes is that it's the lesser of Aqualinc or historic use.

5 A. Yes.

Q. Does that respond to your concern or not?

A. I've given it consideration and I think I agree with the broader principle.

Q. With the principle of that, yes.

A. If you look at the lesser of historic use and the Aqualinc guidelines you come up with something that will avoid over allocation or further allocation, excuse me, and that is at the same time efficient. The key thing however is how you calculate historic use.

10

Q. Yes, that's a different issue.

A. That's a different issue and so that is something to bear in mind, the other thing is, I come back to the fact that we want to provide for a cost effective process as well by doing those assessments both assessments, it is likely to increase the costs for applicants as well.

15

Q. Yes I know but you're envisages this, aren't you? You're, I thought that was your evidence under policy 11 you envisaged that applicants will come back to you and will say using a method, you know, Aqualinc method or equally for Federated Farmers, the ECAN method in its plan which is a reasonable use method as well.

20

A. Not under the plan change 7, on the plan change 7 we would require applicants to look a – or we would look at historic use assessments only but we have the opportunity under the (inaudible 10:22:35) of control and the controlled activity rule to also look at efficient use if required.

25

Q. Yes, if required by whom?

A. Consents officers, if they – the consent authority, they have the discretion to set conditions on that in the replacement consents.

30 Q. What circumstances would they look at efficient use?

A. They would look at whether there's any, they would look at the irrigation method, they would look at leakage, yeah.

Q. Why would they even be interested?

A. You still want to provide from an opportunity I guess to make steps to more efficient use as well.

Q. I see, so applicant can provide historic take but you can then in your discretion also have a look at the reasonableness of that –

5 A. Correct.

Q. – and if they're leaky or inefficient then say, no you can't have your historic, you can have something much less?

A. Yeah, it's –

Q. Soemthing like that?

10 A. Yes.

Q. Now just testing that a little bit further, I didn't think you were wanting to knock peoples historic uses – and that's what was attractive about this is that you are simply by and large rolling over. You're knocking back –

A. That is correct, yeah.

15 Q. So I'm a border dyke coming to you and – which isn't the most efficient use but it's a wide spread use, would you look at my operation and go well I don't like that you ought to be on a pivot irrigator? How would you use this, that's what I'm asking you?

A. I agree with what you're saying, the first thing is to provide for, to make  
20 sure that people get their historic use in their new allocation but as a consents officer, which I'm not, I would, yeah, have a discussion with the applicant and see if there is some way of increasing efficiency.

1025

Q. So this gets back to the problem that you're working on. Is this a very  
25 confined plan change where you are going "I've got an immediate problem within the regional council, I've got all of these deem permits and replacement permits coming through in the next, you know, 24 months. We don't have a fit for purpose water plan or regional plans in place and also the RPS is about the be re-notified. The best we can do is just simply  
30 roll them over on historic use", and I understand that problem and therefore what might travel with the investigation of that problem but you're kind of having a bob each way aren't you, saying: "Well that's your historic use border dykes, (inaudible 10:26:06) and now we want you to

become efficient.” Is that the problem that you’re working on is my question increasing efficiency? What is the problem?

A. To this plan change?

Q. Yeah?

5 A. To this plan change we are not trying to solve the efficiency of use problem but we don’t –

Q. But you’ve just told me you are and, yeah.

A. We want to keep the door open if there are any possibilities, you know, we want to –

10 Q. Because that’s a bob each way in it, and you know in terms of having a really – in terms of minimising the cost I guess for the primary sector but it may apply more broadly, minimising their cost and making this really attractive?

A. Yeah.

15 Q. “All we’re going to be doing is rolling over your consent conditions.” Now you’re requiring them to become efficient.

A. Not requiring, it’s not a requirement. It is just a matter that we listed in there to provide consent officers with the – if needed and if really appropriate to set conditions on those measures but there’s no policy to support it and it wouldn’t be a standard requirement for every consent.

20

Q. But you see there should be a policy for it shouldn’t there? If efficiency gains is what we’re after there should be both – that should be reflective and somehow in your objective and also your policies, would that not be fair?

25 A. It would definitely provide better guidance.

Q. Well actually it’s just a requirement, isn’t it, because you’ve got, you know, policies, implemented objectives, rules, methods, implement policies, that’s how it goes so we would need to see that –

A. Yeah.

30 Q. – policy, you know, beginning with policy (inaudible 10:27:57) but we’d need to see what is your outcome and then travelling all the way through down to the rule and that there’s no sudden reservation of a discretion which is un-related to your objective and policy. That’s normally what you would expect to see in terms of the draft and technique here, okay. So

you're saying is: "Okay we've got a matter of control here which would be useful for consent officers to have in the ordinary course", I would understand that because there's not the ordinary course and there is no policy which is driving efficiency gain.

5 A. Mhm.

Q. Isn't that a problem with the proposal that I'm putting to you?

A. I guess it creates a policy you pointing at a policy gap –

Q. I'm pointing at an orphan method that has no parent. Okay we'll just leave that there. It's something to think about. Are there any other orphans in that rule or any other rule, any other orphans that don't have any parents? Things that can't be parented by your objective or by your policies?

1030

A. Not that I can think of, your Honour.

Q. Okay. That probably requires just a bit more thought as to where the objective as you've written it, transitioning towards long-term sustainable management, whether that's captured there but again as a policy question how then is that brought down through the policies but it's something to think about in terms of what you want to get out of this. What is the imperative here? Is that to roll over and allow the policy team and the consents team time that evidently it needs to have an integrated – to think about a plan that provides for integrated management of natural and physical resources? Or do you want them?

A. If I may add to that, your Honour, and a number of submitters have pointed that out as well, the objective itself does not state an outcome, an environmental outcome.

Q. It doesn't.

A. We have considered and I've considered it and thought about it. The outcome really and that is captured in the objective. The outcome is really to establish that framework. That's what is captured by the objective. There is a risk of stating an environmental outcome in your objective that it's not going to be achieved through the policies because that's not the intent of this plan change really. This is a very confined plan change in terms of scope. Just a simple rollover. The outcomes that we want to go towards haven't been decided yet because that is a process that we're

undertaking to our FMU process and that needs to be done in accordance with the **(unclear 10:32:46)**. It's not within the scope of this plan change so it's purely procedural if you wish.

5 Q. Yes, purely procedural which is how I understand it. May be that's not captured by the objective but there is no environmental outcome in terms of avoiding further degradation or reducing degradation of water quality, is there?

10 A. It's not stated in the objective. It is captured by policy 10A21 for the matters that are listed. They seek to achieve that. they point at a number of tools to achieve avoiding degradation.

Q. Avoiding degradation.

A. Yeah.

Q. Okay. So it's avoiding degradation, Is that right? Avoid an increase or avoiding it per se or?

15 A. This is not what is in the policy but that is what the intent is for policy 10A21.

Q. You want to avoid degradation?

A. We want to avoid further degradation, losing ground really.

20 Q. You want to avoid losing ground. Okay. So when you're talking about degradation you're now no longer talking about that term as it might be understood in the NPS.

1035

25 A. Yes, I do actually because – if I may, just, I'm just gonna take the definition but stated the definition of degradation or degraded in paragraph 9 of my evidence in reply. By avoiding any further or by limiting the risk of further water abstraction and irrigation expansion or intensification we really want to make sure that we're not getting further away from the attribute stage or from the take limits because that's how allocation limits are now called in the NPSFM that we're not getting further away from achieving those.

30 Q. Okay through an increase in water attraction or an increase in the area under irrigation?

A. Yep.

Q. Because – carry on.

A. Also by making sure that we carrying over any existing minimum flows or residual flows, again if we would not have that there is a risk that we kind of, worsen environmental outcomes.

5 Q. Because environmental outcomes are they effect of quite a large number of activities, that's both the taking use of water, the land use, the discharge, the damming changes the environment, would that be fair, first there is a change as a consequence of those activities, correct?

A. Correct, yes.

Q. And as consequence of that change there may be an effect?

10 A. Yes, correct.

Q. Within the environment which is including both the natural environment and including people in communities, there is an effect, that effect might be expressed immediately or it might take a long time to emerge and it may emerge, correct, that would be correct, immediately or over a long period of time?

15

A. With water quantity the effects are usually quite immediate, you know, if you take water out of a river you see immediately a flow loss –

Q. Yes that's why I said actually a range of activities, not just water quantity. So the effect of associated activities with the water quantity emerge over time, either by themselves or together with other changes within the environment.

20

A. Mhm.

Q. Yes, okay. So whatever's happening now, if there is an effect or an adverse effect of what is currently happening in terms of the taking use of water will continue to happen over the next six years –

25

A. Correct.

Q. – if you like. This plan change is not working on those problems?

A. That is correct.

30

Q. That is correct and so when you're talking about degradation, you are avoiding further degradation you are talking about an additive change with consequential effect, that's what you want to avoid (inaudible 10:38:47).

A. Correct.

Q. To the extent that you can given that you don't in fact, you say the plan is not managing in fact a array of activities which are also associated with the taking use of water.

A. Not simultaneously, yes.

5 Q. If at all because most these other things are permitted.

A. Yes.

Q. Okay. So anyway, by degradation what you're seeking to avoid is any additive change?

A. Correct.

10 Q. As a consequence of the taking use of water or an increase of area of land under irrigation, you are not working – that's correct?

A. That's correct, yes.

Q. And you're not working on the problem of the existing state of the environment whether that is degraded or not relative to any attribute or value?

15

A. It's not –

Q. It's not that?

1040

20 A. It's not that. I think it's – we're dealing with complex issues really. We have a limited time window available to develop a new plan and we'll need all the time to deal with those issues. This plan change has been developed over in accordance with the Minister's recommendation over a three month period.

Q. Yeah, mhm.

25 A. So, yeah, it wouldn't be – it would be – I think you need to be careful as well and we've heard that before. It's a complex hydrological and equiological environment and we need to be careful as to how we are seeking to achieve an environmental improvement.

30 Q. And some parties say you should be. That's what I gather from your (inaudible 10:41:09) –

A. That is correct, yes.

Q. – working to improve the state of the environment?

A. Yes.

- Q. And we'll hear shortly from them I suspect but looking at the issue of not increasing the area of land under irrigation, you have recommended an exception for folk that have purchased or made a financial investment in irrigation?
- 5 A. Correct.
- Q. Infrastructure prior to the 18<sup>th</sup> of March 2020, correct/
- A. That is correct.
- Q. And how many folk do you know are in that category?
- A. I don't know.
- 10 Q. You don't know. Who raised this then?
- A. It came to this expert evidence of Ms Marr who –
- Q. Marr?
- A. – acting on behalf of beef and lamb.
- Q. Beef and lamb?
- 15 A. Yeah.
- Q. So anyway you've got a new amended policy 10A21 and to recognise people within that category and you said provide and the increase in area under irrigation will result in a more efficient use of water than the existing use of water. What did you mean by that?
- 20 A. (no audible answer 10:42:29)
- Q. So we're looking at 10A2.1Bii, first part of two, what did you mean a more efficient use of water than the existing use of water?
- A. More efficient application of water because often application method is linked to environmental risk. It is – again there are – I'm not an expert in
- 25 the area and there are many variables but more efficient uses generally reduced to risk of run-off or, yeah, that's – so basically what we want to do here is people that have invested discouraged them from applying for a longer term consent (inaudible 10:43:14) complying rule but also put in a few – a safety net so to speak to make sure –
- 30 Q. You don't need to defend what you're doing because I actually understand what you're doing, I'm just wondering how this policy's going to be implemented, that's all, "so I am an applicant who has – can prove that I have made that investment, so tick, and I now need and I would like



to increase the area of land under irrigation but I am not in fact going to be taking more water so I'm still coming under my historical use", correct?

A. Yeah.

5 Q. So the increase – but the area of land, just say it's dry land currently, so the increase in area of land under irrigation will result in a more – so the increase in the area of land under irrigation results in a more efficient use of water. I don't get that. You know you're – to be able to use the same bucket of water more efficiently I might need to change from border dyke to a spray irrigator for, you know, for the land in total –

10 A. Yes.

Q. Sorry just, again, what's that getting at? You want to see a change in irrigation Infrastructure or what do you want to see?

A. Irrigation method and how the water is being used more efficiently.

15 Q. Does that depend on your clocks though? I mean is it possible to say three days on this block and, you know, two days on that block? No change in efficiency, it's just a different method of irrigating it?

A. Yes it's possible, yeah.

1045

Q. So it's just using the same bucket of water but differently.

20 A. Correct over a greater area.

Q. Over a greater area. Okay. I'm not sure how that would work. "Environment effects resulting from the use of irrigation will be reduced." What does that mean?

25 A. We want to make sure that it doesn't result in degradation of receiving waterbody because that comes back to what we're trying to on this plan change like avoid further degradation.

Q. So what are the things under consideration there?

A. Any discharges that might be resulting from the practice or the proposed activity.

30 Q. So you are going to be irrigating a new block of land, suggest that you might also be undertaking a different land use activity on the new block. If you're moving from dryland to irrigation more than likely you could be moving from irrigation to more intense – it's already under irrigation. I

don't know. This is complex. To look at environmental effects, you would need to be looking at land use and discharge at least.

A. You need to look at land use, discharges, land management practices as well. So it's actually described pretty well in – I think the evidence of  
5 Dr Chrystal as well.

Q. Mhm.

A. Which shows that you might be able to increase the area without there being additional adverse effects or you might actually potentially – because I think it's not a rule of thumb but in some circumstances you  
10 might actually get to a more environmentally friendly outcomes.

Q. A benefit so accepting that that is the case, do these words drive for that outcome?

A. Yes.

Q. You think so?

15 A. That's the intent.

Q. That's the intent. Okay.

A. If you don't meet these outcomes stated like more efficient use, and an environmental benefit then the applicant would need to apply under the noncomplying rule.

20 Q. This being a water plan and with no other associated land use or discharges, would this policy have to operate in tandem with PC8 in order to be effective? In other words, would you not just simply get an applicant saying, "well, you know removing from border dyke into spray that's efficient. We reduced run off." They might say that. but unless you could  
25 demonstrate what the nutrient loading was and what other land use management techniques are happening on that land, you couldn't assure yourself that, in fact, there was either a benefit or is there an effect?

A. With regards to plan change 8, there is no overlap. Again.

30 Q. I'm really surprised that you say that because plan change 8 is now backfilling the absence of land use control, isn't it? To a small extent.

A. To some extent but again the focus is on the land and water plan.

Q. So I'm asking you what do you think an application is going to come up with here? Are they just saying they're going to change the nozzles on

the irrigator? That's more efficient therefore there's less effects or are you expecting something else?

A. I would expect an expert assessment especially when it comes to looking at the effect of potential discharges.

5 1050

Q. And that's picked up under your RDA stuff?

A. Correct.

Q. Okay just looking at the discharges how's that picked up?

A. There is, in terms of the matters of discretion?

10 Q. Yes how are the land use and discharge matters –

A. Yeah it would be the last one out.

Q. It would be the last one out, okay. Yes, is that something that you could be a little bit more specific about rather than just any adverse effect because any adverse effect I bet you the planner will say it's restricted to water, it's just a change of nozzles on the irrigator, we're more efficient, there's less runoff, that's it end of story.

15

A. I think so.

Q. You think so?

A. No, yeah agree–

20 Q. No I'm just putting it out there because you've got a rather significant change sitting here and you don't know – which has come in from beef and lamb and you want to respond to them, it's a reasonable consideration in your view, but you don't know how many people are actually in this category, so I'm just, yes.

25 A. I don't know, the best I can do is make a guess. Because we are currently in a process where a lot of deemed permits are expiring I think the deemed permit transition or replacement process often goes, from observation, it often goes hand in hand with some unfarmed changes, that is an assumption.

30 Q. So you'd want to test that wouldn't you?

A. No want to test it but I want to provide in case that would be the case, yes.

Q. Yes okay but I think you'd want to test that assumption in terms of knowing how many people are potentially within this category and might

want to take advantage of that, you want to also, I think, I'm going to suggest also think about the words 'adverse effects' and whether or not that's actually useful language in this context where at best your managing risk.

5 A. I agree and I think –

Q. Over a short period of time.

A. Yes, it's come up with relation to other matters as well but whether we can be more specific around thresholds, think that will be discussed later on especially in relation to the non-complying rule as well whether we can work specific in terms of quantifiable thresholds on to it.

10 Q. Well yes and no but just be, if risk management is all you can achieve is reasonably what you can achieve within a very short period of time because these rules are applying to a short period of time because other people have got other views and (inaudible 10:53:35) but if it's risk management as opposed to being able to categorically predict an adverse effect emerging within the same time period in the future, then think, you know, you'd need to think about the language and such that it's redolent of the issue that you're working towards and not using old language which may not serve its purpose within a water context is what I'm suggesting.

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**COURT ADJOURNS: 10.54 AM**

**COURT RESUMES: 11.20 AM****CROSS-EXAMINATION: MR WINCHESTER**

Q. Good morning Mr de Pelsemaeker?

A. Good morning.

5 Q. I want to start some questions regarding the basis for PC7 and the alternatives proposed and then I want to deal with some of the areas of difference between you and Ms McIntyre for Nga Runanga. Now the first issue I want to address with you is around problem definition and you'll be aware from some of the planning evidence that there seems to be a  
10 degree of denial that there is a problem that PC7 needs to solve, would you agree with that?

A. I agree, yes.

15 Q. But in many respects the situation in Otago is pretty unique, isn't it, because you've got significant reliance on deem permits, a significant number of deem permits and some degree of inaction by the council in addressing this issue for the 30 year duration of them but those are all relevant factors aren't they?

A. That is correct, yeah.

20 Q. And you've got significant over allocation in many catchments, that exists as a matter of fact doesn't it?

A. We haven't really – well the current plan does not define over allocation. We haven't really established the limits that will be in a new plan so it's hard to kind of say where and to what extent we're dealing with over allocation but there is, in my opinion, there's high levels of water use and  
25 it is – there is definitely a risk that we're dealing with over allocation and, yeah.

Q. And I believe in your evidence-in-chief the regional council considers there's a growing demand for consumptive uses, so demand is on the increase as well isn't it?

30 A. It is. We've got a, yeah, we've got a number of growing population centres and also in the rural area we see an expansion, yeah.

Q. And there seems to be no dispute, certainly from the regional council's perspective that the existing regional planning framework is inadequate

to manage the demands on fresh water and it doesn't – it's not necessarily entirely reflective of the Treaty of Waitangi principles, is that a position you would agree with?

5 A. I agree. The current plan limits the ability to give consideration to values that are relevant to iwi.

Q. And would you also agree that the regional water plan reflects a prioritisation of use of water and reflects a paradigm of commoditisation, it sees water as a useable resource first and foremost?

