

**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:    12 April 2021 held in Cromwell

Court:                      Environment Judge J E Borthwick  
Commissioner Bunting  
Commissioner Edmonds

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 of Royal Forest and Bird Protection Society of New Zealand Inc  
 J Winchester and S Lennon for Te Rūnanga o Moeraki, Kati Huirapa Rūnaka ki Puketeraki, Te Rūnanga o Otakou, Hokonui Rūnanga (Kai Tahu Ki Otago) and Waihopai Rūnaka, Te Rūnanga Oraka o Aparima, Te Rūnanga o Awarua (Ngai Tahu Ki Murihiku) and Te Rūnanga o Ngai Tahu (collectively Nga Rūnanga)  
 P Page and 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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**COURT RESUMES ON MONDAY 12 APRIL 2021 AT 9.33 AM**

**THE COURT: JUDGE BORTHWICK**

Good Morning everybody. I'll just do a brief call through just to see who is in the room and then a couple of matters that we need to discuss, first being the joint witness statements and secondly the minute that I released regarding (inaudible 09:33:45) priorities, so Mr Maw and Ms Melhopt for Regional Council, good morning to you, Ms Baker-Galloway, good morning, Ms Irving. Any party who is here who wishes to be introduced? Like Landpro, I'm sure you're here, you should be, so Ms Perkins is it? All right, anybody else?

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**MS BRIGHT:**

Good Morning (inaudible 09:34:10) from Landpro.

**THE COURT: JUDGE BORTHWICK**

Good Morning to you. Very good. So two things, we've got four joint witness statements and which represents (inaudible 09:34:22) of work and I understand both from reading the technical joint witness statements and also the last planning statement, but that work's not complete, so we need to talk about what directions do we put in place to ensure that it is completed, that people give over the time required to get the job done and done well. We had done a brief audit ourselves of the joint witness statement, the technical briefs and noted a number of things that needed to be finished, not sure that they are all finished in the planning statement, didn't have the time to do the equivalent task, so how do you see this working? We can again offer the services of now Deputy Commissioner Ross Dunlop so he's formally joined the ranks, re-joined the ranks, or so we can offer his services or is it the case that people ought to be making best efforts to sort those matters out themselves and fall back is Commissioner Dunlop?

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**MR MAW:**

(Inaudible 09:35:34) the experts to do some work without troubling Mr Dunlop, Deputy Commissioner Dunlop, without troubling him for the next probably week or so to see whether some of the loose ends can be tidied up, and if not then

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scheduling some further conferencing for the period of time between the end of this tranche of hearing and the next Cromwell week. I think there's a two week gap between those two tranches and we'll know probably later this week as to whether we need to get some formal directions in place to further facilitate that conferencing.

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

Q. So you're not seeking a direction now for people to pull finger and continue with the work that they've done or are you satisfied that they will do so?

10 A. I need to engage again with the Council's plan a bit more particularly the Council's technical team because there has been some further discussion as I understand it, directly between parties and/or their experts to say, well I understand there has been and I just don't know whether that has concluded yet.

15 Q. So how about his? We'll let the technical team and planners confirm it over the next week, but if progress is not made or if one party considers progress is not being made such that a further joint witness statement can be lodged in three weeks hence so that's two weeks in Cromwell plus another week, if there's any doubt about that, parties are to ask for direction and all witnesses will be referred into direct conferencing at short order which means the witnesses are to be available. I want to know what progress is being made by the time we rise next Wednesday. I think by then, next Wednesday, you will know or you will not know, you'll have a good idea whether people are actually committing themselves to the process and if they can't, I will direct them to, yes, okay?

25 A. Very good.

**THE COURT: COMMISSIONER BUNTING**

Q. Is that both the technical people and the planners?

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**MR MAW:**

A. Yes I think it is both. There's, yes. Yes and it looked like significant progress had been made but each of the statements concluded with some texts saying that not – that they ran out of time to do almost the concluding piece of work and I think both groups would benefit from a little more time.

**THE COURT: JUDGE BORTHWICK**

Good. So report by next Wednesday. Actually, I'll ask you to report to the Court because you're going to be here next Wednesday.

**MR MAW:**

Yes.

0940

**THE COURT: JUDGE BORTHWICK**

And I will probably issue a short minute to say that if the report is that insufficient progress has been made by next Wednesday, Court will refer technical and planning witnesses, to expert conferencing in the adjournment between the Cromwell sitting weeks. So priorities. So we issue the minute about priorities because still at this point in time we do not have a sense as to the significance, if any remaining significance of priorities and so we'll be asking questions of farming witnesses and also the experts to come on behalf of farming interests which are not generalised questions where the answer is, tossed off, yes they're important or yes there will be chaos or whatever, but we are really trying to dig into what is known if anything about the exercise of those priorities. It seems to us that the government had a transitional provision for deemed permits for a period of 30 years, which is to finally expire on 1 October 2021 – that is obviously a matter of submission – but that the government had assumed that, when it did expire, that there would be a fit-for-purpose water plan, which would take over those priorities in the form of minimum flows, allocation limits, and so forth. Well, that is not the case, and so there is a potential gap, but is that significant or not? Do we even know whether these priorities are being

exercised or not? Are these priorities taken over by water-share agreements or by some other methods that we are just simply not aware of? Because what this plan change is seeking to do, as I understand it, is to ensure that there is an orderly transition from the (inaudible 09:41:08) water plan to something else, which is the (inaudible 09:41:11) water plan, compliant with the MPS for freshwater management 2020, so we are bridging a gap, and so the focus of the Court's particular interest is on are there any missing elements within that gap, accepting, as we must, that there is no new plan in place or fit for purpose plan in place that necessarily enables the determination of minimum flows and allocation limits. So we are not best assisted by generalised statements. We are looking to or testing the witnesses to see what it is that they can provide the courts so that the Court can factor that into our thinking in terms of are there any elements which can and should be brought forward which have not been brought forward today. So that is our particular interest in it. Now, it may well be that permit priorities survive 1 October 2021, and that is fine, but should they just simply be brought into the plan by citing the name priorities as if that meant anything to any decision-maker in the future? Suspect not. Suspect that that would have been insufficient in and of itself, so we need to talk to people about that. What other? If it is to be brought forward because they have survived, then what should we be doing to recognise those? If priorities don't survive 1 October 2021 but are important, then what other methods are available to us to recognise the work being done by priorities as between abstractors, and should our interests be as between abstractors only, which is what we think priorities are about, or should it have an environmental focus, which is a particular interest in dock, Director General, Conservation. So we will be, again, looking to our alternatives, if priorities don't survive, but there's a gap, how can the gap be bridged, how should it be bridged? So that has our interest in this, and I cannot emphasise enough that the Court is simply not assisted by generalised statements about priorities or about water permits. There is way too much at stake to continue to give evidence like that, so it is a terse word, a terse note, but there is far too much at stake for the farming communities to be continuing on in that vein. All right? So we think we've got the right people in the room, particularly also when we start to hear from farmers, because they



should know. Anything arising? Good. Okay, so we are back with Ms Dicey for the Court's questions.

**MS IRVING RECALLS****SALLY DICEY (AFFIRMED)****THE COURT: JUDGE BORTHWICK**

Q. Thank you, good morning, Ms Dicey.

5 A. good morning.

Q. Good to see you back again. We are going to hand you over to Commissioner Edmonds for her questions.

**QUESTIONS FROM THE COURT: COMMISSIONER EDMONDS**

10 Q. Good morning. I've had the benefit of the transcript, so I'm going to take the opportunity to ask you some follow-up questions on a number of matters that I am unclear about, and I will be looking for more than just a restatement of what you said in the transcripts.

A. Sure.

15 Q. I'll be looking to get some more information out of you. So I'd just like to start by exploring your experience with preparing resource consent applications. So would you be able to just briefly explain to me, in terms of your experience, what is your experience with that in recent times, particularly as it relates to deemed permits?

20 A. Sure, so in recent times, a lot of the applications that we've been working on, actually, we started work a number of years ago. Often the applicants, the permit holders will contact us and say, you know, we need to replace our application and it was a number of years out from 2021, from this year, and our work, particularly, has centred on group applications, and that started with the (inaudible 09:46:34) and then the Lindis were the two  
25 main group applications initially, but a lot of smaller submission-catchments as well, so the Pig Burn is an example, a group of private permit holders in the Poolburn, and then, more recently, the Manuherikia are some of the main ones that I've been involved in, and so the early days is establishing who wants to be part of that group and establishing  
30 principles for the group, and the evidence of Ms McKeague goes into that in some details, kind of the principled approach, because it is a huge shift for a lot of these permit holders to go from often individual competitive

approach, potentially within the water space, to actually shifting to a group approach, and the group approach was something that was promoted quite strongly from the regional council. There was a plan change, and I forget the number of the plan change, I'm sorry, a number of years ago now to facilitate the shift from deemed permits to resource consents, with expiry in 2021, and that was seen as a helpful approach, both in terms of managing the effects effectively, but also transitioning from priorities and an individualistic approach to a shared approach to water management, both for the users and for the environment, and so we start with the principles, and I could refer to those in Ms McKeague's evidence, if that's helpful, but it's generally along the lines of understanding what the environmental needs are and then nobody gains to the detriment of another water user, and then working through what that means, and so very much starting with the science and understanding the ecology, the hydrology, the stream. In the past, it also involved a lot of engagement with stakeholders, so in particular, DOC, Aukaha, and Fish & Game, and often, it was requesting input from those parties as to their values in relation to the particular waterways, and sometimes running field days with those parties as well. More recently, that has become challenge, because we have had a strong indication from both Aukaha and Fish & Game that they would not give written approvals for more than a six-year consent, and so it became more difficult to actually engage on the particular effects of a waterway, or else we had trouble, particularly with Aukaha, getting the representatives, except for a science represent, to come on-site and actually view the stream, and then it was about just preparing the application, working through how water had been used on the property, and for a lot of these applicants, it was the first time ever sometimes that a really comprehensive understanding of their system of water use have actually been kind of documented, some of them have already replaced deemed permits or mining rights into the deemed permits or water permits, so they still had the status under the regional plan as primary allocation because they were originally granted prior to '98. Sorry, I just lost my train of thought there, so yeah it was the first time that a lot of them had been comprehensively documented, so for the

large irrigation schemes, Ida Valley Irrigation Company is an example of that, the Manuherikia and their Irrigation Co-operative Society as well is another good example, very large complex systems of moving water around, a lot of permits covering activities, sometimes, discharge, retake, retakes and actual takes covering the same locations, so there's a whole lot of detail to kind of shake out and try and put into a clear kind of story if you like.

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10 Q. And so how many of those have there been developed through with the application stage?

A. To application? Ooh I'd have to do a count up.

Q. Well just a rough estimate?

A. Twenty or more.

15 Q. So are those individual applications or sub-catchments or catchments you're talking about when you give me that number of just individual applications?

A. Some of them are individuals and some of them are sub-catchments, the Manuherikia is an example where one application or one applicant can represent, so that with the Manuherikia Care Irrigation Co-operative Society, that represents in excess of 300 water users I think.

20 Q. So you've worked on that one and got it to the Resource Consent Application stage?

A. Yes so in the Man-

Q. And it's now been lodged I understand?

25 A. It's been lodged and so Manuherikia's a really interesting example actually, I don't think, I'm not aware of anything quite like it in the country. We've worked co-operatively with my company and two other companies, Landpro and Opius or WSP have worked co-operatively as consultants with clients throughout the Manuherikia to develop a joint process for the Manuherikia and that was really because of the vacuum in terms of limit setting –

30 Q. Oh well that was going to be my next question. These examples that you've been involved with, how many of them are in catchments in

Schedule 2A that actually have allocation limits and minimum flows, or, well most of them do, how many in that situation?

A. So the Manuherikia, it's a bit of an odd one because there is a Schedule 2A limit but it - and that bites in terms of allocation, so the allocation cap exists where the sum of consented is greater than the Schedule 2A limit and that applies to the whole catchment. There is a minimum flow set at Ophir but that has never I think been reached, the minimum flow and I think that's because of augmentation from Falls Dam partly, so it's a very complex catchment from a hydrological level, perspective sorry, and it's recognised that new flow limits have been worked on and we had requested repeatedly to the Regional Council to develop an MPS compliant framework for the Manuherikia head of the deemed permit expiry. At one stage the Regional Council was only going to set a minimum flow and we asked specifically of the Council, did that include an allocation limit, because it had to be a fully MPS compliant framework. Because that framework was not being developed, the catchment (inaudible 09:54:41) that – and this is before PC7 was even on the radar, had been thought about, that the applicants would basically have to fill that gap themselves and so the catchment came together and this is a big catchment where the water users don't all know each other, and come up with a cohesive approach that was s MPS compliant as an applicant could possibly do and I know there are always going to be shortfalls with that coming from an applicant, but it was an attempt to fill that gap as much as possible. In other catchments, the Pig Burn is a tributary of the Taieri and so there is a minimum flow and a allocation in the Taieri and so that one was about setting residual flows, the same with the Kyeburn, so that had a minimum flow and an allocation limit and then several tributaries to the Clutha and now they're a bit funny because they also have an allocation limit, they're not the sum or the consented max, but they're the other default in the primary allocation policy.

Q. Oh the policy –

A. The 50% -

Q. The policy which, I think there's been some criticism of the policy?

- A. In terms of – yes, well it's the how you determine what the primary allocation is. So all the trips going into the Clutha are also subject to an allocation limit, and no more water is available to be granted in those tributaries either, so that's, you know, that's an awful lot of waterways with an awful lot of deemed permits sprinkled along them, although the majority are not in those tribs, I would say, the majority of deemed permits, the Manuherikia, the Taieri, Arrow, Cardrona, I think, are the biggest concentration, but these other tribs are subject to an allocation limit, but no scheduled minimum flow, and so there, it was about residual flows, and on some of those tribs, there may only be one water user or there could be several.
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- Q. So have they all got, the ones you've worked on, do they all have residual flows proposed where there's no allocation limit?
- A. So there's an allocation limit in almost all of those.
- 15
- Q. Sorry, with or without an allocation limit, do they all have residual flows, or only those ones with the allocation limit?
- A. So in terms of our applications, every application we've worked on, we assess the need for a residual flow. In some cases where the waterway dries up naturally below the take and the hydrology supports that, we haven't always proposed a residual flow, because leaving a residual flow, and then it's going to drop to ground anyways, the river naturally, or the stream, wouldn't naturally support values downstream of the take anyway, so sometimes, that's a consideration or a factor, but in every case, we assess the need for a residual flow, and so that's one of the considerations that's critical in the development of those applications. That's one of the key mechanisms to manage the effects of takes.
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- 25
- Q. So you're also doing applications outside of the schedule 2A water bodies, are you?
- A. Yeah, so those are the tributaries that feed into the Clutha River, and so Long Gully is an example there. We've done the Bannockburn, which is an incredibly complicated system of using waterways and retakes and then private rights being taken at the some location as company water, and so that's a very complicated, probably the most complicated one I've seen, and again, that's being done at a group scale, and a range of
- 30

residual flows proposed as part of that application, and so that's not a two-way catchment.

Q. Not a two-way catchment.

A. Yeah.

5 Q. I suppose I was just trying to understand whether there was a difference in approach, given that you've got the allocation limits and the minimum flows in the schedule 2A ones, but you haven't in the ones outside that. So you've mentioned residual flows, but what about other mechanisms?

10 A. Other mechanisms is the flow-sharing agreement, and that is, as Mr Hickey said, that's one of the mechanisms used to help transition away from the priorities. In the Manuherikia, we've proposed a minimum flow for the main stem of the Manuherikia, and a system of integrated residual flows, so not only take-specific residual flows, but residual flows at the downstream end of key tributaries feeding into the main stem, and so  
15 there's a whole system of kind of integrated water management that's proposed with the Manuherikia catchment, and that's focused on where critical values are, understanding, say, fish passage, understanding, you know, where the particular habitat values are for particular species, and also considered water quality effect, so all of those reports have all got  
20 kind of detailed analysis of water quality and trying to link those back to land uses and what may need to shift in the future to address that. I think Mr Hickey talked in detail about the hotspot, identifying hotspots within the catchment, with the Thomsons Creek wetland project, and so they're probably some of the key. Other facts are the drive to improve efficiency in terms of water use, and that's been a response to both the operative  
25 plan and the national policy statements, and so on farm commitments to on farm changes, particularly in the past, we've seen a slowdown of that recently with PC7 where it's much more just about holding steady because of the uncertainty.

30 Q. I guess that was a question I had, I mean, you've talked about the bigger process that you're working on, and then PC7 comes along.

A. Yeah.

Q. So is it capable, then, of being addressed in terms of controlled activity in terms of PC7?

A. All of those wider matters?

Q. Well, I'm not sure all of those wider matters are. That's the purpose of my question. I mean, what could be achieved, I suppose I'm asking you, through the controlled activity status that's now being proposed?

5 A. I think, in my opinion, it has to be a controlled activity, and I guess this reflects the evolution of my thinking from the permitted activity, now a simple controlled activity pathway, is a very process-orientated pathway. Because all of those other considerations, they're complex, they're not necessarily agreed with by other stakeholders, you know, the first  
10 proposal is not something necessarily that all stakeholders will agree with, so that's a complex process of assessment by the regional council, input from other stakeholders, and they require, often, as soon as there is a change, a loss of reliability of supply, which comes with residual flows, adherence to a minimum flow, then that requires changes on farm, and  
15 that can be putting in storage to address loss of reliability of supply from the river source, or changing your infrastructure on farm, and as soon as you trigger any kind of change like that, then a short term of consent, there's just a complete mismatch there between the two. I think this process is incredibly hard on the permit holders, and so I think the  
20 simplest approach possible to allow them to get through this stage and for everybody in Otago, all stakeholders, to actually focus on the limit-setting, would actually, you know, be the most helpful in terms of, you know, we're talking about the controlled activity rule.

25 Q. So can you just run that past me again? I lost the thread of what you were saying at the end. So I've asked you a question about the controlled activity pathway and what that may be capable of achieving over the short term, and I wasn't clear about your answer.

30 A. I don't think it can achieve anything environmentally or from an efficiency perspective. I think it can only be a simple process, or it should only be a simple process rollover, because if you require anything else, that can require on farm changes, which requires investment financing, which won't be possible to obtain because there's only a six-year permit and a lot of uncertainty about the future, so I think there's really, through the



controlled activity pathway, I think it's process orientated rather than process plus. Is that a more helpful answer?

Q. Yes, I think that is, thank you.

A. Sorry.

5 Q. So the next area I wanted to understand a bit better, from looking at the transcript, is this whole question of priorities. We haven't had anything very definite about priorities, we've had a lot of –

A. General?

10 Q. Yeah, well, also quite a lot of speculation as to what may or may not be happening. We've had no actual examples provided of where priorities have been exercised, and reasons for their exercise, and even the methods for the exercise. You had talked about dial-up and that in a general sense, but in terms of some concrete examples of priorities, presumably, when you're working towards these applications and on these applications, the discussions that you're having are surely going to have the word "priority" mentioned more than a little, and people coming to the table probably take it that, well, I've got these priorities, that actually puts me in a better position. Would that be right?

15 A. Yes, absolutely, and that, again, goes back to those principles and the fact that, with a lot of these groups in particular, we've been working with them for years now, and partly the reason for them coming together as a group is because there are priorities and they understand that priorities are going to finish and what then? And so an example where priorities have been used is the Kyeburn, and that was one of the earlier applications that went through, and I can give you a little bit more about that one. The other one is the Pig Burn, and that is actually one of the examples I included in my supplementary evidence was from the Pig Burn, and in that one, it's quite an unusual system of the order, because I think some of the lower priorities are downstream, and the highest priority is the second most upstream water take, of the kind of downstream reach, there's one way up in the hills that doesn't really affect anybody else, and so their priorities were used, particularly between priority one in a lower priority who was situated higher in the catchment, so between those two water-users, and then further down between

another two water users, and so working with the group, many of the early meetings were about things such as priorities and access to water, and they were critical. You know, throughout Otago, I think where priorities have been used and where people have held higher priorities, it's affected land values. That's how critical they were, and so with the Pig Burn example, as part of that proposal – and this is something else that we've done with applications – another way to address environmental effects from water takes, not just residual flows, but also reconfiguration of takes, and so the Lindis is probably the, you know, the largest-scale example of that, closing the three races and having a dispersed system of small takes. With the Pig Burn, three of the water users were actually going to move their points of take and put them to one point of take. Because of that that particular location we'd identified, it was identified it was a gaining reach, they would have less impact on the values in the river, and so that's a big reconfiguration, because two of those water users had exercised – my understanding – had exercised priority, one against the other, and so moving forward, they were letting go of that and actually having a shared piece of infrastructure going forward. Two of the other water users which have used their priorities in that example and it's actually written in the application that they had had the priority 1 had exercised priority over priority over priority 5 and that they were going to enter into a side agreement to acknowledge that they have those priorities, that those priorities had been utilised by priority 1 and that they were entering into a legal side agreement outside of the consent process to try and address that to protect that priority holders, you know, priority 1's access to water and so and that, that was the example in that case.

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Q. So sorry, I've lost – was that the Pig Burn you've just been talking about?

A. Yes that was the Pig Burn.

30 Q. And then you mentioned the Kyeburn?

A. Yep, so the Kyeburn was another example, in that case again we had a system of residuals throughout the whole catchment with the key kind of residual at the bottom of the catchment before it enters the Taiera River. There was also a water supply agreement. They formed a company, was

it a company or a – some kind of legal entity and that had with it, not just its constitution, but a water supply agreement or water sharing agreement as to how those water users within that catchment and from memory, it was a few years ago now, but there might have been 16, 18 different water users were going to manage the flow sharing within that catchment down to the residual at the bottom of the catchment so the-

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Q. So that flow sharing agreement was that a formal agreement and part of the consenting process or was that outside of all that, a side agreement?

A. It was a side agreement, yes, so I'm not, from memory I don't think it was mentioned in any of the conditions of consent, I'd have to go back and check, but from memory I don't think it was and so Ms McKay is more involved in the detail of developing those supply agreements with clients than I am, so she will be very well placed to talk you through the details of that.

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15 Q. Sure. So just going back to that principle that you said drove a lot of the work which is that, I think it was nobody gains to the detriment of another water user and I was just trying to understand that a little bit better, is that water user in the sense of an abstractor of water?

A. Yes, yes. So that's very much - so the first principle is about, well the environment, looking at what the environment needs and that means, the assumption there, is that everybody, all the abstractors will be losing something, they will be losing reliability, a supply or access to the water to some degree because you start with how much the environment will need and so when you're then looking at people's loss of access, its trying to do it in a fair way that takes into account historic access including priorities, but it might also not be a priority, it might be that one person was just lucky enough to have their take in a gaining reach or was upstream and there wasn't a priority, so could get access to water, but it's very much about, yes, just trying to be as fair as possible so that everybody's going to lose a bit, but not to the detriment, or, yes, nobody's going to gain at the detriment to somebody else as well.

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Q. So it's a negotiation process is it? So you might –

A. Very much so.

Q. – might think of it –

A. Very much so.

Q. – that way. So I guess trying to understand the extent to which there are priorities in all of these areas, is there a sort of go to source for that, that you've used when you've been doing your work or does that just have to be done on an individual basis going through the historic permits and things?

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A. So it's very much conversation with the permit holders themselves. So some permits will have a priority on them, but they have never been used, so you can start with the permit but that will only tell you so much, that one, that illegal right exists, but so of the two examples that I put in my supplementary evidence, the first, the priorities is the Pig Burn and priorities have been utilised there, the second I think was in Lauder and those particular priorities between those two permit holders, my understanding is that they haven't been exercised so it completely depends on the permit holders what –

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Q. And you have to ask the permit holders –

A. Yes.

Q. – whether they've been exercised and if they –

A. Yes.

15

Q. – haven't owned the land particularly long, they may not actually know?

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A. They will, not so much about the length of land ownership because often that's part of the due diligence in buying a property is not just the face value of your permit but also actually your access to water under that permit and that's very much informed by the priority on the permit and whether – so if you're a lower order, if you're 2 or lower, whether the higher priorities have exercised their right and whether that restricts access, so, you know, and we, our company has done due diligence in terms of purchasing properties and that's very much a factor in understanding that access to water is whether the priority has been utilised.

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Q. But, I am just a little unclear about that, if it hasn't been exercised, that doesn't necessarily mean that it couldn't be exercised in the future?

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

Q. Yes.

A. Yes.

Q. So it might be a red flag sort of issue?

A. Yes, yes absolutely.

Q. Yes.

5 A. And so if some of it, so if there's a property with a higher priority than you, you and your neighbour have a very stable relationship for years, your neighbour hasn't exercised their higher priority, they sell their property, the new owner is entitled to start exercising it and I'm sure there are examples of where that's happened. I'm not actually aware of where  
10 that's happened, but I'm sure there are examples.

Q. So if you're working with a group as the example that you have given of some other group –

A. Yes.

15 Q. – and so they all agree that, okay, well if there are issues about priorities, we're either not going to worry about that or we're going to do something on the side agreement that isn't going to damage the overall basis that we're proceeding on –

A. Yes.

20 Q. – if you're doing applications, do you mention the word "priorities" at all? Do you set out – is there anything in your AE that talks about priorities?