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10 A. One of the problems with the water plan is that it's got a number of objectives when it comes to managing water and those objectives can be conflicting. For example we've got an objective that basically states we need to provide for the needs of primary and secondary sectors and then we've got another objective that says you need to provide for life support and capacity when there's a conflict and when you cannot provide for both the water plan does not give you any guidance, so it's really hard to – it doesn't reflect the priority under the MPSFM.

15 Q. If I can maybe approach it from a different direction. We've got case law now on the national policy statement for freshwater management for 2017 version, the Southland Regional Plan case law, are you familiar with that?

20 A. I'm not familiar with it, no, not in any detail, no.

Q. Well in terms of the concept of a paradigm shift in the way of thinking about freshwater, are you familiar with that terminology?

A. Yes, yeah.

25 Q. And so what you have and certainly in the Southland context was a very clear finding that the MPS 2017 reflected a paradigm shift in thinking about freshwater.

A. Mhm.

30 Q. And now we've got the 2020 freshwater MPS and that is quite explicit around what prioritisation should occur to give effect to (inaudible 11:26:51) and so you've got that quite different way of thinking about freshwater haven't you?

A. Yeah.

Q. And the fundamental requirement of that is to put the needs of water bodies first isn't it?

A. Correct.

5 Q. So when you think about that and combine that with the other Otago specific factors, you would agree then that there is a significant probably in the way freshwater needs to be managed in Otago, do you?

A. Correct, yeah.

10 Q. And the Minister for the Environment has issued a direction that PC7 be considered by the Environment Court and has identified a number of reasons that he has given as to why it's a matter of national importance and you'll be familiar with that direction are you?

A. I have read them, yes, yes.

15 Q. And obviously some planners have not addressed that matter in their evidence but based on your knowledge and understanding, is there anything in the Minister's direction and reasons that you disagree with? Because you're entitled to give an opinion as to whether there's any gaps or there's anything missing there or inaccurate.

A. No.

20 Q. Thank you, I now want to just move to one of the alternative regimes that has been advanced by some of the planning witnesses and some of the parties and that is a suggestion that plan change 7 is unnecessary and that we should be dealing with NPS implementation through consent renewal process and it can all be dealt with through a consenting process. So my understanding is that the bulk of renewals of deemed permits and  
25 existing water permits would be dealt with as a restricted discretionary activity under 12.1.4.8?

A. Correct.

Q. And are you familiar with that particular restricted discretionary rule?

A. Yes.

30 Q. So that's common bundle, your Honour, common bundle 1 page 182, 183. Just before we look at that rule, Mr Pelsemaeker, are you familiar with a resource consent decision made by an independent commissioner on behalf of the Regional Council, *Last Chance Irrigation Company Ltd*?

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A. Yes, I am familiar, I've read it but it's a while ago.

Q. And that related to an application for renewal for water takes from some waterways draining the Old Man Range in the Fruitmans area and which are partially used to fill (inaudible: 11:30:51), is that your understanding?

5 A. Yes.

Q. And in that decision made by an independent commissioner, it was a very firm finding made that under rule 12.1.4.8 there was no ability to consider values of interest to Kāi Tahu or any cultural effects, is that your understanding of that decision?

10 A. That is my recollection.

Q. Yes. So that's an obvious issue if we're going to continue down the 12.1.4.8 route with all of the renewals, isn't it, because in a way that excludes consideration of a reasonably material consideration, doesn't it, if Otago Regional Council adopts that position.

15 A. Correct and especially in light of the NPSFM and the compulsory values and the new NPSFM.

Q. Yes. And so if we look at rule 12.1.4.8 and we assume that we're going down a regime of renewal of resource consents, have you thought about the ability to have regard to the national policy statement for freshwater management under all of those matters of discretion, is that something you've thought about?

20

A. Yes.

Q. And have you reached a view about that as to whether you can shoehorn the NPS into any of these matters?

25 A. It refers to a number of mechanisms such as the minimum flow which arguably could provide for these matters but the plan itself does not – the primary objective that guides setting up minimum flows does not provide for consideration of cultural values. So I would say – you could argue that there's an indirect link but it's not a clearly defined link. It would be better if it was more explicit.

30

Q. Yes because nowhere amongst those matters does it say that you're entitled to have regard to any relevant national policy statement, does it?

A. It doesn't.



- 5 Q. No. Okay and so looking ahead if we assume we're going down this path, you could imagine there would be some debate if for example my clients wanted to introduce consideration of the NPS and applicants did not, there'd be quite a strong debate about the relevance of those matters, wouldn't there?
- A. It would follow from, I believe, the wording in the RMA which says: "have regard to", which is not the same as: "give effect to", so there is.
- Q. And you're familiar with section 104C of the RMA which deals with what you can have regard to for restricted discretionary activities?
- 10 A. Yes.
- Q. Thank you. So let's just put that to one side and let's assume that everyone agrees you can have regard to the NPS under this rule. So that's an assumption I want you to build in when you're thinking about this, in terms of a matter to have regard to, and I realise you're a policy planner rather than a consents planner, the NPS wouldn't be an overriding consideration, would it? It would simply be one of a number of matters to have regard to.
- 15 A. Correct, there's no obligation. The other thing as well that I think is an issue with that is that the NPSFM sets out a process of outcomes that need to be achieved but the outcomes themselves still need to be determine to run off framework or through an RPS in which you define what (inaudible: 11:35:40) means or the long term vision so you don't have the actual endpoint so it's really hard to make a consent decision that actually achieves that.
- 20 A. Correct, there's no obligation. The other thing as well that I think is an issue with that is that the NPSFM sets out a process of outcomes that need to be achieved but the outcomes themselves still need to be determine to run off framework or through an RPS in which you define what (inaudible: 11:35:40) means or the long term vision so you don't have the actual endpoint so it's really hard to make a consent decision that actually achieves that.
- 25 Q. Yes and so you wouldn't be – while the requirement is not to give effect to the NPS through a consenting regime, you wouldn't be able to give effect to it anyway because you wouldn't know what the endpoint was, is that correct on a case by case basis?
- A. Correct, you could take some guidance from the policies but I think the endpoint itself, as the limits or the outcomes or the attribute states – target attribute states that you said in your plan.
- 30 Q. And so essentially one of the things you might have to do is try and identify Te Mana o te Wai and define it for individual applications, wouldn't we?

**[SOUND INTERRUPTION FROM 11:36:40 TO 11:37:05]**

**THE COURT: JUDGE BORTHWICK**

We're going to sort this. I say with confidence because court security has gone out the door.

5

**MR WINCHESTER:**

I might box on, your Honour.

**THE COURT: JUDGE BORTHWICK**

You might box on? If we need to pause, just pause, this is too important to be lost.

10

**CROSS-EXAMINATION CONTINUES: MR WINCHESTER**

Q. So you would also need to consider, wouldn't you, the regional water plan framework as another relevant matter?

A. Correct.

15 **[SOUND INTERRUPTION]**

**THE COURT: JUDGE BORTHWICK ADDRESSES COUNSEL –  
CONSTRUCTION NOISE PAUSE IN EVIDENCE (11:38:40)**

**MR MAW:**

We could usefully use the time just to talk about the timeframes for the production of further evidence from the consents team (inaudible: 11:39:04)

20

**THE COURT: JUDGE BORTHWICK**

Yes.

**MR MAW:**

The plan is to call two witnesses from within the consents team. The consents team manager is across the broader work programme in terms of how the consents team is preparing to process the applications that are to be lodged. The second witness will be a consents planner who has been processing

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consent applications including applications lodged post the notification of plan change 7 so for the real world experience, their plan change has been considered and applied today.

**THE COURT: JUDGE BORTHWICK TO MR MAW**

5 Q. Right and that real world experience, how's that relevant? I mean, I don't want them discussing the applications as such.

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A. Some of the questions that you had identified when it was suggested that the Court might be assisted by this evidence are outside the scope of  
10 expertise of the manager of the consents team so having a second resource available in terms of how the plan changes are being interpreted in terms of some of the matters of control and et cetera was considered that the officer processing might be better placed to answer those questions.

15 Q. Alright. Okay.

A. What I had in mind was calling the two witnesses jointly to fill the question from the Court and it may well –

Q. You mean not producing anything written in writing?

A. Oh, no, they've both produced written brief of evidence but just in terms  
20 of making sure the right person's able to ask the right question that may be more efficient.

Q. Okay, because there's an overlap.

A. We'll get the evidence produced first and perhaps make a call on that. As to timing we were working on having that evidence really at some point  
25 tomorrow and then lodged and it'll be a matter of timetabling those witnesses and I'll need to talk to my friends about other witness availability as to when we can slot them in but presumably the sooner the better.

Q. Yes, about the scene setting. I think it's really important. That sounds good. Anyone got any difficulties with that? No. Okay. I'm obliged to  
30 thank your witnesses. We're good to go.

**CROSS-EXAMINATION CONTINUES: MR WINCHESTER**

- Q. Thank you, your Honour. Thanks Mr De Pelsemaeker for your patience. Now, my last question was around the need to also consider the regional water plan framework as a relevant matter and I think we've talked about the way that it seems to prioritise consumptive uses. So you've got that factored – have regard to, you'd agree and it also favours long consent durations, doesn't it?
- 5
- A. It doesn't give much direction in terms of consent duration. It's more like a list of matters but it creates an expectation for long consent durations and the practice has shown that that has been the case.
- 10
- Q. Thank you that's helpful. Would it be fair to say that the existing RWP framework doesn't deal very well with the concept of accumulative effects? It tends to deal with things in a very much case by case basis.
- A. It is a difficult matter to grapple but I agree with you in general, yes.
- 15
- Q. When you've got those factors to also take into account you'd agree that for a restricted discretionary activity application you're going to struggle to achieve the NPS goal of putting the needs of a waterbody first, aren't you?
- A. Yes.
- 20
- Q. And I think you've referred to the procedural directions in the NPS around tangata whenua involvement and they occur several times around clause 3.4 and other related clauses, don't they?
- A. Correct. Yep.
- Q. So if we go down this framework that simply won't occur, will it?
- 25
- A. The risk is that you create a framework that will be – sorry the regime that will be in place will be determined by consents as you'll have difficulty to bring them in line with the regime that will be in your new land water plan.
- Q. And that's the exercise that regional council and mana whenua have embarked on at the moment, isn't it?
- 30
- A. Correct.
- Q. And both parties are seemed to be placing quite a lot of weight on that.
- A. Correct.
- Q. So you then think about the ability to take into account treaty principles. Treaty principles aren't referred to in rule 12.4.1.8, are they?

A. No.

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5 Q. And in the absence of going through the procedural requirements of the MPS, which is itself a reflection of three different principles then that effectively, that couldn't happen under this regime could it?

A. No.

10 Q. Thank you. I want to now just deal with some differences between you and Agnes McIntire and I wonder if the simplest way to do it is to have a look at your latest recommended version of plan change 7 so that's the one that incorporates your amendments of 4 March, do you have that at hand?

A. (no audible answer 11:45:52).

15 Q. I wonder if you also just have your evidence in chief at hand because I just want to, I want to keep going on your new restricted discretionary activity rule and you've had some interaction with the Court about some of the detail and purpose of that but I just want to ask some further questions around that. So in your evidence in chief and I look in particular at your analysis at page 107 and paragraph 365 and following and there's quite a detailed analysis there which runs for, my maths is not particularly  
20 good but about six pages where you analyse the concept of why increasing the extent of irrigatable area is not a good idea and you've very thoroughly identified in that analysis all of the reasons given in submissions as to why you might make provision for that.

A. Correct.

25 Q. And you've rejected all of them.

A. Correct.

Q. And so it was only when you saw the evidence of Ms Marr that you thought this is a new or different factor that needs to be accounted for, is that the position or did it just make you think again?

30 A. It was not just the evidence of Ms Marr, I believe that there's a number of experts that have said that irrigation expansion, while it creates a risk does not always create a risk of environmental degradation. So I've that into account as well.

Q. Well my reading of your evidence in chief and I look in particular at paragraph 371 on page 111 is that you've gone through that information and the positions of people including recognising that there is some scientific evidence to that effect and very firmly rejected the concept of increasing the irrigable area so –

5

A. Yeah.

Q. – I'm interested as to the basis for the change and it does seem to be inconsistent with what you've just said.

A. Yes, so there's two key reasons why I wanted to discourage in my evidence in chief irrigation expansion. One is for ecological considerations, the other one was for economic implications for landholders. We want to avoid that they're going to invest more and then the investment is going to be redundant. The change in my evidence in reply stems from the fact that A. I've been able to consider some evidence that points at certain ways of mitigating environmental impacts and secondly, because in the cases where I've provided for, so where people actually already have made the investment, there's a likelihood that they will apply for a 15 year consent to maximise what they've invested in. The intent of the plan change is actually to provide for six year consents so I'd rather have them applying for a six year consent than for a 15 year one.

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Q. But I think you said in answer to a question from her Honour that you don't know the scale that this particular issue and what your proposed rule is intended to address do you? You don't know how many people it might apply to?

25

A. No it wouldn't – the timeframe that was available to me I've not been able to make that assessment.

Q. And in order to be effective at addressing your concerns, you'd agree that in terms of the drafting of the rule it needs to be clear in terms of its application, it can't be open to debate or discretion?

30

A. I think clarity is a good thing so I agree with you in that respect, yes.

Q. Can we just have a look at some of the drafting aspects?

A. Yeah.

- Q. And let's look at your new rule. If we look at the conditions for entry, so if we're on page 6 of the document and the rule's set out there and it says: "It's a restricted discretionary activity providing the following conditions are met." My understanding was in answer to Commissioner Bunting yesterday evening that after roman numeral ii, under (a), that should be an *or* rather than an *and*, is that correct?
- 5
- A. No, sorry I might have – it should be "You have to comply with (a)(i)(ii) and (iii)", and *or* at the end of (iii)." Probably should – from a drafting perspective it should be either (a) or (b).
- 10
- Q. I see.
- A. So – does that make sense?
- Q. Yeah, well, probably not but that's how I thought and I'm just going to go through the rest of the rule but that at least explains your intention, so thank you. Now you had some discussion with her Honour this morning about the ability to measure the reduction in environmental effects which is one of the factors that needs to be demonstrated in an application. And last night I think you suggested that you might take a net benefit approach?
- 15
- A. I could have worded that better. I think it's an overall – sorry a benefit, yeah.
- 20
- Q. Well let's just think about as a for instance, what about the circumstance where the extent of an irrigable area had or raised issues of concern from a cultural perspective but in all other respects there were demonstrable reductions and effects of other relevant effects.
- 25
- A. You mean ecological effects or, yeah.
- Q. Well I guess that's part of the issue. What is the bundle of effects to be considered and do you see the issue that you may have to place weight on certain effects at the exclusion or expense of other effects because by my reading of this rule if there is a concern about cultural effects and an increase in cultural effects, all it needs is one increase in effect of a relevant type of effect and you don't qualify or is that not the intention?
- 30
- A. Could you repeat that?
- Q. Well let's say you have an assessment before you that says there will be a reduction in effects in terms of discharges. There will be a reduction in

nitrogen application. There will be improved water use, and that's a benefit. A concern has been raised by mana whenua about a cultural implication that they are concerned that there's a cultural effect because of potentially increasing an irrigable area. Is that one concern enough to prevent an applicant getting through the gate or do you trade one off against the other?

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A. Yeah, that's the issue against using the word environmental because it captures everything, so I agree that the provision could benefit from being more precise in that regard.

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Q. Okay. Alright. Thank you. In terms of the need to demonstrate that a financial investment in infrastructure has been made and that is dealt with in that first factor, infrastructure for irrigation on the additional area to be irrigated whilst purchased or ordered with a deposit paid. So just thinking about the evidence that would need to be furnished to satisfy that, what if someone's entered into a conditional contract to purchase irrigation infrastructure, is that enough? Is that a sufficient commitment?

15

A. You'd have to link it to the area specifically, like you wouldn't accept any – I'm not a consent officer but I would expect that to be a relevant consideration making sure that it's linked to the irrigated area that is proposed to be expanded.

20

Q. But I'm talking about the commercial arrangement that's been entered into by the application and a supplier of infrastructure. Doesn't your rule require you to reach judgements about the nature of the arrangement that's being entered into and whether that's a sufficient commitment?

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A. The evidence should include assurances that some financial commitment has been already.

Q. Alright.

A. Or investment.

30

Q. And there's no dollar threshold specified, is there?

A. There is not, no.

Q. In terms of the type of equipment, it needs to be a judgement exercise as to whether it's relevant to increasing the irrigable area, doesn't there?

A. When you refer to equipment, do you mean irrigation equipment?



Q. Yes.

A. It would need to be demonstrated that it's more efficient in use.

Q. And that it's infrastructure which is directly related to increasing the irrigable area.

5 A. Yes.

Q. So you can see, can't you that there's some judgements calls on some quite unfamiliar areas that might need to be made by regional council officers in terms of application of this rule?

10 A. Yes and no. Yes, in terms of there would need to be some judgement calls made. No, in terms of under the RMA at times we already have to consider investment or financial implications so my expectation would be that the consent holders have done similar assessments already.

15 Q. Yes but there's a distinction isn't there between matters over which discretion is restricted and specific conditions of entry so that you can rely on a rule?

A. Yep.

Q. Alright. Now, the rule as proposed doesn't make any provision for consideration of cultural matters or effects, does it?

20 A. Not explicitly. The word environmental, environment the way it is defined by the RMA captures everything but that is, as you pointed out, previously something that could be made more specific.

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25 Q. Okay well just in terms of that issue, can we turn over the page to page 8 and the notification clause that's been drafted, and I think that's the same as the notification clause that appears earlier?

A. Yep.

Q. Just want to try and understand what it is the intention is here because it starts off with a very clear direction that they'll be no limited or public notification, that's the first sentence isn't it?

30 A. Yes.

Q. But then it makes reference to limited notification to effected order holders in terms of section 95F of the RMA, I won't ask you to look at it but my reading of the Act is that that relates to affected orders under the Marine and Coastal Area Act, do you, is that your intention because that deals –

A. Actually –

Q. – in coastal matters?

A. Yes that is my recollection, yes.

Q. And is that the intention though of this?

5 A. No.

Q. No.

A. No.

Q. Okay. So is this an exception to the general rule that there'll be no limited or public notification, is that the intention?

10 A. Correct.

Q. And so it does seem to be a mistake in reference to Marine and Coastal Area orders but looking just at the last part of that, where relevant under section 95B3 of the RMA that relates to statutory acknowledgment areas, so is your intention that where a statutory acknowledgment area is effected that limited notification may be given to mana whenua?

15

A. Correct.

Q. I see.

A. I think, if I may add to that, also it might be good to be able to consider downstream effects as well on coastal areas.

20 Q. Okay, thank you. But clearly that drafting and that notification clause might need a bit of a twig in terms of what the intention is?

A. Yes, I'd be open to reconsidering that.

Q. And in terms of the rule that you drafted, the new restricted discretionary activity rule, did you seek the input of the Regional Council consents team in terms of interpretation and drafting?