A. There might be passing reference but I mean we do a section on in our AEs in terms of affects on other water users. Often because we do them as group applications in the sub-catchment basis, so that is within a tributary, a contained kind of system of priorities, then that's already been  
25 addressed in the proposal internally, so it won't always be explicitly recognised in say that section of AE. In the Pig Burn we did mention it very briefly and pretty much to say that the – the other priorities have been set aside, but the priorities between, I think it was priority 1 and 5, were being addressed in a side agreement, I can't actually remember if we  
30 specifically mentioned it in the Kyeburn, so a lot of the time it forms part of the background work within the group and it's about the group coming to an agreed position after the kind of the environmental aspects, the other, all the other environment aspects looking after the waterway being addressed.

**THE COURT: JUDGE BORTHWICK**

Q. Can you say that again? I'm sorry I lost the thread of what you were saying?

5 A. So it's very – so it's often contained within the proposal, but it won't be explicit so it's part of – it very much forms part of the development of the proposal in terms of the management between themselves, whether it's the water supply agreement, but it's probably, I don't think we often mention it explicitly in the application in detail, how it's being dealt with, often if there is a water supply agreement we'll mention that there's a water supply agreement. That may reference back to the priorities, or it may just be “this is how this group proposes to flow share down to these limits and manage to the limits,” and perhaps that reflects the fact that it's very much been something between water users, historically, and that the council hasn't been involved in managing, so quite possibly, that's a, you know, reflection of that.

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Q. So I have noted, your evidence is: “Often, albeit that the applicants for resource consent will have proposed a new take and use of water, taking into consideration existing priorities, how those priorities are managed as between water users is often not mentioned in a resource consent.”

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A. Application.

Q. Yes, application, and secondly, you may or may not mention the existence of a water share agreement in an application for resource consent.

25 A. No, sorry, I'd reframe that to say we do mention that there will be a water supply agreement, but that might not reference back specifically to how it replaces priorities, so we do note where there's going to be a water supply agreement or a water-sharing agreement.

Q. So what's the difference between a water-supply agreement and a water-sharing agreement? You're using different terminology.

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A. Sorry, sorry, I should just use one. I'm just using them interchangeably there. I suppose, more technically correct approach, water-supply agreement is more about an irrigation scheme and its supply agreement to its shareholders, and a water-sharing agreement is an agreement

between abstractors to how they are going to manage their access to the water body.

Q. So you have been referring to water-sharing agreements?

A. Yes.

5 Q. Yes.

A. Sorry.

Q. So some of these applications that you're involved with, presumably, it may not be possible to get everyone in the tent, some people may have got new water consents already, for example?

10 A. So in the Manuherikia, yes, there are some outside of the tent. Some went through earlier, although one of the main ones to go through earlier in that example was the Hawkdun Idaburn scheme, which reconsented in 2001 and were granted long-term permits, but they are still formally part of the Manuherikia catchment group and have been active members of  
15 that group. There are a few, or maybe three, five, permit holders, I think, that I can think of off the top of my head that aren't formally part of Manuherikia catchment group approach, which I think is quite remarkable, considering just how many permit holders there are and the geographic spread of them.

20 Q. So how do you deal with that, the fact that not everybody's in the tent?

A. So we anticipate that whatever minimum flow limit will be imposed, they will also have that imposed on their permits.

Q. You mean that the regional council will review their permits and do that, even though you're not the council setting the minimum flow and the  
25 allocation limit that you've got your group working to?

A. Yeah, so I was actually referring then to people who had current applications who were replacing their permit, so if, you know, there's a minimum flow proposed for that catchment, we'd anticipate that it would be, you know, a condition of their consent as well.

30 Q. But you're relying on the regional council –

A. Oh, absolutely.

Q. – to review those –

A. Oh, well, if they're a current application –

Q. – other permits if they're not current applications.

A. Yes, yes. We have no control over that, yeah.

Q. As a matter of interest, how many permit holders are there in the Manuherikia who have consents which are still running and are not going to be expiring before 2025?

5 A. I couldn't tell you that number off the top of my head, I'm sorry. I know the Hawkdun Idaburn company takes water above Falls Dam is the key one. I'd say I think there are very few.

Q. When you say Hawkdun Idaburn?

A. Hawkdun Idaburn.

10 Q. Hawkdun. They are the key one in what respect, what do you mean by that? Because they have got a long-term consent which is still running beyond 2025?

A. Yeah, they're the only one I'm aware of, and because they're an irrigation company, rather than a single-permit, you know, a single landowner, so they're supplying water, and they transport it all the way from the top of the Manuherikia Valley over into the Taieri catchment, but they're the only one I actually know of in terms of surface water abstraction. That's not to say that there might not be a few others, but if there are others, I imagine that they'd be, you know, small individual landowners. There were some, there was the Jopps, I can't remember the name of their station, that were replaced maybe four years ago, but not ones that I've dealt with myself.

20 Q. And is your assumption that if Manuherikia is processed according to the application and granted, that the Hawkdun Idaburn Irrigation Company will be reviewed in line with whatever is set on the application or applications which are now before the regional council for Manuherikia?

25 A. I wouldn't say it's my assumption.

Q. Does that need to take place or not?

A. I think a separate assessment of their impacts would be helpful.

30 Q. Does it need to take place in the sense that it is important to review that existing water permit to enable whatever has been proposed for the wider Manuherikia catchment to take place?

A. I don't think it's critical for the health of the water body in the Manuherikia itself.

Q. No, I am talking about abstractor interests only.



A. I think it would be useful to review it, definitely. I think it would be a good thing to do, to bring things into line, yes.

Q. Is the exercise of the new proposal for the Manuherikia, contingent upon a review of the Hawkdun Idaburn?

5 A. No.

Q. That is all I was getting at.

**QUESTIONS FROM THE COURT CONTINUES: COMMISSIONER EDMONDS**

10 Q. So the work you've been doing, you've just factored that consent that's outside the tent in as a given?

A. That's right, yeah.

Q. So having done that, that would have effected everyone else in terms of the work that you're doing?

15 A. Not hugely, because they're above Falls Dam, and so because it is such a complex catchment with, you know, storage of water at the top of the catchment that then can augment flows downstream in summer, and that take's above the dam, so it has a lesser impact in terms of what – yeah.

Q. Sure, but there must be other examples where –

A. They've already been granted?

20 Q. Yes.

A. Yeah.

Q. That could have quite a major impact in terms of the principle that you've been working too if they were in the tent as well and being reviewed.

25 A. I can't think of another example in terms of a permit that would either undermine the proposal, or they would be scattered amongst tributaries, and I know, so I'm thinking of one example, the other one I mentioned, and I'm sorry, I can't remember the station name or the actual applicant's name because it wasn't one I dealt with, they've still been part of the discussion about the future of water management within that tributary, so  
30 they have still been brought into discussions about flow-sharing within that particular at the bottom of that, you know, meaning the residual flow that we've proposed for that trib.

Q. So they've been brought into the discussions, but with what outcome?

A. I'm not actually familiar with that specific, I haven't worked on that tributary, sorry.

1030

5 Q. So most of the applications that you've been involved with and are aware of, do you have an expectation in terms of review clauses?

A. Yes and we've got much more specific detailed review clauses on recent consents granted for water abstraction in Otago and I think most permit holders now with this process are aware that if they got granted a permit now, that, I say if they were in the Taieri, that the minimum flow could possibly change as a result of the limit setting process under the MPS, as part of the FMU process and that that could very well result in a review of their permit, so I think that's now much more an accepted part of it.

10

Q. So is that, there was explicit review clauses that signal that future re- well the MPS FM review and the likely change to the plan and those sort of things –

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A. Yes.

Q. – triggering a review?

A. Yes.

Q. But it still requires the Council to –

20 A. It does.

Q. – undertake the review?

A. Yes. And that has been something that's been –

Q. Or trigger the review, yes –

A. – that's - yes that's right and that has been foreshadowed in Otago, that was the approach that was going to be taken under the current, the operative plan in terms of those 2A, the schedule 2A catchment where there was a minimum flow set in the Taieri as an example of that we were getting new permits issued but no – the minimum flow isn't a condition of consent on those permits but people know that - or anticipated because the plan said it would happen, that once all deemed permit applications were in or at 2021 the minimum flow for the Taieri would be applied to their permits, so we've actually had some permit holders who have been voluntarily flow sharing in anticipation of that to meet the minimum flow even though it's not actually a current condition of their consent.

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Q. Sorry, I just need to switch horses, I've just got a few other things that ....  
so the – you may or may not be able to help me with this, tell me if you  
can't, but where you might have an irrigation that's supplying a variety of  
purposes, so you might be providing stock water, drinking water for  
5 people, and then you've got your standard sort of irrigation to support your  
pastoral activity or your particular horticultural activities, are all of those  
things broken down in the different activities and the different allocations  
that are being sought?

A. In the applications?

10 Q. Are all of those separately broken down in an application that you're  
involved with?

A. So for those large schemes, what we do, is we undertake a mapping  
exercise and identify and we utilise Aqualinc as a bit of a template here  
because everything has been assessed against those efficiency  
15 requirements and Aqualinc uses at a kind of a broad level using water for  
pasture, viticulture and then I think it's cherries but we apply – so the  
cherries one is applied to horticulture in general and then market  
gardening which is really a North Otago thing in terms of how Aqualinc  
have developed it, so those are the kind of the high level categories in  
20 terms of land use, the pasture, the viticulture and the horticulture and then  
on top of that we identify where it's required, stock water and the needs  
of stock water, frost fighting and there are either requirements based on  
kind of a his- you know, frost fighting requirements in an area and some  
allowance for distribution losses. A domestic – a lot of schemes don't  
25 actually supply water as potable water, so there may be some users who  
utilised water for domestic supply but that's not actually part of their water  
supply agreement, so we haven't factored that in for the larger schemes,  
for an – on an individual farm level, or a much smaller focused application,  
again it's identifying whether they're using their water for pasture,  
30 horticulture, viticulture and so sometimes it's quite complex, depending  
on the application and their water use where people also have some  
amenity areas that they might water or lifestyle blocks and so we try to  
acknowledge that and group it in to say pasture or horticulture, or one of  
those two. So try to acknowledge the use and then the application itself

will detail, if it's a smaller application specific to private permit holders, it goes through and outlines what they do on their farm and the breakdown of what they're doing with the water, in terms of area what infrastructure they're using, so we do try to give that specific information as possible in terms of what's happening on the properties.

### THE COURT: JUDGE BORTHWICK

Q. So we've heard either cross-examination suggesting to the contrary and we have, and evidence of a highly generalised nature also suggesting to the contrary that it's not possible to understand what is the area under irrigation, is it your evidence that that is wrong because that information is being supplied now by applicants for water permits?

A. So I think just trying to understand what – in terms of your reference, so we do know the irrigated area at the moment, absolutely, and property owners can identify that, I think the concern was about the providing proof based on a certain date of particularly retrospectively of an irrigation area, so being able to prove categorically one way or another that an irrigation area was in by a certain date, so it was that more the date reference that was the issue, but...

Q. Why's that an issue?

A. Again that was within the context of the controlled activity rule and keeping the process very simple.

Q. Why's that an issue? In the context of a controlled activity rule –

A. Yes.

Q. – why is it an issue for any irrigation company with a water sup- any irrigation company supplying water or alternatively any farmer taking water and using water to establish what area of land is under irrigation?

A. At a particular date?

Q. At a particular date?

A. Yes.

Q. I don't understand what the issue is?

A. And I was thinking particularly about the Manuherikia there where they have 300 shareholders, over 2000 hectares and land being subdivided, sold, irrigation is not static in terms of –

Q. Just pause a second, if we're taking Manuherikia as the example –

A. Yes.

Q. – the 300 shareholders to – what's the name of the entity, the company there?

5 A. Manuherikia Irrigation Co-operative Society.

Q. The Co-operative Society, 300 shareholders to that, those shareholders are party to a flow sharing agreement?

A. A water supply agreement.

Q. A water supply agreement?

10 A. Yes.

Q. That water supply agreement doesn't note or it is agnostic, it doesn't note at all, what the area of land is to be irrigated?

A. It does but that's based on a very outdated Ministry of Works calculation which isn't actually accurate in terms of what's happening on the ground?

15 1040

Q. Okay, so the water-share agreement for Manuherikia co-operative society is inaccurate in terms of what is actually happening on the ground, that is your evidence?

20 A. Yes, in terms of there is a mismatch there between how the supply agreement works in terms of what they've signed up for, in terms of their shareholding and then the water that they received from the company, compared to what they might actually do on the ground. On the ground, they might irrigate less, and they might not take their full allocation from the company. The water supply agreement just speaks to their  
25 entitlement, so they might only irrigate half of that, or some of them may be able to spread that water further, because, as I understand it, the calculations, the old Ministry of Works calculations, probably wouldn't be something that – well, might be amended, in today's terms. So that's really about that legal entitlement in terms of the supply that the  
30 landowner can ask for and then the payment that they give to the company as well, or to the society.

Q. If the regional council is interested in understanding what the area of land is under irrigation, what information should it be supplied as part of a controlled activity?

- A. It starts with a number, but I always numbers have to be supported by something, so then it would be mapping to support that number as well.
- Q. And that mapping applies to, obviously, an area of land which may or may not be the whole parcel of land under irrigation in any one year. And that would be very normal, some blocks are irrigated, other blocks are rested, and that changes year in, year out.
- 5
- A. Yeah.
- Q. And it depends on what crop rotation is happening, and it also depends on what stock has been put to the land. Is that not so?
- 10 A. Yes, or if you're in the process of changing your setup, and I think the date and the rule – was it 2018, 2019? So my concern was more centred about going back to a particular date and just going through that process, and, you know, targeting a specific date retrospectively and saying, okay, on this date, what was your irrigated area, and give us proof that it was that on that date or in that season.
- 15
- Q. And you are saying that farmers would not have a record available from 2018?
- A. Or some kind of proof specific to that date. It's not insurmountable.
- Q. No, it is not insurmountable, and that is the point, is it not? It is presented as insurmountable in this case, but I do not think it is, and so I am trying to draw out of you what, if this is an important control, should the regional council be looking at?
- 20
- A. So I definitely do not see it as insurmountable. My concern around that was more focused on keeping the controlled activity pathway as simple as possible, and so –
- 25
- Q. Understood, but now we are driving into the detail.
- A. Yeah.
- Q. So what is the detail that the regional council would look for in order to establish what is the area under irrigation?
- 30 A. Yeah, and so I think, again, it's a number supported by maps and, you know, whether that's current irrigation area at the date that it's lodged is the line in the sand, or, within, you know, a span of a particular number of seasons may be helpful, one of those options.

Q. Presumably, that area under irrigation, there is a date line in the sand somewhere, would reflect the setup or the irrigation systems as of that date?

A. Yeah.

**5 QUESTIONS FROM THE COURT CONTINUES: COMMISSIONER EDMONDS**

Q. So I just wanted to understand, you talked about a water-sharing agreement, so how does that relate to a low-flow management regime – I've forgotten the actual terminology at the moment – or a rationing agreement?

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A. A rationing, low-flow sharing agreement, a sharing agreement, all pretty similar things. So all of them require as a starting point a limit, and so setting the limit is the critical thing, because all the background work goes into that, actually what is the limit? What does the limit need to be? What are the values? What is required to protect those values? What is appropriate?

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Q. So when you say "limit," what do you mean?

A. So a minimum flow limit or a residual flow limit. So what are we managing the abstraction down to? And so –

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Q. Sorry, finish your answer.

A. And it's in an abstractor's best interest not to hit the limit and then be turned off, so what they try to do is to reduce their take as they approach a limit so that they've still got some access to water. Some small access to water is better than complete turn-off once you reach a limit, so the limit is an incentive, so that flow-sharing begins as flows drop down towards the limit, so that's, you know, people reducing their take down to that limit, and in a kind of co-operative sense, and I'm not the one within our kind of team that has, you know, actively developed these. Mr Hickey and Ms McKeague are more involved in this than I am, but it may be proportional reductions, you know, across the different abstractors as flows start to drop, so everybody drops back to 80% of their take, or, you know, and then down to 60% and down like that, or it can be turnabout, you have water one day, I have water the next day, again, at a reduced

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limit, and then, yeah, with the aim of keeping some abstraction available while not, you know, hitting that limit, whatever that limit may be.

Q. So you've given me the minimum flows and residual flows, but you haven't mentioned primary and supplementary allocation, so how does that mesh with this?

5

A. Okay, so supplementary allocation is not even in the picture at that stage, so we've got the two bands of water, the supplementary allocation are when flows are higher in the river, so by the time you're even really getting down to any kind of flow sharing as flows are dropping, we've only taking about the primary allocation, so sharing within that primary allocation block, down to the residual and minimum flow limit. So there are flow limits set for supplementary, but the supplementary allocation is allocated in bands, and the access to water is not so critical, it's not at a time when, you know, you've got your crop going, dry conditions, flows are dropping, it's about accessing water when it's available to full storage, so it's a whole different scenario. So, really, these flow-sharing agreements are within primary allocation only.

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Q. And to go back to my question, you talked about limits, but you didn't talk about primary allocation limits, so how does that fit into what you're talking about?

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A. So these water users or abstractors, all these permits are within the primary allocation block, and so they have the ability to apply for their permit because they qualify as being within that primary allocation block. The policies that are, you know, talked about as the sinking lid policies apply and are a factor in terms of when we're developing the application. Water that they haven't had a history of accessing, they know they're not going to be able to apply for it under those policies, and so it's that lesser of their history of use and the Aqualinc calculation of what's efficient that they will be able to consent as or seek replacement allocation for under the operative plan. That's a very long-winded answer.

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Q. I'm just not sure whether the environmental purpose of these allocation limits is coming into it. You've mentioned efficiency.

A. The key factor, and, you know, we're working within the framework of the current plan in terms of these current applications. In my opinion, the key



mechanism at the moment to look after instream values and other values that, you know, aren't abstractor values is through the minimum flow limits and through the residual flows, because those sinking lid policies do reduce down the allocation, but at the moment, they only, in terms of environmentally, they speak to efficiency, only being able to take the water that, you know, is efficient or reasonable for your purpose of use and that you've historically been able to access, so that's how the current plan is set up. So we have seen, in some of the applications that have been granted, we have seen some quite significant drops in allocation across a sub-catchment or a catchment, and that's beyond just a reduction in paper water, but actually a reduction, even, to their actual abstraction as well, so below their history of use, and then that's further affected as well in terms of their reliability of supply, with the setting of minimum flow limits. So setting the minimum flow or the residual flow, that essentially keeps the most reliable water for the water body, and other values that have been identified.

Q. So I think we did have some evidence about how allocation limits can have environmental benefits. You weren't here for that, presumably, or you don't agree with that, or because you're working within what you see as the current framework of the plan, you don't see that allocation limits have an environmental benefit other than in the efficiency of use sense?

A. I think they can. I think the key, in my opinion, the key mechanism for that, though, is the setting of a flow limit, so not an allocation limit but a flow limit, whether that be called a residual, a minimum, or, you know, it's called other things in different regions, so I think that if you get that right, then you've set aside that most reliable flow in the waterway for values. Once that's done, the allocation is still relevant, but it has a lesser impact if you get the flow limit right.

Q. Yes, I think the evidence related to fluctuation of flows are not necessarily driving things down to the minimum flow, so you don't get that variability.

A. That's right, and so that is something that we look at with our applications. We do look at things like flushing flows and the variability. I think there's some strong information in the Manuherikia that there was a very limited effect on holding flows down in terms of abstraction had a very small

effect on that variability. I think it was, in terms of flushing flows on periphyton it was a change for three months' duration by an additional three weeks, so that is something that we look at in terms of the applications, and it's important as well that the flow sharing agreements, because there's an incentive for water users not to hit the minimum flow, so then they all have to turn off to try and keep it above and so what tends to happen, it's I think very difficult from what I understand to keep it at a static level and so they'll drop their rate of abstraction and then it's really about sharing amongst themselves their access, the more, abstractors you've got, it's really about them having to share that as they drop it down and try to keep above that minimum flow and so the flow will drop – will bounce around a bit because there's so many variables.

1055

Q. Well –

15 A. Yes.

Q. – sure understand, but that's within quite a confined band if your aiming for the –

A. Yes.

Q. – minimum flow or to be above the minimum flow, anyway I don't feel I need to explore that anymore, so I guess my last line of questioning relates to this vexed issue of duration of consent and the situation where people claim that they need to be doing X and Y and Z and this is going to be very costly and so they need a long duration to their consent and I think you did have a number of questions relating to your drafting proposition for that, but I really wanted more to know about your experience with the durations that are being given with one of the reasons being advanced, the work that needs to be put in and the cost of it and those sort of things, so are you able to briefly explain your experience with –

20

25

30 A. Sure.

Q. - durations and that work that needed to be done, and argument for a -

A. Yes.

Q. - lengthy period of time is part of the decision making in the end?

A. Sure, so because we're developing the application, because it's in the round with all the different factors and because we have still some historical, these are kind of long-held permits rather than say in other parts of the country where they're new schemes, long held permits used for many, many years on these properties and we're setting for the first time, flow limits in terms of residual flows particularly as well as minimum flows, then often as soon as you change that access, that and effectively reliability and supply, then it does result in requirements to change what you're doing on the farm very frequently and so people have been investing in storage in the past years and also the very strong messaging about needing to be efficient have been investing in efficient infrastructure but there's also a large group of people, it all depends on your appetite for risk, your financial status, there's – it's huge variation, other people haven't done that yet and have been waiting for the outcome of their permits before they do that and been wanting to know what those limits were going to be in terms of just how much access they might lose, how much reliability and supply was going to change and so it's very much about the on farm changes that they were anticipating having to make and then getting financing for that and I have been to hearings recently where there's been evidence from the permit holders banker saying that they need 15 to 20 years in terms of – that's what the bankers are looking for in terms of security for their investment.

Q. So you have a group of people who've gone ahead –

A. Yes.

Q. – been more proactive, been getting things underway –

A. Yes.

Q. – and you've described another group of people who have been sitting back and now saying, oh I need a much longer period of time in order to be able to do these things and then you've got the potential for the NPS process for the fresh water that's the payout that's going to put quite a different complexion possibly, potentially, less than some places –

A. Yes.

Q. – on the regime that they will be working within, so I mean there's a lot of factors at play here isn't there?

A. Oh it is, it's hugely complex, it really is and, yes I think it's incredibly stressful on people, both those who have invested already and had the expectation based on what they could see happening around them in terms of long term permits being granted and so had gone ahead with investments on that basis and then other people who yes, had for whatever reason wanted to wait and see, so it – it's a very complex situation from that respect.

Q. And then you've also got to look at the paradigm shift –

A. Yes.

10 Q. - and the need to make sure that you're not going to compromise that, so –

A. Yes and I think one of the most complex kind of examples in the mix potentially are some of the large dams, where I think they do need to have work done on them and probably that's important from a health and safety perspective and from a risk perspective and I'm not sure how they're going to manage that with the six year permit, those large dams, whether that work just goes on hold and those, I don't know the legalities of that in terms of the potential exposure of the often volunteer kind of directors that sit and are responsible for those large dams.

20 Q. So in terms of duration and setting some better guidance or parameters around that, have you given that any thought, because it's very easy just to talk about future investment –

A. Yes.

25 Q. – and the work that's going to be required, I mean that would be pretty universal I'd imagine across the deemed permit areas, have you given some other thought to how duration might be better directed other than an absolute figure like six years or –

A. Yes.

Q. – 10 years or whatever?

30 A. I think in my evidence-in-chief I made some amendments to the current policy on term in the operative plan and I'm just trying to recall what I put in my supplementary about that, can I just have a look?

Q. Sure.

A. Yes.

Q. Whether there's scope for such thing is another question but we won't go there at this stage.

A. So I didn't address that specifically in terms of – I had the no more than 20 years but also discussed in the section 32 evaluation about where the fifth, it's hard to land on a number but that 15 years might be appropriate as well and so I guess where I was trying to go with that rule was to try and do exactly that, to try and indicate where it might be acceptable or appropriate or the things that you might try and think about in terms of justifying longer than six years at the moment with all the complications that we've just discussed and so that was really about, are there factors where there are critical environment effects that could or should be addressed now and that was the threatened species, a clearly degrading waterway and linking that in to requirements to try and ensure that was done in a manner that was as consistent as possible with the MPS requirements and that those kind of circumstances tied in with the investment, the need for investment, so really it – trying to build into that where the considerations might be that you might consider a longer term than six years.

Q. Okay, thank you.

**20 THE COURT: JUDGE BORTHWICK**

Right, we'll take the morning adjournment and then come back to the rest of the questions from the Court.

**THE COURT: JUDGE BORTHWICK TO MS IRVING**

Q. Before we do, Ms Irving, Court's asked you to provide details as to the – either the District Court rules or section that you're relying on, you haven't responded, you are to respond?

A. Yes. We're working on that, I've got a dictation with my secretary, so it shouldn't be too far away.

Q. Well even if it's an email, it's just that it requires a decision from the Court.

A. Sure.

Q. And I don't see why I should be chasing through the District Court rules to figure out which provision you're relying on –

A. Yes.

Q. -it's just good Court craft, okay?

A. Yes.

Q. Thank you.

**5 COURT ADJOURNS: 11.06 AM**

**COURT RESUMES: 11.23 AM****QUESTIONS FROM THE COURT: JUDGE BORTHWICK**

- 5 Q. I've got some questions and at least initially these questions are directed at the controlled activity rule or the controlled activity pathway and I understand your counsel, Mr Page to say that (inaudible) is accepting that they might be a controlled activity pathway and I think the thrust of your evidence is that there should also be a controlled activity pathway. And you're nodding?
- A. Yes.
- 10 Q. So nodding means yes. Okay, very good for the record.
- A. Sorry.
- Q. All right and I know that in your evidence you've also proposed a discretionary pathway and there is also a non-complying pathway and are you continuing to pursue the discretionary pathway? I just want to check that off?
- 15 A. Yes, although, as I stated in my supplementary evidence, in that section 32 Evaluation and Appendix C I do acknowledge that could equally be framed as a non-complying activity so –
- Q. Your discretionary pathway could be non-complying?
- 20 A. That's right. So I stated there and I think in the body of my evidence, talked about whether there was value having something like my discretionary activity rule as I proposed it, as a non-complying activity, and then I guess why I went back to a discretionary, I didn't actually know when I started drafting it, whether I was drafting a discretionary or a non-complying activity rule, and I landed on the discretionary activity in my
- 25 evidence because of the utility, whether there's that much utility, I guess I was questioning whether there was that much utility in terms of the gateway test because the no more the minor is unlikely to be available accept for a very limited number of takes which may be a very small take out of a lake. With that Ngatirunga test in the mix and cumulative affects
- 30 in the mix, so that gateway is shut pretty much for most applications ,so then it's the policy gateway and if we're writing a policy specifically, then

actually maybe it's – what is the actual merits of having it as a gateway because here is the one policy that's providing that pathway.

Q. Okay. Now I'm going to ask you to put all of that to one side and let's just focus on the controlled activity pathway?

5 A. Yes.

Q. Okay. So we have Mr de Pelsemaeker in his 14<sup>th</sup> of March document making suggested revisions to that pathway and I think that those revisions are picked up in the joint witness statement filed by planners on Friday and there may or may not have been because I haven't done the comparison, some additional changes to that pathway, correct?

10

A. Yes I think that most of our changes in the joint witness statement were actually to the restricted to discretionary role.

Q. Yes, okay. So I am interested in what are the gaps for the – if any, there may not be any, for the controlled activity pathway. Should applicants elect to go down a pathway where they are guaranteed to get a water permit and Mr de Pelsemaeker has noted various conditions being rolled over. What is he missing, and this has I suspect, everything or something at least to do with priorities or water share agreements and you can't ignore it.

15

20 A. No.

Q. If there's something missing there, you cannot, because you are favouring a full discretionary pathway, and you know that is where your clients wish to go, you cannot ignore the controlled activity, not if you're an expert planner giving independent evidence, so I need to close out the controlled activity rule.

25

A. Yeah, and I actually think that a lot of people might pivot, potentially, depending on the outcome of PC7, we might see a lot of applications actually pivot towards the controlled activity pathway, depending on how it lands, if it lands, as a controlled activity pathway, if it's a process-orientated and simple one, so I do think it's critical.

30

Q. So process-orientated and simple, you said, take out the environmental drivers or imperatives and take out efficiencies. That is where you started. Okay, so I have taken them out, they are not there. So what now is missing in that pathway?



A. So, yes, I agree, the kind of glaring one is the priorities and how we deal with the priorities.

Q. I do not know that it is clearing. Why do you say that?

5 A. That's the first one that springs to mind with me. If we're trying to make a simple process orientator, then I can't think that there are other gaps. My concern with the priorities, I think that the lawmakers did anticipate that when priorities expired, there would be a full – I don't know if they thought that far ahead, in terms of 30 years – but we've certainly anticipated that there would be a full assessment of the activity that  
10 allowed for an understanding, as I described this morning, of how, in any given set of circumstances, those priorities have or haven't been exercised, and how the exercise of that both affects other water users and their access, but also the water body and the values in the water body, because as we've stepped through applications over the last few  
15 years, it has become clear that, in some cases, it can have an impact on the in-stream values as well, and so to do that is a comprehensive assessment of all the factors, and they're so interlinking in terms of the behaviours and the interactions and the placement in the catchment, and to what degree they've been used, and then, if you're going to replace them with something, what do you replace them with? What's the limit going to be? What infrastructure changes? There's a whole lot of interconnected, complex factors, and so that's what we've been working with and working towards to date, and if we simply roll over without that opportunity to undertake that full assessment, then to simply just stop  
20 priorities overnight, there is a risk, I think it's a very real risk, it's both a risk to –

25 Q. I do not know how you come to that statement that there is a risk and a real risk, and we are in the business of looking at risks, so you now need to help me understand, either catchment by catchment, based on your own experience, whether those priorities are being exercised, if they are,  
30 by whom and in what circumstance, or is it the case that the exercise is ad hoc and therefore can't be, I suppose, communicated in a series of principles.

A. So, yes, I was going to say a risk is twofold, it's in terms of – so I'll come back to how I, you know, say that there's a risk. Twofold, I guess it's a risk of – chaos is a bit of a strong word.

5 Q. But it has been used, and it was unhelpful, so how do we get to chaos, whatever that means? Firstly, define what chaos is, or, if that is not your term, you should just disabuse the term and move on to something which is more helpful.

10 A. Yeah, I'll try to think of an alternative term while I'm talking about it, but if you have – so this is between water users, initially, I'm talking now, and then there's the environmental stuff as well. So between water users, if you have priority one, who has actively used his – his or her, excuse me – priority, and over a lower-order priority, and they've actively used it, they bought the property or developed their property on the basis of that access to water, and those priorities just disappear overnight. Will  
15 someone with a lower priority than them, situated higher upstream, just suddenly start taking more water because the priority no longer exists?

Q. Okay, so that is the first proposition, so an upstream lower-order priority user takes more water than what they have done historically.

A. Yeah, and so when flows are dropping –

20 Q. Yeah.

A. Yeah.

Q. Okay.

A. Yeah.

25 Q. How could an upstream lower-order user take more water than what they have done historically under the method which is proposed in this plan for regulating on the basis of historical use of water?

A. So it's the timing.

Q. Right, go on.

30 A. I guess it's the timing of the abstraction. So they've got that history of use cap, yes, but the critical factor in terms of the first priority holder is about being able to tell the lower order priority order to turn off or to reduce their take as flows start to drop. So number one says: "Hey, you know, you've got to turn down because I'm exercising my priority," at the hottest, driest month, say it's a hot, dry, January, so it's about the timing of that access.

So in the past, the lower-priority holder upstream might have taken significant amounts in spring and flood irrigated and there was plenty of water, so they might still have a history of use to justify that taking, but now, they switch, if their priorities disappoint overnight, they could still be within their history of use, but they're accessing water and they're not turning off for the person further downstream when flows are critical, so they let go of some of their water in the spring.

5

Q. And is this where you've gotten to or where the technical experts have gotten to in their joint witness statement, but now history of use is one thing, but the use now becomes quite – the use in different months is no longer reflected in terms of what the pattern of usage might have been.

10

A. I don't know if we got to the – we certainly didn't get into the specifics of that in the –

Q. You see, I need to flag it because I need to close out the controlled activity rule, because it seems most people are wanting to go (inaudible 11:35:53) in that place, unless, of course, we reject the whole thing. So what are you recommending be done next by the technical people? Firstly, how do we know – and when you have that recommendation, you have also got to keep in mind, do we know anything about who is actually exercising priorities, and I have got to move away from the anecdotal and generalisation.

15

20

A. So I guess the problem with priorities and why they are so vexing is because we don't know until we start working in a comprehensive fashion with a particular set of applicants how they've been using them, so the face value of the permit only tells you about the entitlement, not how they've been used and to what degree they've been used. In terms of the technical experts, sorry to put a question back to you, but are you meaning in terms of some kind of methodology that looks at history of use across months, so you can't shift your –

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Q. I do not know. You are the planner and you are not opposing, in principle, a controlled activity pathway, and I am asking you are there gaps, and you are saying potentially, and now I would need to know how to bridge those gaps, because otherwise you've supported a controlled activity rule

which you have loosely said that could be chaotic. Is the Court likely to go there?

A. And my proposal had been that priority simply got carried over, and I understand that you have got concerns with that from a legal position.

5 Q. Well, that is twofold. If you can carry them over, how do we carry them over? Just assuming you can carry them over, what does that look like in this plan? I suspect it does not look like just saying the word “priority” and everything follows, I think much more is required. You know, this drafting, that can be done. If you cannot carry them over, and so there is  
10 a policy gap now, then what do you fill the gap with?

A. So for the first part of that, in terms of if they can be carried over, I had anticipated that it would simply be a mirror of what was in the existing permits, bringing notes up into the conditions if they exist in notes, and then they are something that simply sits there and are available to be  
15 utilised between the consent holders and, you know, with the regional council as the backstop to that.

Q. So what I imagined, if they can be carried over, is that you would need to have a definition or deemed permits so that we would know what was being caught, which is deemed permits which continue exist, I guess,  
20 31 August.

A. Yeah.

Q. So it is not all deemed permits because some of those have been replaced already, so it is just that bunch which are currently in effect now, and you may or may not also require a schedule of those deemed permits,  
25 and we may or may not also require for this plan change a notation for that schedule as to what were the orders of priorities. I would hope that’s not too difficult, because region should have that information to hand, but it is not just a case of saying the magic word, priorities, and it all happening, I wouldn’t have thought, in terms of plan drafting. Do you want to comment on that?  
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A. So I’m trying to think through, that transition and scheduling that, and I’m trying to recall off the top of my head, whether there is a definition in the Act around priorities, so beyond the wording within the sections, I don’t

think there is, so I think that would be, workable with some kind of – and I don't know if you would actually need to even define or link it specifically to deemed permits because many of them – they're not necessarily have a deemed permit title at the top of them now, as you say, some of them have been replaced with priorities, so whether it's actually just a schedule of specific consents with priorities, whether as part of the controlled activity rule, part of that process is to look at sets of priorities and specifically require the applicants to identify whether they utilise their priorities within that subset and whether they want them to carry over as part of the application process and so that would allow some kind of reconciliation and sifting out of areas where they're not being used, so only those where they're being used and the applicants want them to carry over, then they would be carried over. Does that make sense?

Q. Mmm.

15 A. And so that's almost part of that controlled activity process is, the onus is on the applicant then to identify the use of the priority and whether they want them to carry on going forward and it may be that we need to have groupings of those controlled activity applications by those priority subsets.

20 Q. I understand and I set this out in the minute and I am assuming that you have seen the minute –

A. Mhm.

Q. – dated the 7<sup>th</sup> of April –

A. Yes.

25 Q. – dealing with priorities – oh deemed permits, okay and I say at paragraph 8 that the exercise of priority to water is limited to cases where water is flowing in water course, mean a water body, is insufficient to supply fully to races that are connected to the same, so that's coming straight out of the legislation in terms of drawing and definitions I think from the Water and Soil Conservation Act. Is that – and then a race is defined also under  
30 the same Act as meaning any artificial channel, ditch for the conveyance of water or into or in which water may be diverted, conveyed or for any authorised purpose, so that's what it's about, it's about supplying water to races. Is your understanding that – or in your experience, for those

persons exercising priorities, that they are indeed exercising priorities to unders- to ensure that water is available to the higher priority user to put into a water race and not for any other circumstance?

A. I did read that –

5 Q. Yes.

A. – and think, ooh I wonder about pipes. Are pipes covered in that?

Q. I don't know. That's what I'm asking you, I don't know.

A. Yes and I'm just trying to think of specific examples where it's been pumped or piped instead of into a race.

10 Q. And by piped do you mean a gallery?

A. Sometimes there's a pipe sitting in a submerged pipe is actually the intake in a waterway and then it might stay in a pipe or it might – the pipe might feed into an open race, galleries, yes, submerged shallow bore and some system of piping involved with that.

15 Q. So that's interesting which is why I reflected this back, this is a definition coming out of the Act, so RMA referencing now into the Water and Soil Conservation Act, very specific definition about priorities and what they mean in terms of ensuring access to water –

A. Yes.

20 Q. – to supply a race, and is it your evidence that you don't know that priorities are being exercised for the purpose of supplying a water race?

A. I don't know if they're only being exercised to supply –

Q. That's the question –

A. Yes.

25 Q. – you don't know?

A. No I can't tell you that categoric- and I, in dealing with priorities had not act- something we just work with day-to-day hadn't actually seen that definition before your minute.

Q. Well you can check it out.

30 A. Mmm.

Q. I mean it's a matter for the lawyers as well but you can check it out, I just grabbed that out of the RMA.

A. And is it – it does reflect what Otago would have looked like at the time RMA came into being.

Q. Yes, yes.

A. Yes.

Q. So you don't know whether or not priorities are only being exercised for the purpose of supplying a superior water supply race?

5 A. No.

Q. Race, yes. Is it your experience that it has gone beyond that?

A. (No audible answer 11:46:20).

Q. Or other circumstances have been applied?

A. I actually just don't know.

10 Q. Don't know.

A. The ones that I can think of off the top of my head are water races but I can't assure you that they're only water races.

Q. So you don't know that and you don't know in relation to the rights of priority which are there, how many of those rights are currently being exercised or in what circumstances?

15

A. I'm sorry but I can't give you a specific number.

Q. But all you know is that some of your clients have?

A. Yes definitely, yes.

Q. And I have described this as being a non-regulatory sort of method because it's not really a method that involved the Regional Council and it's not a method reflected in resource consent terms or permit terms, would that be correct other than reflecting the fact that there's a right of priority?

20

A. Yes.

Q. So it's non-regulatory, it's as between permit holders, correct?

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A. Yes.

Q. And I also said that that's what a water share agreement was as well, well at least I put it out there because actually I don't know. Water share agreement's a non-regulatory method that's – it's an agreement entered into by two or more permit holders on the same water body and it sounded like, in response to Commissioner Edmond's questions, whilst you will tell the Regional Council about that, in an application for resource consent, you don't invite the Regional Council to impose conditions that mirror or reflect that water share agreement, is that correct?

30

A. That's correct to date, I would note that the Lindis there was a specific condition which referenced that a water sharing agreement was required but it did not go into the detail of what that should look like.

Q. Was that an initiative of the Court or of Lindis as an applicant?

5 A. It was the applicant and that evolved out of negotiations right before going to Court and then it got refined through the process as to what the wording was.

Q. So why is that not reflected? The existence of a water share agreement, why is that not reflected in consent conditions?

10 A. The specifics of it?

Q. Yes?

A. Because it can, with the example of the Lindis, it was because it hadn't been trialled yet, so the abstractors wanted to retain some flexibility about how they might carry out that flow sharing, so whether it would be – what exactly would be the trigger flow, the amount that they might drop down on, the percentage that they might drop on, so just to allow for some flexibility and some adaptiveness and learning along the way and also that every season is slightly different, so that was the basis for that.

15

Q. So asides from the example of Lindis, has any other resource consent decision that you're aware and that reflected in the conditions of consent, the existence of a flow sharing agreement in the terms of that agreement?

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A. Not the terms of the agreement, no, not that I'm aware of, I know that there's a water allocation committee in the Kakanui, but I'm not at all familiar with that, so I can't speak to that. Ms McKeague or Mr Hickey would be able to speak to that. Consents, and we propose a condition of consents with application which refer to the applicant agrees to be party or a member of a water management group for this catchment, and that is about as much as usually gets in the consent, so the Lin-

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30 Q. Why is that?

A. Again, for the reason of allowing - the rationale has been for allowing the abstractors to come up with an adaptive approach that they can kind of work through and adjust if necessary. It's kind of a learn-as-you-go process, I guess.



Q. Okay, so your evidence is that of those water share agreements, the fact of their existence may be noted in the consent conditions, either as a fact they exist, or be a requirement to be a part of a water-sharing group, but that the terms of those water-sharing agreements are not recorded in consent conditions, and the reason for that is that that is a method, again, a non-regulatory method as between abstractors, where controlling a matter is to enable abstractors to retain flexibility over water use.

5

A. To retain flexibility about how they reduce their takes as it approaches a flow limit, yes.

10

Q. Water-sharing agreements, are they contingent on a minimum flow, however that is calculated?

A. So not just a minimum flow, sometimes, they can be on a residual flow. So in the residual flow, the trigger residual flow may be at the bottom of the catchment, and so that's what we've proposed for the Manuherikia, within those applications, that there are trigger residual flows, but because those are just proposed, you know, they are not an actual flow limit at the moment, and we don't know if that's what would actually eventuate at the other side of a process.

15

Q. All right, well, getting back into the controlled activity route, is there any utility recognising either priorities or recognising water-share agreements? Start with priorities.

20

A. I think there is utility in recognising priorities, and –

Q. What is the utility?

A. The utility is twofold, both in terms of retaining existing access between water users, so managing effects between water users, and the second one being the potential retention of flows over a longer length of a waterway, resulting from a higher priority being further downstream and exercising priority over a lower order priority, so they have to turn off, and so the potential for environmental benefits there. Sorry, there was a second part to that question, wasn't there?

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Q. Water-sharing agreements, we will get to it. You have not addressed, other than the naming of priorities, you know, because of the fact they are named in the plan somewhere, you have not discussed that I can recall – but then we have got about 10,000 pages' worth of evidence, so you will

forgive me – you have not discussed whether or not the policies in particular need to talk to the dual purposes of priorities, whether they are retained, you know, because you can retain them after 1 October, or whether that is a new tool created to speak to that gap.

5 A. So the policies in PC7?

Q. Yes, and should you have?

A. Yes, I should have, yes.

Q. Okay, so I am not asking you to draft on the hoof, but what should have been reflected in the policies of PC7, such that the priorities, or a new tool reflecting mimicking priorities, were brought forward?

10

A. So, yes, I think I'd simply added the words –

Q. Priorities?

A. Yes, into, yeah, yeah.

Q. If it helps, the Court trying to problem-solve in this place talks about possible ways forward from para 24, and in particular para 24(a), allowing some recognition in this plan of allowing other permit-holders to continue to take water, so there, we were thinking that is either a new tool, or it is the old tool, priorities. Either way, that is the space you are working in, but, in saying that, something much more may be required, so I am really wanting you to reflect on that and tell me what your thoughts so.

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A. So that's right, I was just checking back on where it had been mentioned in the policies, and so it was very much just an add-on, you know, an extra comma, so potentially, it's separating that out into a separate subparagraph of 10A.2.1, because that's really the controlled activity policy, and having it as – it's difficult to simply insert that, because that policy is very focused in terms of where it's acceptable to just grant, so something along the lines of where a priority has been exercised, either to protect access to water or may retain in-stream flows, but the difficulty with that is then that requires an actual substantive assessment.

25

30 Q. It requires evidence, does it not?

A. Yeah.

Q. And if you think irrigation areas are difficult, frankly, I struggle with that, but anyway, if you think irrigation areas are difficult, how do you think they are going to come up with proof of that?

A. In terms of retaining in-stream flows for –

Q. Well, in terms of evidence as to exercise.

A. Mmm, and so again, it would have to form part of the application, and in terms of evidence, if it was brought in and it was a whole subset and you did have, say, you know, number one saying: “I exercise my priority,” and number two saying: “Yes, this has been done,” again, it’s reliance, really, on the applicants’ statement, and when we develop applications, that’s exactly what we’re doing, is we’re, you know, we’re talking to those consent holders.

10 1200

Q. What would the control look like if a new method or a new tool is required because in fact you just can’t bring down priorities because they are a creature of statute and because they will cease on the 31<sup>st</sup> of August so you need a new tool, so what does that tool look like?

15 A. So if we can’t simply carry priorities over?

Q. Yes? Or if you have to recreate priorities in some way, because I, yes?

A. At best, I think a take cessation condition again or a take reduction and cessation because it’s not always simply about turning off, it’s about turning down -

20 Q. Down, yes.

A. – condition, linked to other permits and so if priority 1 is above four other permits, so if you’ve got five priorities, priority 1 would have a take cessation and a reduction condition that is linked to four others. Priority 2 would have one that’s linked to three other permits, etc until you get down to number 4 that’s only linked to number 5. That would be about the only other way I could see it and again that would require information from the applicants. I do not see and this gets to the other part of your question that you posed earlier, with the flow sharing, I don’t see –

25 Q. No I don’t want to go there, just part that up?

30 A. Okay, so –

Q. I’ll go there next, all right. I’m trying to problem solve.

A. Yes.

Q. On priorities.

A. Yes.

Q. And I suspect you need to problem solve on priorities even if they survive after 1 October or can survive after 1 October, I think it's quite probably the same issue will need to be addressed other than the recital of the word "priorities", what does that actually mean?

5 A. Mmm.

Q. Yes. So again you see that as a non-regulatory method or do you see it as a method where Region gets involved and starts to enforce the cessation or reduction on behalf of the superior permit holders?

A. I think that's the ultimate back stop when it's a condition of the consent.  
10 As with a lot of conditions of consent, self-regulating, we expect them to be self-regulating, and that's what I think would have to happen in this case and that's the history of deemed permit operation in Otago, that it has been a self-regulated with going to an enforcement agency, Regional Council as a very last backstop and the Regional Council had given strong messaging throughout the years is my understanding that  
15 they were interested in getting involved between the parties and I think that's consistent with the evidence of Mr de Pelsemaeker, that it hadn't been something that the Regional Council wanted to get involved in but I think if they're brought in as modern conditions, then I think that would  
20 have to be part of it. I don't think it would be utilised very much because priority holders are very used to dealing with it between themselves.

Q. So can you have policy support for a non-regulatory method in a plan, regional plan?

A. We currently do, we currently have policy support for water management  
25 groups, a shared approach to water management, so it would be around supporting the retention of historic systems of priorities, maybe not the word, "priority" if that's going to be moved on from, although that word is very well understood amongst Otago water users.

Q. And in your view, I mean I know you talk about, well that's your ultimate,  
30 not sure actually whether permit holders would think it was its ultimate, their ultimate goal to have the Regional Council enforcing priorities, but anyway, should it be something that is enforceable or should it be something where there is policy support for the recognition of priorities

but priorities remain a non-regulatory method, exercise of priorities remaining a non-regulatory method?

5 A. That's an interesting question because I think potentially having a legal back stop over the years has given them weight and so if you take that away altogether, is there a risk of undermining them, but yes I acknowledge they are essentially a non-regulatory matter between, so I think it would be useful to keep that regulatory back stop there if possible, just as there has existed in the past.

10 Q. All right. The purpose of priorities are what, going forward? If they are recognised going forward, is that ensuring that water remain available for permit holders with a superior priority or is it environmental?

15 A. I think it's both. I think yes definitely to the first one because that's the clear and obvious in terms of the history of priorities and development on farms and the value of the water, the permit that they hold, but we do know that in cases particularly in the tributaries, that they have resulted in water staying in stream.

Q. But are they being exercised for that purpose?

A. No.

20 Q. No and so that's again, what we're driving at, you say this is process only, it's not process plus, it's not environmental and it's not efficiency, okay, I've taken that on board. Why then are we defaulting to there's an environmental benefit that needs to be recognised in the priority? To me that's a side wind for what has only been a tool which is available to meet abstractor demands?

25 A. You're absolutely right, I think in the plan it will have to be about retaining that access because this isn't a full assessment under the controlled activity, not even a part assessment of the environmental factors and if you only look at one aspect, then all those interconnected parts won't work or won't be properly assessed, so I think that's a potential benefit of recognising priorities with regard to abstractors' access, maybe that we  
30 retain the status quo as much as it is a status quo, over those six years and potentially reduce some environmental risk, but it can't, you're right, it can't be the purpose in the controlled activity pathway because that

suddenly brings in a whole lot of assessment that we just can't do through that pathway.

1210

5 Q. And does that reflect also that the exercise of priority may have had an incidental environmental benefit, but that those benefits might also, themselves, be an expression of wider things happening within the water body?

A. Yes, very much.

Q. Not solely attributable to the exercise of a priority?

10 A. The environmental benefits?

Q. Yes.

A. No.

Q. No.

A. No.

15 Q. Okay, all right, flow-sharing agreements. Anyway, you have clarified something which is very helpful for me is that while there are policy recognise flow-sharing agreements, and I talk about that in the minute, this is a non-regulatory method, so it does not get picked up and expressed in conditions of consent.

20 A. Yes, that's correct.

Q. I understand from evidence which is to come that those flow-sharing agreements, where they have been entered into, replace, if you like, the exercise of priorities.

25 A. Yes, and sorry, I'll just say again, I think the Kakanui might be an example of a flow-sharing agreement which is actually recorded on consents, but I'm not familiar, so, yeah. So the ones I'm familiar with, I haven't seen any flow-sharing agreements specifically set out in consents, and sorry, what was the –

30 Q. The flow-sharing agreement, the evidence to come, farmer interest evidence, is that on some occasion, these flow-sharing agreements replace deemed permits.

A. Yes.

Q. Is that the case always that flow-sharing agreements replace deemed permits?

A. No, it entirely depends on the situation, so if in some cases, we have deemed permits which are a single permit on a tributary going into the Clutha, so there is essentially no one else to flow-share with in terms of, you know, downstream users on the Clutha, it's not linked in terms of those hydrological conditions experienced on that one trib.

5

Q. There is a flow-sharing agreement in that case?

A. No, there's not.

Q. There is not? Right, okay, sorry.

A. Sorry, sorry, I'm saying we've got examples where there are deemed permits that are replaced without a flow-sharing agreement.