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A. No, I did not have the time to do that.

Q. Thank you. Now, the last question I want to ask you is around the concept of true exceptions and you'll recall when Mr Maw gave his legal submissions on the first day he had an interchange with her Honour about the concept of true exceptions being able to be considered under the non-complying activity rule, do you remember that?

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A. Yes, I do.

Q. And is your intention with drafting the restricted discretionary activity rule that the circumstances it deals with is a true exception or is it just a new pathway for consenting?

5 A. It's new pathway for consenting because it ultimately achieves the same, or is intended to be achieve the same outcome as a controlled activity rule which is a short term consent for six years.

Q. But gives you the opportunity to decline it because it's restricted discretionary?

A. Correct.

#### 10 **THE COURT: JUDGE BORTHWICK TO MR WINCHESTER**

Q. Sorry, which other non-complying, which rule are we one?

A. I was asking whether the restricted discretionary activity rule was and the circumstances it dealt with was in the nature of a true expectation or whether it was –

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Q. I see, yes.

A. – or whether it was a whole new distinct consenting pathway –

Q. And the answer was?

A. And the answer is the latter.

20 Q. The latter, distinct.

A. Yes.

#### **THE COURT: JUDGE BORTHWICK TO WITNESS**

Q. And then following up on the last comment for how many years?

A. Six years.

25 Q. You still think a whole new pathway for a six year consent is what you hope to get out of this? Yeah, okay.

A. Yes because the risk is that people that already have committed to an investment are going to apply for a – under the non-complying activity rule for 15 years. But it's ultimately we want to keep that a true exception.

30 Those non-complying activity rules should be for the true exception. Therefore we want to try to capture as many people as possible under

either the controlled activity rule or the restricted discretionary rule for six years consents.

**CROSS-EXAMINATION CONTINUES: MR WINCHESTER**

5 Q. No that's very helpful, so if I understand you correctly the true exception is the granting of a consent for longer than six years –

A. Correct.

Q. – and being able to make a case for that?

A. Correct.

Q. Thank you it's very helpful.

10 **CROSS-EXAMINATION: MS WILLIAMS**

Q. Mr de Pelsemaeker, I'm actually going to start with the 2020 National Policy Statement and Te Mana o te Wai and just for the record this is common bundle the start of volume 3. So the fundamental concept of Te Mana o te Wai as expressed in the National Policy Statement is that  
15 it's a concept that refers to the fundamental importance of water and recognises that protecting the health of freshwater protects the health and well-being of the wider environment who protects the Māori of the wai, Te Mana o te Wai is about restoring and preserving the balance between the water, the wider environment and the community. And I'm not going to  
20 go on to the second clause there. You have certainly referred to the obligations and again just to reinforce there is a hierarchy of obligations in Te Mana o te Wai they prioritises. First the health and well-being of water bodies and freshwater eco systems and it's particularly the freshwater eco systems I guess which I want to discuss a little bit with you  
25 because we've been talking quite a lot about water bodies but I don't think we've been talking about eco systems. So we have heard the evidence of Dr Allibone that we have in Otago a heap of freshwater fish species and he's described those in his evidence and in particular what we do have in Otago is we have these threatened (inaudible 12:08:48) fish and  
30 we have a lot of them and quite a few of them are in places which interact with water extraction and you have told us this morning and yesterday

that part of the purpose and the intention of Plan Change 7 is to ensure that there is no further degradation of freshwater and of eco systems?

A. Correct.

5 Q. So one of the outcomes of Plan Change 7 must be that we do no inadvertently further degrade those freshwater eco systems which amongst other things are supporting the threat of (inaudible 12:09:37)?

A. Correct.

1210

10 Q. One of the matters which the Director-General raised in his submission is the ability to impose controls to protect those threatened species and so if we're looking particularly at the controlled activity, we certainly have some matters of discretion in there, this is rule 10A.3.1.1 I think. Yes, so we certainly have some matters of discretion in there over intake method and flow rates to avoid or mitigate fish entrapment. So essentially that's  
15 (inaudible: 12:10:53) now. We also have at paragraph D provision of fish passage and so that picks up on at least two of the factors which are going to be important to our non-diadromous fish species. Mr Brass suggested in his evidence, and it was also in the Director-General's submission that there be some additional matters of control. Do you have  
20 Mr Brass' evidence there?

A. I do.

25 Q. It may be simplest to go to his appendix which is from page 27 of his evidence. Apologies, the appendix doesn't appear to have page numbers on it – oh, it does at the top. I think it's going to be easier to look at where it's consolidated rather than the individual portions so perhaps if we look at the consolidated version which starts from page – bottom of page 6, top of page 7 of the appendix. In answer to a question from her Honour this morning where she was exploring with you again this concept of avoiding further degradation, you told her Honour that policy 10A.2.1 set  
30 out a number of tools to avoid that further degradation to avoid losing ground and bottom of page 6, top of page 7 is a consolidated version of changes to policy 10A.2.1. And where I'm focusing on is the new suggested paragraphs G and H. Recognising that we have, in the national policy statement there's focus not just on water bodies but also

on freshwater ecosystems, remembering that we are trying to avoid further degradation in the Otago Region and that these are a threatened species with a lot of interactions with water extraction, do you consider that perhaps not with the exact wording that's set out in Mr Brass' evidence but that it is appropriate to have those as tools which are available to avoid that further degradation?

5

A. If this was a long term planning regime I would definitely concur with you. I consider though that the policy itself gives support to the controlled activity rule. Controlled activity rule; it is anticipated that it has a limited lifespan until the new plan is introduced. I have considered this but I also consider (inaudible: 12:14:58) which states that after he looked at plan change 7 he did not consider there to be a risk of extinction on those non-migratory galaxiids. Also, the controlled activity rule – and I think it's a shared concern amongst quite a few parties involved in this procedure to make it as accessible as possible requiring applicants that would apply under the controlled activity rule to undertake assessments that would inform the measures you're alluding would make the cost – would add significantly to the cost of those applications which could cause them to apply for a longer term consent.

10

15

20 Q. Although they would still have to pass through the non-complying threshold test, wouldn't they?

A. Correct.

**THE COURT: JUDGE BORTHWICK**

Sorry, why was that?

25 **MS WILLIAMS:**

They would still need to pass through the threshold for a non-complying activity.

**THE COURT: JUDGE BORTHWICK**

I've lost the train. I thought the question was whether you should put these additional measures in the control activity rule or have I got that wrong?

30

**MS WILLIAMS:**

That's exactly – sorry, your Honour, it was just that the longer term pathway is only available for non-complying activity.

**THE COURT: JUDGE BORTHWICK**

5 Then you'd have to go there, true.

**CROSS-EXAMINATION CONTINUES: MS WILLIAMS**

Q. And that in part is because we're trying to avoid that further degradation in terms of the non-complying rule being the longer term consents.

10 A. Yes, the intent is to get as many applicants applying for short term consent. Another consideration is that some of the populations, while I acknowledge that extraction can have an impact or habitat alteration can have an impact, in some cases, and that's been discussed previously as well, they are there because of a certain flow regime that is in place. So, yes.

15 Q. I'm going to come onto flow regime because that's also very important but just for the moment dealing these additional matters of control which are proposed, and I'll move on particularly to rule 10A.3.1.1 and that is additional matters K, L and M which are on page 9 of the appendix to Mr Brass' evidence. What you have also told us in your evidence to date  
20 is that these are all matters of discretion for consents officers, is that right?

A. Under the control activity?

Q. Yes.

A. They are limited to the ones.

25 Q. Yes and these are matters of discretion for consents officers so not all of these matters of control will apply in all application.

A. That's correct.

30 Q. And the Council whilst it has told us that it has limited information, it does have some information about where the galaxiid species are and indeed, there's a bit of a discussion in both Dr Dunne's and Dr Allibone's evidence about the extent of mapping of where the galaxiid habitat is.

A. There is – my understanding from reading the evidence, there is a good level of understanding around the distribution but there is still quite a bit of knowledge to be gathered around these specific locations.

Q. But there is certainly some information available about locations?

5 A. There is some.

Q. Yes. Because these are matters which are discretionary, it really becomes a matter for the consents officer to basically look at the existing information the Council has and from that, make a call whether or not it is appropriate to impose conditions to deal with non-diadromous galaxiids in this particular case, doesn't it?

10

A. That is correct.

Q. And not having those matters listed in the matters of control means that they cannot be considered?

1220

15 A. They – I guess they can be considered but they cannot be addressed.

Q. Yes, they can't be addressed.

A. Directly.

Q. Thank you. I'm going to move on from that. I have already explored with Dr Allibone the issue of priorities and I'm going to address that again with you and that was something that you also discussed with Commissioner Edmonds yesterday and what you told Commissioner Edmonds yesterday in your evidence is that the council has records of deemed permits?

20

A. Correct

25 Q. So it has that information available to it because the deemed permit itself states whether or not they're priority permits or not?

A. Correct.

Q. You have also proposed as part of plan change 7 that existing cessation of take conditions would carry on to replacement consents?

30

A. Correct.

Q. In some respects the way the priority works is a de facto and in fact a de jure currently cessation condition, isn't it? It's just not one that's imposed or enforced rather by the council.



A. That is an important distinction I think because a condition needs to be complied with and the council needs to enforce that. Whereas I'm not an expert in this area but I'm not sure if there are any sanctions upon not adhering to priority if there would be an agreement within consent, within  
5 deemed permit holders within a catchment, amongst impairment holders within a catchment to deviate from that and have an alternative arrangement.

Q. So I'm not talking about an alternative arrangements. I'm talking about legal rights because these're existing legal rights and whilst the council  
10 may not be enforcing them, certainly the current priority holder can.

A. They can.

Q. And given that the council has knowledge of them, even if the council is not enforcing them, the council has knowledge of them, where a current priority holder on a deemed permit, that is that priority is important to  
15 them, would you not expect that priority holder to inform the council of that as part of their application for a new replacement permit?

A. I think that's a question that probably can be better answered by consents officer.

Q. If a consents officer is aware that that is something which is important, as  
20 I say, they have visibility of what the priority is, even if it's not currently enforced, it could be translated into a take cessation condition because that's effectively what it is, couldn't it?

A. It could be translated into a take cessation condition. It could be embodied by another condition shared amongst consent holders within a  
25 catchment and that being a condition on the consent. There are number of ways.

Q. So given that and given that the priorities in the way in which they're exercised means that we have freshwater ecosystems which are habituated to the exercise of priorities, isn't it important to continue those?

A. Umm...

1225

A. Yesterday I already explained that some of the (inaudible 12:25:07) patterns might not fully to a degree be reflected in the volumes and the limits, the rate of take limits and the volume limits set on the new consent.

That will basically prevent people of a lower priority to ramp up their takings so others lose access. I also acknowledge that it's a very – sorry it was acknowledged by Mr (inaudible 12:25:43) that's it's a complex matter, not easy to deal with. The intent is in relation – because we're

5 talking about the (inaudible 12:25:52) relation to the control activity rule to make the rule as simple as possible. So therefore it would add another layer of complexity, another layer of cost that would drive people towards a longer term consent.

Q. Is it adding another layer of complexity and cost when this is an existing right which is being exercised and which the council are aware of? Where is the additional cost?

10

A. Well first of all there needs to be an agreement between all the consent holders.

Q. But this is the point is that there doesn't need to be an agreement because it is in the deemed permit.

15

A. But the deemed permit will expire.

Q. Yes.

A. So my understanding, again I'm not an expert, the priority system will cease to exist. It is not automatically carried over into the resource consent regime, so therefore – yeah in summary the RMA does not provide for these priorities to be retained.

20

Q. It certainly doesn't post-October this year.

A. Yeah.

Q. And that of course is precisely my point is that the priorities exist at the moment. They are being exercised at the moment. We have water bodies and freshwater eco systems which are used to, this is the way they operate at the moment. We don't want to have further degradation. There's a need to continue the priorities post-October onto these replacement consents.

25

30 **THE COURT: JUDGE BORTHWICK TO MS WILLIAMS**

Q. Isn't the issue that you're addressing though the question of what is the risk?

A. Yes.

Q. And so what is the evidence or, you know, perhaps a better way of approaching this is to point out in your, you know, in your evidence or in the evidence of any other party how this risk is articulated both in terms of the rights whether they are exercised and how are they exercised. I am just wondering whether you are working on facts or you are working on assumptions and the assumption is that, well it is a fact there are rights. The assumption is they're exercised and a further assumption is that they're exercised on a continuing and variable basis which has resulted in a change of in a hydrological flow to which eco systems have become habituated and so if all of those assumptions are proved true I understand the problem.

A. Yes.

Q. The question is are your assumptions true?

A. Yes and I would have to say that's not addressed in the Director General's evidence.

Q. No.

A. I believe it is addressed to some extent in the evidence before the Otago Water Resource Users Group and potentially some others and so –

Q. Possibly referring to that evidence then, you know, if that is the case for, you know, those other parties putting that evidence to the witness would be a better way to go because I think this witness is going: "I have no knowledge", or "the regional council has no knowledge", and so you're not going to get anywhere, you know, so, yeah, here is again there's a risk in the environment, what is the likelihood of the risk? That's tested by the strength of the assumptions.

A. Yes, your Honour. I would have to say though unfortunately I have not at this point read all of the OWRUG evidence.

Q. Well how about you just park it up and come back to it after lunch, how about that?

A. So yeah.

Q. Yeah it's actually lunch-time, that's a good place to stop. We're bang on 12.30 so it's a good place to stop. Have a look at it.

A. Yeah.

Q. But that's, as I see, yeah it's not that I don't understand, I understand what the problem is that you're putting but, you know, is there is a risk is the question.

A. How big is the problem?

5 Q. Yeah and how do we –

A. Is it a real problem or is this just hypothetical?

Q. Is this hypothetical, yeah, yeah, but I certainly understand what the problems that you're putting.

A. Okay, thank you.

10 **THE COURT ADDRESSES WITNESS – REMAIN ON OATH (12:30:29)**

**COURT ADJOURNS: 12.30 PM**

**COURT RESUMES: 1.45 PM****THE COURT: JUDGE BORTHWICK TO MS WILLIAMS**

Q. Where were we, Ms Williams?

5 A. Yes thank you your Honour. So before lunch Mr de Pelsemaker we were exploring or I was exploring with you the issue around application of deemed priorities and her Honour suggested perhaps that I find some evidence to that point to put before you so I have thought about that and looked into that somewhat over the adjournment and where I've got to your Honour is that I don't think there is any particular evidence currently  
10 before the Court which I can point to. What I would put to the Court is that when you have the laypersons/lay parties appearing before you in Cromwell that I expect that that will be an issue for some of them and that might be an issue that the Court could explore with those persons.

Q. Yes I mean those folk are wanting to maintain those priorities?

15 A. Yes.

Q. Okay but you won't be there?

A. I won't be there your Honour, I'm sorry. I am expecting to either be in Invercargill or in the High Court.

20 Q. The only other witness that you can put this line of questioning to would be Ms Dicey who also –

A. Yes and I am going to cross-examination Ms Dicey, your Honour.

Q. – wants to retain it. And I did check her evidence and I couldn't see any reasonings there, you'll need to explore with Ms Dicey why she makes that recommendation.

25 A. Yes.

Q. All right, thank you.

**CROSS-EXAMINATION CONTINUES: MS WILLIAMS**

30 Q. So really the only, just concluding matter I just want to put to you Mr de Pelsemaeker, is that again in terms of the controlled activity if there is no provision for continuation of priorities, perhaps as a take cessation condition as one of those matters of control then again it's simply not something that can be addressed, is it?

A. Correct, yep.

Q. Thank you. Moving on to the application of schedule 2A and the minimum flows which are in the schedule but currently not operative?

A. They are operative but they are not imposed as a condition on consents.

5 Q. Okay and in the conversation or discussion that you had with Commissioner Edmonds yesterday, what you told the Court was that in part that was because the large number of deemed permits in some of those catchments meant that the minimum flows were not going to be effective because you would have a large number of consents effectively  
10 which would not be subject to those minimum flows?

A. Correct.

Q. What we now have however is a situation where the deemed permits are expiring and where we anticipate that for I think we've got it down to around 200 but still quite a sizeable number and particularly in the  
15 Manuherikia catchment a sizeable number who are all applying for replacement consents at the same time.

A. Correct.

Q. Does that change your view about the utility of the schedule 2A minimum flows?

20 1350

A. In regard to the Manuherikia, we heard previous evidence I believe we, that the minimum flow actually is irrelevant because it's an augmented river. At the point where the minimum flow is measured you have flows released from Falls Dam that artificially increase that flow so the real  
25 bottleneck of the river is further down the minimum flow site. With regard to other rivers, the schedule 2A minimum flows, they're going to be reviewed. In some cases, there's quite some technical work done behind them and other cases, especially with older ones, the ones that were set at the time the plan was notified and made operative, there is in some  
30 cases no or very little scientific basis for it. so the effectiveness of those minimum flows is in some cases at best doubtful. The other matter that I thought about as well is and I thought about it in relation with your earlier proposal about maintaining existing flow regimes. How do the two work together? Because if you have a minimum flow requirement all of a

sudden, the irrigators that were previously in a priority system might have to change how they take water so it was one of the reasons also why I didn't have a clearest ear as to how the two would work together, those two requirements, so to speak.

5 Q. Again though, looking at your proposed wording for rule 10A311 which is that controlled activity rule, paragraph f, that's on the next page, I think, is the matter of control dealing with minimum flow, residual flow or take cessation condition.

A. You're talking about page 7, is that correct?

10 Q. Yes, I am, I think. It's a bit hard to tell. It's in your revised corrections as at 4 March 2021 version of the plan change.

A. Yeah, so it is a matter of discretion and I think it is also...

Q. That may be replicated in the restricted discretionary rule.

A. It's in the restricted discretionary rule, yeah.

15 Q. I'm not actually discussing that but we'll leave that to one side. Actually the way it's phrased in the rule here is simply minimum flow, residual flow or take cessation conditions. It's only when you go up to the policy 210A21D that's where it talks about existing residual flow, minimum flow or take cessation condition being applied to a new permit.  
20 I guess there's a distinction and I'm wondering if there's a useful distinction between the existing minimum flow et cetera in the policy as opposed to the matters of control which are reserved in the rule, which actually don't make that distinction.

A. No and that's deliberate. Because the policy basically sets out a  
25 requirements which you need to meet in order to get resource consent. If you don't meet it you don't get a resource consent. The wording in the matter of control and also the matter of discretion which refers to minimum flows, residual flows or take cessation conditions in general allows consent officers to go beyond that but it's not a requirement. It is at their  
30 discretion really.

#### **THE COURT: JUDGE BORTHWICK**

Q. Can we just pause there? I just want to think about your answer plus also looking at the provisions at the same time. Is that kind of like the same

issue I raised? What's this matter of discretion? Okay. You pursue it. This is interesting, how will it be exercised relative to any policy.