10

Q. Without a flow-sharing agreement because there is no one there to get into a group with.

A. That's right, and in other cases, they can be replaced simply by a system of residual flows and a flow-sharing agreement hasn't been developed, and I can think of a group of applicants on the Poolburn mainstem, where, actually, it wasn't seen to be necessary to have a flow-sharing agreement, it was just a series of residuals, and that was actually seen as sufficient.

15

A flow-sharing agreement didn't add anything, so it's about the hydrological connections and conditions between those users, and again, the Pig Burn, the bulk of the applicants have gone forward with just their residual flows, complete, you know, restructure of take infrastructure for three of them, and it's only between two of them that a flow-sharing side agreement would be developed, and that's just for the priorities between those two. So it can vary even at a sub-catchment level, and again, they're always predicated on that full assessment of, okay, what is the flow limit that we are sharing to, and at the tributary scale, where a lot of these priorities are kind of critical between each other, it's about developing that flow limit first, to then get an understanding of how that affects people's access to the water.

20

25

30 Q. So again, we have heard lines of questions in cross-examination that there are flow-sharing agreements everywhere and that they always have an environmental benefit, I mean, that is really the driver for them. Do you want to comment on that? Every catchment you were led to believe would have a flow-sharing agreement and that every flow-sharing

agreement, the outcome, principally, is one that benefits the environment. That is what is driving it.

5 A. I think there are a lot that will have flow-sharing agreements. I think particularly in the Manuherikia, there will be, for the main tributaries where there are permits being replaced. There will be internal kind of flow-sharing and there will be a broader flow-sharing agreement across the catchment. There are pockets of either tributaries or areas on a mainstem, where, as I said, either residual flows or minimum flows mean that they might not have a flow-sharing agreement, or they might become  
10 party to one further down the track. It will, anticipating, be a little bit iterative like that. More people might join, or other people outside of the tent may get a condition on their consent requiring them to be part of a catchment flow-sharing agreement. In terms of there being environmental benefit, the key environmental benefit is, first and  
15 foremost, the setting of the flow limit and adherence to that, and then also the motivation of the abstractors not to reach that flow limit and be cut off altogether, and so again, it's about fairness and equity between those abstractors as they move down towards that flow limit, and that creates, in itself, an environmental benefit, because it keeps flows above whatever  
20 the flow limit is.

Q. You mean the minimum flow?

A. Minimum flow or residual flow, and so it will reduce the flatlining effect by its very nature.

Q. Question for you: many catchments have them, their principal purpose is  
25 to ensure equity and fairness as between abstractors where the flows in the river are now moving towards a minimum flow, however that's being calculated. The minimum flow itself, and recession flows, are there to benefit the instream environment. So, with that in mind –

A. There's just one part of that questions that's not quite right. Many  
30 catchments have them. Quite a few catchments, we're anticipating, and have a draft based on a draft-proposed flow limit, say, in the Manuherikia, but they don't actually exist yet. Some of those details haven't been fleshed out, they were anticipating potentially trialling them, refining them, so if we'd gone right through the consent process under the operative



plan, yes, I think we would have ended up with a lot of flow-sharing agreements, a lot of which the detail might have been developed alongside that application process once there was greater clarity around where the flow limit would actually land, because we've only just proposed them, but whether or not that's what gets through is something else entirely. So there was a lot of water under the bridge still with a lot of those, to use the –

5

Q. Right, so talking about the first case, many catchments will have them. Is it your evidence that for any catchment that does have a flow-sharing agreement, that that agreement will reflect minimum flows, at least, which are consistent with policy, I think it's 6.4.2, of the operative plan, you know, the one of three ways of calculating the limit.

10

A. That's the allocation limit?

Q. Yeah, yeah, no, that is the allocation limit, so that is not quite right, the minimum flows.

15

A. So schedule 2A minimum flows?

Q. Yeah, so outside schedule 2A what's the method in the operative plan to calculate minimum flows?

A. I don't know, I'd have to go back and have a look.

## 20 **THE COURT: COMMISSIONER EDMONDS**

Q. Policy about that? Minimum flows hidden somewhere, some useful matters that you might consider when setting a minimum flow, and maybe that doesn't only relate to schedule 2A, that might relate to something you want to put forward in an application. I'm sorry, it's sort of coming back to me.

25

A. Yeah, I'd need to have a look at the plan.

Q. I think it seemed an odd place to have it in the plan because it had a lot of quite useful things in it.

A. Yeah.

30

Q. Probably can't find it in five minutes.

**THE COURT: JUDGE BORTHWICK**

Q. We will do that over lunch, we will direct you to have a look at it over lunch, and I know we have gone beyond 45 minutes, but if we do not close this out, we are going to have a lot of problems

5 1220

A. Yes sure.

Q. And I know we've gone beyond 45 minutes but if we don't close this out we are going to have a lot of problems with this plan change should the plan change be confirmed? So many catchments have them and they're working towards a minimum flow and the question for you is that minimum flow set as between irrigators or is that minimum flow something which comes out of a policy or a methodology in the water plan? The (inaudible 12:20:30) –

10

A. So where there is no two way minimum flow –

15 Q. Yes where there's no two way, yes?

A. – then it – there's not, from memory and I will check this, there's not actually a kind of a default minimum flow that applies, there is a default process called a supplementary flow setting, it's more an indication in those policies that if one is set, then that will be inserted into two way and applied by review and so other than that if there is no two way, so in all the tribs coming into the Clutha which are dealt with as their own kind of primary, little mini primary allocation block and are all fully allocated, pretty much, then it's about setting, we try and develop a residual flow as part of that application process. If there -

20

25 Q. Again I need to bring you right back to your water share agreements which is the only thing I'm interested in.

A. Yes.

Q. Your water sharing agreements, for the catchments that have them, are going to be matters of fairness and equity between the abstractors will have come up with a minimum flow or alternatively perhaps a recession, residual flow depending on the water body that you're in or both, but what the – whatever's in those agreements are, if they're outside of Schedule 2A then these are matters which the abstractors have come up with themselves as opposed to any consent process or plan change process?

30

A. Yes very much so, so until it's been through the whole consent process –

Q. For Schedule 2A?

A. No, if it's a residual flow, then if it's been right through the consent process and we're out the other side, we get agreement decision, it's, we've proposed 100 litre, a second residual flow and everybody agrees, then that's the flow limit or 150 if that's what comes out of the other side and if you're not in a Schedule 2A minimum flow catchment, then it will again be something that we've proposed and it has to work through the system to actually know if that's what ends up landing on the other side.

10 Q. So those minimum – those flow sharing agreements outside of Schedule 2A, any, are there any flow sharing agreements which exist in any water body or in any catchment which are not – the flow sharing – where the minimum flows or residual flows are not yet part of any condition of consent. In other words, farmers have got together and have said, "Look to make this work, this is what we've got to do with minimum flows and residual flows. To make this work, ie, to ensure that I have water, I can continue to abstract, this is how we need to be managing ourselves.

A. So flow sharing without a limit, no.

20 Q. No. So flow sharing agreements have only come into being where there is a general need I guess within a catchment or on a water body to go through a consenting process?

A. Yes.

25 Q. Then there's a flow sharing agreement, in terms of the flow sharing agreement, the fact of their existence is noted in the consent conditions if that it is, if there's a minimum flow or if there's a residual flow, that is tested and to that extent only those two provisions come down into a resource consent?

A. Yes.

Q. So ...

30 A. So they're very much a child of the full consent process.

Q. That's what we're getting at.

A. Yes.

Q. So that's like, that's new and important. Flow sharing agreements are a child of a consenting process?

A. A full assessment, yes.

Q. A full assessment, yes because you're getting your minimum flows and you're getting your –

A. Yes.

5 Q. Yes. So that's not this?

A. No.

Q. So is there any utility –

A. No.

Q. – to be recognising flow share agreements?

10 A. No -

Q. No.

A. – not in a controlled activity pathway.

1225

15 Q. All right, that is helpful, because we have been talking about outside of schedule 2A. Inside of schedule 2A, again, outside of a full merits-based assessment of water permits, is there any utility on recognising flow-sharing agreements?

A. No.

20 Q. No, and is that simply because you are not going to have folk put up minimum flows and residual flows without a full assessment?

A. Full assessment, that's right.

Q. Okay, that is helpful.

A. And then also understanding the drop in reliability, what that means for on-farm changes, et cetera. There's the whole big complex.

25 Q. Yeah, and so when the regional council says, look, if you have got a residual flow and minimum flow already as a condition of consent, if you bring that forward, that is actually all that really needs to be done, you do not need to be noting the existence or otherwise of a flow-sharing agreement. From the regional council's perspective, you have got the  
30 two drivers of environmental outcomes.

A. Yes, that's right, unless there are, you know, the Kakanui, unless that does have it actually in the consents, unless that is an outlier, and again, I'm not familiar with that one.

- Q. Okay. Checking my other questions from some responses that you have given. So it seems to me, from what you have said, particularly in answers to Commissioner Edmonds, what is critical under a controlled activity pathway is that you are not changing the reliability of supply, and you are nodding, so that is correct.
- 5 A. Yes.
- Q. Because to change the reliability of supply such as that, that is less reliable. Farmers will need to start to take measures to respond to that, including on-farm storage or changing irrigation systems to become more efficient, correct?
- 10 A. Yes.
- Q. Okay.
- A. Well, to offset that loss of reliability.
- Q. To offset the loss of reliability.
- 15 A. Yeah, yeah.
- Q. So aside from recognition of priorities, either as they exist or some other new tool that does the job, what other tools are needed to ensure that there is not a change in reliability under the controlled activity pathway?
- A. So it's really what you don't do, it's really that you don't introduce new flow limits, you don't reduce actual access to water, and again, I think where the schedule has now landed, with maximums rather than the average of maximums, addresses that. So, yeah, I think it's just really what you don't do.
- 20 Q. Okay, so the gap, if you like, is the gap which we've been talking about in terms of priorities.
- 25 A. Yeah.
- Q. That needs further discussion and further thinking. Flow-sharing agreements doesn't sound like it's going to result in any benefit here.
- A. No, no.
- 30 Q. Otherwise, where the regional council has come to, especially, I guess, through also expert conferencing, we're meeting your concerns about what it is that you don't do in terms of impacting that reliability?
- 1230 A. Yes.

Q. Okay. I was interested, and I took the time to read over parts of the Lindis decision – both the plan changes and also the resource consents – and quite decision.

A. Yes.

5 Q. But as I understand it, there was a proposal there for the Lindis catchment to move away from races to a series of galleries and boards. Is that right?

A. Mhm, that's right.

Q. That is right?

A. Dispersed infrastructure.

10

**COMMISSIONER EDMONDS:**

Not entirely.

**THE COURT: JUDGE BORTHWICK**

Not entirely.

15

**COMMISSIONER EDMONDS:**

Some races remained.

**THE COURT: JUDGE BORTHWICK**

20 Q. Some races remained as well, okay, but that for the first five years, in recognition that there was a change to infrastructure, am I right in thinking that the rates of take, or volume, expressed on a deemed permit remained for the first five years, to ensure that the race systems which were being replaced could continue to take sufficient water and distribute it. Am I right in thinking that?

25 A. Yes, that's right. So for the first five years, they could continue accessing what they've historically accessed because they were still utilising the races.

Q. Using the races.

A. Yeah.

30 Q. Yeah.

A. And then within that five-year period, they had basically five years to transition away from the use of the races, acknowledge that it's going

from a company supply to dispersed private takes and that they each needed to obtain, you know, to actually put in the infrastructure to deal with that.

5 Q. From those applications that you have been involved personally, how many of those applicants are seeking something similar in terms of at least for an initial period of years where new infrastructure is being proposed, the higher rate of take of volume on a deemed permit continues until the infrastructure is in place?

10 A. I don't think any. I think for some applications, we may request, say, a five-to-10-year period for new infrastructure to be put into place, but I think in all cases, it's not the full deemed permit, definitely not in terms of volumes that is replaced. It is brought down to that history of use cap, or the lesser of the history of use or the Aqualinc responsible use assessment, and that was really in the Lindis in recognition, and I would  
15 have to go back and check to whether we applied for the full – I think we still only applied for, in the first five years, the history of use cap and then, potentially, bringing that – I'd need to check the details. So it wouldn't have been the full deemed permit extrapolated volume, which is, you know, just –

20 Q. Huge.

A. Huge, that's right, and it hadn't been accessed, so there's no point in replacing that, but, yeah, the focus in other applications is really about requesting some time to transition for structure.

**COMMISSIONER EDMONDS:**

25 I think there was a another element, which was after the five years, it was pivoted activity to continue using those three major races as a sort of belt and braces, as the only lever you could pull to make sure that somebody didn't apply to continue on using those. That's my memory of it.

**JUDGE BORTHWICK:**

30 All right, those are my questions, and that has been really helpful to our thinking.

**COMMISSIONER EDMONDS:**

So I don't think looking at the business about the policy on minimum flow is needed, I don't think it's any help.

**JUDGE BORTHWICK:**

5 Anybody got any questions arising?

1235

**QUESTIONS ARISING: MR MAW**

10 Q. I want to stay with the vexed topic of priorities and I use that word carefully, when you're having your discussions with current permit holders and you're working through the process of preparing applications and I have in mind these group applications, is it the understanding of the current permit holders that their priority will expire on 1 October 2021 or is the expectation that though priority will continue on reconstenting?

15 A. No they're very much aware that they will expire and that's part of the motivator to come together as a group and work through the process together as a group I think.

20 Q. So staying with the priorities now and let's say they roll over for the next six years and that the Plan Change 7 can be crafted in a way to bring the existing priorities down, the fact of whether or not the priorities are actually implemented or not, isn't particularly relevant, would you accept that if they simply come down it leaves the ability open for them to be exercised?

A. Yes.

25 Q. And so an assessment wouldn't need to be made as to whether or not the priorities have been exercised because permit holders are not required to exercise a priority are they?

A. Yes, potentially that would be okay.

30 Q. Now there's been quite some discussion around irrigable areas and we had some questions about that a couple of weeks ago and I just wanted to understand in terms of the applications that you have been involved in with respect to the Manuherikia, have you specified or do those applications specify the current irrigable area?



A. Yes they do and I have no issue with an irrigation area as such. My concern really rests on proof at a certain date retrospectively and what proof may or may not be accepted, so it was really around clarity around that.

5 Q. So with respect to those applications, how have you specified the existing irrigable area?

A. As hectares, total hectares and that's based on mapping.

Q. Thank you, no further questions.

### **QUESTIONS ARISING – NIL**

10 **WITNESS EXCUSED**

**COURT ADJOURNS: 12.38 PM**

**COURT RESUMES: 1.48 PM**

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

15 Q. Now I want to hear from, not from you, but from your technical witness first, okay? Because your technical witness is giving the inputs into your evidence. So is that Dr Chrystal?

### **MS BRIGHT**

(Inaudible 13:49:15).

20

### **MS PERKINS**

Let's just do the opening first.

### **THE COURT: JUDGE BORTHWICK TO MS PERKINS**

25 Q. Your, so firstly, sorry, Ms Perkins did you want to make an opening address which was not evidence, is that what you are doing?

A. Yes –

Q. Or did you want to give your evidence, which is what we heard from Madam Registrar?

A. No, so what my intention was that there is an opening, kind of summary of who we're representing, so just summarising who Landpro is and who the parties are that are being represented by us, so I have that drafted, but my thinking was that potentially questions you may have for me that may come from that and the planning evidence might kind of be sort of one and the same, so it might be easier if I just did both together.

Q. Yes.

A. But happy for Ms Bright to be up first and then I can kind of do the opening and technical stuff together because they probably do merge a bit.

Q. I think, that's right. Yes. I think we should go with Ms Bright, not Dr Bright, or Ms Bright?

**MS BRIGHT:**

Ms Bright.

**15 THE COURT: JUDGE BORTHWICK TO MS PERKINS**

Q. Ms Bright. I think we'll go with Ms Bright.

A. Sure.

Q. Because she's providing foundational evidence for your brief.

A. Sure, yes.

20

**MS IRVING**

(Inaudible 13:50:19) the witness confirm her evidence your Honour.

**THE COURT: JUDGE BORTHWICK**

Q. That would be good and if Ms Bright is a signatory, and I should have done this with Ms Dicey, but I forgot. If Ms Bright is a signatory to any joint witness statement, she is to confirm that as well.

25

**MS IRVING**

Certainly.

30

**MS IRVING CALLS****CHRISTINE ELYSE BRIGHT (AFFIRMED)****THE COURT: JUDGE BORTHWICK TO MS BRIGHT**

Just bear with me and I'll find the correct folder of evidence.

5

**MS BRIGHT:**

That's okay. If it's okay as well your Honour, I was anticipating Clare providing her summary, so I just need a moment to find my papers too.

**THE COURT: JUDGE BORTHWICK TO MS BRIGHT**

10 Find her evidence, very good.

**THE COURT: JUDGE BORTHWICK TO MS IRVING**

Q. So we'll review, Ms Irving, have you got everything you need?

A. Yes I think so. I am traveling a little lighter this week so I'm just having to bring some of the things up on my computer.

15 Q. That's all right.

**EXAMINATION: MS IRVING**

Q. Ms Bright, so is your full name Christina Elyse Bright?

A. Yes.

Q. And you are employed as an Environmental Scientist at Landpro Limited?

20 A. Yes.

Q. And you have prepared a brief of evidence dated 5 February 2021?

A. Yes.

Q. And you also participated in two joint witness conferences or expert conferences?

25 A. Yes that's correct.

Q. And were a signatory to the planners joint witness statement dated variously, the 8<sup>th</sup> or the 9<sup>th</sup> of April?

A. I believe I was only a signatory to the primary sector –

Q. Right, sorry.

A. – JWS, but assisted in the capacity of a technical advisor on the – what we’re referring to as the planners conferencing.

Q. Thank you. And you were a signatory to the joint witness statement in relation to the primary sector Schedule 10A.4?

5 A. Yes.

Q. And that is dated the 25<sup>th</sup> of March 2021?

A. Yes.

Q. So can you please confirm for the Court that to the best of your knowledge and belief those documents are true and correct?

10 A. Yes, although in the summary of my evidence that I’ve prepared I do have a paragraph in relation to some corrections.

Q. Right, can I perhaps get you to take the Court through those please?

A. Certainly. In relation to my summary of evidence at paragraph 2, I have made comment that I have updated the tables that were originally included in my evidence-in-chief, dated the 5<sup>th</sup> of February. This is in response to some editorial or typo related issues that were identified in Mr Leslie’s evidence, so I thought that – I saw it relevant to update those tables and append them to my summary for consistency if they were going to be referred back to.

15

20 **THE COURT: JUDGE BORTHWICK TO MS BRIGHT**

Q. Do you want to just read that, because I haven’t read this, so ...

A. Yes, yes. Of course. I wasn’t sure if – I can start at paragraph 2 and then when I come to the summary we can just go through other –

Q. And we’ll just make sure we’re all on board, it’s a new – it’s a supplementary evidence (inaudible 13:55:44). Why were you filing supplementary?

25

A. Ooh, if the word “supplementary” has been used, that would be incorrect. That would be an error.

Q. Okay, oh “summary”, “summary” it is, yes, no it is.

30 A. “Summary.

Q. Okay, good. Good. This is your summary –

A. Correct.

Q. – of your evidence, including a correction?

A. Correct.

Q. Okay, got it.

A. And just because the correction is technical in nature I wanted to write it down –

5 Q. Yes, than -

A. – rather than just verbally –

Q. I think that's the best way, yes, okay.

A. So paragraph 2, under the heading "Corrections", reads: "In reference to errors identified in Mr Leslie's evidence in reply, dated 19<sup>th</sup> of February, I have reproduced Tables 1 to 5 from my evidence-in-chief with corrections made. Those corrections pertain to paragraph 45 and 61 of Mr Leslie's evidence in reply. Tables 1 to 5 are contained in Appendix A to this summary of evidence. Consequential changes to the text of my evidence-in-chief may be required due to corrections to Table 1 to 5. Given the technical nature of these changes and the fact that Plan Change 7 and Schedule 10A.4 has moved on, I have not updated the text of my evidence-in-chief."

10

15

Q. Okay. Do we know what paragraphs may have needed changing or consequentially or not?

20 A. I could provide that.

Q. Or at - you could provide that. Maybe you should, but I think you're saying that things have moved on quite considerably?

A. In terms of the time that it may have taken me to fine tooth comb check?

Q. Yes.

25 A. I think things have moved on sufficiently enough that it wouldn't be valuable time spent.

Q. Okay, all right, thank you. Paragraph number 3.

A. Is it okay if I start at paragraph 1 or would you like to just take that?

Q. Oh we'll take that as read.

30 A. As read, okay, thank you. "Summary of Evidence, starting at paragraph 3. My evidence-in-chief sought changes to Schedule 10A.4. I note that conferencing on Schedule 10A.4 has occurred since my evidence-in-chief was prepared and both Plan Change 7 and Schedule 10A.4 have moved on from the notified version. My evidence-in-chief

presented a series of data analyses completed using both the proposed Landpro method for calculating historic water use and the Plan Change 7 Schedule 10A.4 method. These analyses highlighted that there were risks to using the Schedule 10A.4 method and could mean that water users may not be allocated water at a rate and volume that reflects their historical use and could leave water users not able to run their irrigation systems reliably. Subsequently, my evidence-in-chief sought changes to the notifiers schedule 10A.4. Schedule 10A.4 should only be used to determine historic water use and be supported by an assessment of the efficient water volumes needed for the intended use. For example, for irrigation, a model like the Aqualinc guidelines for reasonable irrigation water requirements in the Otago region should be used for informing replacement water allocation. All available water use data of suitable quality should be used. Data auditing steps are needed to assess data gas, exceedances and whether these can be accounted for in water use records. The instantaneous rate, daily, monthly and annual volumes should be based on the historic maximum, not the average maximum. Schedule 10A.4 should include provision for the volumes determined as reasonable for replacement allocation, be the lesser of the historic maximum volumes or the volumes determined by an assessment of the Aqualinc reasonable water requirements. Recent proposed amendments to Schedule 10A.4. In light of the planners conferencing, and I'll refer to that the planner's JWS, on Schedule 10A.4 and the subsequent joint witness statement, and attachment 1 to that joint witness statement, I provide the following additional comments on points (a) to (f) that I just read earlier. I still support the use of an assessment of the efficient water volumes needed for the intended use of water, so that water is allocated on the basis that water meets demand. This is reflected in para 426 and 54 to 57 of the primary sector JWS that I participated in. The amendments in attachment 1 of the planner's JWS somewhat address this via the proposed amendments to the restricted discretionary activity rule in attachment 1 of the planner's JWS. I wish to acknowledge the comments at paras 4 to 5 – sorry – 4 to 9 of the primary sector JWS, and that allocating water based on efficient use may encourage or promote

the upgrade of less-efficient systems. In my opinion, this cannot be achieved under a short six-year consent term, therefore, I now believe that assessments of efficient water use are relevant only where schedule 10(a)(iv) does not represent historical water use. Aqualinc is an appropriate assessment tool to demonstrate efficient water volumes for irrigation, and I agree with the position reached in the primary sector JWS and paras 7, 25 to 26, and 54 through to 57, that tools like Aqualinc have a place in plan change 7, but not in schedule 10(a)(iv). I also acknowledge there are other methods available to demonstrate efficient water use, and historical water use where there is a need for additional data. Refer to para 5 of the primary sector JWS and para 7 of the planner's JWS. The amendments made in attachment 1 of the planner's JWS with regards to the restricted discretionary activity rule allow for other methods to be used where the entry conditions to the controlled activity rule in relation to schedule 10(a)(iv) cannot be met. I support this. I still support that every full year, 1 July to 30 June the following year, of available water data should be used. With regards to data auditing steps to assess data gaps and exceedances, I support the primary sector JWS at para 28. Data gaps do not need to be filled if using historical maxima. I support the proposed amendments to schedule 10(a)(iv) with regards to data exceedances as included in attachment 1 of the planner's JWS but acknowledge there is some remaining drafting work to ensure this meets the intended outcomes of schedule 10(a)(iv). I support the use of maxima for the rate of take limit, daily, monthly, and annual volume limits, as included in attachment one of the planner's JWS. As schedule 10(a)(iv) is intended to provide for a simple to apply, objective, certain, and low-cost process, I no longer consider that schedule 10(a)(iv) needs to include the proposed schedule 10(a)(iv)(5), included as appendix A of Claire Perkins' evidence-in-chief. I support the proposed amendments to the RDA rule in attachment 1 of the planner's JWS that allows for other methods or data to be used where water use records may not be representative of historical water use.

1400

**CROSS-EXAMINATION: MR MAW**

Q. Good afternoon.

A. Good afternoon.

5 Q. Ms Bright, for the next month or so, and then you'll have your PhD confirmed.

A. Yes, that was an additional correction. Unfortunately, I'm still not allowed to be referred to as Dr Bright, but I will be very shortly.

Q. Right. I wonder whether you could help me understand what daily volume limits might seek to achieve.

10 A. In the context of whether there should be one or not?

Q. Just put to one side whether there should be one or shouldn't be one. I'm interested to understand what a daily limit, what it does, what's its purpose, as you understand it?

15 A. Its purpose would be to limit how much water you can take daily within a 24-hour period.

Q. So when you think about patterns of water use in the Otago region, you accept that applicants or consent holders or deemed permit holders, as the case may be, don't necessarily take their instantaneous rate of take for a full 24-hour period?

20 A. That's correct in some cases.

Q. And so when we think about replicating the current patterns of usage, a daily volume limit would, to a certain extent, pick up those patterns of usage.

A. Yes, in theory.

25 Q. I want to understand now monthly volume limits. Can you explain what the monthly volume limit is and what it reflects?

A. It is how much water you are authorised to take during a month. Depending on how the monthly volume limit has been determined will define whether it is based on historical use or something else.

30 Q. So if the monthly volume limit is reflecting historical use, it may well be that the monthly volume doesn't reflect precisely the number of days in any given month times the daily volume?

A. That's correct in practice, yes.

Q. So it may be less?



A. That the daily volume multiplied by 30.4 could be less or more than the actual monthly use? Yes.

5 Q. So, like the daily volumes, if what we're trying to do is to reflect existing or historical patterns of use, then the monthly volume limit is one mechanism by which the pattern of use at a monthly level is reflected.

A. That's correct.

Q. I want to look at the annual volume now, and again, what's your understanding of the annual volume?

10 A. Much the same as the monthly, that it is the amount of water you are authorised to take during a certain defined period. It could be a calendar year, 12 months, or a predefined period of time reflecting the irrigation season, and its determination would be based on, to my understanding, historical use or some other reasonable method.

15 Q. So where the annual volume is reflecting historical use, again, it, in a sense, might be a limiting factor in terms of the volume of water that might be taken under a consent?

A. Yes.

20 Q. So looking at each of those, and I'll call them limits for present purposes, they are all, in the context of plan change 7, seeking to reflect existing patterns of usage.

A. That's correct.

25 Q. Now, there's been some debate as to precisely how those volumetric limits might be calculated, and I understand that has been considered in the expert witness caucusing that has taken place, and that the agreed outcome, if I understand the joint witness statements correctly, is that, with respect to the daily volume, monthly volume, and annual volume, those should reflect the maxima in terms of historic data, as opposed to averages of maxima, which was a previous position or previous articulation in the schedule.

30 A. That's correct in relation to schedule 10(a)(iv) being applicable to the controlled activity pathway.

Q. Yes. Now, I haven't yet mentioned the calculation of instantaneous rates of take, but in relation to the instantaneous rates of take, my understanding, again, is that the experts jointly recommend that it should

be the maximum rate of take expressed in terms of historic use, as opposed to an averaging of maxima.

A. That's correct, with the specific caveats that the experts discussed in relation to data auditing steps.

5 Q. Yes, that's a convenient segue. So the agreement in relation to the use of maxima was conditional upon there being a satisfactory way by which to remove what is described as atypical data?

1410

A. Yes.

10 Q. So perhaps if I can put that in terms that I sometimes can understand, if I look at a picture, the spikes on a graph that might just look well out of place in terms of a hydrograph showing typical usage?

A. Correct.

15 Q. And in terms of dealing with what is described as atypical data, my understanding is that a step, and I recall it's step 4, has been introduced to deal with the atypical data.

A. Yes, step 4 is currently in a proposed format.

Q. And just so that we're all looking at the same thing, have you got the –

A. The 1<sup>st</sup> April version?

20 Q. I'm looking at the joint witness statement from the planners which has the planning appendix attached to it.

A. Oh, sorry, yes, it has the date, 8<sup>th</sup> of April, on the coversheet.

Q. It's attachment 1 to the planning JWS.

A. Yes. I believe I'm looking at the right thing.

25 Q. Very good. So when we look at schedule 10(a)(iv) and the methodology set out, in relation to the rate of take limit, step 4 has been introduced into the methodology.

A. Yes.

30 Q. And that's the process by which atypical data is to be managed when calculating the limits.

A. It's an option that, at this point in time, I believe is a good option, but it has only been heard by both Mr Wilson, myself, and the planners involved in that planner's conferencing, not any of the – sorry, correction – and any other witnesses at the planner's conferencing that was involved in the

hydro and community, but there are experts who have only received this via the Court communications process and have not necessarily provided commentary on it.

5 Q. Now, you were in court this morning, I recall, when I was tasking with reporting back to the Court the matters on which the experts might need to do some further work.

A. Yes.

10 Q. Now, my understanding is that step 4 in the methodology is a step that the technical experts might usefully consider in terms of whether that appropriately addresses the concerns addressed in the technical joint witness statements in relation to atypical data.

A. Yes, and if applicable, I would also like to stress, that is summarised in my evidence in relation to meeting the objectives of 10(a)(iv).

Q. What do you mean by that?

15 A. The three key outcomes that ORC stipulate as being the intended outcomes of schedule 10(a)(iv).

Q. I understand. Have you had an opportunity yet to test the step 4 with some actual data?

20 A. Not any of my own data, sorry, data that's available to me via my clients, other than what Mr Wilson and I had the opportunity to look at during conferencing.

Q. So in terms of further testing this step, my understanding is that the scenarios that have been used in the conferencing might be a useful set of scenarios.

25 A. It would be where I would start.

Q. And at a principal level, assuming that step 4 does appropriately address the way atypical data is managed, you are not comfortable that schedule 10(a)(iv) is reflecting those three outcomes.

30 A. As currently drafted, we have amendments to 10(a)(iv)(1). As long as those same matters are repeated in the additional parts of the schedule, then, yes, we are at a place where I believe this is going to reflect better the outcomes that schedule 10(a)(iv) was intended to achieve.

Q. Yes, and just to be clear on that, my understanding is that the planners had time to make the changes to the rate of take limit, but not the other calculations of limits in the planning conferring.

A. That's correct.

5 Q. And so that's a task that the planners need to invest a little more time in to track those changes into the balance of the schedule.

A. And/or direct the technical experts to make those changes, and then plan is reviewed. I believe that is where we landed, that Mr Wilson and I had a high-level conversation about whether we had capacity within the 48  
10 hours following the conferencing to achieve that. We both had to be here today, myself, in this capacity, not as an expert with time to make those amendments, so I believe that it is in progress already.

Q. Very good. I want to talk to you now about the date range for data to be used when conducting calculations using the schedule. Now, as I  
15 understand it, your evidence is that all available data should be used for that purpose.

A. Yes, that's correct.

Q. And that would include future data, or data beyond the June 2020 date that was recorded in the earlier version of the plan.

20 A. For permits due to expire prior to 2025, as per defined in plan change 7 as being the permit that it applies to, all available data should be used.

Q. Now, not all planners agree with that change. Is that your understanding?

A. From the joint witness statement and being in the room, there are some potential reservations.

25 Q. And those reservations relate to, amongst other things, concerns that the data, colloquially, could be gamed in terms of higher usage being adopted for a short period of time just prior to a consent being renewed.

A. I appreciated that those were concerns about those people's reservations, but I didn't see that as a potential problem, with some other  
30 caveats around that, I didn't see that as a potential true risk.

Q. So when you think about this issue from a risk perspective, and I want you to think about it using two scenarios. One is that the data range stops – I'll get the date right – on 30 June 2020, and the second scenario, there is no fixed end date, so any data available up until reconsenting. So when

you think about the risks of either providing a fixed date versus not, the risk could be conceptualised as in relation to that first scenario, where there's a fixed date, so a past date. It's the risk on the abstractor, the abstractor bears the risk that they might have wanted to take a greater  
 5 either instantaneous rate or volume of water after that date, but before consent renewal.

A. It's possible there are very legitimate reasons for that being the case.

Q. And if you think about the risk of extending that date out, that risk is one borne by the environment in the sense of further water being abstracted.

10 A. Not necessarily, because abstraction is controlled by reliability of supply, which doesn't change that dramatically. The current reliability of supply is the current reliability of supply. If the water's not there, it wouldn't be taken beyond the current litres per second limit.

Q. I mean, you think about the changes that have been made to the schedule  
 15 in relation to using maxima as opposed to averages, doesn't that heighten the risk of greater volumes being taken for short or temporary periods of time artificially changing the historic use pattern?

A. The historic use pattern may differ between 2020 and some other date into the future, yes.

20 1420

Q. But that risk is heightened with the shift to maxima as opposed to the use of average values?

A. Oh sorry yes, sorry, misunderstood your question. Yes by using the maxima, the maximum that has occurred in that period of time could in  
 25 theory be applied for as a replacement allocation.

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

Q. Was that your question?

A. Sorry?

Q. Was that your question?

30 A. Yes it gave the answer –

Q. You were looking for?

A. Yes.

Q. Oh okay, right, all right.

**MS BRIGHT:**

I can - would you like me to rephrase or?

**MR MAW:**

5 No, no.

**CROSS-EXAMINATION CONTINUES: MR MAW**

10 Q. So let's just make sure I've understood this, the opportunity to – or the risk of – it's not a risk, the opportunity to increase the maximum amounts taken is higher with a single use maxima used as opposed to the average of maxima over a longer period?

A. Yes but there are those very legitimate reasons when that may occur.

15 Q. So if we hypothetically track forward into the future, assuming that there was water available, an abstractor of water could take at a much higher rate on a one off occasion and that would have the effect of influencing the maximum then historic rate of take on consenting?

A. Yes with the caveat that they would not be exceeding their currently authorised consent limit.

20 Q. Yes and when you look at the range of existing permits, there's a broad range of usage in terms of existing permits, not all applicants are taking up to their maximum amounts?

A. Correct.

25 Q. I want to talk to you now about the restricted discretionary activity pathway and you mentioned in your supplementary evidence that there might be other methods that could be used in relation to the restrictive discretionary activity pathway. Putting the drafting to one side, is it your understanding that the restricted discretionary activity pathway is a pathway to apply when there is no technical information or water metering data available to run the calculation in the schedule or something different?

30 A. Not just no data, but there might be data available that is not representative of the historical use.

Q. Can you give an example of where you think that risk might eventuate?

A. There are many examples we – would you like something in particular?

Q. You give me one that best represents or best reflects where the data doesn't reflect the historic use?

A. The most obvious and commonly referred to example in our conferencing was due to limiting factors in getting water meters installed across Otago.

5 Some people have very short water use records or the good sections of their water use records beyond when they maybe had a manual record initially and then turned to telemetry or a logger could be short and only capture water use characteristic to incredibly dry years where reliability of supply was so low they couldn't access the water they would need or  
10 could be incredibly wet years when access to the water wasn't necessarily needed as farmers only typically apply water when their soils and crops require it.

Q. So when you read the wording that's put forward for the restricted discretionary activity and on the staying in the Appendix 1 to the joint  
15 witness statement, you'll see matter of discretion A under the restricted discretionary activity?

A. Yes.

Q. Refers to – through consideration of water meter data and other relevant methods and data. What do you understand those other relevant  
20 methods to be?

A. Sorry, could you please point me to the –

Q. Yes, sure.

A. I'm not sure if... (inaudible 14:24:51).

Q. Have you got "Restricted Discretionary Activity Rule 10A3.1A?"

25 A. Yes.

Q. And then if you track down there, you'll see that the Council will restrict its discretion to the following matters?

A. Yes.

Q. And then matter of discretion A? You'll see some new text has been  
30 recommended for insertion?

A. Yes but I'm – this is now where I'm wondering if I'm not looking at the same version, because I'm aware of the text you're referring to, but it's not in the version I am currently looking at.

Q. What precisely are you looking at?

A. I'm looking at "Matter of discretion A being within the limits of historical use."

Q. Yes, keep reading?

5 A. "The existing water permit conditions, the volume and rate water taken, dammed, discharged or diverted."

Q. No, we're looking at two different versions. Do you have the planning joint witness statement with you?

**THE COURT: JUDGE BORTHWICK TO MS BRIGHT**

Q. That's dated 8<sup>th</sup> of April 2021?

10 A. Yes I believe I printed the right copy but it's now apparent I potentially haven't printed the right copy.

Q. No, it's okay, we've got a copy.

A. I'm sorry, I do have it. I was looking at the wrong version, my apologies.

**CROSS-EXAMINATION CONTINUES: MR MAW**

15 A. Yes, "Matter A".

Q. Right, we're on the same page?

A. Yes.

Q. So there, this is picking up on the reference to other relevant methods and data?

20 A. Yes.

Q. Now just so I'm really clear, this matter of discretion is still in your opinion, seeking to reflect historic use?

A. Yes.

25 Q. So when these other relevant methods are used there, what are the methods that immediately spring to mind, so if you were asked to do a calculation where there was an issue with the underlying record, what are some of the other methods you might use?

30 A. We would employ a range of and in combination, but this is on the assumption also that a water meter does exist, so what available data there is, in comparison if for irrigation we would look at Aqualinc potentially. There are frost biting regulations, stock drinking water regulations, the ability to create synthetic hydrological flow records and/or



take records, we could assess physically, site visit and complete gauging of a system during irrigation to understand the capacity of a race network to know whether under average conditions over Summer, when things are dry, how much water is physically going through a race.

5 Q. So I want to stick in the first instance with the Aqualinc guidelines, so the Aqualinc guidelines, those guidelines don't reflect historic use at all do they?

A. They reflect historic climatic conditions.

Q. The Aqualinc guidelines though don't reflect historic actual use?

10 A. Not water use, no. It represents the demand that would have occurred.

Q. So some care would need to be shown when looking at models such as or methods such as Aqualinc in the context of this RDA and because Aqualinc simply doesn't reflect historic use?

A. No but in combination with a water use record, we can line things up fairly accurately with anecdotal evidence from a potential irrigator and land on a replacement allocation that would be reasonable.

Q. Reasonable or reflective of historic?

A. Reasonable and reflective.

Q. When you read "Matter of Discretion A" as a hydrologist, do you read that as applying or referring to historic use? Is it really clear in that drafting?

20 A. It is to be me because of line 1.

Q. So within the limits of historical use, you're reading that as saying the methods that are adopted here are to reflect historic use or within the realms of historic use?

25 A. Correct. This was a topic that was discussed at length and the planners sought advice from both Mr Wilson and myself being in the room and that was my assumption based on the drafting. I felt comfortable with that knowing that within historical use, you could use those methods.

Q. Right and so in terms of if there are any improvements that might usefully ensure that that outcome is achieved, you'd be comfortable with that, the overarching principle being that it's within historic use, that's what this matter of discretion's driving at?

30 A. I believe, yes, there – in light of Plan Change 7 being simple, cost effective, I believe that that wording is appropriate. In a perfect world, you

might have an additional schedule that describes how stock water regulations, frost fighting regulations, Aqualinc, hydroelectricity, community water supplies, all other possible uses, would be defined based on responsible need and/or could address both historical use patterns, but in the context of keeping this simple and putting as least words as possible, and you're not having another schedule, the direction from within limits of historical use satisfies that for me, and counsel obviously has discretion.

1430

10 Q. Yes, I think that's helpful in terms of the understanding about what that manner of discretion is driving at. The wording's probably going to be an issue for the planners to make sure that that is accurately coming through in terms of the wording.

15 A. There may be additional drafting, yes, although, not being a planner, I wouldn't want to put that back on them right now.

#### **JUDGE BORTHWICK TO MR COOPER**

20 Q. Forest and Bird representative is not here. Mr Cooper put a (inaudible 14.32.00). Go back to Forest and Bird and ask them to confirm their interest going forward for cross-examination because we are according for them in the schedule, aren't we?

A. Yes, your Honour.

Q. Right.

25 A. We did have an email from them last night saying that they wouldn't make it for the next week and a half in Cromwell due to other environment court mediation commitments.

Q. Right, okay.

A. So we aren't anticipating that they'll be here this week or next week.

#### **CROSS-EXAMINATION: MS IRVING**

30 Q. I just have a couple of questions, Ms Bright, for you to assist the Court in relation to the matter of priorities, and her Honour, this morning, expressed an interest in some more detailed examples of how priorities may have been exercised or not within the region. Do you have any

examples that you could usefully talk through, perhaps, to assist the Court with that?

A. Yes.

Q. Could you do that, please?

5 A. Yes, of course. I have read the latest minute from the Court and familiarised myself with the questions related to priorities, and there are some in there that I think an example could provide context to, primarily, the one where priorities are being exercised but there are not necessarily conditions on a consent to that effect in a new water permit where a  
10 deemed permit has been replaced. This particular example, a water user has the highest priority take in a small catchment with other water users in a tributary that flows to the Clutha River, so it's a very small, short-order catchment, and they exercise their priority over downstream users. They have recently gone through a replacement process where the intent was  
15 for them to continue exercising their priority access to water, and they are doing so under the authorisation of their new water permit, but there is no condition or water-sharing agreement condition on the consent to cover that. The council has not imposed a condition that reflects that a priority is being exercised. The exercise of that priority means that other water  
20 users in the catchment have altered their water-use behaviour in terms of the sources of water they are accessing, but also the infrastructure to ensure they have reliability of supply, for example, storage, for when that water user is exercising their priority, so I think that is an example where a priority on a gentlemen's handshake is continuing to occur.

25 **THE COURT: JUDGE BORTHWICK**

Q. What is the name of the permit-holder?

A. Smallburn Limited.

Q. All right, we will direct that we obtain a copy of that consent. Was the regional council – are you familiar with the application for a water permit?

30 A. I was the hydrologist who was involved in the hearings process.

Q. And do you know whether or not in the application for resource consent the applicant stated, you know, we have this existing priority, which we

intend to continue to exercise as between ourselves and everybody else on the small tributary, or was the applicant silent?

A. To the best of my knowledge, the council were aware that the priority was being exercised and would continue to be.

5 Q. And how would have they been aware?

A. There was an affected party approval letter provided by a downstream water user.

Q. And the affected party approval said what?

A. To the best of my knowledge, along the lines of: "I'm aware that so and so is using all of the water upstream, and I support their application."

10

Q. So you are inferring from that statement what? That there was a continuing exercise of priority notwithstanding the replacement consent?

A. In essence, yes.

15

Q. All right, so I will not only get a copy of that resource consent, but together with the application and a statement, I think, from your planner, one of your planners, as to whether or not there was disclosure as to an assumed continuing exercise of a priority, and this is a non-regulatory method, though, isn't it?

20

A. Correct. The way I understand it, they have on their new water permit a scheme management plan.

Q. What does that mean?

25

A. Another term, yeah. So a scheme management plan, to the best of my knowledge, is a condition that is being imposed on many new water permits that relates to the management of the system and any efficiency upgrades that are required by council as a condition of granting the permit, for example, conversion of flood irrigation to spray, and there might be some time constraints that go with that. I have not seen, in a quick search of a few recent ones, anything under these scheme management plans that relates to water sharing. They are primarily about

30

the infrastructure and the irrigation area.

**THE COURT: COMMISSIONER EDMONDS**

Q. And are they also about if you don't use the water within a certain therefore, or basically upgrade the infrastructure, you forgo some of the water that you might have had access to otherwise?

5 A. I'm not sure of the answer to that.

Q. Yes.

A. No, I wouldn't, I'm not – yeah.

Q. I may have seen something of that nature.

**THE COURT: JUDGE BORTHWICK**

10 Q. So anyway, here, the permit holder has presumed that a priority could survive, if you like, after the application and grant of a replacement consent. Your evidence is the regional council was informed of that in the application, and is it your evidence also that – what is your evidence in terms of any minimum flow or residual flow as a consequence of this understanding?

15 A. So as part of the hearing process, residual flows were proposed on some points of take in the larger complexity of the scheme. The particular permit that exercises priority has, I believe, a visual residual flow condition, meaning there is no numerical limit on how much flow is to be left so long as visually, there is water at a defined point some distance downstream, so that is the current residual flow condition. I may have that wrong, apologies if I do, it may be numerical. It's a complex system.

20

Q. So anyway, the new take has residual flows at different parts on the water body is what your evidence is?

25 A. A single point some distance downstream.

1440

Q. A single point, so residual flows at a single point some distance down? No minimum flow presumably?

A. No minimum flow being a tributary to the Clutha that naturally has drying reaches.

30

Q. And the residual flow, what was the purpose of it?

A. I cannot recall. Often a visual residual flow is to provide for some value that is immediately downstream of a point or take or is simply to ensure that not all water is taken.

5 Q. Now you may have already said so, but so forgive me if I ask this again, your, the permit holder, did they find themselves upstream or downstream in terms of the tributary (inaudible 14:40:43) yes?

A. The effected party?

Q. No, the person with priority?

A. They're the highest in the catchment.

10 Q. They were the highest person in the catchment?

A. In that particular catchment yes.

Q. Oh and the affected party being somewhat down or the lowest person –

A. Yes.

Q. – and said, “That’s all right if they take all the water”?

15 A. Yes.

Q. Yes. And you don’t know whether they said that’s okay because of the priorities or for some other reason?

20 A. No I have not, I cannot recall the specific wording of it, but my understanding of the situation going into that process was that a downstream user had given approval for the upstream user to continue their status quo. I think it’s recall- I’ve just recalled that their visual residual flow may be based on a 50/50 flow share between the point of take and the creek that they must leave visually half of the flow in the creek which is another complex version of a visual residual flow.

25 **THE COURT: JUDGE BORTHWICK TO MS IRVING**

Q. Were you going to ask other examples?

A. Can I just flesh out this one?

Q. Yes that’s fine, yes, go further.

**CROSS-EXAMINATION CONTINUES: MS IRVING**

30 Q. You referred to Small Burn Limited as being the applicant that exercises the priority, as part of the replacement of the permits and I think it was on

the Park Burn, were there other water users seeking consent at the same time?

A. Yes.

Q. And were they downstream of Small Burn?

5 A. Not necessarily. There were some users in an adjacent catchment that had to some extent were affected by the activities in the neighbouring catchment due to bywashers, race networks, re-takes, discharge permits.

Q. So in essence, was there a bundle of consents in that instance that were considered together?

10 A. Yes there were multiple water users.

Q. Can you recall what the other permit applications were referred to?

A. Commonly there were three that were bundled and held together as a joint hearing. Smallburn Limited was one, Pisa Holdings Limited was a second and the third was Rockburn Wines Limited and they weren't necessarily the sole applicant, but that was the common naming. I believe the Pisa Holdings Limited application covered more than five.

15 Q. Yes and I think your Honour might recall, but there's an appeal on foot I think in relation to Pisa Holdings and Rockburn?

**THE COURT: JUDGE BORTHWICK**

20 Yes there's, sorry, Rockburn and Pisa both under appeal.

**MS IRVING:**

And Pisa Holdings, yes.

25 **MS BRIGHT:**

Sorry, I should have made that clearer.

**THE COURT: JUDGE BORTHWICK**

That's okay, no that's all right.

30 **MS IRVING TO THE COURT: JUDGE BORTHWICK**

If I may, it would probably be helpful for the Court I think if it received the bundle of documents rather than just the Smallburn.

**THE COURT: JUDGE BORTHWICK TO MS IRVING**

Q. Why would that help the Court?

A. Because it was a comprehensive bundle.

5 Q. But why would it help the Court? The Court is really trying to understand and I thought it was important for (inaudible 14:44:16) that we do understand whether or not priorities continue to be recognised on a replacement consent, now we have heard evidence in Dunedin, they're not. Now we're hearing evidence they are, so we know for Smallburn something may have been recognised. Now whether that was lawful or  
10 not is an even more interesting question, but it's interesting. It's about all I can say really, it's interesting at this stage, what on earth's going on?

A. Yes, no I suppose I'd suggest –

Q. But Pisa, why would am I interested in Pisa?

A. Well what I'm saying –

**15 MS IRVING TO MS BRIGHT:**

Q. Well would you like to answer that question?

**MS BRIGHT:**

20 A. Yes I could add, yes apologies, to understand how Smallburn Limited operate their system including their priority, the context that surrounds that is linked to the Pisa Holding and Rockburn Wine's Limited applications.

**THE COURT: JUDGE BORTHWICK**

25 Q. Well if you give me that paperwork, how many pages are you likely to give me and ask me to then analyse and understand what the relationship is?

1445

A. Many.

Q. Many.

A. It's possible that –

30 Q. And is that going to be helpful in terms of the Court speedily understanding what's happening with priorities? I accept your evidence at this point that priorities are Regional Council is continuing to recognise



priorities on replacement consents and does so after 1 October 2021 would be your evidence, is that right?

A. (No audible answer 14:45:51).

Q. Yes, Smallburn?

5 A. Oh sorry yes I thought you might have been directing a question over that way.

Q. Yes looking, yes, I'm –

A. I think what I understood from –

Q. That's right?

10 A. – one of your comments was that we could, if we could provide you with the detail of that and an accompanying comment from the planner involved and that might just be able to give you enough high level understanding of the total scheme without giving you hundreds of pages worth –

15 Q. That's right –

A. – of application and/or decisions and appeals, so.

Q. – I don't want to hear hundreds of pages. Yes, no that would be – I think that would be helpful because I think I really don't want to receive hundreds of pages and then leave it up to the Court to do its own analysis but question for you, is this just like a one off or not?

20

A. I'm not aware of another specific example –

Q. So it could be a one off?

A. It could be but I don't think it is. I think there would still be people planning onto continue exercising their priorities and it may be more relevant in smaller headwater catchments –

25

Q. Yes.

A. – where there is only three or four users and not 300 water users that have come together as a larger catchment group and/or entity.

Q. I mean, as we've reflected back to Ms Dicey, it may be that the mechanism does extend longer than 1 October 2021. It may be that it doesn't and it may be that this is a gap – a policy gap that needs to be filled, particularly for the an effective controlled activity route. I don't know, but –

30

A. I think there would –

Q. I, but –

A. Sorry.

Q. – what I’m wondering is whether this is an arrangement that the Regional Council is (a) acting inconsistently about or (b) actually hasn’t understood because it hasn’t been properly advised what are the informal -, oh what are the non-regatory measures or methods relating water use, which is happening on the tribs and I guess bigger body of water than the tribs?