1355

**CROSS-EXAMINATION CONTINUES: MS WILLIAMS**

- 5 Q. So there is this issue which her Honour has alluded to already with you this morning around where is the support for the matters of discretion in the policy and the objectives and I'm going to put that to one side for the moment but coming back to the matters of discretion in the rule which are helpfully up on the screen there, what you've now told us is that this is not
- 10 confined to existing minimum flows, residual flows or take cessation conditions?
- A. That is correct.
- Q. There is then the ability for consents officers to – if they are dealing with all applications for a number of takes from a catchment to impose a
- 15 minimum flow consistent with the current schedule 2A flow?
- A. Or if there is no minimum flow in the schedule, another minimum flow condition or a residual flow condition, that's correct, yes.
- Q. There is a bit of a policy gap though and is that sufficiently accounted for in that current wording in policy 10A.2.1?
- 20 A. Well the wording in policy – sorry, 10A.2.1.D only applies in circumstances where there is a minimum flow condition or residual flow condition on an existing consent. It requires you to set it over, it does not provide you with policy direction to set a minimum flow in all circumstances.
- 25 Q. And I'm certainly not asking for that policy direction because I accept that there is a lack of information, we've had evidence about that, my point is where we have flows which are set admittedly some time ago and admittedly perhaps on limited information but there is at least something there.
- 30 A. Sorry the question is?
- Q. So the question is you have a figure, it's in the plan, it's been in the plan for some time, it was in the plan with the expectation that it would be



implemented by October this year, what is the harm in allowing that to then apply?

A. In an ecological sense, there would be, in general, I'm not an ecologist here, there would be, I would assume, little harm.

5 Q. And there could indeed be a benefit couldn't there because it is requiring at least a level of ecological ecosystem protection?

A. There could be a benefit, yes.

#### **QUESTIONS FROM THE COURT: JUDGE BORTHWICK**

10 Q. So just to check that I've understood this correctly, your evidence is that there is a policy, a general policy together with a controlled activity, an RDA rule with an entry condition pertaining to an existing residual flow, minimum flow, cessation condition. If that exists on your water permit, it is to be concluded in the application?

A. Correct.

15 Q. Okay, so we're past that gateway and assuming all other gateways then in terms of deciding the resource consent, the Council reserves control over the following matters including minimum flow, residual flow or cessation conditions and how you imagine this working is that all applications provided they pass the gateways regardless of whether or not they have existing conditions of that ilk, matters of discretion include  
20 minimum flow, residual flow or cessation conditions?

A. Correct.

25 Q. So they may not have – so for example I might be an applicant, I don't have one of those existing conditions but nevertheless I'm through the gateway.

A. You're through the gateway, yes.

Q. And I could be exposed to a minimum flow, residual flow or cessation condition?

30 A. If there is a need for that or a clear benefit then yes, officers have that option.

Q. So what's the policy that is implementing in terms of a need for it or a benefit for it?

A. There is no policy within plan change 7 for that.

Q. So are we looking like another orphan provision here? What would guide the consent officer's decision making?

A. It is a standalone chapter for existing water permits so you'd be confined to the scope of what is in ORC chapter 10A.

5 Q. But you've said this provision's orphaned?

A. One of the considerations that consent officers may have regard to is the NPSFM as well, for example.

Q. Well that's actually the point that Mr Winchester makes and makes with very good reason is whether or not that consideration could be brought  
10 down when looking at a controlled activity or RDA, so that's actually a legal issue which his lawyer will now have to grapple with. Mr Winchester makes the point because Mr Winchester had a case of Ngai Tahu involving (inaudible: 14:01:31) diversion recently where that very issue came up, would that be correct, Mr Winchester?

15 **MR WINCHESTER:**

Yes.

**THE COURT: JUDGE BORTHWICK**

So that's a legal issue, it's a pretty significant one if the Council's thinking: "this will all work out because we can bring this down, it's a relevant consideration",  
20 and it's not and the absence of parents – it's going to be important as well so we just need to think about that. I guess that's for re-examination whether it truly is orphaned but if it is then what? Thank you. Ms Dixon?

**CROSS-EXAMINATION: MS DIXON**

Q. Good afternoon De Pelsemaecker.

25 A. Good afternoon.

Q. I want to take you to a number of paragraphs in your evidence in chief so if you make sure you have that handy please as we start and my first question is actually really one I hope just of clarification, so if we can start with paragraph 108 please of your evidence in chief?

30 A. Yes.

- Q. You say in paragraph 108 that the key outcome that PC7 is seeking to achieve is to facilitate at least in part the transition towards a new long term sustainable freshwater management et cetera, in part or entirely? Surely entirely.
- 5 A. Well, we cannot achieve – there will be existing consents that are not captured by plan change 7, consents that are granted before the plan change is notified and they could be for a long term so it will be hard to transition them towards that new planning regime within the lifespan of the plan.
- 10 Q. But we are transitioning towards a new framework.  
A. That is correct.  
Q. And that is the purpose of this plan change?  
A. That is correct, yes.
- 15 Q. If we can go from there please to paragraph 27(b)(iii)? And in that paragraph you're discussing, first of all, Professor Skelton's report and then the Minister's recommendation on the back of that report which is to prepare a plan change that will provide an adequate interim planning and consenting framework to manage freshwater et cetera. Adequate means, in my suggestion, do enough, something less than perfect, would that be a fair definition or synonym for adequate? So the recognition here is that this plan change is not going to be all things to all people but it's going to transition as you were saying before?
- 20 A. It's a transitional plan, it is not our intent to fully give effect to higher order planning documents.
- 25 Q. Sure. Paragraph 44 please next. At paragraph 44 you say that there are five significant resource management issues that PC7 seeks to address all of which are strongly interlinked, I just want to explore with you slightly what you mean there by to address because in fact what you're really saying, I think is that PC7, to use the words you've used elsewhere is holding the line in order that in fact the coming land and water plan can address these issues.
- 30 A. I agree with you. Really, a better phrasing would perhaps be that PC7 stems from these resource management issues and that those issues actually require us to take action. The plan change by itself cannot

address things like gaps in our data and things like that. It does address some aspects of it, for example, we're trying to go some degree in – we're trying to make some headway in terms of dealing with the allegation issue through the plan change but yes, I agree with you.

5 Q. But the plan change is not going to solve those problems, is it?

A. Not entirely, no.

Q. With that in mind, I want to turn to the two issues that you have expressed some hesitancy over and in fact have left open until you heard – I think you said until you heard the evidence in cross-examination I think of other  
10 witnesses and the two issues that I'm referring to are the question of hydrogeneration and how it's provided for and secondly, that of municipal supply which of course includes drinking water. Now, both those issues are subject to national policy statements in their own right, is that correct?

A. That is correct, yes.

15 Q. So in the case of hydrogeneration we're talking about the NPS renewable electricity generation?

A. That is correct, yes.

Q. And in the case of drinking water, and it's drinking water I'm particularly concerned about, it itself is covered by the NPS Freshwater Management  
20 2020?

A. That is correct.

Q. And there is an obligation for a plan to give effect to NPSs under the Resource Management Act?

A. That is correct.

25 Q. So let's just start with the hydro question then because I think it's important to understand in light of the fact that this is an interim plan change and your expressed view that in other places that this is about rolling over, holding the line et cetera, that the scale of hydro issues that might be subject to this particular interim plan change before the land and  
30 water plan comes into force, I presume you're aware for example that the Clutha scheme is consented to 2042?

A. Yes, I'm aware.

Q. And the Waipori scheme to 2038?

A. Aspects of it I believe.

Q. I'm sure Mr Welsh can address that more with you but the point that I'm making is that the big takes, the big schemes are in fact not going to be subject to this plan change because by the time they come around for reconsementing, the big water takes, we hope very much that the new land and water plan will be firmly embedded in place, do you agree?

5

A. I can confirm that that is definitely the case for the contact consents.

Q. So in reality, we are talking for the lifetime of this interim planning position about some deemed consents which need to be rolled over and Mr Welsh said yesterday that given the number that are being surrendered, I think we're down to about something like seven in this context, is that your understanding of the situation that applies during the lifetime of the interim plan change?

10

1410

A. I could not confirm the exact number –

15

Q. Sure.

A. It seems a reasonable number but I do consider that there are a number of hydro schemes operating, not necessarily with a deemed permit but with a resource consent within deemed permit dominated catchments as well so it is almost like a holistic system in a way that we need to consider.

20

Q. I accept that but the focus has been on not locking in big takes and my point to you is that this is an interim plan change with another –

A. Yep.

Q. – real plan coming and actually these really little danger of locking in big takes given what's at stake in the next few years, is that a fair affirmation?

25

A. (no audible answer 14:11:11).

Q. It's just a question of getting the thing in proportion really.

A. What do you mean with locking in?

Q. The concern is that anybody who consents anything during this period unless they're confined to a six year period or whatever, it's about preventing big water take concedes getting 35 year consents as has been the –

30

A. That's correct.

Q. – pattern in the past.

A. Yes.

Q. So isn't it a reasonable position, particularly given the national policy statements that sit behind hydro and we haven't talked about drinking water but also sit behind drinking water, that actually addressing those issues doesn't need to happen in the context of this plan change but in fact can wait for the land and water plan that's coming.

5

A. Yes and I think that's the appropriate way because there's a cascade of planning documents that we need to take into account, we have an RPS but as you know it's being reviewed as well.

Q. Yes.

10

A. I would assume that dealing with matters such as how you deal with community drinking supplies hydroelectricity we will get some direction on that in the RPS, it then makes sense to incorporate into the new land and water plan and I think that's the right place to set up a framework specifically for that.

15

Q. Thank you. You see my concern is, and it's not just about those two issues but a broader concern, that as we go further and further in cross-examination and evidence and discussions into the detail of what should be in this particular plan change more and more is being added and I particularly noted your comment this morning that in answer to I think to the Court that we and I think you were talking about Council want to consider activities as soon as possible and bring them in line with the new land and water plan and forgive me if I haven't written that down absolutely accurately but that was the gist of what you said. My point to you is, this is interim, there are something like 500 consents, I think we're down to about 200 or so of the deemed consents but there's still another 200 or so at least so four to 500 consents sitting out there that have to be dealt with in very short order. Isn't the risk, if you start to anticipate activities that really belong in the new, in the coming land and water plan, the risk that this plan change simply will not be able to deal with what it has to deal with in the next few months and after is becomes operative?

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A. This plan change is intended to allow those activities to continue as they have done in the past so if that is a risk – if you consider, is that what you mean with a risk or?

1415

Q. The risk is that the consents simply can't be processed in the time. What I'm thinking about is in addition to your comment this morning which to me looks as if you're trying to do more in this plan change that is actually an interim position but I'm also thinking about it a discussion you had this morning I think with her Honour around what some of the conditions and the controlled activity rule might lead a consent officer to look at and it was the discussion around efficiency. The more we put into, if you'd accept those rules, and the plan change is kind of growing all the time. The more that goes into those rules the more planning officers have the opportunity or the invitation or the discretion to start looking behind those controlled activity conditions, the more complicated this process becomes and the more at risk it is of actually being able to achieve what it is intended to achieve, isn't that true?

A. The key objective is still to make sure that we get those activities aligned with a new management regime as quickly as possible. So I guess it's a trade-off. We can add perhaps more complexity but if that serves the bigger purpose I guess it might be worth while doing that.

Q. But we're looking for something that's adequate. We're not looking for perfection, yeah?

A. Yeah.

**THE COURT: JUDGE BORTHWICK**

I think counsel's proposition is that you add less complexity, would that be it? Yes.

**WITNESS:**

Yeah.

**MS DIXON:**

But that's my concern about the way in which more and more is being added into this plan change as we go.

**THE COURT: JUDGE BORTHWICK**

It's the question of where are those discretions that you talk about and to be fair I hadn't actually appreciated until Ms Williams cross-examined you as to the minimum flow discretion, where's it going to take you? Is it going to get your  
 5 consents team bogged down processing consents when they ought to have their mind on something else and I think that's the problem and that's the problem that I think that the Minister is trying to – it lies behind the Minister's own amendments or preferred relief, yeah.

**CROSS-EXAMINATION CONTINUES: MS DIXON**

10 Q. Yes, your Honour, I'm thinking about where the Minister began in this exercise and as expressed actually through the evidence but it seems to be that – and I'm putting really to Mr de Pelsemaeker that there's a risk that just – we lose sight of that and the whole plan change is actually undermined by its own weight at the end of the day.

15 A. In terms of, you know, providing for sufficient capacity to deal with all these consents that it's not a question that I can answer. As an organisation I think obviously, you know, needs to take that into account and provide for that. In terms of adding complexity, initially if we take it back to Mr Skelton, Professor Skelton sorry, his recommendation was just  
 20 to simply roll over, let some of those activities continue. We've added a little bit of complexity to that, not a lot I would assume, but again I come back to the issue like if we start carving out certain activities out of the plan change then it becomes also more difficult to achieve the outcomes because the outcomes need to be achieved and I'm talking about  
 25 outcomes in a non-environmental sense, by all those activities working towards the same outcome as well.

Q. But if those outcomes can wait till the land and water plan shouldn't they wait till the land and water plan?

A. Yes but we do not set environmental outcomes in Plan Change 7.

30 Q. Yes. Just coming back to the MPSs for a moment, one of the outlying I suppose type questions is if there is going to be some specific provision made for hydrogeneration, in particular and also for municipal water, where that should lie in the plan change?



5 A. So I recommended that my view on that was to keep those activities within the scope of Plan Change 7. Specific concerns were raised about really the ability of those operators and those consent holders to abstract sufficient water. I think that is a very mechanical issue that can be best addressed through the schedule just making sure that the schedule does not act as an impediment for those activities to continue to operate in the manner that they have.

1420

10 Q. I understand that. My question to you really is though isn't it appropriate that matters which are subject to a NPS should be in the body of the plan change itself rather than a schedule?

15 A. I don't think so. Again, because this is an interim planning framework, we propose to deal with these through the land and water plan. While they are subject to NPS, I think we need to make sure that all the NPS are achieved at same level and I think by providing for those activities now in plan change 7, there's a risk that we lock ourselves in.

20 Q. It's not a question of whether it's appropriate to provide for them. My suggestion obviously is it is. It's where in the plan change that it goes and I'm interest in your comment that you think it's appropriate to put it in a schedule.

25 A. That was my thought. I consider it – the evidence that was provided by Ms Styles in relation to hydroelectricity generation. Mr (name 14:21:41) as well and I think on behalf of MFE and I'm happy to discuss these in more detail but they did not seem to achieve what I believe to be the intent or what I think is the intent of the plan change.

Q. It may be a matter that can be subject to the planners conferencing.

A. Yeah.

30 Q. The last matter I wanted to discuss with you, Mr de Pelsemaeker is actually an extension almost of the conversation we've been having. It's around the general framework of the plan change. Would you accept that when this was drafted that the intent was that there would be a controlled activity rule and a noncomplying rule and the two would act more or less like carrot and stick. Here's the controlled activity process, the carrot is, yes you'll have to put up with six years if you're an application, six years

is what you're going to get but it's a nice, simple, straightforward process and you have some certainty around it. If you're not willing to accept six years, then you can go down the noncomplying pathway and obviously life is going to get more difficult. That was the carrot and stick approach?

5 A. Correct.

Q. Alright. And I presume that you'd accept too that the nice clean lines of that, if you like, have got a bit lost by the fact that lying behind the controlled activity rule is the continued survival of the operative water plan and as a result of that as Mr Lloyd discussed it in his legal submissions,  
10 as a result of that because applicants find themselves effectively having to apply for a restricted discretionary status rather than the nice, straightforward controlled activity status, in fact, they're tending to apply for noncomplying activity and try and get the longer timeframe. That's what's happening.

15 A. Yes.

Q. In practice, that's the way it's working out. Coming back again to that point that I've made before about the scale and magnitude, the number of applications that are sitting out there to be processed and getting this thing workable. If at all possible for the planners to caucus not just on the  
20 methodology which is well underway and organised and obviously the methodology is an aspect of the controlled activity rule but if a planning caucus were able to get some consensus on the shape of the controlled activity rule itself, would you consider there will be some merit in trying to get that rule operative early and obviously this is a discussion we would  
25 have to have with her Honour and the commissioners, but some merit in trying to get the controlled activity rule operative so that in fact this problem of the restricted discretionary activity status lying behind could fall away and that would assist the late deemed applicants and it would assist the applicants looking to make their applications, the ones that  
30 expire in 2025, so they're applying over the next couple of years. Can you see that there would be some merit in trying to reach that sort of position?

1425

A. As an interim measure you mean? So made the control activity operative and keep on working on fine-tuning the non-complying pathway is that –

Q. Almost like dealing with this plan change in stages?

A. Speed has always been of crucial importance for the plan change to be effective so I would agree with you.

**CROSS-EXAMINATION: MS GALLOWAY-BAKER**

Q. Now Mr de Pelsemaeker I'm just going to pick up on one point that her Honour took you to at the start in terms of how the operative regional plan integrates between changes in land use and water takes and you were asked some questions about when a land use creates either leaching through the soil or over land discharges and you just touched on briefly that it was a – started off as an effects-based permitted activity framework and just to round that off I just wanted to take you to the rules I think you were thinking of in the plan, so they're in volume 1 of the common bundle. If you go to common bundle CB218?

**WITNESS REFERRED TO COMMON BUNDLE 218**

**THE COURT: JUDGE BORTHWICK**

And if you can just give me the rule reference?

**CROSS-EXAMINATION CONTINUES: MS GALLOWAY-BAKER**

Q. And the rule reference is 12C11A. So is it correct that that rule there is the permitted activity rule which states that where you meet the limit in schedule 16A you are effectively a permitted direct discharge?

A. Correct.

Q. And that rule applies from 1 April '20 or applied from 1 April 2020, is that correct?

A. Correct but we have undertaken a plan change recently, Plan Change 6AA which defers the dates by which that aspect of the rule compliance with the schedule becomes mandatory.

Q. So is the version in the common bundle not been updated to reflect that? Should it say 2026?

A. I think it –

**THE COURT: JUDGE BORTHWICK**

So this is a permitted activity rule?

**MS GALLOWAY-BAKER**

Mhm.

**5 WITNESS:**

It is in the schedule, sorry. It is in the schedule.

**CROSS-EXAMINATION CONTINUES: MS GALLOWAY-BAKER**

Q. Well no, no, I've just got the version I've downloaded from the website,  
the council website. The version on the council website of 12C11A from  
10 1 April 2026 –

A. Mhm, yeah.

Q. – for schedule 16A limits apply.

A. Yeah.

1430

15 Q. So perhaps the common bundle could be updated. So in that case where  
you've got a change of land use that comes with it a potential change in  
overland flow and directors charge to a surface water body there are no  
water quality limits that apply until 2026 now?