A. Yes.

Q. Have you got any impression about that? Because it wouldn’t be the first case that I’ve come across where I thought, “No, Regional Council has not been told, why should it know?”

A. I think it might be a little bit of a mixture. I think there is a lack of understanding from Council about the current exercise of priorities that maybe then leads to fewer questions asked of those users exercising them.

#### **THE COURT: COMMISSIONER EDMONDS**

Q. So did this one come up largely because of the effected party approval situation?

A. That was one component that in this particular case the downstream user provided some approval for the status quo to continue. In this case that would be some of the evidence other than mentioned in the application that a priority was being exercised.

Q. So it may be that people are signing these affected party approvals, but they may have side arrangements in addition that the –

A. Yes.

Q. – the Council may have no idea about?

A. Because a part of this broader replacement process that occurred in these catchments, the particular downstream user in question recognised they weren’t getting water at that location in that catchment, so sought to fulfil their reliability of supply issues from other water sources and I believe they have been able to access water via an alternative.

**THE COURT: JUDGE BORTHWICK**

Q. Out of catchment source?

A. Is it within the same – it's across catchment.

Q. Well different, cross catchment's in a different water body or –

5 A. Correct, yes.

Q. Yes, okay.

A. A tributary of the water body in question.

Q. Yes. But a different one from Smallburn?

A. It's in the Park Burn catchment.

10 Q. In the Park Burn, yes.

A. I think –

**THE COURT: COMMISSIONER EDMONDS**

Q. I was just going to say I see that the new controlled activity proposes that these things be non-notified. It basically says there won't be public or limited notifications, so what do you think that might have an effect on the need for affected party approval on some of these things coming to the surface? You might be the wrong person to ask that question of.

15 1450

A. I can appreciate the challenge you've just identified because I work in the planning space, but I'm not within scope where I am right now to make comment on that.

20

**THE COURT: JUDGE BORTHWICK**

Q. Because of our lack of understanding of priorities by concrete examples of where they are currently being exercised, a concern that we have is (inaudible 14:50:52) recognised, so were they required to be recognised because they are a policy gap and they cease having effect on 1 October? What needs to be written around that for there not to be unexpected or unattended consequences, particularly if you have got non-notification, because I think it is reasonably unusual that you have users driving outcomes for water plan as between themselves without region having effective control, or more effective control. Do you want to comment on that?

25

30

A. Yes, I think the contrasting point to that is that there are more examples, I would say, where priorities are not being exercised, or are, that would have those unintended consequences if they weren't carried over.

Q. And why do you say that?

5 A. I'm aware of priorities in the Manuherikia where they are not being exercised, for a number of reasons, but if the priority was to exercised, they would have the ability to take whatever they wanted, as they are the highest priority user, and they are voluntarily working with the wider catchment to flow share as per other agreements in place and the wider  
10 scope of the catchment. They have not been doing that, so bearing in mind there are other agreements in the catchment, but should that priority be rolled over and allowed to be exercised without the flow-sharing agreement that goes with this catchment, that user could increase their water use and abstract up to their consented limits without consulting with  
15 their other water users in the catchment, or there are cases where often, there might be some unintended environmental benefits between priority 1 and priority 2 in a catchment that, should priorities disappoint altogether and water users start taking whatever they want, whenever they want, that flows further decrease and those values are lost.

20 Q. So now we are getting back into the high-level general, and whereas I'm concerned as to the likelihood of that event – say it is species extinction for galaxiids, because that's been the evidence – what is the likelihood of that actually occurring, should priorities A) not be recognised, or B) be recognised, but without any policy around that or without anything else  
25 like a water-share agreement around that. What is the likelihood of that? So we deal with risk, how likely is it that that species extinction could occur, or how likely is it that you would have the high priority abstractor de-watering the environment for their neighbours? I do not have a sense of that.

30 A. I can appreciate that.

Q. Well, if I do not have a sense of it, I am not going to carrying it over. That is what people risk in not bringing to the Court good evidence and dealing in generalities. We can only act on the evidence before us, but you have given us an example about Smallburn, you have given us an example

about someone in Manuherikia, and there, you said it is not just a case that the Manuherikia example not rely on existing priorities, but now involved in a flow-share agreement which ensures something. I do not know, we heard a lot of cross-examination that the flows in the river from Manuherikia are effectively set by resource consent conditions. I have not seen that in evidence, it has just come through in examination. Can you expand on that particular catchment?

5

A. With regards to the client that I represent through their current payment replacement process, or Landpro represents, and their current priority status, they have the highest priority permit in the catchment, they are a dairy operation and have spent vast amount on infrastructure to upgrade that system and run a profitable dairy operation. They do not exercise their priority due to voluntarily flow-sharing agreements in the catchment to maintain. They are upstream of Ophir, so they voluntarily work with the catchment to maintain the current 860 litre per second flow at Ophir.

10

15

Q. What set that flow at Ophir?

A. That's a 2(a) flow.

Q. It is a 2(a) flow. It is not on any consent condition anyway?

A. No.

20

Q. No.

A. So this is part of what some other experts have referred to, I guess, as what is actually occurring in the catchment and what the observed flows are aren't necessarily the status quo without those flow sharing agreements in place, example. If the flow-sharing agreements weren't in place currently, the observed flow could be significantly different to what it is currently.

25

Q. Mmm, so I understand from the last witness that there is no utility in recognising flow-sharing agreements because flow-sharing agreements only have impact where work through minimum flows, residual flows, et cetera.

30

A. Yes.

Q. But that is not your evidence? You can have flow-sharing agreements which exist as between water users.

A. Well, this is on the assumption that the group have decided that they are going to work to some flow-sharing.

Q. My question for you is what is happening now in the Manuherikia, not what they are proposing for their long-term consents. What is observed in the river? I was told through Mr Page, through questions, and, I think, responses to the Court it is achieved through consent conditions now, or is that wrong? Is it more like flow-sharing agreements?

**MS IRVING:**

10 I think you might have got confused with the Taieri.

**JUDGE BORTHWICK:**

I do not know what I have got confused with because we simply do not have good evidence on this.

15 **MS IRVING:**

The Taieri consents have minimum flow conditions. The Manuherikia consents largely don't.

**THE COURT: JUDGE BORTHWICK**

Q. Okay, so what drives the flow in the Manuherikia catchment?

20 A. The catchment water users wanting to both have access to water to irrigate and meet their obligations to not inefficiently take water when values need to be protected.

Q. Are you talking about the application which has been filed by the regional council, or the regime, if you like, that they are currently working to now?

25 A. My understanding is that the regime they are currently working to is the same as what is being proposed going forward in those replacement applications.

Q. And so where would I find the detail of that? Do I take it that that is not in any resource consent or deemed permit which currently exists, but it is in a voluntarily flow-sharing agreement, is that what you are saying?

30 A. It's in a flow-sharing agreement between those catchment users that's in the process of being drafted into a formal –

Q. Okay, so more formal record?

A. Correct.

Q. But it exists? Okay.

5 A. Yes, it is included within, I believe an overview report that accompanied all of the Manuherikia catchment applications that were lodged a similar time. There is an overview report that accompanies those applications that explains, at an overview, higher level, how that all works.

Q. And how long has that been working for?

A. For as long as I've been working at Landpro, which is 2017.

10 Q. So for three years?

A. Yes.

Q. Three or four years.

15 A. And, at various times, other sub-catchments within the Manuherikia might have also decided for a period to voluntarily work in sub-catchment groups on particular flow-sharing agreements to test how they would work in practice should limits be set, and I think Mr Hickey provided some evidence to that, that the observed flows currently in the Manuherikia, as an example, reflect a lot of that voluntarily flow-sharing and collaborative approach that is going on.

20 Q. Right, okay.

A. But I – yeah.

Q. Did you have any other you want to give us of priorities?

25 A. I'm aware of another example that Ms Perkins might be able to talk to a bit more specifically, she was involved, but the water users in the Luggate catchment have new water permits granted recently that have both low-flow rationing conditions and/or scheme management plans, and some of that reflects the previous exercise of the priorities, where they have now been replaced with a flow-rationing system, but I wasn't involved in that process closely enough to comment.

30 1500

Q. But that is, as you would expect, though, the replacement of priorities with something else?

A. Correct, unlike –

Q. And that is what has happened in Luggate.

A. Correct, unlike Smallburn, where they are carrying on as water users on the assumption that those priorities are exercised and there are no conditions on the permits in relation to water-sharing agreements.

Q. But Smallburn is the only example you can give us?

5 A. Correct. There may be others, but to my knowledge.

Q. Okay, anything else? Any other permits that you are familiar with?

A. Nothing that I can bring from the top of my head.

### **QUESTIONS FROM THE COURT: JUDGE BORTHWICK**

10 Q. Court has already asked quite a few questions, how about we just finish asking our questions? How do you imagine going forward is the scenario is – which is the regional council's scenario – you have got a controlled activity or a non-complying activity? So a non-complying activity, generally speaking, we will not have policy support for something being proposed, but nevertheless, on the merits, that ought to be considered.

15 So that is what non-complying means, generally. In the controlled activity law, are there any gaps? That was the question for Ms Dicey, and now a question for you. Are there gaps, and if so, what are they?

A. I would be of a similar opinion that priorities is a clear gap.

20 Q. Can priorities be exercised in some shape or form absent recognition of water-flow or water-sharing agreements?

A. Sorry, was the question can they be exercised?

25 Q. Yeah, can you, if you bring them down, just say you can, the Court should and the Court has got to reach a view on that, but the Court should and does somehow bring them down into this plan change, can they exist independently or any other flow-sharing agreement which may, on a formal or informal basis, exist as between water permit users?

A. In a procedural-only sense, the controlled activity rule does not contain any other environmental considerations.

Q. Yeah, take environment off it.

30 A. Then you could just roll the priority over.

Q. Yes, but can they be usefully exercised?

A. Between water users?



- Q. Yeah, without actually recognising that there is also flow-sharing agreements present, because I thought you said they could not.
- A. Well, where there is no flow-sharing agreement –
- Q. Then that is all you have got.
- 5 A. – then the priority is all you’ve got between water users to ensure that whoever had priority had got first access.
- Q. Yeah, yeah.
- A. But there are many more cases where flow-sharing agreements are being proposed as a replacement of priorities, so I’m not sure what pathway forward we have if flow-sharing agreements are not to be a part of plan change 7, because we do not have limits, or ecological or hydrological or all other values, to define those, then no, a flow-sharing agreement can’t come first, in a sense.
- 10 Q. Meaning that – meaning what, sorry? You lost me.
- 15 A. That you need all of the other information in relation to all values to set a limit, which then defines what flow you have available to share.
- Q. So you could not have a flow-sharing agreement which is dealing with abstractor access to water, if you like, regulating as between abstractors only?
- 20 A. Oh, sorry, no, yes, you could.
- Q. You could? Okay.
- A. Yes, well, a priority could just become a flow-sharing agreement between user A and user B that user A gets first access.
- Q. Yeah, something like that.
- 25 A. Yeah, yeah.
- Q. Okay, that is a useful way of looking at it.
- A. But more often than not, a flow-share agreement is developed quite tediously with users on the basis that we have well-informed science, so it would be a shift in the use of that term to define it that way.
- 30 Q. Yes, no, understood, okay, I understand the language difficult. So in your example of in the Manuherikia with the permit holder – and can you tell me who it is, the one who has got first priority?
- A. Barley Station,
- Q. Where is that?

A. Barley Station.

Q. Barley Station.

A. Commonly known as.

5 Q. Yeah. So Barley station was to apply for a permit that, under a controlled activity rule, granted – because it must be granted – recognising its priority, then what? Then recognising its priority must also be a drive to, as part of that recognition, because the word priority does not mean a heck of a lot, it needs, I suspect, to be flashed out.

A. Yes.

10 Q. That would be in the form of an abstractor-only water-sharing agreement, so not talking about environmental stuff at all, we are talking about regulating the take of water as between abstractors. There would need to be some mechanism setting that out, what that meant.

A. Yes, there would be.

15 Q. Otherwise, if Barley was taking on the basis of historical use –

A. They would essentially get the use that reflects their exercise of the priority.

Q. Yeah, and what is the downside?

A. Not, sorry, not exercising of their priority.

20 Q. And the downside to that is what, if anything? So they are just taking historically, but now, they could apply that out of season, or they could apply that in –

A. They would not be able to, due to agreements with Falls Dam Company. There are other agreements in that particular catchment that would limit the exercise of them going back to square 1, full mining privilege, taking whatever water they want would not occur, but in their particular case, if we consider, hypothetically, that they could exercise their priority, their historical use figures calculated under schedule 10(a)(iv) would never allow them to exercise the priority, because they have been restricted, voluntarily doing so, wanting to work with the catchment, but that use figure would restrict them from being able to fully exercise their priority, I suspect. The timing of their pattern of taking might change, but they also have submersible river pumps that are on pipes, so they are also

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restricted based on their infrastructure. It's not an open channel where the take is less controlled, to a certain extent.

**THE COURT: COMMISSIONER EDMONDS**

5 Q. One of the maximums, meaning if you're going on the maximums, how would that be limiting?

A. So currently, during summer, lower flow conditions in the Manuherikia. If the river is approaching minimum flow, and the water users, along with the irrigation companies in Falls Dam, are working to manage a water level that hovers above that minimum flow so that we can all continue to take a little bit without hitting the minimum flow, Barley Station voluntarily reduced their rate of take also, so their historical use does not necessarily reflect what they could actually be authorised to take during those periods, because they do not, in theory, have to voluntarily not exercise their priority. So their use is somewhat lower than what it would be had they exercised their priority, because they had been asked to reduce their rate of take, or not take on certain days.

15 Q. So how does that get picked up in the controlled activity? How does it?

A. I'm not entirely sure right in this minute, but I could think about that from a technical hydrology perspective, other than some sort of agreement that is the same as a priority but worded differently to make sure it covers the appropriate circumstances.

20 Q. Well, wouldn't the regional council just simply say that that pattern of usage is going to be reflected in the water data for many, not necessarily all, because, you know, some people allude to (inaudible 15:09:37) and so forth, but for those that have a good record, it is going to be reflected in that, in daily and monthly use patterns?

25 A. Yes, sorry, yes.

30 Q. Yeah, and those daily and monthly use patterns, is that what is being brought forward, once we figure out what the maximum was, does that reflect the agreement with Falls Dam or whoever it is that is driving the voluntarily restrictions?

1510

A. Yes.

Q. So that's, yes?

A. Essentially yes. Their historic use demonstrates compliance with voluntary –

Q. Measures?

5 A. – measures to regulate flow.

Q. And so if you're looking at your schedule and what comes out of a schedule, what's the product, is it a – I'm not sure what it is, is it a single highest day or a single highest month or are you going to see a pattern of usage over an irrigation season for example?

10 A. A pattern of usage that will have instances of high end use within limits that reflect that there was supply available and there was demand for that water so it was taken.

Q. So over what sort of a time frame are we talking for some of these voluntary arrangements kicked in?

15 A. Do we see instances where we have increasing and decreasing use?

Q. Yes?

A. That could be daily, weekly, monthly, season to season.

Q. But going back how many years were some of these things starting from –

20 A. Yes I would have to –

Q. I'm just wondering about this -

A. Yes.

Q. - all available data -

A. Correct, yes sorry.

25 Q. – provisions, so that –

A. I would –

Q. – you know, lately that might all be reflected in the data that the earlier ones it was a completely different sort of arrangement, so I'm just struggling with that concept?

30 A. And I think this is why having the RDA pathway open to where water use is not representative, is appropriate in terms of being able to demonstrate why use record, however, long it is, is not necessarily representative of use, but it is possible under that controlled pathway using the schedule, if you use all available data, it will show periods of time when priorities are

potentially more or less relevant along with any current voluntary flow sharing agreement because every season is different. So the use pattern will show spikes where water use is higher because water is available and all users might be taking water because it's available or that user might have been allowed to take water because it was available.

**QUESTIONS FROM THE COURT CONTINUES: JUDGE BORTHWICK**

Q. And if it's not available, what does maximum usage tell us about how flows are being managed through non-regatory means?

A. It shows the maximum water that was available to be taken by that user.

10 Q. So the maximum water available to be taken is it saying anything about when in this case, Ida Station was required to dial it back?

A. It's incredibly difficult to see the pinpoint moments when that's occurring, but largely the pattern reflects if lower use is occurring, it is possible if that coincides with what would otherwise be a dry month and flow levels are dropping, that might be the consequence of them voluntarily reducing their rate of take.

15 Q. So how does the maximum reflect priorities if it all, the exercise of priorities, if at all?

A. It would be incredible difficult to see that in a record.

20 Q. So (inaudible 15:13:27) okay. So if priorities are something that – somehow they must be brought down, how would you do that and for what purpose and how would you reflect these (inaudible 15:13:45) agreements that you say are there?

A. Well I think the flow sharing agreements may not be relevant under the simple roll over controlled activity six year term pathway.

25 Q. Why not?

A. Because those flow sharing agreements often are accompanied by infrastructure upgrades to ensure that a flow can be maintained between users if reliability of supply is going to be affected, then storage is often installed or conversion from flood installed or converging from flood or border dyke to more efficient spray methods would be required to give effect to a flow share agreement, so one under a procedural only approach, a priority is the best way to reflect any incidental environmental

gains being provided for by current priority water users sharing on that basis.

Q. How would you apply a controlled activity rule to Manuherikia? Assuming that that's your only pathway, just say it is your only pathway, how does it get applied?

5

A. Assuming that we have a schedule that prescribes the use of historical maxima?

Q. Yes?

A. And you can take into account existing conditions of consent, where those are obviously relevant and the existing priorities if they are being exercised, you could roll that over.

10

Q. You could?

A. I believe so although I –

Q. And there's no gap there? Like if it was Barley and you do that for Barley Station?

15

A. Mhm.

Q. There's not a gap represented by some other formal or informal arrangement for Falls Dam?

A. Well they might as a catchment continue working to their voluntary, their voluntary flow sharing, I'm not sure what would happen in the Manuherikia if we went to a situation where applications were to be considered under the controlled activity pathway as drafted.

20

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

A. Yes I don't –

25

Q. Yes.

A. – we would have to revert I suspect away from the proposed mitigations that are currently on the table.

Q. But their proposed mitigations on the table because there's infrastructure change and change in reliability, is that not so?

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1516

A. Yes, because we're applying under both the Regional Plan and Plan Change 7.

Q. So if you're not proposing irrigation upgrade and if you're not proposing to change intentionally reliability of supply, how would the control activity apply to, like, within that catchment?

5 A. You would get the historic maxima, as calculated in accordance with 10A4, maintaining the existing relevant conditions and I suspect be rolled over with a new permit.

Q. And that would be effective without anything more. That's really what I'm driving at.

A. Yeah.

10 Q. Except what I am I missing?

A. In the Manuherikia currently, I'm not aware of how other priorities are being exercised and whether the current on-the-table proposed flow sharing reflects all priorities or not and whether all priorities have to be rolled over but I think the simplest way forward is just to roll priorities over and let water users, admittedly under a non-regulatory method, continue to manage water like that, if we are to maintain the status quo.

15 Q. Well, that's the proposition by the Regional Council, maintain the status quo.

A. It's entirely possible that if Otago-wide priorities were not carried over, that there could be increased water use by some users, not beyond their historical use or limits but rather the timing of that water take, that if a downstream user who otherwise had priority is also taking, that there either isn't water available or a reach of river that has otherwise always been wet or intermittently wet is now permanently dry.

25 Q. Okay.

#### **THE COURT: COMMISSIONER BUNTING**

Q. I just had one or two questions if I may. In your joint witness statement, for the primary allocation, there was a statement about the outcome was to provide a methodology that's simple to apply and so on, which you've talked about. It was prefaced with schedule 10A4. Does this also apply to the RD route?

30 A. Yes, but it would be on the applicant's own back to what extent they wanted a, presumed to invest in providing alternative data via other

methods that Council would then have discretion over whether to accept or seek further information on but the intent would be that it would also be simple but it would be on the applicant if they choose to spend a little more resourcing on preparing an application under that pathway.

5 Q. So how would that relate to the process under the existing water plan? Do you have lots of meaningful discussions on these sorts of matters?

A. Every application. The current RDA as the proposed amendments sit, forgive me if I haven't quite got the wording right in my head, I haven't delved deeply into it because I haven't been preparing planning evidence  
10 but the RDA feels very similar to the current process where we present other data that accompanies water use data, whereas the RDA is assuming that you are also applying for a six-year permit, whereas that's not the case obviously under the Regional Water Plan but the process to provide that data, have a discussion with Council, potentially provides  
15 some additional information to support your water use records because the RDA requires you to have a water metre installed, would be similar but still more straightforward than the current process under the Regional Water Plan.

Q. Okay, because this use of this term "other relevant methods" which has  
20 been put into the draft of that provision, but if you go back to your own joint witness statement, the technical one, it talked about frost-fighting guidelines, stock water guidelines or guidance documents.

1520

A. Yeah.

25 Q. And then there's another sort of an umbrella guidance document, that I think it referred to also in the joint witness statement that would need to be updated.

A. Yes.

Q. Can you just speak a little bit to those three guidance documents and how  
30 they work?

A. Could you refer me to a paragraph number, just so I can speak specifically?

Q. Okay, para 25 of the primary sector. Have you got that one there?

A. I should do, hopefully no printer issue this time. 25.



Q. If I've got that correct.

A. Oh, yes, it's the second bullet point.

Q. The second bullet point, yeah, yeah.

A. So how that would work in practice?

5 Q. Yes, and what these guidelines are, who's prepared them and so on.

A. So the Aqualinc guidelines, I think, have been discussed.

Q. I think we understand that one.

A. Yes, enough.

Q. Yes, okay.

10 A. Fantastic. So the frost-fighting guidelines are not necessarily formal guidelines, specifically, in terms of the Otago region. There are other guidelines under other regional planning frameworks that I believe the regional council here in Otago looks to as for how we would apply frost-fighting water use allocations in the Otago context, and there is some  
15 guidance around a millimetre-per-hectare water requirement to fight a frost of X duration, and you then apply some known information about how likely a frost is in Otago based on your location and multiply that to get a reasonable volume of water that would be applicable to fighting frosts on that property.

20 Q. And do you have agreements or disagreements?

A. I'm not aware of where we've had disagreements.

Q. Okay, so frost fighting is reasonably understood and agreed.

A. I think it's relevantly black and white, the water requirement to fight a frost. I think more issues arise when it is mixed with other water use and how  
25 you might be fighting a frost during the irrigation season, quite early on in the irrigation season, and is that indirectly irrigation water for the day, or is it only frost-fighting water? If you've fought a frost in the morning, you are not necessarily then going to go straight into a rostered irrigation day if you were planning on irrigating anyway, because you've just applied  
30 water. So it gets more complicated when there are other uses in the mix, but just to determine a reasonable amount of water for frost-fighting purposes, there are some quite specific guidelines that are relatively black and white.

Q. And the next one is stock water guidelines.

- 5 A. Yes, so my understanding in using some of these guidelines is that there are a few documents prepared, also by other regional councils using external consultancy services, for example, that the regional council looks to in terms of defining what an appropriate litres per head is for a dairy cow, beef cow, sheep, deer, vice versa, including dairy shed wash water. So those guidelines inform what is reasonable use for those purposes.
- Q. So if you're assisting an applicant, do you have a fairly clear understanding of what?
- 10 A. Yeah, the Otago Regional Council in their resource consent form number four outline very clearly what the expectation is around stock drinking water and frost fighting. Both have numerical guidance included in the consent form about what you can apply for. There are circumstances, depending on where you might be and the breed of animal. You know, dairy cows is quite general, there are larger dairy cows that require more drinking water, so I presume there is the ability to discuss with council and use an alternative guideline, which often comes from Dairy New Zealand in that situation, on what is a reasonable water requirement for a large Friesian cow, for example, particularly if they're also winter milking, you know, the milking season then strongly affects
- 15 how much water would be recommended or is also reasonable use.
- Q. Okay, and the overall guidance document? I think in the joint witness statement, it said it would need to be modified.
- 20 A. Yes, so the Otago Regional Council, not long after notifying plan change 7, produced a guidance document for users of schedule 10(a)(iv) that sets out some step by step, almost a recipe of how to use the schedule, so that needs to be updated with the consequential changes that have occurred to the schedule through this process, but that guidance document exists in terms of helping or facilitating those who want to use
- 25 schedule 10(a)(iv).
- 30 Q. So it's only 10(a)(iv), not the interpretation of the regional water plan?
- A. No, it is only –
- Q. Only 10(a)(iv).
- A. Only 10(a)(iv), and has no relationship to the water plan, operative water plan.

Q. Okay, thank you. Just a couple of other small details, in terms of the water meter data, I think, in the joint witness statement, Mr Leslie suggested that it should be connected to logger or telemetry, but is would that be a requirement to accept that data?

5 A. Well, it is a requirement to a certain extent under the water meter registrations unless an exemption is provided, so in all avoidance of doubt, people who have existing water meters will need to have a logger of telemetry, but there are cases out there where manual records are still collected.

10 Q. And would they form part of your historic record?

A. Yes, in my opinion, they should meet the criteria to enter the controlled activity and apply schedule 10(a)(iv), otherwise, you walk down a pathway, again, where it is not easy to access the controlled activity rule, and people are left to use a different pathway, and that becomes the non-cost effective simple process.