A. That is correct.

20 Q. And the same situation is for the leaching of nitrogen isn't it?

A. That is correct.

Q. Which is rule 12C.1.3, the nitrogen limits in that rule do not apply until  
2026?

**THE COURT: JUDGE BORTHWICK**

25 Q. What rule was that again sorry?

A. 12C.1.3.

**CROSS-EXAMINATION CONTINUES: MS GALLOWAY-BAKER**

Q. So from April 2026 depending on what nitrogen sensitive zone discharge  
is in, there's limits of kilograms of nitrogen per hectare per year so they

don't kick in until then and until then the only control on nitrogen or if you think of it as the permitted baseline is down in ii – B(ii) of that same rule so the current permitted baseline for discharging nitrogen is that you're permitted as long as you are keeping your overseer records, that's the only control isn't it in the permitted rule?

5

A. That is correct.

Q. And just around that of plan change 8 doesn't address either that overland flow rule or the discharge, the diffused discharge of nitrogen does it?

A. It's, the gap in terms of the management of nitrogen has not been filled by plan change 8. To some degree there NES which sets a limit on synthetic fertiliser, nitrogen just (inaudible 14:32:31) fills that but I acknowledge that it's not a complete fill at all and within the water plan there's nothing. The plan change 8 does try to address a number of water quality issues to partially fill the gaps created by plan change 6AA but we mainly target to the plan change high risk activities such as animal waste systems and affluent plants.

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Q. Okay thank you. Right so now again just picking up from something that her Honour asked you about this morning, in terms of whether there's an environmental objective to this plan change as opposed to just a process related objective, so as notified the objective 10A.1.1 it is a process, a solely process related objective, it does not refer to any environmental goals our outcomes, is that correct?

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A. That is correct, yes.

Q. There is a general vague reference to long term sustainable management, that's about as close as it gets, isn't it?

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A. That is a reference, what we refer to there is the planning regime that will be established on the land and water plan.

Q. Now I could have a laborious cross-examination on this theme but I could go straight to the point which is in several places, not just in your written evidence but even today, you have said quite sensibly that one of the aims of this plan change is to halt environmental degradation and prevent further over allocation.

30

A. Correct.

Q. Now that would not be too difficult to articulate in objective 10A.1.1, something along those lines in what Fish and Games witness Mr Farrell has done in his marked-up version as a start at articulating the environmental part of the objective alongside the process part. So perhaps if you have a look at that version of Mr Farrell's tracked changes. So you've got that?

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A. Yes.

Q. So one way of articulating the environmental arm of the objective of this plan change is a statement along the lines of protect the health and wellbeing of waterbodies by avoiding further degradation of freshwater. Would you agree that that's consistent with the environmental objective of this plan change?

10

A. Avoiding further degradation of freshwater I would agree. If you look at protecting the health and wellbeing of waterbodies in isolation it is something that requires a lot more than just avoiding further allocation.

15

Q. Exactly. Which is why you have to link it very explicitly to the fact this is a steppingstone towards protecting health and wellbeing by degradation now for starters. That's the intent of tying those words to the first limb of Te Mana o te Wai, protect health and wellbeing of water by avoiding further degradation at the moment because this is a process whereby we're buying more time. It's intended to read in that context.

20

A. Yes, I know. I agree with you but the words avoiding further degradation of water also goes beyond merely managing water quantity or allocation which is something this plan change does but it does not address discharges.

25

Q. Correct. But it's not inconsistent with the aim of this plan change, is it?

A. No, but the risk, as I mentioned before, of having this wording in the objective is that you won't achieve the objective through the policies and the rules of the plan change by itself.

30

Q. What if you qualify that then to take away the risk of the water quality aspects, avoiding further degradation caused by overallocation, qualified again?

A. Can I look at a definition of overallocation?

Q. Yes, sure because we're going to get there anyway.

5 A. Again, it's a tricky one because overallocation is defined also by making reference to limits in general which can be take limits as well as resource limits which again brings us to water quality aspects and same with words degradation or degrading. They go beyond purely managing water quantity.

10 Q. No, you're absolutely right. In terms of the NPS, we can't make an NPS finding of degradation in this context because degraded is – every limb is very explicitly linked to the values that had been identified for the FMU, the target attribute states for those values the limit set so we can't make a NPS finding but when can't make an NPS finding we can look at part 2. Part 2 requires that life supporting capacity be protected that the significant habitat of important indigenous species be protected and to a certain extent the habitat of trout and salmon also be protected. We can  
15 make a finding about degraded in that part 2 context, can't we?

A. Does that create a risk that there's going to be tension between how it's defined in a part 2 context and how it's defined in the MPSFM? I guess does it create a risk of – sorry I'm not intending to ask you questions. It's not my intent. I just want to –

20 1440

Q. Well I'll put it to you, you are concerned about the tension between a part 2 finding that's inconsistent with an MPS definition, is that your concern?

25 A. I think at the end of the day whatever we write as planners is going to be used by consents officers and you want to be – and that's been – the point has been made before. You want to be as clear as possible and avoid the risk of different interpretations. It's about consistent decision-making so I'm not trying to dismiss your suggestions. I'm just trying to gage what the implications might be.

30 Q. And it might be, and there's a theme here from my friend's questions, the less discretion there is in that – what's meant to be the carrot rule, that very easy rule, the less discretion there is in there the smaller that risk is of confusion.

A. That is correct, yeah.

- Q. So still looking at Mr Farrell's drafting, another suggestion from Mr Farrell is that he's actually separated out the three additional limbs that were in the policy, A, B and C which were more processed limbs of your objective, he's suggested that as those are doing clauses or doing provision if you like that it's more appropriate that that as a policy do you agree with that?
- 5 A. I think a policy generally sets out how, so in that regard I don't see any issues with the policy as suggested, yeah.
- Q. I'm sorry I skipped down too fast. The other change in the main limb of the objective is the deletion of the word *resources* after freshwater and Mr Farrell's reasoning for that is that that turns water into something that's for human use, it's looked at as a resource, it's anthropocentric rather than water having its own mana mauri hauora and so by deleting the word *resources* it changes that focus, that paradigm, so would you agree with deletion of the word *resources* from that limb?
- 10 A. It does make – it doesn't create any problems at all. I think – I appreciate Mr Farrell's rationale and yeah I think it's sensible and it doesn't really, like I said, it doesn't create any problems for the objective talking about freshwater instead of freshwater resources.
- Q. And it's more consistent, isn't it, with the objective on Te Mana o te Wai the first limb that –
- 20 A. Correct.
- Q. – is just about the water, not the people?
- A. Correct, yeah.
- Q. And the other change is deletion of the phrase *long-term* from the main limb of the objective. Do you have any problem with the deletion of that word, those words?
- 25 A. I initially – my response to that was we really want to distinguish between this planning framework which is a process-driven planning framework and the planning framework that is going to be in the land and water plan. The long-term makes it clear that the sustainable management will be achieved through a new land and water plan not by this plan change, hence my recommendation to stick to the word *long-term*.
- 30 Q. Shouldn't we not assume – sorry double negative. It might not take long.
- A. Hopefully not.



Q. Why should we assume now that that is going to be a long-term process given everything that we've still got to come?

A. It's not a long-term process, it's a longer term planning regime, a planning regime that will be in a longer term than this one.

**5 THE COURT: JUDGE BORTHWICK TO WITNESS**

Q. What you mean to say is: "In the long-term there will be this new plan." That's really what you're getting at.

A. Correct, yes, yeah.

Q. In the long-term, you know.

10 A. Which is not that long.

Q. In the long-term (inaudible 14:44:50), yeah.

1445

**CROSS-EXAMINATION CONTINUES: MS GALLOWAY-BAKER**

15 Q. So now I just want to turn to your evidence-in-chief and your paragraph 44 that you were taken to by my friend, where you've identified the five significant resource management issues and what I, again to try shortcut to the answer that I was hoping you'd give me at the end, isn't it correct that in addition to those five matters, the other significant issue that this plan change addresses is halting over allocation and degradation  
20 associated with that, the holding of the line is the significant issue that this plan change is actually addressing, isn't it?

A. That is actually the response in the plan change.

Q. Probably the first significant issue, isn't it, that this plan change addresses?

25 A. I'm trying to avoid asking you questions, are you referring to the current state of the environment as –

30 Q. Yes, so what I'm referring to is the current state of the environment in places is degraded, we've got lots of evidence from Edward Allison, we've got Richard Allibone, we've got the Department of Conservation witnesses, we've got Fish and Game witnesses, all have given evidence in various places about where there's degradation associated with extreme allocation.

A. That is the case for some places but acknowledging that there are some data gaps, so we cannot make give an overall picture of what the state is of the environment throughout the region and that is one of our issues that we're dealing with.

5 Q. But the other issue is that there is information that there is degradation associated with the level of abstraction and that is why you need to hold the line and not let consents be granted on a case by case basis?

A. Yes.

10 Q. Now, I just want to jump quickly to the controlled activity rule and this is just picking up on, again, some themes from my friends about whether there should be the entry point to the controlled activity rule that refers to schedule 2A minimum flows and what became apparent to me when Mr Henderson, I think, was being asked questions – might have been Mr Allibone in terms of the Manuherikia and the Taieri specifically and as I took it from, I think it was Mr Henderson's exchange with I think Ms Irving that the schedule 2A minimum flows for the Manuherikia and the Taieri are already complied with by virtue of the design of the Falls Dam release and the augmented flows and the top storage and Upper Taieri releasing flows and so on and so forth, so I just wanted to clarify with you, is your understanding that the schedule 2A minimum flows for the Manuherikia and the Taieri are actually currently complied with anyway as a consequence of how those schemes are run?

15 A. Definitely for the Manuherikia, for the Taieri I know or I recall that the Maniototo Irrigation Company maintains the minimum flow at certain points in the river but the Taieri has five different minimum flow sides and I could not give you a clear answer as to whether those other minimum flows are adhered to.

20 Q. Because what I'm trying to understand is whether or not submitters seeking that the scheduled 2A minimum flows be added as an entry point requirement to the controlled activity rule, is that actually an issue given what's happening in the schedule 2A catchments and do you have a feeling for whether there are deemed permits that are currently being used that take below the schedule 2A minimum flows? Is this actually a problem we need to worry about and if you can't answer it, what I was

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going to suggest is we've got exhibit ORC 1 with the current summary of deemed permits not applied for or in train, I don't think it would take too much to compare that list of catchments with the quite honestly quite limited list of catchments in schedule 2, there's not actually that many  
5 minimum flows in there and (c) if any of the outstanding deemed permits are actually relevant to the schedule 2A minimum flows and then get to the bottom of the Taieri situation as well.

**THE COURT: JUDGE BORTHWICK**

We can do that over the tea break. Can you remind me whether it's the case  
10 that some people who are seeking minimum flows, the scheduled term minimum flows do so without proposing an allocation block at the same time and I don't think that's you, I think your client is minimum flows and allocations.

**MS GALLOWAY-BAKER:**

No, we're just focused on the minimum flow because allocation block, that's a  
15 big change if you oppose that as an entry point.

**THE COURT: JUDGE BORTHWICK**

Okay, I just want to go back to where your relief is. For example, in your control rule, the entry point would be an application that's put up a minimum flow but there's no allocation block otherwise applying to that rule.

20 **MS GALLOWAY-BAKER:**

No.

**THE COURT: JUDGE BORTHWICK**

That potentially could be problematic. I can ask the questions and you can ask the questions as to why that might be potentially problematic but –

25 **MS GALLOWAY-BAKER:**

To not have an allocation block?

**THE COURT: JUDGE BORTHWICK**

Yes. For the reasons that Dr Hayes – I think Dr Hayes is your witness.

**MS GALLOWAY-BAKER:**

Yes, that's right.

**5 THE COURT: JUDGE BORTHWICK**

So isn't his evidence that minimum flows allocation blocks work together and so if you've got a large number of people coming onto a new minimum flow then the potential for that is to bring the level of flow in the river down to the minimum flow and hold it there in dire conditions and that's problematic I would have  
10 thought or potentially problematic for the environment, so I wasn't quite sure why we were suggesting that here.

**MS GALLOWAY-BAKER:**

What I'm exploring and this is just for the controlled activity six year rollover, on the assumption that some of these deemed permits – this is the assumption  
15 that we actually need to clarify, is this actually a thing? Is this an issue that some of the deemed permits are taking water below down from the minimum flow to be a bit less –

**THE COURT: JUDGE BORTHWICK**

They could already be under there.

**20 MS GALLOWAY-BAKER:**

So it's already under it, so all that would do is bring up the bad situation a little bit higher for the same amount of time, so the flatlining, yes, but in the context – what Fish and Game agrees with is that this controlled activity rule should be as easy as possible to get through and if everyone is currently complying with  
25 the 2A minimum flows where it's relevant to this plan change then that's easy, they are actually already complying, that's not a disincentive but if there are quite a handful of them that aren't currently applying and that turns into a disincentive to even look at the controlled activity rule, I think that's a very important point for everybody to understand.

**THE COURT: JUDGE BORTHWICK**

And I think in part of that discussion – I mean, we talked about Manuherikia and Taieri as if they are only the two catchments which of course they're not, we don't have a sense yet when people are talking about those two catchments, are they talking about the FMU scaled catchments which are kind of super catchments or something – which is not an FMU but actually quite smaller than that and that's what this operative plan applies to. I'm going to ask Mr Moore to have his regulatory witnesses clarify that. We don't have a sense yet for each of those schedule 2 catchments, we have no sense as to how many permits are actually out there and of those permits, what are up for replacement because they're deemed or because the water permit's are up for replacement in the next two years, what's trucking along not up for replacement which may have a minimum flow though it does sound doubtful, that they do have any minimum flows imposed. So I don't know what's under the line, what's above the line. So we're sitting there going: "we're a bit blind actually – potentially to the implications of this policy and are very concerned you'll flatline the river."

**MS GALLOWAY-BAKER:**

Mmm, make it worse or it might not be an issue.

**THE COURT: JUDGE BORTHWICK**

Or it might not be an issue. So if you need more information and we certainly think you need more information to pursue this because Dr Hayes' evidence is so legible, so it was good evidence on the relationship but you need to be asking me and I'll ask Mr Moore. You can ask this witness but I just think it's coming in such a piecemeal fashion which is no criticism of you because it's just a function of questioning. It would be actually good to get it on paper.

**MS GALLOWAY-BAKER:**

Yes, and we agree about what matters we need to figure out so I'll leave it for now with this witness.

**THE COURT: JUDGE BORTHWICK**

And perhaps talk to Mr Moore over the break. Do you want to park it there and talk to Mr Moore and then we can come back?

**MS GALLOWAY-BAKER:**

5 Sounds good, yes, thank you.

**COURT ADJOURNS: 2.56 PM**

**COURT RESUMES: 3.26 PM****MR MAW:**

May I just, before the tea break there was a discussion around the production of some further information in relation to which of the catchments shown on the deemed permits report that goes to the Minister are also covered by minimum flow in schedule 2A of the plan.

**THE COURT: JUDGE BORTHWICK**

Q. That's certainly part of it, yes.

A. That part of it can be done relatively quickly and easily and it's probably already being done and will be produced from the consents team leader with her evidence so it'll come through in that form. The second question or the second element in relation to whether the catchments where there is overlap, whether the permits are already compliant with those minimum flows is a far more complicated question and if you think about the example given where the Falls Dam is controlling the minimum flows it may well be that there's a control taking place that's not captured for example on each and every deemed permit that might be further downstream so that –

Q. Are control taking place though?

A. Sorry, a –

Q. You said that a control taking place.

A. A control by virtue of a condition on a permit further down stream so it's not just an exercise of looking at each of the deemed permits within a particular catchment and checking whether each of them has a minimum flow recorded on each permit because one permit might be controlling the minimum flow for the entire catchment or a part of a catchment. So I'm told that that exercise just isn't a straight forward exercise to do unfortunately which perhaps highlights the risks associated with whether the rules accommodate schedule 2A minimum flow or not.

Q. So part of the issue in this case is that in some ways some parties evidence is presented using Manuherikia as an example and perhaps Taieri to a certain extent, is if everything is find there, whatever fine means

in terms of minimum flow, therefore these provisions can apply or reject the plan change or therefore these provisions and it's like well, it might be fine there but is it fine in every other catchment, I don't know. I don't know, we're just a little blind and maybe we're wanting too much information but you know we have this, there's an element of uncertainty that we have in relation to the relief being pursued by some parties.

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A. Yes and the convenient response is to say that the onus is on those parties but the reality is that council has the type of information that they might be seeking to rely upon and the council staff are looking to produce where they readily can produce that information when it's been requested and where it can usefully assist but this question what happens in the other schedule 2A catchments outside of manuherekia and Taieri, that's complex question and it's perhaps highlighting some of the challenges including those restrictions within the planning framework.

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Q. Yes and that's exactly so but we're getting close to it. The problem is in terms of the problem that we're working on is that process or is it environmental or is it both? Now, your witness says process but to me these provisions are plainly working on both so we'll see whether that should be so and obviously parties have quite divergent views.

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A. Yes, I think we just need to see how that plays out over the next little while.

Q. So I'm not sure where that takes us in terms of – and again with the spatial relationship between your FMUs and catchments. It's not clear. Possibly that evidence is in 5,000 pages of documents out there. I don't know but actually that was one of the reasons for bringing forward those entry folk, they would be able to set the scene.

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A. Yes, so they're producing a series of maps showing spatially the extent of permits still outstanding, those in process and those that have been processed to assist with the spatial understanding of the permits and train and those to come.

30

Q. That's the deemed permits. You got deemed permit, you've got replacement water consents and then you've actually got that baseline permits which are out there which are not up for renewal in any sense



and into the mix, you might have minimum flows either in schedule 2 or actually you might have minimum flows because that's what policy 6412 says you should have. I have no idea whether that's being implemented.

5 A. Yes, again, one of the maps that's being worked on is showing simply by coloured dot permits that have a minimum flow versus those that don't have minimum flow imposed on them so again, you will be able to see spatially just what the spread is and having looked at drafted – that there are dots of different colours so there's a mix. I haven't drilled in to see whether there's a consistent pattern within particular FMUs or catchments yet but hopefully that information will start to assist in terms of the current state of affairs.

10 Q. Yes. So it's an implementation of plan question really. You've got lots of policies about minimum flows. Are they being implemented and can they be implemented? You've got an answer on the can with deemed permits but for everything else where they're being implemented and may be the answer there was also if you can't implement for one, it's not much point implementing for the other. So actually minimum flows and allocation blocks are not implemented and if that's the case we just need to know that and therefore know what the hydrology is.

15 20 Q. Again, the consent planners will be able to assist just with their direct experience having been processing applications under now both regimes for a little while.

Q. Okay.

A. That was all. Thank you.

25 **CROSS-EXAMINATION CONTINUES: MS GALLOWAY-BAKER**

Q. I'd like to move on to the non-complying policy now and I'm again looking at Mr Ferrel's marked up version. As I understand it, the purpose of this policy is twofold and I want you to tell me if I'm correct or not. One is it to act as a disincentive for people to even try and go through the non-complying consent pathway.