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Q. And so do you have any idea what proportion would fall into that category across the –

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A. Not a proportion. Unfortunately it would be far less than there is loggers in telemetry available but I'm very aware that there is examples across Otago where access and, sorry, access to use that technology where you can have a logger and/or telemetry installed is just not possible right now and a lot of those water users, I know, when the, as part of the freshwater package, the regulations were updated, have been working through what that process would mean for them and how they can best comply with those regulations, obviously with the change in requirement around that, so there are manual records out there that would exist or records that don't meet the current regulations for those purposes but I suspect that in future there will have to be some way of doing that or those exemptions will still apply.

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Q. But the manual records can still form part of the historical record that you take?

A. They could do if it was needed to demonstrate your use. The manual records tend to not reflect your historic maxima, so they would possibly

actually disadvantage an applicant if using the average maximum, because those manual records don't capture necessarily how peaky or variable taking actually can be but by using the maxima, if it is appropriate to include older manual records, it still contributes to your description of what you've been doing for the last 10 years and it would seem unreasonable just to exclude it.

5

Q. So when you say it would be appropriate, is that a matter of contention perhaps?

A. I think there has been, there was discussion around the table around whether manual records mattered or not and at the end of the day, when you're using maxima, I suspect they don't but a water user may still feel that part of that manual record, whether it's, there are various types of manual records, is relevant for them demonstrating what their historical use has been under a 10A4 scenario. It might be more applicable under the proposed amendments to the RDA activity where there is a need to use those records that otherwise not necessarily fully compliant with having some sort of logger or telemetry.

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Q. Okay. Thank you. Community water supplies, community water, the take is obviously sometimes shared with other things.

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A. Yes.

Q. Have you discussed, you know, at your conference how you may take out the drinking water component or how is that dealt with? Is it still just dealt with as an all-in?

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A. I think during the primary sector conferencing, perhaps unknowingly to the experts in the room, we were referring to it, in a lot of our discussion, about exclusively primary sector examples. There are, where the primary purpose is for irrigation, there are permits that have a primary purpose as being for irrigation that also some water may go for domestic supply but that in a sense, as far as an understanding from the planning conferencing, wouldn't necessarily be defined as a community supply in essence. So I think not being involved in the community supply conferencing beyond what I got from the planning conferencing and reading the JWS, the amendments to plan change 7 reflect the needs for

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community water supplies where the primary purpose is for supplying community drinking water.

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Q. But you weren't at that conference?

5 A. No.

Q. No. Sorry, I didn't realise that.

A. Sorry.

Q. Okay. Okay. I think that's all I had. Just one last comment I noticed. It's a general comment. I would have found it helpful if the pages of the plan change had numbers on them to – when I open them out sometimes I thought when I put them back together it might be the wrong way or something. So that's just a general comment but that's the questions I have. Thank you, your Honour.

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**THE COURT: JUDGE BORTHWICK**

15 Q. So ordinarily this would be the time for re-examination. Do you want to take that on or do you want – or not. I mean it is kind of weird asking you actually.

A. I didn't really have anything that I was –

Q. Okay.

20 A. – thinking I'd cover off but –

Q. No, all right. But I guess the question for you, Ms Bright, is, you know, there's been a lot of discussion and obviously the matter is wide open, that controlled activity rule and is there any gaps, how the gaps are going to be filled but there's been questions from Mr Maw and questions from Ms Irving, questions from the Court. Is there anything you want to add or where you felt my answer was incomplete or, yeah, any, reflecting on where you want to be clear that we have understood what your evidence is where perhaps in the discussion you think that we might not have or the questions have been too narrow for you to, you know, have a complete answer?

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A. I would potentially, given the opportunity now, provide some additional context to some of the questions from Mr Maw that I think it's really important to consider in relation to the data that is used in schedule 10A4,

that statistically speaking, all data or more data is always more appropriate and more data between 2020 and beyond for a permit that doesn't expire up until 2025, may be incredibly relevant for them being able to demonstrate their historical use. We don't know what climatic conditions may occur between now and then but we may get use records that help a user demonstrate what the historical use is, in a scenario where there has been no ramping-up, is that common word used, I think it'll be incredibly clear to the Council where a water user has gone out of their way for that to occur and there are provisions that is not under the controlled activity and they may be encouraged to the RDA. The Council then has full discretion as to whether to consider that data or not. If it is justified water use, it should be considered, particularly where investments are being made now and I'm talking about through the ordering of cherry trees and setting down deposits for cherries that are not intended to be planted for two years but there is water available within authorised limits, that investment has been made now and that water user may choose to stay within their authorised limits for the next however long and use that water that they're entitled to take to feed the trees that they've paid for now and plan on planting. So that's an example where justified increased water use in the period extending beyond June 2020 and up to whenever could be incredibly relevant and cutting that water off could be at a detriment to substantial investment. There are other many examples where, I think I said there's lots of examples and we could, you could talk at an arms-length about, you know, storage is a classic example. It takes time for a storage, for a system with storage to adjust and get used to working with storage and using their authorised primary allocation to fill that storage and that may occur, may have been planned for or be occurring across seasons, across that 2020 date and it is important to consider that ramping-up as reasonable use. So that is their historic use because it is justified. So I think it may be that in those cases, applicants are encouraged to use the RDA pathway if that became part of plan change 7 based on the proposed amendments, so that they have the opportunity through other use, sorry, through the use of other methods or other data, to demonstrate why that water use is justified but

I think we can't just assume that all water use between now and 2025, if a consent is not due to expire and is not currently, you know, in the system, that all that water users misbehaviour. So I think there's some important distinctions to consider when assuming the implications or the risk. It's a can of worms.

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Q. No, no, I appreciate what you're saying. It's just something else to think about. How do you sift between misbehaviour and actually, your storage example is a good example, so storage is sunk infrastructure. It's in the ground. We can see it and the bedding-in of storage systems, a good example but that's an easy example. It's where it's actually, because you've got the infrastructure in the ground.

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#### **QUESTIONS ARISING: MR MAW**

Q. A follow-up question if I may. In light of that, no, it's interesting. So as part of your further explanation, in terms of legitimate reasons to increase taking water in relation to say a permit that doesn't expire until 2025. You said it would be obvious to the Council where there'd been ramping-up versus legitimate increases because of your example, purchase of cherry trees et cetera. When you look at the planning framework as it's currently put forward, the controlled activity wouldn't give the Council any such discretion in that instance, would it, because it would simply be the maxima used up until the date of expiry. So thinking about what you've put forward, if the controlled activity pathway retained its fixed date, the 20<sup>th</sup> of, the June 2020 date, but the restricted discretionary pathway didn't have that limit, would that perhaps provide the flexibility for consideration of the increased use where Council does have the discretion to consider the appropriateness of it?

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A. That might be a better way of looking at it but I'm not sure if the amendments have since reflected that or whether I've misunderstood what the planners were intending but that would be a more appropriate way potentially to deal with it, but it is again the controlled activity rule is intended to be cost-effective, simple, capture as many water users as possible considering why in this process. If that is the intended purpose of the controlled activity rule, that component of it could just be removed

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but I appreciate there are other planning-related things that go with that but I'm not a planner.

Q. That was all. Thank you.

A. The only other thing I would just say is, the question of priorities, I can appreciate how complexing and confusing they can be, particularly where they are being used or not and then what's happened when a permit's been replaced or, you know, what's the assumption from water users about priorities. I suspect that specific farmers might be able to provide those examples that you're looking for.

## 10 THE COURT: JUDGE BORTHWICK

Q. It's not necessarily that they're confusing. It is the case that there's not a lot of evidence about this –

A. Sorry.

Q. – although there are farmers to come.

15 A. Yes.

Q. But even still, there's no analysis about this, other than they exist and some folk exercise them and some folk don't exercise them and evidently they're important if there's no other regime in place to bridge a gap, okay, so that's fine, so then what is their import? Is it abstractive, regulating abstractive, environment, something else. It's like if people want it, they've got to give the evidence about it and so that we can start to think, well, is the policy there, is the policy framework there, is the rule framework there. But I expect we'll see more of you. Okay. So thank you very much. The next time we see you, will you be a doctor? When's the conferment? You don't know?

A. 9<sup>th</sup> of May.

Q. You might be, yeah.

A. Yeah. I shall let you know.

Q. Enjoy that day if we see you later.

## 30 WITNESS EXCUSED

**COURT ADJOURNS: 3.40 PM**



**COURT RESUMES: 4.08 PM**

**THE COURT: JUDGE BORTHWICK**

Sorry about the delay. Be seated, I understand the delay is occasioned by parties wishing to swap witnesses around. I've generally no problem provided  
 5 that we are given a good reason by the witnesses not available and generally speaking provided also we don't cut across another party's case, though sometimes that's not possible. So when asking to change the schedule it's really important that you give us the reason. The reason is not that the witness is unavailable, why? Why? Are they just prioritising a haircut or something  
 10 more important, like they, in this case they've got teaching commitments in Christchurch. So that's reasonable. So provide more information please.

**THE COURT: COMMISSIONER EDMONDS**

And notice would be good because I like to re-read the evidence before the witness comes on.

15 **THE COURT: JUDGE BORTHWICK**

It's reading as it goes.

**THE COURT: COMMISSIONER EDMONDS**

Q. So to get a witness for two days or something suddenly in the box I don't think that's very helpful.

20 **THE COURT: JUDGE BORTHWICK TO MS PERKINS**

Q. So, you are in the box Ms Perkins, so we need to swear you in. I know you want to produce a summary, is that best considered as evidence given that we don't want to confuse you with being an advocate?

A. I think in this situation if you just take it as evidence but –

25 Q. It's safest?

A. - I'm trying to talk about it more in summary, it's just that it's safest I think and that's why I thought putting them together was probably the best option.

Q. Yes, no that sounds like a sensible plan. So we will swear you in.

**CLAIRE ROSE PERKINS (AFFIRMED)****THE COURT: JUDGE BORTHWICK TO MS IRVING**

Q. Do you want to do your bit? Thank you.

5 A. I'll just bring up Ms Perkins' evidence.

**EXAMINATION: MS IRVING**

Q. Ms Perkins, your full name is Claire Rose Perkins?

A. Yes.

10 Q. And you are employed as a Senior Planner and the Planning Team Lead at Landpro Limited?

A. Yes.

Q. You have prepared a brief of evidence in these proceedings dated 5 February 2021?

A. Yes.

15 Q. And you have also prepared some supplementary planning evidence dated 23 March 2021?

A. Yes.

Q. Are there any amendments that you wish to make to either of those briefs of evidence?

20 A. No there's no corrections.

Q. And I also believe that you are a signatory to the joint witness statement in relation to planning dated the 8th of April 2021?

A. Yes.

25 Q. So can you please confirm for the Court that those three documents are true and correct to the best of your knowledge and belief?

A. Yes they are.

Q. Thank you, I'll leave you for questions.

**THE COURT: JUDGE BORTHWICK**

30 Q. I think you want to do two things, you've got an opening and you've also got a summary of evidence, so which way do you want to go first?

A. If I just take you through the opening that just sets the scene for the clients that we are sort of representing here as well. So I'll just read through that and you just let me know if there's anything as you go. "I present this opening summary as a representative of Landpro Ltd, not as a planning expert. This summary is made on behalf of Landpro and other parties. Landpro is a consultancy firm headquartered in Cromwell, Central Otago. We support a significant number of rural landowners and their resource management needs, including preparing applications to replace deemed permits for water take, use and storage, as well as applications for new permits. We have been working with our clients for many years drafting their applications and assessment of environmental effects and coordinating science investigations of hydrological flows and instream ecological values to support these applications. Many of these replacement applications have already been lodged with ORC (to balance the timing and spread of their lodgement as preferred by the Council) , prior to Plan Change 7 (PC7) being notified, and several have been granted. Since making our original submission a number of replacement applications have been lodged. So the expert evidence of myself (Planning) and Ms Christina Bright (Hydrology) who you've heard, is being presented on behalf of the following additional s274 parties: a. Ross Naylor, farmer in the Manuherikia catchment, b. Hortinvest Limited, who manage Deep Creek Fruits Ltd Partnership and develop and operate cherry orchards in Central Otago, c. Knapdale Farms Ltd, farm located in the Manuherikia catchment, d. Lindis Peaks Farming Ltd and Terrace Irrigation Ltd, farm and irrigation company located in the Lindis catchment, e. Earl and Bernadine Attfield, on behalf of the Waikerikeri Water Users Group, farmers located in the Clutha/Mata-au catchment, and Mount Earnslaw Station, farmers in the Earnslaw Burn catchment who run a small hydroelectric scheme. So further details on the parties is identified in paras [ 20 ] to [ 69 ] below. So why did Landpro submit on PC7? Landpro have invested time and money into submitting on PC7 as we feel strongly about helping shape the outcomes and future of our rural communities, particularly in Central

Otago. Landpro have three key company values – Be Honest, Be Your Best, Be Collaborative. It is these values that helped drive this decision. We concluded that given our strong views on the suitability, or lack thereof, of PC7 as notified, if we did not choose to submit and seek a better outcome for the transition period to a new land and water regional plan, then it would be very difficult to be able to provide the best possible advice to our clients on the best pathway forward now, and over the next 5 - 6 years. In addition, as this plan change has been directed straight to the Environment Court rather than initially proceeding through an RMA Schedule 1 process, and as there is no outside funding being provided by clients (including those which we have offered to represent), Landpro (as a small business) do not have the financial backing to have instructed legal counsel. The time of our experts myself and Christina Bright has been provided at a significant lost opportunity cost to the business. As a result of this funding constraint, we have not been able to be present in Court throughout the hearing, however we have been keeping close and track of proceedings via the audio and visual recordings remotely and participating in expert witness conferencing as required. We consider that through our participation to date we have made a tangible contribution to the process. Although it is disappointing that we and other parties have spent substantial time and money to now be back at the point where the 14 March 2021 version of PC7 has become the much simpler procedural plan change as originally recommended by the Minister. Through our participation in the focus group workshop in January 2020 we raised the cost and time issues relating to the ORC's suggested inclusion of environmental considerations, and advised that if PC7 was required at all then it should be a very simple and straight forward roll over, not the detailed version that ended up being notified and we are now having to apply for consents and be processed under. The issues raised by Ms Gilroy and Ms King in their evidence, in relation to the substantial amount of information that is required in an application in order to pass the s88 test and then further request under s92, are

being faced by our team on nearly every application, even where those are for terms of not more than 6 years and which are intended to be a simple rollover. The application process is requiring a substantial amount of information for what is supposed to be a short term 6 year transition period. ORC Consents Officers have recently advised that they were considering whether two of the applications we have recently filed for 6 year terms should be rejected under s88 due to their view that because there was no substantial hydrology science work undertaken in the subject waterbodies, the applications could be considered incomplete. This is contrary to the argument ORC have been putting forward through this hearing to date that this transition time is needed so that ORC themselves can undertake the science work to be included in the land and water regional plan before a second round of replacement applications can then be submitted. This is supposed to provide for a simple, cost - effective rollover process which PC7 as notified is not achieving in practice. So Landpro's position, in reference to page 2 of the original submission, but further updated as the Court has progressed, the key outcomes that Landpro seek are: a. To introduce a simple rule that enables current permits to be effectively exercised as they are currently until a new land and water regional plan is operative. This requires re-issued consents to be on the same terms and conditions (aside from historical use limits being used as new limits, rather than paper limits), including statutory entitlements, and requires removing the restriction on increases in irrigable areas. b. Remove from PC7 deemed permits relating to the damming and discharge of water so that these permits can continue to have applications assessed under their current RPW framework. c. Allow those permit holders willing and able to lodge their replacement applications before October 2021 to seek the long-term consents that they need, as many have done already, and have duration considered on their merits."

**THE COURT: JUDGE BORTHWICK**

Q. Just pause there a second, I need to re-read (b) I didn't quite hear it. Oh okay, I see what (inaudible 16:17:35) it.

A. Paragraph 18?

5 A. Yes, slow the pace down?

A. Sure. "In reference to point (c) above, I attended the recent community meetings for the Cardrona catchment (and my colleagues similarly for the Arrow catchment where the flow and allocation regimes that will be included in the future land and water regional plan were presented. At this meeting, ORC's General Manager, Strategy, Policy and Science advised the attendees that this regime takes into account the community's values and vision for the catchment including those of Nga Runanga. She also confirmed that no further work, science or otherwise would be undertaken on this proposed regime prior to the land and water plan being notified. This confirms Landpro's view that where there has been substantial work at a catchment scale, longer term consents may be considered. So I then move onto other parties represented and the reason for their submission. Ross Naylor. Mr Naylor's family own two properties in the Manuherikia Valley that are farmed together. Irrigation occurs on both blocks and is delivered from various sources including private water takes in the Chatto Creek and Thomsons Creek catchments, as well as irrigation company water delivered from the Omakau Area Irrigation Company (OAIC). The irrigation water is currently provided under consents due to expire on 10 15 20 25 30 1 October 2021 through a mixture of deemed and water permits. Significant investment has been made in the last decade on the properties to upgrade the irrigation infrastructure, water storage and water use efficiency. Mr Naylor has engaged Irritech Otago Limited to design pivot plans for the whole property, with water guns in the corners that are set to replace flood irrigation that has been occurring across some parts of the property. Further development of storage on the property has occurred with new storage installed in the 2020/21 irrigation season to increase the storage capacity and therefore increase irrigation reliability on the property, and reduce reliance on instantaneous

creek flows. These additional operational efficiencies (in particular conversions from flood to spray irrigation) will achieve greater water use efficiency but developing storage requires significant and long-term capital investment. Mr Naylor has acted in good faith and has been preparing for these renewals for some years, being mindful of the previously well signalled process and efficiencies that would be required to comply with the existing Aqualinc models and undertaking science work to understand of the effects of his abstraction activities on the instream ecology and hydrology of the Black Bush, Chandler and Devonshire Creeks and as part of the wider Manuherikia Catchment process. Efficiency has been his prerogative with his entire financial outlay. He has planned intensively and invested significantly in all his water development. Mr Naylor was advised by the ORC that he had to have everything in place by 2021 and has invested to do that, the upgrades will be completed this year. A significant investment has been made into freshwater fish and habitat value investigations in these waterways. These investigations commenced several years ago on the understanding that applications to replace his permits would be made under the current RPW planning framework and demonstrating the level of effect on instream aquatic values is necessary when seeking a long-term permit to replace them. Subsequently significant investment has already been made in consultancy, planning and infrastructure. Mr Naylor has recently completed his application in a timely manner and it is through no fault on his part that the goal posts have now shifted due to resourcing limitations at the ORC that have led to an inability to handle the process despite having known about this looming expiry date for Deemed Permits for the last 30 years. Mr Naylor requests that a longer-term pathway remains available for those applicant's applying to replace consents on a whole of sub-catchment or catchment basis (such as the Manuherekia, Chatto and Thomsons catchments) and where appropriate mitigation is proposed based on specific science work. Hortinvest Ltd. Hortinvest Limited (Hortinvest) are a

Deep Creek Fruits Ltd Partnership. They are involved in the purchase, establishment and operation of cherry orchards and packhouses, and the marketing of cherries for exports. Water for these orchards is sourced from a variety of sources (including groundwater and surface water) and irrigation schemes, some of which are currently authorised as deemed permits, some have recently replaced deemed permits or obtained new water permits. An application has recently been made for the replacement of the final deemed permits that were yet to be replaced. Hortinvest and other irrigation scheme shareholders have been actively developing consent applications. This has involved significant time and input from consultants and considerable science work. These applications were very well advanced at the time PC7 was notified in preparation for a lodgement date in late 2020. Water is integral to the operation and development of horticultural businesses, and without water it would not be possible to produce high value export crops. As part of the development of new orchards, long term and secure sources of water are required to give confidence to investors, especially given that it takes approximately 4 years to reach first production of fruit and a further 3 - 4 years to reach full production capacity of the tree(s). Significant capital investment has been made in the establishment and operation of these horticultural developments. Typical costs for development until point of first production range from \$150,000/ha to \$200,000/ha depending on the planting method, level of irrigation infrastructure, and whether or not the orchard is to be netted. Significant economic benefits arise from these developments, including employment of between 3 to 4 full time staff per orchard, and up to 100 full-time equivalents during pruning and harvest. These developments also rely on local supply businesses for the provision of services, irrigation infrastructure, and other orchard related products such as fertiliser and spray. Where possible Hortinvest endeavour to source locally, which means there is a significant economic flow on effect to local communities from these horticultural developments. Hortinvest are currently looking at further horticultural



development opportunities within Central Otago, although there is a significant risk that such developments may not occur if PC7 limits access to long term secure water supplies. Hortinvest have significant reservations around whether the ORC has fully considered the economic and social impacts of PC7, and whether they have provided due consideration to alternative options other than PC7. Hortinvest request that a longer-term pathway remains available for those applicant's applying to replace consents on a whole of sub-catchment basis." I won't repeat the rest of that, it's the same as what Mr Nayland summarised. Knapdale Farms farm 687 hectares in the Omakau/Matakanui are of the Manuherekia valley as a dairy farm with 750 cows. Irrigation water is provided to the property through private deemed permits from Black Bush Creek and Russell Creek in the Thomsons Creek catchment and through shares in the OAIC. Significant investment has been made to maintain the water take, conveyance, storage and irrigation infrastructure in good working order. Knapdale Farms has already invested heavily in water storage to reduce instantaneous reliance on surface water, with 6 reservoirs/dams constructed in the past 6 years in addition to the existing 2 reservoirs present at the time the property was purchased in 2014. Ongoing expenditure will also be required to ensure all of the water infrastructure (especially the reservoirs) are in good working order and water is used as efficiently as possible. The provision of on farm storage has enabled efficient use of water, so that when restrictions on scheme water arise, private water rights can be used to top up storage and enable irrigation to continue during dry periods. Knapdale Farms has also spent considerable capital making the farm in general more efficient, productive, and environmentally friendly. This has included construction of a state-of-the-art milking shed and effluent management system. Fencing of waterways has occurred, and riparian planting is ongoing. In December 2018 Knapdale Farms applied to the ORC to replace the existing permits to take water. This application is seeking a consent duration of 35 years for both replacement permits. At the time, ORC had actively encouraged applicants to lodge their application well-prior to the

expiry of their permits, in order to ensure the application was processed in a timely fashion. Considerable expenditure has since been made in attempts to achieve resolution with ORC and affected parties, with no real progress made some 18 months later. Knapdale Farms consider it unfair, then, to force applicants to spend additional time and cost to participate in PC7 to ensure the voice of farmers and irrigators is heard, and is financially challenging, when this plan change would see that Knapdale Farms do it all again in 6 years. Like Mr Naylor, Knapdale Farms has been preparing for their replacements for some time, being mindful of the efficiency expectations of ORC and the need to undertake robust science work to feed into the sub-catchment and catchment wide approach. Subsequently significant investment has already been made in consultancy, planning and infrastructure on the farm. Knapdale Farms also request that a longer-term pathway remains available. Lindis Peaks and Terraces Irrigation. Lindis Peaks is an approximately 3,500 hectare extensive sheep and beef operation with irrigated finishing country, that has recently expanded to include a small area of horticulture. Lindis Peaks has approximately 300 hectares of irrigation which equates to around 8% of the total land area in irrigation. Whilst proportionally the area of irrigation on Lindis Peaks is very small, it is integral to the success of the farming operations, without which it would not be possible to finish the stock. This irrigation ensures certainty of production in a climatically challenging location, which would otherwise impact on-farm profitability and production capability. Lindis Peaks secures all of its water from the Terraces Irrigation Scheme and since the scheme starting providing water in 2014, Lindis Peaks has been able to improve efficiency and profitability, as well as now being in a position to explore greater on-farm diversification opportunities. Since the establishment of that scheme, Lindis Peaks have progressed with the installation of a series of centre pivot irrigators, to now enable the full irrigation of around 300 hectares. In addition to the capital costs associated with pipes, pivots and pumps, there have also been extensive costs associated with installing new stock lanes, new fencing, and pasture renewal. On the back of a secure long-term consent for irrigation, Lindis Peaks have taken the opportunity to

commit to the development of approximately 80 hectares into cherry orchard. In 2019, approximately 11 hectares of land was planted in trees, a further 20 hectares is planned and was planted in winter 2020, and a final 50 hectares is to be planted in 2021. Terraces Irrigation Limited currently hold permits to abstract groundwater and connected surface water. Both permits authorise the taking of water from the Clutha/Mata-Au River. Water from both sources is used for irrigation, communal domestic, stock water, firefighting, frost fighting, and industrial use. A transfer application was recently granted to Lindis Peaks to transfer their shares from APL to the TIL that's from one location to another basically on the Clutha River, but because of the PC7 process, the term of consent was reduced by 19 years to only a 15 year term. Lindis Peaks and Terraces Irrigation share the view that this application should have fallen outside of PC7 and should not be subject to the matters of control set out within PC7, especially where no "new" water allocation was involved and the abstraction site was on the same water body. Or primary concern to Lindis Peaks with regards to PC7 is the lack of clarity on how PC7 is intended to apply to applications for new water takes, including the proposed transfer of water from one point of take to another. The transfer that has occurred did not propose any change to allocation, rather it was only to take the same water from a different location. However, the current way in which PC7 is written and the contradictions between objectives, rules, and policies make it unclear how such applications will be processed. Lindis Peaks and Terraces Irrigation consider the PC7 should not apply to transfers of water where there is no new allocation at the proposed transfer site and the proposed transfer site is on the same waterbody." Sorry, that "at" should be "and".