30 A. Are you referring to policy 10A23?

Q. Yes. As I read it there's two reasons for this policy. One is to act as a stick, as a disincentive for people to go through the non-complying

pathway and the other, if they do choose to go through the non-complying pathway is to put in place a precautionary policy direction to protect the environmental outcomes that might come from such a consent?

1535

5 A. Correct as well as give direction around consent duration.

Q. And duration?

A. Yeah.

Q. So three purposes then?

A. Yeah.

10 Q. Disincentive but if you come here precautionary environmental test and still strong direction as to short consent duration?

A. Yes.

Q. And then when you evaluated the proposal that has been put up based on the evidence of Dr Hays and then reflected in Mr Farrell's evidence, you've addressed that in your reply evidence at paragraph 150?

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A. That is correct. I assume so. I definitely addressed it.

Q. Yes you did. And then your paragraph 150A, one of the reasons you currently don't support the proposal is in the third sentence of paragraph A say: "The amendments recommended by Ms McIntyre and Mr Farrell could prevent water takes with less than minor or de minimis adverse effects from getting consent for more than six years?"

20

A. Correct that was my interpretation of reading the table recommended by Mr Farrell. I came to that conclusion when I considered the allocation rate. In under the role that we first to allocation rate, he talks about – he sets a certain threshold, 20% of flow allocation or 30%, 25% in some cases. I interpreted that but it is actually one of the things that I wasn't 100% sure about but I assume that it will refer to the aggregate of all the consents within or from that water body, is that a correct assumption?

25

Q. Well that's possibly a drafting issue isn't it?

30 A. Yeah. If he relies on the table from Dr Hays, Dr Hays sets those threshold considering the combined allocation from all the consents, so I assume that that is the rationale that is applied up here as well.

Q. Yes.

A. And so in that case if that becomes the threshold the state of the water body in terms of allocation becomes the determinant not the effects of the activity because you might have an activity with a negligible effect. That wouldn't be granted consent because of this. So kind of changed the intent as to what was initially proposed in the plan change proposal.

5

Q. I was just going to say if there was a consent that had an application that had a negligible effect, there is still the alternative non-complying pathway, though, isn't there, under section 104D(a) that if effects minor or less it doesn't matter if you're contrary to the policy to get through that non-complying gateway is still a consenting pathway to be assessed on the merits isn't there?

10

A. That is correct, yes.

Q. So that really takes away your first concern in subparagraph (a) doesn't it?

15

A. That is correct, yeah.

Q. And then your other concern in subparagraph (b) that you've articulated is that the thresholds rely on the hydrological parameters?

A. Correct.

20

Q. And you've got a concern that some of those might be problematic to calculate in terms of uncertainties?

A. There are some uncertainties. To give you an example when we started looking at the naturalised mouth of the (inaudible 15:39:39) so of the initial figures had a margin of error of 500 litres per second which isn't not a small volume of water, so that was where I was coming from in relation to the (inaudible 15:39:52) you might have the same issue based on the current available information held by ORC to determine what is a naturalised mouth.

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Q. Although that wasn't the impression we got from Mr Henderson on Monday was it when these questions were put to him, his evidence was more certain than the concern that you're expressing.

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A. It would be possible, my understanding from Mr Henderson, is that it would be possible to come up with a regional model based on a refined national model that applies to the Taieri but in the Taieri as well he

pointed, if I recollect well, to the complexities of the hydrology there as a result of modification due to water taking and in some cases releases from Logan Burn as well.

5 Q. All right, and then finally on this point again, so you obviously read the evidence of Dr Hayes?

A. Yes.

10 Q. And as you will be familiar with his recommendations, if I just take you to say his paragraph 107. And so the section that I've taken you to is his more comprehensive discussion and explanation of where he's come to with the table but at 107 he refers to the document that was prepared in support of a draft NES for flows and levels and you've also referenced that document I think in your evidence in chief at your paragraph 65.

A. Yep.

15 Q. So you're familiar with that as well and Dr Allibone referred to it as the 2008 Becker report?

A. Correct.

Q. Which represented a, I think his words were, I'll say it, it represents a consensus of a set of experts that were engaged to help prepare the report for the Ministry for the environment, is that your understanding?

20 A. That is my understanding.

Q. And Dr Hayes also later in his evidence in chief refers to additional report, the (inaudible 15:42:20) report at his paragraph 115 which is international review of scientific research on the same issue in terms of setting flow thresholds?

25 A. I can recall that Dr Hayes referred to that but I'm not familiar with that report.

30 Q. Now obviously we will get to see Dr Hayes' evidence on these flow thresholds and what they protect and what they don't protect, I expect there'll be some testing of that so I'm not asking you to second guess the outcome of that. But should those thresholds holdup and can, should we be able to rely on them as setting a precautionary threshold, doesn't that make this policy clearer and more directive in terms of achieving that precautionary limb that we discussed?

A. It's a, a point that has been realised before putting in quantifiable thresholds might, will probably help to clarify what are no more than minor adverse effects. For, on some values, I'm not sure whether they can apply to all the values that are relevant for that waterbody, I'm so not hydrologist so I don't know what the applicability is across all the waterbodies. The guidelines made reference to a distinction between waterbodies smaller than five cubic metres or more but I think it would be a, in my personal opinion, I think it's definitely worth while considering applying that in at least some circumstances. I'm happy to participate in that, yeah. I just had a few more questions as well when looking at the evidence of Mr Farrell. What if you cannot calculate MALF in a reliable way, Dr Farrell came up with an alternative solution as well as to looking at the instantaneous flow rate as an alternative. My initial thought was at what level, is that a medium flow, is that a mean flow, so I think there's a little bit of work to do in cases where you cannot apply it but it's worthwhile looking into.

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Q. Thank you. Then the final set of questions is related to concerns from submitters that plan change 7 will cause them to defer investment into upgrades on their farming businesses and you've addressed this in your reply evidence in a couple of places and one place was specifically in relation to an investment to address climate change and your response to that was – that's at your reply paragraph 59 and 60 that it's not that long a deferment given everything else that is in train from the Climate Change Commission and so forth. Is that a fair summary of that response?

A. Correct, I think climate change issues require a long term approach. If we would bring that into this plan change it would take us too long to develop actually those provisions and have them supported by suitable information, make the purpose obsolete probably.

Q. Yes. Then just on this topic of investment, if we look back at the period leading up to 2021 when many of these permits and privileges expired, there has been leading up to that point and there's a lot of detail in the evidence, significant investment on some farms into their infrastructure

despite the fact their permits or consents were expiring in 2021, you're aware of that?

A. I am aware of that, yes.

5 Q. And possibly a reason for that is that there wasn't a clear message in the planning framework to be cautious about investment in that context?

A. Well, the planning framework – one of the issues, and I hope I addressed that appropriately in my evidence or I have addressed it is that our current planning framework especially policy 642A in combination with the policy on duration creates the expectation that what you've been using the past 10 you will be able to continue to access for long term. The NPSFM clearly now put some caveats around that in terms of where resources overallocated or degraded so in order to transition to a new plan that gives effect to the NPSFM thought it would be prudent to include that in the plan change as well.

15 Q. And you explain in your paragraph 60 in your reply evidence that one of the intentions behind PC7 is to caution against further investment in water use so you're not shying away from that, it is one of the intentions that sits behind it.

A. Yes.

20 Q. And in terms of any relevance that the NPS has and what weight can be given to people's desire to invest and being frustrated from investing for a period of time, there is – I think there is probably only one or two provisions in the NPS that I want to take you to that might be relevant to that consideration, the first is policy 15, you got that?

25 A. Yes.

Q. CB674, so policy 15: "communities are unable to provide for their social, economic and cultural wellbeing in a way that is consistent with this national policy statement", so that enablement of those wellbeings, that's the only policy you can really look at when you're considering what weight 30 to give to this issue of deferment of investment, isn't it?

A. Correct.

Q. And any weight that you do give to that has to be – it's qualified, it's in a way that's consistent with this NPS, so it's qualified by the three priorities of Te Mana o te Wai?

A. Correct.

1550

5 Q. And even when you get into the real nuts and bolts in the NPS down at 316 and 317, which is about 316 is setting environmental flows and levels and 317 identifying take limits. Now I know we're not applying these provisions now but those provisions make no reference to even existing investment let alone future investment, do they? They're not relevant to the setting of limits and flows and takes?

10 A. Well, no, I think the MPS is quite clear that you've got apply Te Mana o te Wai and the three priorities in setting these limits.

**CROSS-EXAMINATION: MR ANDERSON**

15 Q. Many of the issues that I was proposing to traverse have been covered by my friend so we won't be effectively long. Have you got your evidence-in-chief there Mr de Pelsemaeker? Can you go to paragraph 371?

A. Three hundred and –

20 Q. Three hundred and seventy one, is that better? Now this is your reasoning for not supporting an extension of irrigation in consents, correct, and you're reasoning behind that, if I read this correctly, is that you haven't done the MPS compliant with the quality work yet and there are areas in Otago where reductions maybe required in order to meet the requirements in relation to water quality?

**WITNESS REFERRED TO EVIDENCE-IN-CHIEF**

A. That's correct.

25 Q. Those processes haven't been run so we don't know what those reductions might be?

A. That is correct.

30 Q. So in some places everything might be fine or we can carry on as we are. Some places it might be status quo but some cases might need a reduction?

A. That's correct.

Q. And while that is the case we don't want further investment in irrigation in case that investment becomes lost because of a necessitated reduction in discharges and nutrients?

5 A. That is correct. When I read the evidence, the evidence pointed that it is possible to have a no increase in adverse effects, but I was wondering what if you need to actually claw back on contaminant discharges, so that is actually the reason why?

10 Q. I was really referring because what I wanted to do was put to you that the reason why you changed your mind and just explore that a little bit with you.

A. Yes.

Q. So that was your position in your evidence-in-chief?

A. Correct.

15 Q. And in your reply evidence you've considered the evidence particularly of Dr Crystal?

A. Correct.

Q. And he says that we can actually increase the amount of irrigable area and in some cases reduce the effects?

A. Correct.

20 Q. And based on that evidence you have reached the view that we can create a rule which provides for a reduction in environmental effects as being okay to get consent on a restricted discretionary basis?

A. Correct.

25 Q. Now the point I want to put to you is that the requirement for a reduction, that may still not meet given that there's no quantum on that and it could be a small reduction or a large reduction. If we have a catchment which is over allocated and required a significant reduction in nutrients to become MPSFM compliant, you might end up with a mismatch. Can I explain what I mean by mismatch?

30 A. Yeah.

Q. The mismatch is that you've got an irrigator who has decided they want to do some more irrigation, they want to increase the area and they've made an effort to reduce their losses to the most extent they reasonably can?



A. Correct.

Q. And then they've got their consent and then you get an MPS compliant framework which requires an increased reduction in N losses. That's a plausible situation?

5 A. That is a plausible, yeah.

Q. In that situation, isn't it that the risk you refer to you in your evidence-in-chief at 371?

A. Well the restricted discretionary activity tries to achieve again that we're not having a worse effect and also consents granted under that rule and the recommended amendment, the restricted discretionary rule, would be for six years which would allow you to review that activity relatively short term.

1555

Q. But isn't the problem that you've allowed this activity to commence on the basis that it's done the most it can to reduce its environmental footprint but that might not be enough to meet your NPS compliant one in which case the very risk you talked about in 371 hasn't actually been addressed, the risk being the risk that the investment will be lost because irrigation equipment won't be able to be used?

20 A. That is correct. I guess the key concern though was that people who have already committed to an investment that they would go for the non-complying rule and would get the consent for a longer duration. So the plan change itself it tries to discourage investment, we don't actually – it's an implicit consequence of the plan change and intentional but we don't – we –

25 Q. Can I interpret your answer for you and you can let me know if it's right? We've got these levers which is the controlled activity is the lever that we want to make as easy as possible and the key determinant of that is term, the six year term.

30 A. Yes.

Q. So in terms of your two levers, you're adding a lever to the term one which is restricted discretionary to make the lever of non-complying less palatable?

A. Yes, that is the intention.

Q. Now, in relation to the way in which you've drafted this provision, you've referred to a reduction in environmental effects?

A. Correct.

5 Q. Now, an increase in irrigation can have a range of adverse effects on the environment, can't it?

A. Yes.

Q. It could have adverse effects on landscape?

A. Possibly.

10 Q. It could have adverse effects on terrestrial ecology if that involved the clearance of areas which was currently indigenous vegetation? These are just possible adverse effects.

A. Yep.

Q. It could have adverse effects on water quality?

A. Yes.

15 Q. And those could manifest in a variety of ways, you could have nutrient discharge going through groundwater into surface water, you could have e coli making its way into surface water and then when you talk about the effects being reduced are you talking about – so if we say there's a (inaudible: 15:57:43) adverse effects in relation to increased irrigation, is the reduction in relation to all of them or just of them? So if you had a – was the intention behind your draft that you could balance these effects to achieve an overall reduction or simply you had to achieve a reduction in each one?

20 A. It would be the full suite of environmental effects and not kind of a trade-off, yeah.

25 Q. So the intention is that if there was – if for example in an outstanding or important landscape, it would reduce the effects on landscape which doesn't really make sense as a concept?

30 A. It would be also like referring to a – landscape matters could potentially be on a district plan as well so would not directly be applicable to matters that you control to your water plan.

Q. So the intention in this is not to – when you talk about adverse effects of landscape, you're not referring to – adverse effects of irrigation you're not referring to landscape?

A. Given that this is a part of a water plan, I would assume that any ecological effects would pertain to the realm of the water plan.

Q. Right, so when you're talking about environmental effects you're only referring to environmental effects on water quality or quantity?

5 A. Yes.

Q. And so then if we had the situation where we had a potential increase in improvement in for example water quantity because you're taking less water because you're being more efficient but an increase in relation to one but not all of them, you would fail your test?

10 A. Yes.

1600

**THE COURT: JUDGE BORTHWICK**

Q. Just while we're there, I'll just cover off a question which arose in relation to what Mr Anderson had to say and what also what Ms Baker-Galloway had so say. We were talking about effects on water quantity, water quality. Did you mean to include or capture those activities which evidently are permitted under the water plan? So Ms Baker-Galloway took you to rules in chapter 12 to do with the discharge of nutrients et cetera.

20 A. These are not captured by plan change 7.

Q. No.

A. No.

Q. So when we're talking about no effect on water quality, those activities which are permitted under the rules that Ms Baker-Galloway took you to you wouldn't be looking for an improvement there? Those activities are permitted. You wouldn't be looking to exercise a lever and start to lift the game in terms of nutrient application and controls of it?

A. The framework does not alter how those rules apply. Yeah.

Q. No, yes, that was the point of my questioning and I think the other questioning of counsel, what do you mean environmental effects? It's easy to say but what's actually in your mind? Is it stuff which is permitted, are you meaning to catch this stuff which otherwise is permitted in the

30

plan or not? What's the broad range here? You're going to think about this overnight because you're coming back tomorrow by the looks of it.

A. I know and we had the discussion yesterday as well, your Honour, and I acknowledge that as I said yesterday there might be an opportunity to sharpen up those provisions.

Q. Okay. Good. Alright. So we're with Mr Welsh.

### **CROSS-EXAMINATION: MR WELSH**

Q. Sorry, Mr de Palsemaeker. It just carries on one lawyer after another.

10 A. It's not good. It's not good.

Q. I would say that typically at this time of the day it's the counsel that gets in trouble with the bench rather than the witness so you might be on safe ground. I just want to pick up some of your answers to questions that Ms Dickson posed you and Ms Dickson's series of question were largely aimed at suggesting to you that the council may have lost sight of a quick and simple and cheap plan change and really what are we dealing in the context of hydro and she put to you about the Waipori scheme which is one of the larger takes or activities in the Taieri and said that the consents for those don't come up for renewal again until 2038 and you said aspects of that and Ms Dickson left that for me to follow up. What do you understand as to be the outstanding consents for the Waipori scheme in Taieri?

20 A. My recollection and I'm sorry if I have it wrong but the Waipori scheme operates on a number of deemed permits which are gonna expire now but at the same time I think it was in Ms Foran's evidence. She hinted at another suite of consents for which they would lodge applications I think in 18 years' time.

Q. In sorry what?

A. Eighteen years' time.

30 Q. Yes. I'll put this to you and see if you agree. That what Ms Foran was relating to was when the Waipori scheme in deep stream which is associated with it are up for their next renewal. The Environment Court granted consents in 2001.

A. That is yeah.

Q. And they're up for a renewal in 2038 and what we're talking about for Waipori and the deemed permits are seven deemed permits. You would've heard I mentioned that to the court yesterday which Mr Mitchell  
5 says contributes only five per cent of the Waipori influx. Do you recall that?

A. What you said or what Mr Mitchell said?

Q. Both I suppose.

A. Both.

10 Q. A fair question.

1605

A. Yes, I recall both, yeah.

Q. And just for the record if I suggest to you that the Paerau and the Patearoa scheme which is in the Maniototo and also owned by Trustpower, those  
15 consents don't expire until 2034. You'd have no reason to disagree with that would you?

A. No.

Q. I'm not going to try and do amendments to the clauses by committee today. I'm going to try and focus on some of the higher order documents  
20 and just take a step back first and look at the Skelton report?

A. Yes.

Q. Which is the sort of genesis for this whole plan change and Professor Skelton doesn't, it would be fair to say, wouldn't it, that he doesn't really address hydro at all. He mentions Trustpower's 96 permits  
25 that it intends to surrender and that's the extent of his assessment of hydro, would that be fair in terms of your recollection?

A. I believe so. That's my recollection, yeah.

Q. And the limited consideration of hydro and the MPS on renewal energy generation, that limited assessment has flowed through to the section 32  
30 report hasn't it where there was only 10 lines dedicated to that issue and no assessment of any of the policies or objectives of the MPS?

A. That is correct.

Q. And in the keys issues report, those 10 lines reduced to nine lines and it seems to be that the key message from both the section 32 report and

the key issues report is that the MPSREG is not given effect to but a framework's provided, is that a fair summation of those two documents as they relate to hydro?

5 A. That is correct and that is quite intentional. As I probably have said before, the intention to provide for a framework for hydro is to incorporate that in the land and water plan.

Q. Yeah and I'll come to that in a moment. And would it be fair to say that the drafting of the plan change has essentially had at the forefront of its mind irrigation consents and I'll give you an example –

10 A. No.

Q. The notified version of the schedule was entitled *Methodology for Calculating Assessed Actual Usage of Surface Water Takes for Irrigation Purposes*.

15 A. I agreed to the letter that was initially in there and I recommended to change that. The issues that Professor Skelton alluded to, one of them, and a key one, is the inadequacy of the water plan to deal with allocation and that includes a wider range of uses not just irrigation.

Q. And one of the inadequacies of the water plan, you'd accept, is that it does not give effect to the MPSREG does it?

20 A. There is very little reference to hydroelectricity generation except for –

Q. And that's in respect of the Waitaki?

A. Yes that's the only one, yeah.

Q. So you would accept with the general proposition it doesn't give effect to the MPS?

25 A. Correct.

Q. And your answers to Ms Dixon appeared to me at least to suggest that we'll kick the can on giving effect to that higher order document in the new plan?

A. Correct.

30 Q. And that would represent, would it not, some 10 years, circa 10 years, after the regional council was required under the MPS to give effect to that MPS and the regional plan?

A. Correct, yes.

Q. And Plan Change 7 perpetuates this, does it not, because it doesn't contain any references to renewable generation at all?

A. Correct.

5 Q. I just want to talk to you and clear up something around Mr Wilson's evidence which I didn't put to him because a) I wasn't here in the morning and it was decided we weren't crossing him but it is probably a planning matter and Mr Wilson opined that hydro takes are consumptive because of the definition in the water plan which uses the definition from regulation 4 of the water takes and the reporting dregs, do you recall that?

10 1610

A. Yes.

Q. But that's not quite the entire story, is it? The water plan also treats hydro in the same sense as other non-consumptive takes.

15 A. It does describe that but I personally don't believe that that description matches the description or the definition of non-consumptive in the regulations.

Q. No but the explanation for policy 632 makes it clear that hydro's categorise with non-consumptive takes? You'd accept that.

A. I accept it.

20 Q. And Mr Henderson, he described the Clutha scheme, one of the largest in the country is also being non-consumptive in his evidence in chief at paragraph 23, didn't he?

A. He did, yes.

25 Q. But in any event, whether it's consumptive or not consumptive, you would accept that the NPS reg doesn't distinguish or it applies to both consumptive water takes for the purposes of the regulations and non-consumptive water takes provided they are for renewal electricity generation, doesn't it?

A. My recollection from reading it is that there's no distinction.

30 Q. And notwithstanding that, one of your key intended goals of plan change 7, you've stated in a number of times in your evidence is to discourage further investment in water dependent economic sectors, isn't it? And that reference is to one of your quotes at 393 of your evidence in chief?

A. Yes.

Q. Do you consider hydrogeneration to be a water dependent economic sector?

A. Yes.

5 Q. And in your summary you made a slight and subtle change to that language in that in paragraph 4D you said one of the methods that plan change 7 transitions to a sustainable management for freshwater is by discouraging further investment in irrigation expansion, so you narrowed it down to irrigation expansion?

A. I believe so.

10 Q. But you still stand by that one of the purposes of this plan change is to discourage investment in water dependent economic sectors including hydro?

A. My reading from the NPS renewable energy generation especially the preamble which I refer to is that we – might be best to reference or to read  
15 it out loud: “NPS does apply to the allocation and prioritisation of fresh water as these are matters for regional councils to address in a catchment or regional context and may be subject to the development of national guidance in the future.” So what I’m getting at is that even with activities such as hydro which are provided for (inaudible: 16:13:49) and NPS, we  
20 still need to make sure that it is undertaken in accordance with the priorities set in the NPS freshwater management and be able to have those activities operating in accordance with a regime that gives effect to the NPS freshwater.

Q. Sure but we’re not in a full allocation hearing for a plan change are we?

25 A. We are not.

Q. We’re not and the Court is sitting instead of the Regional Council and I think Mr Moore accepted that the NPS does apply. Have you approached that the NPS is of no relevance to plan change 7?

A. NPS renewal energy –

30 Q. Sorry, I’ll move onto FM later, too hard with all the acronyms at this time of day.

A. It is relevant.



Q. Okay. The relevance or the application of that relevance seems to me in your evidence that you suggest that whilst we don't give effect to the NPS reg in plan change 7, we provide a framework, is that your fancy twostep?

A. That's the intent.

5 Q. I just want to look at that, so the framework in plan change 7 is the same framework for hydro as it is for every other application for water take, isn't it?

A. That is correct.

10 Q. And that framework operates to actively discourage investment in renewable electricity generation and other water-related economic sectors, doesn't it? You've accepted that.

A. Again, caution applied because of the need to sort out allocation issues and water management issues.

15 Q. And that framework for hydro applies a schedule that Mr Mitchell will give evidence on, has provided a statement that the schedule will result in lost generation and inefficient use of the resource.

20 A. That is correct but also in my evidence in reply, I have indicated that it might be an opportunity to look at how the schedule applies. The intent of the schedule is to claw back on paper allocation, not to restrict actual use or historic use.

25 Q. Yes, in your reply at 124 you've said: "it may be appropriate if there were to be demonstrated that the application of schedule 10.4A would significantly impact the continued operation and viability of what you call HG schemes. Now is there an applicable planning document that provides recognition for renewable energy generation that's owned that – should I say, is there an applicable statutory planning document providing that recognition of renewable electricity generation is only necessary if it's demonstrated that the planning framework would significantly impact on the continued viability and operation of the scheme?"

30 A. I think that is basically NPS renewable energy generation that you're referring to, am I correct?

Q. No, this is your test in your evidence in chief at paragraph 124. You've suggested you're willing to reconsider the application of the schedule if Trustpower, I presume it's Trustpower, can demonstrate to you that the

schedule will significantly impact the continued operation and viability of the scheme in question of Waipori scheme, now I'm asking you where did you get that test, are you aware of any planning document that says one only needs to take into account the NPS on renewable energy if it can be demonstrated that there would be such an effect on it?

5

A. Sorry, maybe it's the time of day but I'm really struggling.

Q. Maybe the question, I'm really asking you where have you come up with this test that it's necessary for Trustpower to demonstrate to you that the schedule will have a significant impact on its continued operation and viability before you will reconsider the application of the schedule and I'm asking you where did you get that test from, is there a planning document that supports you?

10

A. No, there is no such planning document, no.

Q. No, that's where I was getting to.

15 **THE COURT: JUDGE BORTHWICK**

Q. Do you need to take a break to be fair? You've been on the stand all day.

A. I'll see how I'll go.

**MR WELSH:**

It may speed things up if he takes a moment, maybe it's the questions.

20 **THE COURT: JUDGE BORTHWICK**

Q. Well, no I was actually thinking a recess overnight if the witness is tired, you should be because you've been on deck all day.

A. Sorry.

Q. And there's no need to apologise.

25 A. I'm okay. I was just – I think what you hear and what you hear in your mind are sometimes different.

**MR WELSH:**

Well, I only get one go at this but I'd like to know if we are recessing because I've got a hotel to find and some flights to arrange.

**THE COURT: JUDGE BORTHWICK**

How long do you need to finish your questions?

**MR WELSH:**

I've got a fair way to go, Ma'am.

5 **THE COURT: JUDGE BORTHWICK**

You've still got a fair way to go?

**MR WELSH:**

Yes and it is what it is, the children won't care that I'm not home, the dogs may but the children won't.

10 1620

**MR DE PELSEMAEKER:**

I'm happy to go a bit further. Are you happy for me to respond to your question?

15 **MR WELSH:**

I think you did. You said no, there was no planning document.

**MR DE PELSEMAEKER:**

There was no planning document, yeah.

20

**MR WELSH:**

Ma'am I'm in your hands. Do you want to proceed?

**THE COURT: JUDGE BORTHWICK**

I'll continue if you're okay.

25

**MR DE PELSEMAEKER:**

I'm okay.

**CROSS-EXAMINATION CONTINUES: MR WELSH**

- 5 Q. Mr De Pelsemaeker, I just want to suggest to you that placing such a high bar in respect of the schedule where the expert evidence from Mr Mitchell is the schedule doesn't work and will have effects that are directly contrary to what the NPS are seeking, I wonder how much of that comes down to your desire to hold the line, a term that you have used repeatedly in the last couple of days.
- 10 A. It's two matters really. One is you refer to the evidence of Mr Mitchell which demonstrates that there are shortfalls in terms of what would be allocated under new consents would be less in some cases. I have other evidence provided by other witnesses, Mr Leslie in particular who considers that there are generally a good level of agreement between historic use and what is generated by the schedule. As a planner, I'm trying to evaluate which one should I give weight –
- 15 Q. May be if you approach it this way. The only rebuttal evidence or reply evidence filed by the council in respect of Mr Mitchell was that by your data analyst, Mr Wilson who commented on two aspects. One outages where he suggested, "well, if there's missing data and there's an outage. It's half. You don't go control. You go restricted discretionary." And the other aspect we've already covered, which was consumptive, non-consumptive. Mr Henderson, the council's hydrologist and Mr Leslie don't provide that counterbalance to Mr Mitchell's expert advice. There is no other expert advice on the matters Mr Mitchell gives evidence on.
- 20 A. Yeah.
- 25 Q. So do you accept that?
- A. I do. Yes.
- Q. Okay. In respect of drinking water, you also state at 1.12 of your reply statement that you consider that matter of better providing for drinking water supplies is a complex one.
- 30 A. Yes.
- Q. And you have not yet fully consolidated your views on the matter around drinking water.
- A. Yes.

Q. Given what we've talked about and what's been stated about hydro is it fair to characterise that issue in the same respect for hydroelectricity that it's complex and you haven't fully consolidated your views around how we deal with hydro?

5 A. In both cases, in my opinion, it can be best dealt with within the framework. Making sure either through the method or through the rules that the method does not impede on or does not claw back on actual use. In terms of drinking water, the NPS is quite clear that it's a higher priority use. Whether higher priority use compared to third priority use is not  
10 compared to Te Mana o te Wai.

Q. We'll come back to the hierarchy of uses in a moment. So is that fair to say then that you're still to consolidate your views around hydro in terms of how it is appropriately provided for in plan change 7?

A. Yes.

15 Q. I'm coming now to NPS. I should largely be talking about the freshwater management.

A. NPS, yep.

Q. So you've confirmed in your evidence in chief and reply that plan change 7 does not nor does it seek to give full effect to the NPSFM.

20 A. Correct.

Q. But the approach taken in plan change 7 has been to give effect to the NPSFM to the extent it can, that's right?

1625

A. Correct.

25 Q. And in some parts as we've gone through the last two days, probably more accurate that you're inviting the Court to give effect through plan change 7 to parts of the NPSFM, because at the moment it doesn't fully achieve that does it, as much as it can reasonably –

A. Yes.

30 Q. – and practically do. Okay, I want to look at a couple of the policy's that you haven't, you've mentioned then insofar as setting them out but haven't provided an analysis of and the first one is policy 4 and policy 4 reads: "Fresh water is managed as part of New Zealand's integrated response to climate change"?

- A. Correct.
- Q. Doesn't it?
- A. Yep.
- 5 Q. And you would accept that hydrogeneration is clearly an important part or important in the context of the nation's response to climate change, isn't it?
- A. Correct.
- 10 Q. But it's fair to say, is it not that the approach of plan change 7 is to kick the climate change can, too much alliteration at this time of day, down the road to the new regional plan?
- A. Correct.
- Q. Because it's silent on giving effect to policy 4 isn't it, plan change 7?
- A. Correct.
- 15 Q. Similarly, policy 15 which Ms Baker put to you: "Communities are unable to provide for their social, economic and cultural wellbeing in a way that is consistent with this MPS." Electricity generation is important in that context of wellbeing too, isn't it?
- A. Correct, it's important but I also read this policy as policy 15 requires a lot of policy's to be met, you know, you need to still comply with all others, it's not a pick an choose one.
- 20 Q. No I understand that although plan change 7 is picking and choosing, isn't it?
- A. In what sense?
- Q. In the sense that is doesn't deal with MPS REG.
- 25 A. Oh yes, yes.
- Q. And it doesn't deal with all the policies that it could give effect to now.
- A. Mhm, that's correct.
- Q. And you haven't provided any analysis on policy 15 in your statement of evidence, have you?
- 30 A. No.
- Q. Now, I want to come to the order of hierarchy and your answer just before suggests that, may suggest a reason for that. The third order of priority in the MPSFM relates to the ability of people and communities to provide

for their social, economic and cultural wellbeing now and in the future, doesn't it?

A. Correct.

5 Q. And you consider, is it fair to say you consider renewable electricity generation to be in that third order priority under the MPS?

A. It is not that simple, reading the NPS, the NPS is quite silent on it except it makes a distinction, it's not really a distinction but it does provide for some hydroelectricity schemes to be included in an appendix I believe, one of them being the Clutha and so it provides an exemption for those –

10 Q. In terms of –

A. – but not for others.

Q. Yes, but that's in terms of attributes isn't it, those –

A. Yes.

15 Q. – five schemes are described as the five largest and they have a free pass, or a less of a obligation when it comes to attributes. What I'm talking about is the order of priority and I'm wanting to know from you whether you consider renewable electricity generation to be a third order priority?

1630

A. Yes.

20 Q. And the second order of priority relates to the health needs of people and then it's brackets: "(such as drinking water)" doesn't it?

A. Yes.

Q. And you state in your evidence in chief at 342 that water takes from drinking water are a second order priority?

25 A. Yes.

Q. Do you accept that water takes for electricity generation are also a second order priority under the NPSFM?

A. In my opinion, it's within the third category.

30 Q. All right, well let's have a look at that, the NPS second order refers to health needs of people and then uses the word specifically: "such as drinking water." So would you accept that the word: "such as", means that drinking water is an example of something that is a health need of people? So "such as" rather than "i.e.

A. Yep.

Q. And so that would suggest, would it not, that “such as” or that list of drinking water by the use of the word “such as” is not an exhaustive list?

A. Correct.

5 Q. And it being the NPS clearly contemplates that there may be other health needs of people, doesn't it, beyond drinking water?

A. Correct.

Q. And do you accept that the electricity generation is critical to people's health?

10 A. It contributes but is it critical? Again, I still think it's, in my opinion and it's just one opinion, the health needs refers to drinking water as well as things such as availability of water for hygiene purposes. I had not anticipated hydro to be in that category.

Q. Yes but it may be, would you accept that?

A. Maybe, according to – yep.

15 Q. According to the authors to the section 32 evaluation report for the NPS freshwater management, have you had an opportunity to read that section 32 analysis?

A. Bits of it.

20 Q. And those authors noted in respect of policy 4 at page 46 and Ma'am, this isn't in the common bundle but I have some hard copies but I'll read the quote anyway: “contributes”, this is talking about policy 4: “it contributes to achieving the objective of 2.1.1(b) which is the health needs and (c) by preserving hydroelectricity flexibility which will secure renewable electricity generation which is important for meeting the health needs of people, clause (b) as well as enabling communities to provide for their social, cultural economic wellbeing now and into the future, clause (c).” So my question is do you accept that it is open for a finding that renewable electricity generation can be a second order and third order?

A. On that basis, I stand corrected, yes.

30 Q. And does that cause you to reconsider where you think the framework for hydroelectricity should be in plan change 7 as a second order priority?

A. Not really because still it is subordinate to the first order one and that is looking after the health and wellbeing of water bodies and puts it in line



with drinking water and that is how we intended to treat those two activities in plan change 7 so in the same manner.

**THE COURT: JUDGE BORTHWICK**

5 Q. Sorry, I don't understand, are you saying that – I don't understand. Are you saying you intended the health needs of people such as drinking water and the generation of electricity to be on the same level?

A. Yes, they're both captured by plan change 7 framework.

10 Q. They're captured by plan change 7 framework but did you see them as meeting the second part of objective 2.1 of the NPS in terms of the three priorities?

A. I agree with counsel.

Q. Okay, so you put hydro together with drinking water as the second priority to be address?

A. Yes.

15 Q. Okay, I've got you.

**CROSS-EXAMINATION CONTINUES: MR WELSH**

20 Q. Now I want to talk briefly about Trustpower's relief and the term "carveout" has been bandied around a bit, is it fair to say that some of the relief that Trustpower seeks is some specific provisions or in your language, a framework for renewable electricity generation? Just a different framework?

A. It is different framework, yes. It's a suite of provisions from recollection.

25 Q. And in rejecting or applying to that framework as set out by Ms Styles, you say that's inappropriate because renewable electricity generation may have significant impacts on the health and wellbeing of water bodies and other values?

A. Yes, correct.

30 Q. Now you're not for a moment suggesting that the effects associated with Trustpower's four deemed permit applications will generate anything like significant adverse effects? Maybe I should put it this, you're not the processing officer because you've said several times your not in

consents, you're not the processing officer for those applications, are you?

A. No, I'm not.

Q. And have you reviewed those applications?

5 A. No, I've based myself on key evidence that was provided by Ms Styles and Ms Foran and Mr Mitchell.

Q. And none of that evidence identifies significant adverse effects associated with those applications, did it?

10 A. I cannot recall whether they are specific to the applications but some of the descriptions in Mr Mitchell's evidence and Ms Foran's evidence describe activities that are from hydrological or ecological or a cultural perspective would have an adverse effect.

15 Q. There's a difference between having an adverse effect that's relevant which is anything over de minimis. There's a big difference between something that's greater than de minimis and something's that significant but my question is you're not suggesting, are you, that the Trustpower applications for these deemed permits will generate significant adverse effects having not seen them?

A. It would be hard to make that assessment, yep.

20 Q. So it would be hard to stand by your assertion that they may have significant adverse effects?

A. Correct.

25 Q. In terms of the plan change, let's assume that there are applications out there that do have significant adverse effects, is it your view that providing a consenting pathway with no ability to decline such an application with a six year term is appropriate?

A. Is that the –

30 Q. Turn it around, so I'm saying assume that there are some applications out there that do generate significant adverse effects, given the consenting pathway that plan change 7 provides of a six year controlled activity...

1640

Q. Plan change 7 provides of a six year controlled activity provision, would that be appropriate to have no ability to decline that activity even though

it generates significant adverse effects for at least a period of six more years?

A. Well, in the context that it would be for a period of no more than six years.

Q. Together with 124, it could be longer than six years, couldn't it?

5 Applications may take a year to process and be granted and go through the process?

A. Yes.

Q. So you're quite comfortable with a significant adverse effect on a deemed permit carrying on for at least six more years?

10 A. Yes, but I would not want to stretch it too much beyond six years.

Q. Alright. You in fact acknowledge that under plan change 7 there could be some worse outcomes environmentally than what could eventuate if an application were processed and assessed against the operative plan.

15 A. In reference to schedule 10A I believe I have based on some assessments that were done by Mr Leslie we identified that while the methodology takes away paper allocation you could end up with rates of take that are slightly higher than what would be granted under the practice that is currently carried out to give effect to the operative plan.

20 **MR WELSH TO THE COURT:**

Q. Ma'am. I've only got about four more questions.

A. Just wondering where this is going. Where is this going? Are we talking about dams or are we talking about throwing it open now to all activities?

Q. I'm not talking about dams at all.

25 A. Okay. Hydro, sorry, hydro.

Q. I just wanted to know the witness in his reply evidence indicated it wasn't appropriate to provide for the relief that Trustpower seeks because it could generate significant adverse effects but the reality is, the planning framework that the council's put up specifically it could enable an effect that is significant with no ability to decline that.

30

A. Well, it may enable something significant. Certainly it might enable increased effects that's the –

Q. Well, my point is that.

- A. – change with subsequent effect where the significance of the effect I don't know but anyway. What this plan change is not doing is avoiding effects, nor reducing them, it's rolling them over.

**CROSS-EXAMINATION CONTINUES: MR WELSH**

- 5 Q. Now, one of the other reasons that you consider that specific provisions for sought by Trustpower are not appropriate is because there is a need to take a longer term perspective on the impacts of climate change on fresh waterbodies, you do that at 1.2.3B. Do you appreciate the irony in citing climate change as a reason against providing for relief on hydroelectricity?

- 10 A. I think there's two aspects to it, one is climate change helps in a response – sorry, hydroelectricity helps in responding to climate change and helps with resilience of communities but at the same time hydroelectricity can be effected as well by climate change, specifically the supply of water that is needed to support hydroelectricity generation. So given that you have a variety of uses, how we're going to deal with the impacts of climate change on flows and what that means for allocating water to different uses is something we need to sort out in the land and water plan, that is where my, that is where it was coming from.

- 15 Q. All right. Two more questions, on the topic of climate change at paragraph 150 of your evidence in chief you set out the section, relevant section 7 matters but you have, or the most relevant, but one of the only two section 7 matters you omit is 7(J) which is the benefits to be derived from the use and development of renewable energy. Was that an oversight or do you think 7(J) has no particular relevance to plan change 7?

1645

- A. I did not include it because we are not specifically providing provisions in plan change 7 for hydroelectricity generation.
- 30 Q. Okay and is that the same reason why you excluded or omitted objectives and polices in sections 4.2 and 4.4 of the RPS relating to climate change and renewable electricity generation respectively?
- A. Correct.

Q. Correct, okay, thank you.

**THE COURT: JUDGE BORTHWICK**

When I say we're rolling over the effects I guess that just, it depends somewhat on whether this is a process orientated plan change or process and  
 5 environmental plan change and it's not clear what the outcome there will be. I suggest we do take the break because I suspect you're probably quite tired having been at this all day, I had thought Mr Reid we'd get to you tonight but unless we had any confidence you'd finish in 10 minutes I'd, I think we'd head home?

10 **MR REID:**

Well I've had a discussion with my friend Mr Page, he's raising most of the issues that I was going to discuss. The remaining issue that I had related to the schedule which is being dealt with via the inaudible (16:46:34) anyway and the only other point I was going to question this witness about was related to  
 15 the restricted discretionary pathway. That's already been canvassed extensively, I did have my own client's scenario to put to this witness but I'm not sure, it probably doesn't really add anything that – they're a vineyard, the sort of scenario that my learned friend Mr Anderson was putting to the witness sounded more like a convert dairy conversion type expansion scenario whereas  
 20 my clients dealing with a small expansion of their existing vineyard which they've already committed to. So that was, that was the only matter that I really wanted to raise with the witness but I'm really content, I'd like to get away this evening –

**THE COURT: JUDGE BORTHWICK TO MR REID**

25 Q. You're okay to come back tomorrow?

A. Well I'd like to –

Q. Or finish tonight, that's what I'm asking.

A. I'd like to finish tonight so that I can get away.

Q. Okay so just on that small matter and otherwise Mr Page is going to pick  
 30 up the balance of matters that you're in to sit in?

A. Yes.

Q. Okay, all right, hopefully it's – how long do you reckon you need?

A. Just a few moments.

**CROSS-EXAMINATION: MR REID**

5 Q. So Mr de Pelsemaeker, Mr Anderson questioned you, I think about how you'd got to your position regarding the restricted discretionary pathway and I think you, it's really a recognition that for those who have committed to, already committed to an expansion, they've already taken the financial risk that you're seeking to avoid with the plan change in part, is that correct?

10 A. Yes.

Q. And so as I said to her Honour, the scenario that Mr Anderson painted was, it sounded as though he was getting at a dairy conversation or pivot conversation, something of that nature so I'm just going to put to you the scenario that my clients are facing, so they have an existing, they are an existing series of vineyards on the Manuherikia scheme and they are, sot they're located nearby to Alex, Alexandra and they have been developing their vineyards since 2002 throughout the 2000s since then. They initially established their infrastructure piping storage on the basis that it would irrigate a certain hectarage and they haven't quite fit, they haven't quite got to that number but they have always planned to do so. So I just want you to assume for current purposes that they would be able to show that they have no, they'd be able to meet your criteria in terms of the rule relating to existing discretionary – to restricted discretionary activities so that's your 10A3.1(A)

25 A. 1.

Q. B.

A. Yep.

1650

30 Q. 2, 1,2 and 3. So one, they would be, so they have already committed to the infrastructure. Two, they would be able to show an improvement in efficient use because they're using the same amount of water over a larger area and then with three, what they might be able to show and just for the purposes of discussion, they might be able to show that they had

no additional effects on the environment. So really the status quo. Water quality wise, landscape wise, whatever. So isn't that exactly the sort of scenario that you would want to encourage into the restricted discretionary pathway as against them going through non-complying?

5 A. Correct. Yes.

Q. So the issue there is what her Honour discussed with you this morning which is what is meant by the notion of an improvement or a reduction in environmental effects and whether that's really necessary in the context of this plan change.

10 **THE COURT: JUDGE BORTHWICK TO MR REID**

Q. Alright. It's two notions. What is a reduction? What are the environmental effects? What's any of that mean?

A. It begs the question as to what it does mean, your Honour, yes but by real proposition is, is this the sort of scenario that the witness would see a benefit from encouraging into the restricted discretionary pathway as opposed to the non-compliance?

15

Q. Yes but you haven't told me what effects your clients will be working on and this is the critical issue neither has this witness.

A. Yes.

20 Q. So is it the effects that I put to the witness in the morning which I thought the broader answer was yes but now is an answer no if those effects are otherwise covered by permitted activity rule which is virtually everything apparently Otago? What effects are left to be managed under this rule is actually a really big issue and we have no clarity. So when you say effects, what do you mean? What's left over that's not permitted?

25

A. Well, I'm just working on the base of the rule, your Honour. I'm not sure what it means.

Q. I know. Neither do I and it's really important and I do think perhaps he needs to sleep on it, think about it. It's actually huge. I mean you can ask him but I think it's huge.

30

A. I can't take it any further, I don't think. It's an issue that whether sleeping on it helps. It's something that needs to be given some consideration and I don't know whether the questions about that topic are really going to be

able to solidify that issue that needs clarity. In terms of a written rule about what this exactly means.

Q. When you say your clients are committed do you mean the infrastructure is already in ground and purchased on the land?

5 A. Yes. It's really a question of storage as to the dams and the piping network. That's already in place.

Q. It's already in place. It's just that they haven't actually irrigated this block and would like to now.

A. Yes, quite, yes. It's largely done but not quite finished.

10 Q. So it's not a conditional contract of purchase subject to getting a water permit or anything like that.

A. No.

Q. I understand. Okay.

A. That's all I had.

15 Q. Perhaps we'll think about that overnight because this is really big. I don't know how it's covered off in s 32 but this is huge, what you mean or don't mean.

#### **UNIDENTIFIABLE SPEAKER**

20 (inaudible 16:53:42)

#### **THE COURT: JUDGE BORTHWICK TO MR REID**

Q. I don't know. I don't know. I mean there's also a question whether this is something you can do by yourself. I'm not asking you to confer with other people but it's almost got an implementation theme to it too. In other words what your consents team are thinking about. How they actually implement this policy and that very much could be something which might be referred to conferencing. If there's merit and I can certainly see it from your client's point of view. Infrastructure is already in the ground, on the ground so it's not as if you're talking about have made enquiries or have a conditional contract. It's not that.

25

30

A. No, it's not that.

Q. It's actually already existing and again that's really important. So what was this meant to cover. People like yourself at least or is it meant to



cover somebody on the other end that has been working towards putting a new infrastructure, it's not in the ground, it's not on the ground? It will not be committed to until there is a water permit or the renewal of the water permit, is it meant to cover then? I don't know, is that sufficient commitment, I don't know. It sounds like lots of discretion in that restricted discretionary rule.

1655

A. I take your point, your Honour.

Q. And that's actually a consents team sort of question too, isn't it, it's actually what would they make of it.

**MR REID:**

So my suggestion your Honour is that the Council formulates a considered position on it, perhaps in writing, comes back to the court and gives the parties an opportunity to comment on that.

15 **THE COURT: JUDGE BORTHWICK**

Q. Yes, what do you think Mr Maw?

**MR MAW:**

More homework.

**THE COURT: JUDGE BORTHWICK**

20 Q. Well not necessarily overnight either, this, I'm just wondering if we finish with Mr Page's questions, release the witness from his oath on the basis he's going to come back which he is actually going to come back anyway but start thinking about these issues of this is the policy, that's the consents team, how does this, you know, how does this actually work together.

25 A. It strikes me, if you look at the genesis of this RDA rule it's a rule put in in response to evidence from submitters so its not a rule that was assessed in the original section 32 report and where we find ourselves in this exercise has been very helpful in terms of identifying perhaps the breadth of what could be covered in terms of the language. It strikes me that the

30

topic would benefit possibly from some conferencing with parties insofar as they have expert planners who have raised this issue to which Mr de Pelsemaeker is now responding to but in the alternative Mr de Pelsemaeker being released from his oath following cross-examination to further consider this issue in consultation with those that will be implementing this framework.

5

Q. Yes and really shake it down, in terms of is his understanding of this policy the same as somebody who would actually implement this policy, really critical. Not that this policy, it's the whole package.

10

A. I think there's clarity over what the issue is that the witness is trying to address through this rule, it's just that the way in which the rule responds or seeks to respond appears very broad on it's face and uncertain in terms of what environmental effects means and what reduction means in this context.

15

Q. And who is captured anyway and whether you need to or whether you actually stop being so kind and say (inaudible 16:57:45) consents which is where the Minister would go. So you know, that's a –

A. Well it's –

20

Q. Now do you need an RDA rule for Mr Reid's client or can Mr Reid's client be swept up in the controlled activity rule?

A. Yes well –

Q. I don't know.

A. It is still a six year consent –

Q. Still a six year consent.

25

A. The RDA consent is. Yes it's the expansion of the irrigation area in the controlled activity rule which is required a response.

Q. No I understand that. Okay well if you are going into conferencing it will be, in terms of the pre-conferencing or even pre-mediation work, all parties would need to get themselves, would need to be revealing, you know the standard positions, what is the position, why, counsel would need to understand what those different positions are and come back with a response, you know, the way that we've been managing Dunedin Plan and also Southland Plan, almost looks like a mediation actually when everybody reveals what their positions are and you go, oh yes but –

30

A. Yes well it would certainly help and particularly understanding those parties that had raised this issue and I'll need to refamiliarize myself with precisely what relief they were seeking and how that fits in in terms of where this issue is at at present.

5 Q. Okay well Mr Page you might want to push it around a bit more tomorrow or not, but anyway that seems a sensible way – I'm just saying, you know, if you don't need to pursue then obviously don't but if you want to pursue it to some extent do but sounds like there's an agreement that there needs to be more work done on the RDA rule.

10 **MR PAGE:**

Yes, my clients don't have a particular interest in that rule but we do have an interest in the issue which has given rise to the rule so I'm going to explore a lot of things tomorrow with Mr de Pelsemaeker about what the goal because it seems to me that part of the difficulty with the state of the hearing at the moment  
15 is we don't have – it's clear whether we are just dealing – that we're dealing with a substantive plan change or whether there's a hybrid on which there are two paths, a procedural path and a substantive path.

1700

**THE COURT: JUDGE BORTHWICK**

20 I don't know that there's a hybrid.

**MR PAGE:**

With respect, that seems to me the different function of the controlled and non-complying rule.

**THE COURT: JUDGE BORTHWICK**

25 I think there's lots of environmental stuff under that control too.

**MR PAGE:**

Yes, I agree. The question's whether there should be.

**THE COURT: JUDGE BORTHWICK**

- 5 Q. And that's a question, so it seems to be a hybrid plan, it's not a process. Only it's a process in environmental. Now here's the issue; it's whether or not this plan change was tested with the consents folks and they understood it to be a blend of both process and environmental and we're content with that but the policy, in putting your hat on as the policy person, you didn't foresee that they were these substantive environmental things travelling through with some of the matters of control or restrictions on discretion.
- 10 A. May I respond to that?
- Q. Sure.
- A. So the environmental measures that are in the plan change are there because they are actually mechanisms that are currently in the plan, for example, the clawback on paper allocation, the minimum flows, those are mechanisms that have been set under the current plan. This is a standalone chapter which means that for activities that deal with – sorry, for the replacement of existing permits we cannot consider other provisions in the plan, therefore, we brought those into – those critical ones, we brought them into the standalone chapter. Does that make sense?
- 15 20 Q. I think you're saying this is a process plan only where you're trying to remove the paper allocation and cap, if you like, the individual takes and volumes.
- A. That is correct.
- 25 Q. That's your process plan. But matters of control and matters of discretion look to be substantive environmental concerns.
- A. They are wider, yep.
- Q. Did you mean that because you've actually said at different times: "no, it's a process, it's not environment", but actually the two seem to be travelling together and that's the problem of what is the problem we're working on here and so you've got a range of responses from folk.
- 30 A. Yep.
- Q. And with that in mind, did you check with – firstly, is this your drafting for the plan change?

A. Sorry?

Q. Did you draft the plan change?

A. It's stated early on in my evidence, the plan change was drafted because we were constrained in time.

5 Q. No, did you draft it?

A. No, I did not draft it.

Q. You didn't draft it?

A. I provided input in the drafting.

Q. Okay.

10 A. The recommendations, however, in my evidence in chief and in my evidence in reply I have drafted those.

Q. Yes, they've come through. So you've got this plan change, was this plan change, was it vetted or run by consents?

15 A. It was partly developed with consents and yeah, relevant bits, yeah, and they definitely reviewed it.

Q. I'm not sure where this leads you. You know, is it a process? Is it environmental, is it both? Does the Court just make a decision on what it is but it's the key issue and it has been the key issue since we started.

**MS WILLIAMS:**

20 Your Honour, I didn't want to just raise one issue which is in relation to the new restricted discretionary rule. That of course is something that has come in Mr De Pelsemaeker's evidence in reply in response to the evidence various positions, because it was evidence in reply, the Director-General does not deal with (inaudible: 17:04:35) the restricted discretionary rule, the plan is true for  
25 (inaudible: 17:04:39)

**THE COURT: JUDGE BORTHWICK**

Unfortunately that's the process where you've got this plan change sitting with the court and it's not your usual exchange evidence and reply evidence but that's the purpose of cross-examination and I think it's a fair point that you're  
30 raising.

**MS WILLIAMS:**

It's just that if we're going to conferencing, your Honour, I do want to leave open the opportunity for the planners who have not commented on the RDA rule to still be present –

**5 THE COURT: JUDGE BORTHWICK**

And I would have thought that that was something in fairness that (a) you could lead from your witness and if not lead, put on paper. Not that I'm inviting another 2000 pages of paper but if in listening to all of this and there are concerns of the drafting and that can be addressed – yes, not just as a draft but also in a  
10 narrative fashion.

**MS WILLIAMS:**

I just wanted to flag that now, your Honour.

**THE COURT: JUDGE BORTHWICK**

Fair enough and it was flagged in the directions, the opportunity to file  
15 supplementary papers was always there and so yes, it's there, you can file, you just need to let me – just need to flag that that is what you're doing and we can manage that but I'm not inviting people to put in the breadth of evidence that they have so far, it's working against you but yes, it doesn't need to be that way. All right, so where do we get to? We get to this is something that actually needs  
20 some serious thought and testing with the consents people. It may be that you won't carry through with this but the witness needs more time.

**MR MAW:**

Yes, and that will be something to explore when the witness has finished this round of examination in terms of where to but it's certainly – the process to date  
25 has identified some of the issues which weren't necessarily foreseen.

**THE COURT: JUDGE BORTHWICK**

No, that's always the process, yes. Exactly, that's always the process. So you know, in case people out in the gallery don't know, this is the process, you start a hearing and then the relief changes and changes again; there's nothing

unusual about that. What's unusual about that is actually the fact that we've got a first instance decision so that's slightly unusual. Well that is a (inaudible: 17:07:14) the first time and also we're trying to make the process work within the usual procedures of the Court but we'll get there. Supplementary evidence  
5 is always available, just have to let me know and then I have to let Mr Cooper programme it in the back and he's not listening, more impact on his schedule I think. So we're adjourned through to 9.30 tomorrow morning and you remain on your oath.

**WITNESS STOOD DOWN**

10 **COURT ADJOURNS: 5.07 PM**

# Notes of Evidence Legend

## National Transcription Service

Indicator	Explanation
<b>Long dash –</b>	Indicates interruption: Q. I think you were – ( <i>Interrupted by A.</i> ) A. I was – ( <i>Interrupted by Q.</i> ) Q. – just saying that – ( <i>First dash indicates continuation of counsel's question.</i> ) A. – about to say ( <i>First dash indicates continuation of witness' answer.</i> ) This format could also indicate talking over by one or both parties.
<b>Long dash</b> (within text)	Long dash within text indicates a change of direction, either in Q or A: Q. Did you use the same tools – well first, did you see him in the car? A. I saw him through – I went over to the window and noticed him.
<b>Long dash</b> (part spoken word)	Long dash can indicate a part spoken word by witness: A. Yes I definitely saw a blu – red car go past.
<b>Ellipses ...</b> (in evidence)	Indicates speaker has trailed off: A. I suppose I was just... ( <i>Generally witness has trailed off during the sentence and does not finish.</i> ) Q. Okay well let's go back to the 11 <sup>th</sup> .
<b>Ellipses ...</b> (in reading of briefs)	Indicates the witness has been asked to pause in the reading of the brief: A. "...went back home." The resumption of reading is noted by the next three words, with the ellipses repeated to signify reading continues until the end of the brief when the last three words are noted. A. "At the time...called me over."
<b>Bold text</b> (in evidence)	If an interpreter is present and answering for a witness, text in bold refers on all occasions to the interpreter speaking, with the <i>first</i> instance only of the interpreter speaking headed up with the word "Interpreter": Q. How many were in the car? A. <b>Interpreter: There were six.</b> Q. So six altogether? A. <b>Yes six – no only five – sorry, only five.</b> ( <i>Interpreter speaking – witness speaking – interpreter speaking.</i> )
<b>Bold text in square brackets</b> (in evidence)	If an interpreter is present and answering for a witness, to distinguish between the interpreter's translation and the interpreter's "aside" comments, bold text is contained within square brackets: Q. So you say you were having an argument? A. Not argue, I think it is negotiation, ah, re – sorry. <b>Negotiation, bartering. [I think that's</b>