Q. So what considerations should apply?

30 A. I think just the same considerations that you'd use under the RPW rather than the change in duration. I think it's the duration consideration that was their concern here.

Q. Yes, so what considerations do apply under the operative water plan?

- 5 A. Whether there is any change in effects in your location compared to the current location and whether, probably that key consideration in terms of in stream ecology and also whether there's any other users that may be effected in the breach between one water take and the other are probably the two key considerations.
- Q. And so on that transfer, their longer term consent was knocked back?
- A. So they had 34 years left and they got dropped back to only having 15 year term, so instead of the 34 year term, transferring over with a new location, they got knocked back down to a 15 year duration.
- 10 Q. Are they going to go with it?
- A. Well they didn't want to go through another whole hearing process to argue that.
- Q. Did they have the option of continuing with their existing consent?
- A. They couldn't access the water for their particular property from that other location.
- 15 Q. Oh okay.
- A. So they had to move it to be able to actually access the water properly.
- Q. To get, yes, okay. Is that a relevant consideration?
- A. I think it is a relevant consideration, it is something that a few applicants are looking at, we've had – talked with a few other current water permit holders that want to make changes, transfer locations in the save aqua for a water body where this duration argument is coming into play.
- 20 Q. And so is that picked up in your – was it picked up in the original submission?
- A. It was picked up in the original submission yes.
- Q. And what was the relief they were looking for?
- A. That – I would have to double check to be honest exactly how the relief was worded.
- Q. And have you picked that relief up in your planning evidence or did you – weren't you required to?
- 30 A. I hadn't at the time, no.
- Q. Okay, but you were acting for them?
- A. Yes to an extent.
- Q. But you haven't proposed relief?

A. No not on that specifically.

Q. Should you have?

5 A. Potentially yes, as I was going through this more over the weekend. It's something that came back to the front of mind, going well potentially that is something that we should consider a bit further.

Q. All right and then at paragraph 54, you talk about new water. What's your problem with new water? I understand the transfer issue?

10 A. Yes, so that was – this is Lindis Peaks' request in their submission, so some of this information is taken directly in terms of representing their view on that. My view as a planning expert is that new water probably should be captured under PC7 in terms of the reflection of duration because it is falling into that transition period. But a transfer is a different scenario.

Q. Okay.

15 A. So briefly moving to Earl and Bernadine Attfield, in paragraph 57, they, "along with two other users, share in two permits to take and use water from Waikerikeri Creek which is a tributary of the Clutha which expire in October. Water under these permits is used for irrigation of pasture using a mix of borderdyke and flood irrigation methods. Significant investment  
20 has been made to maintain the water take, conveyance, storage and irrigation infrastructure in good working order including the construction of a new storage dam and plans for a pipeline that will allow for spray irrigation conversion. An application to replace the deemed and water permits was lodged in 2018 but has stalled and as a result of the  
25 challenge progressing consultation with iwi to a meaningful resolution. Having prepared and lodged their application some years ago and spent considerable time and money on science work within the catchment, they are now having to spend additional time and cost to participate in PC7 to ensure their voices are heard which adds additional time and cost. It is  
30 incredibly frustrating considering the time and money spent over the last 3 to 4 years preparing and lodging their application that they may have to do it all again in 6 years'. The Attfield's request that longer-term pathway remains available. And lastly is Mount Earnslaw Station. Geoffrey Thomson holds a deemed permit to take and discharge water

from Earnslaw Burn for the purpose of hydropower generation, located in the Glenorchy-Paradise area. This water services the small hydropower scheme built and constructed in the 1950s to power the surrounding farms. The race delivering water to the hydropower station also provides stock drinking water, and domestic water for one dwelling. In February 2020, Mount Earnslaw Trust applied to the ORC to replace the existing water permit. Prior to PC7 being notified. Water is sourced from the Earnslaw Burn, an alpine glacial fed river feeding Diamond Lake. The abstraction point is low in the catchment due to the steep alpine topography and is the only water permit on that water body. Water is then conveyed through a well-maintained race to the applicant's reservoir where the hydropower station is located. The power plant has been operational since 1958 and was registered in 1962. The powerhouse holds a 20kW generator but provides approximately 10-11kW of power when generating. Power generation historically provided electricity for the farms within the area and has since continued running for personal use on Mount Earnslaw Station. The powerplant is currently independent of the main grid. Mr Thomson has discussed with an electrician who supported the original development of the powerplant regarding sending surplus power to the local grid of which is possible, and this is being investigated as an option. This is a significant positive of the scheme and of the investment made into the powerhouse in this remote area of Otago that frequently has disruption to the main grid due to severe winters and remoteness. No irrigation is provided by this permit. The primary use is therefore hydropower, stock water and domestic needs. The scheme infrastructure is all in good condition including the diversion that is well looked after by the applicant when all water not required for stock or domestic use returning to the same catchment will be a little further downstream than where it would naturally flow. Significant investment has been made by Mr Thomson into understanding the potential impacts of the scheme on the values of the wider Diamond Lake Reserve. Being an alpine catchment, the abstraction is a minor proportion of mean annual low flows. Written approval has been provided to the application by Department of Conservation and approval from Aukaha, Te Ao Marama

Fish and Game, and Forest and Bird has been discussed in some detail for a possible 10-15 year amended consent term prior to being withdrawn as a result of the current PC7 Court process. Geoffrey Thomson of Mount Earnslaw request that water use for hydroelectric generation be considered separately to those permits where irrigation is the primary use, and a simpler process should be in place for this activity. Geoffrey Thomson believes that the current s 32A report and PC7 lacks a high-country perspective. Although PC7 is worded to be relevant to all Deemed Permits, PC7 does not adequately address the unique situation in this case where the water is used for hydro electricity generation.”

5

Q. Did you propose relief in your evidence dealing with hydro?

A. No I didn't at the time originally.

Q. Should you have?

A. Yes much likely (inaudible 16:37:53) is going to come back to those.

15

Q. You may not have a chance, but that's, you know –

A. No it's more when I came back to them, the purpose of summarising this.

Q. How do you understand the term “primary” just as a matter of interest like, you say it's 66, there's no irrigation provided by the permit, so the primary use, therefore, is every other use that they've got, whereas I would have thought “primary” would have a different meaning. It's at least at the primary use is hydro and then the permit holder takes water off for stock water and domestic needs which, you know, depending on reasonable use and effects on environment is permitted anyway under the Act. So how do you understand the term “primary”?

20

25 A. I would interpret the term “primary” to be what it is the main purpose of it, the majority of the water is used for. (Inaudible 16:38:40).

Q. Yes and so here, what is the majority of the water use-

A. Hydroelectric generation.

Q. Hydro. I just wish to be clear because I'm going to be asking the same thing about community water use as well. Okay, thank you. Right, and you've got a second statement?

30

A. Yes that's much shorter. Shall we zoom through to start at paragraph 3?

Q. Yes.

5 A. So this is about timing and approach. “I accept that PC7 in my opinion in some form is needed to provide direction towards the transition to longer term sustainable management of fresh water via a new land and water regional plan that fully gives effect to the MPSFM as discussed in paragraph 17 of my supplementary evidence. I consider that the changes to the controlled activity pathway in the 14<sup>th</sup> of March version better reflect the position I put forward in the original focus group session in January 2020.” I probably don’t need to repeat that because that’s actually in the summary I’ve just gone through.

10 Q. Mhm.

A. If we move to paragraph 5, “In addition, being able to implement many of the changes required through an environmental approach and not simply a procedural approach, are unlikely to be able to be achieved with only a 6 year term of consent as many will require infrastructure and system upgrades on farm. The timing of PC7 compared to the timing of the applications for the majority of the deemed permit replacement applications means that a simple low cost process cannot be followed, as applications have had to be made under both the RPW and PC7 in order to meet the time frames under s 124 and are, therefore, complex and costly. Many of the recent applications outside the larger catchment groups, I or one of my colleagues have lodged for a 6 year term albeit as a non-complying activity as the notified provisions of PC7 cannot be met, have had substantial section 92 requests from ORC consents officers in relation to providing more information on the hydrology and ecology of the subject water bodies and indicating that they will be recommending residual and/or minimum flows. This clearly indicates why the PC7 controlled activity pathway needs to be procedural only in order to achieve a simple low cost and appealing pathway. PC7 also undermines the collective and collaborative approach undertaken by many catchment groups and water users across Otago that have been progressing the development of, as far as possible, MPSFM compliant river flow management regimes for some time. The placeholder consents encouraged by PC7 will prevent any benefits being realised in those catchments for the next at least six years. And just briefly on Scope. In



consideration of the legal submissions of ORC dated 7<sup>th</sup> of April and the recommendation in my supplementary evidence to include a discretionary activity pathway that allows for some permits to seek a longer term, I have reviewed Landpro's submission which clearly sets out the scope of decisions sought including in particular allowing those permit holders willing and able to lodge their replacement applications before 2021 October 2021 to seek the long term consents that they need as many have done already and have duration considered on their merits. I consider that this clearly indicates to any interested parties the relief that is being sought and that the discretionary activity or longer term approach is a logical consequence of this relief that could be foreseen. The Court, therefore, have jurisdiction to consider this in my opinion."

Q. It may be that counsel is getting at something slightly different than whether you made a submission about it. It's whether it's in the scope of the plan changes notified. So you've got both orders for the purpose of this plan change as an instrument as well as what are folk picking up in terms of their submissions, are you within scope of both? And it could be counsel is saying, well look, this plan change isn't a plan change about supplanting the water plan, chapter 6, chapter 12 regime with something in this plan change, it's not about that, so, therefore, you're outside of scope. So it's a serious question and you might need to come back to it.

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

Q. Mr Maw is that where you're coming from?  
 A. In fairness to the witness, the submissions were not about the Landpro submission, they were about the OWRUG submission, so.  
 Q. Yes well I think that's right actually, yes.  
 A. So insofar as there may be scope within the Landpro –  
 Q. Mmm, within a submission –  
 A. – submission for this relief, that may well be the case, we didn't look at scope in relation to parties that hadn't yet appeared but we were to do so before the –

Q. No you didn't, and you weren't asked to, so is there scope in terms of the plan change itself, the notified plan change to be looking at a policy regime for long-term consents or have you not turned your mind to that?

A. I haven't really turned my mind to that.

5 Q. Okay.

A. Although my preliminary view would be yes that would be a submission on plan change evidence, a plan change seeking to constrain the duration of permits, so a submission seeking not to have that constraint would still be a submission on Plan Change 7.

10 Q. You could look at? Okay.

A. I'd need to go back and look at this particular submission and see whether there's a logical connection between the passage set out at paragraph 10 and the precise relief which is now being pursued which I'm not actually clear about yet either, so.

15 Q. Yes, but you will get to in your next question.

A. Indeed.

Q. Okay, all right, thank you. Continue.

**MS PERKINS:**

20 A. Sure. So then I finally note that further amendments that I recommend in addition to those that have already been proposed through the 14<sup>th</sup> of March version and changes made through attachment 1 to the Planners JWS. So (a), there is the limitation on irrigation area from policy 10(a)(2)(1) and rule 10(a)3.1.1 being removed, (b) is allowing those  
25 permits as I've sort of mentioned a few times to be able to continue with a longer-term pathway where there has been significant work undertaken and see that the application of PC7 for deemed permits related to the damming and discharge of water should be removed.

1645

30 Q. Okay, thank you. I am going to hand you over to Mr Maw now.

**CROSS-EXAMINATION: MR MAW**

Q. I want to start by understanding what I am to do with your opening representation on behalf of a range of submitters in the context of the

question which I am going to ask you about your planning evidence. Now, just so I am clear, in terms of your opening presentation, are you professionally engaged by the parties listed at your para 5 to provide planning evidence for them?

5 A. Yes, so we prepared the submissions for those parties and then have had discussions with them about whether they wanted to present any evidence themselves, whether they were happy for us, who are providing evidence already, to be effectively presenting that on their behalf as well, so we have had conversations and emails with those parties to say that they are happy for us to take the lead on that for them. They did not want to present anything themselves, so that opening representation is merely a summary, like you would get from any other farming witness, lay witness, turning up to say this is just basically a summary of their key points from their submission and setting out a perspective for the Court as to why it's important for them.

10 Q. And so each of those submitters has not given evidence?

A. No.

15 Q. And insofar as you have put forward in your representation information pertaining to those submitters, are you putting that forward as evidence or something else?

20 A. It's not specifically evidence, it's more re-highlighting their submission points, effectively. None of that is new. That is all just taken from their submissions directly.

25 Q. Is it fair to say that what you are doing is you are highlighting their position in terms of the position that they have put forward in their submission?

A. Yes.

Q. So in a sense, you're advocating their position for them?

30 A. Yes, effectively, that was, effectively, a bit more of an advocacy statement, which is why I did try to be quite careful with what went into that versus what I considered to be my planning evidence or summaries of what I have stated to date, as I pointed out to the Judge that I hadn't fully taken into consideration some of those points in those submissions in my original planning evidence.

Q. And so when you sit down and you prepare your planning evidence, you say you've complied with the code of conduct for expert witnesses?

A. Yes.

Q. And you reread that code again?

5 A. Yes.

Q. And you understand that, as an independent expert witness before this court, you are not to advocate for a client?

A. Correct.

10 Q. And yet what you've set out in your opening representation is, essentially, a set of advocacy statements in relation to parties that your company represents.

A. Effectively, and that's why this didn't necessarily need to be presented as an expert witness, but it made more sense for questions that may arise in the Court that were of a planning nature to be here at the same time for both.

15 1649

Q. Well, I understand the line you're trying to tread but it's not as simple as it is simply taking off one hat and putting on another hat as you transition from being an advocate to being an expert planner.

20 A. Sure. I appreciate it may be a blurred line there. It may have come across as a blurred line today for that.

Q. So in relation to the evidence that you've given in your opening representation, are you familiar with the information that you've put forward in this summary? Can you answer questions about that which you have put forward in terms of the factual assumptions underpinning these submissions?

25 A. For some of them, yes, because I am familiar with them as a client, as a separate part of the process but for some of them, I am not any more familiar with them than the information they have provided me with.

30 Q. So insofar as, well, perhaps let's look at your paragraph 5 of that opening presentation.

**WITNESS REFERRED TO OPENING PRESENTATION – PARAGRAPH 5**

Q. Which of the entities are you familiar with and which are the ones have you just summarised what's in the submission?

A. I'm particularly familiar with Mr Naylor. I prepared his application for the Chatto Creek catchment. For Knapdale Farms, Earl and Bernadine Attfield and Mt Earnslaw Station –

Q. Just slow down for a moment –

5 A. Sorry.

Q. – please.

A. So B, sorry, C, is –

Q. So let's do it in order. B, Hortinvest.

A. No, I'm not specifically familiar with them.

10 Q. Yes, Knapdale.

A. Insofar as I, in my role as team leader, have worked with others in the team who are responsible for it, so, no.

Q. So not really?

A. Not as good. It's like tier 2 effectively of knowledge.

15 Q. Lindis Peaks.

A. Not that familiar, no.

Q. Attfield.

A. Similar to Knapdale Farms. I have some knowledge through others in the team working on that process, their processes.

20 Q. And Mt Earnslaw.

A. The same. I am familiar with the application but I have not been involved in the details of their particular consent.

Q. So when we look down that list there, it's only really the Naylor application that you would be able to answer any further questions on in relation to the information that's in this representation?

25

A. I could answer some further questions on Knapdale, the Attfields and Mt Earnslaw but not on Hortinvest or Lindis Peaks.

### **MR MAW ADDRESSES THE COURT (16:52:18)**

Your Honour, we're getting close to the end of the day and I want to have a  
 30 more careful read of some of this information that's been put forward to see whether or not I want to take any further questions in relation to the information in the representation statement. Otherwise I'm going to transition away from that into some other material and I may have to circle back to this in the morning.

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

Q. Yeah, I don't have a problem with that. Ms (inaudible 16:52:47) suggested that we need to sit a little bit later in order to get through who we need to get through for tomorrow.

5 A. Right.

Q. Only going to suggest half an hour more if that's what parties wanted to do.

A. I would suggest we won't, this was the, your economist was it?

10 **MS IRVING:**

Well, it's changed slightly. Mr Patterson –

**THE COURT: JUDGE BORTHWICK**

Q. Is teaching tomorrow.

A. Yeah. So he will be called later. We've just, we've got Mr Lanam here, who is making a submission on behalf of Central Otago District. I'm just conscious of how much we've got to get through tomorrow and I have likewise witnesses that have some availability constraints that I'm just trying to manage. So I'm wanting to try and avoid, I suppose, to the extent we can, carrying too much over into tomorrow. So perhaps if Mr Maw wants to carry on with his cross of Ms Perkins' evidence, that would reduce what we needed to cover off tomorrow or alternatively, we perhaps deal with Mr Lanam this evening, so that's done.

15

20

Q. No. Look, parties have got to be realistic with the sort of hearing that this is and that is that there may be slippage in time and parties saying I'm, you know, witnesses not parties, saying I'm only available on this date and sorry if you don't make it, I've got to teaching appointment, you know, tomorrow, it's really not helpful. It's, you know, you're not at fault or to blame in any way for that but it's just not helpful. So there has to be some ability to move within a reasonable timeframe, which I would have thought if we can't reach today then we can reach tomorrow for most people. We haven't gone more than a half day over, I don't think. So I don't want to interpose another case. This is Landpro's case, Landpro's only opportunity or primary opportunity, it may not be the only one yet, but

25

30

primary opportunity to nail its case. So I don't want to interpose another witness and your witness can come tomorrow.

A. Yes, that's fine. I think in that case if we could carry on a little bit this evening so we get through as much of Landpro's case today would be

5 certainly very much appreciated from my point of view.

Q. All right. Thank you.

**MR MAW:**

I'm happy to continue, subject to the caveat I'd like to read that carefully overnight.

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

Q. Yes, absolutely. No, I understand that. So we're back with Ms Perkins with you anyway tomorrow morning.

A. Yes, thank you.

Q. You had other questions though?

15 A. I do have other questions.

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. I'm going to be heading to your supplementary evidence, which I think was dated the 23<sup>rd</sup> of March.

A. Yes.

20 Q. Now, I just need to find my copy of that, so bear with me. It's not where I was anticipating it to be hiding.

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

Q. Do you want us to give you a copy?

A. No, I do, I have – I do have it somewhere because I've highlighted parts  
25 of it.

Q. Okay.

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. Here we go. Right. I want to take you to paragraph 17 of that supplementary statement.

**WITNESS REFERRED TO SUPPLEMENTARY STATEMENT –  
PARAGRAPH 17**

Q. And in this part of your evidence, you are dealing with the non-complying activity pathway and this paragraph is about providing an extended consent duration for some types of activities and in particular, you have  
5 referenced community water supply or hydroelectricity schemes and noted that the duration of 15, 20 or 25 years is perhaps more appropriate but you're not sure which of those numbers might be appropriate. I want to start with the hydroelectricity schemes and I want to stay with the  
10 context provided in relation to the schemes that you have described in your paragraph 16.

**WITNESS REFERRED TO PARAGRAPH 16**

Q. So those are all existing schemes?

A. Yes.

15 Q. So in terms of the need for a long duration permit for an existing scheme, what is it, in your mind, why is a longer term permit required to ensure the viability of one of these activities?

A. I guess when thinking about it, it just gives them some more security that operation can continue for a longer period. We don't know what's going  
20 to come out of the Land and Water Plan and whether that particular activity will be able to continue in the same vein that it has been consented and I think there's potentially more drivers in the, a shorter term for something like the primary sector uses where water is being removed from a catchment entirely and used for irrigation rather than  
25 being a, I'm not going to say non, it's like vaguely non-consumptive but maybe technically in terms of the interpretation of word actually out of the water body for too long to be officially non-consumptive but those sorts of takes are a lower risk to the environment of continuing for a slightly longer term to give them security that they can continue while other activities  
30 may be dealt with in the shorter timeframe.

Q. So it's not about the viability of the activity itself. Well, the infrastructure's already there, isn't it?



A. The infrastructure is already there. I have not discussed with those parties specifically the viability of six years versus longer to understand exactly how the companies or systems operate.

5 Q. So why is it that those activities should be given security of supply in the long-term then?

A. I'm not suggesting it be a 35-year, as has often been granted in Otago in the past. It's more in consideration of the situation we have found ourselves in as planners at the moment of having all of these applications all at once, and that will be the situation we are in again with a six-year term, but if there are some of those activities that might warrant, potentially, a long-term security supply and that might have a lower risk on the environment, then potentially, they could have a slightly longer term as part of that transition process.

1700

15 Q. So in terms of the risk to the environment associated with these types of activities, aren't those the very risks that the new land and water plan is going to be considering?

A. Yes.

20 Q. And so isn't it appropriate to allow that plan to come to fruition, to set out the allocation framework such that all activities are then consented under it?

A. Yes, but I don't think that that prevents reviews or further consideration of these to be able to occur within that timeframe of a consent, that duration that may be granted on it.

25 Q. If you think about security of long-term supply, and if your answer to the land and water plan is to say, well, the council can just review the permit and impose the new regime, the security of supply risk is precisely the same, is it not?

A. Yes, effectively, it is.

30 Q. Except the one point of difference is that it puts the onus on the council to undertake a review, doesn't it?

A. Yes.

Q. And the council may not be resourced to do that.

A. Quite possibly not. I'm not sure what the resourcing levels are.

Q. When you're working with consent applicants and you're putting together these applications for fairly significant durations is my understanding, let's unpack that. You've put together some applications that have been lodged?

5 A. I have, yes.

Q. And how would you describe the consent terms sought in those applications?

A. They varied from six years to 35 years.

10 Q. And if you were to weight the range in terms of where the majority of those applications are in terms of durations, where would you say?

A. I think I need to be clear here, the time with which I've been with Landpro, so I haven't been responsible for preparing as many as other colleagues at Landpro. So, for example, I prepared the last chance applications and I've prepared a couple of the Manuherikia ones, but only insofar as to assist with getting them completed, and then assisted with a couple of other shorter term more recent ones, so, to be honest, it's probably only – the last chance covered 21 deemed permits, but it there was one application, so I would say I've prepared four applications myself.

15

Q. So remind me, last chance, what was the term sought?

20 A. 24 years to tie in with the dams that had already been reconsented.

Q. Thank you. I want to move now to the joint witness statement for planning. Now, you have a copy of that?

**WITNESS REFERRED TO JOINT WITNESS STATEMENT FOR PLANNING**

A. I do.

25 Q. Very good.

A. The right one, I think, too.

Q. I'll just take you to para 6 to start with. Now, just so that we're clear, your initials there in para 6 are CP?

A. Yes, that's correct.

30 Q. And you support the amendments shown in attachment 1?

A. Yes.

Q. And then at para 13, in relation to whether the data period to be used should extend post June 2020, you support the use of all available water metering data.

A. Yes.

Q. So you're not concerned about applicants ramping up their takes to achieve a single maximum on which to base an application for a controlled activity?

5 A. In my opinion, that is a possibility, that some applicants could do that. I don't consider that that would be the majority that would do that. Part of my view with this as well is the choice of June 2020. I understand it's sort of somewhat linked to the timing of notification, but some of my thinking in that is that I have some clients who have recently purchased properties.  
10 They actually got their irrigation system properly underway only this last season. As it turns out, their history of use from a rate of take point of view and a daily volume point of view won't be any different, but this year, they have actually used it across the season far more than the previous owners have, so in that situation, they would be adversely impacted when  
15 it was not bad behaviour of trying to ramp up just to secure water as such.

Q. Sure. So, in that example, there is a reasonable and logical explanation for the change in the pattern?

A. Yes.

Q. So wouldn't it be better for that situation to be considered through the  
20 restricted discretionary activity rule rather than the controlled activity?

A. I guess it could be done under both. I think it's just more the security to the applicant of a guaranteed replacement for a short term. In this situation, that applicant has applied for a six-year term but had to seek a non-complying pathway because of the schedule that was notified.

25 Q. So staying with that example, and using the schedule as recommended by the technical experts and also (inaudible 17:06:32) the planning statement. How would that application be treated now?

A. It would probably, the way the wording has been included, that does not have 2020 as a limit, it would be under a control pathway. It would fall  
30 under that pathway, yeah.

Q. Do you see that there could be a risk of some applicants ramping up their takes to achieve a single maximum spike in, say, an instantaneous rate?

A. It is possible, but I think, when you look at the numbers of permits that have already had to lodge replacements as part of the deemed permit

process, the numbers you're looking at that are water permits, it's probably – I'm sort of just guessing here in a way, but I wouldn't think it would be as much of a risk because a lot of those permits would have been granted more recently. They're not historic deemed permits where people haven't used their water. I would imagine that they're more likely to be in the last sort of 20 years where people had to put a proper application together to explain what they wanted and how much and why, albeit it's not as comprehensive as they are today, but I can't imagine it would be a significant risk, but yes, you may get a few that are still able to do that.

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Q. So when you think about who should bear that risk, is it a choice between the environment versus the abstractor?

A. I guess if that happens, then, yes, it would be putting the abstractor above the environment potentially in that situation.

15 Q. And when you think about the paradigm change brought about in the national policy statement for freshwater management around putting the needs of the water body first, how should that risk be dealt with in the planning framework?

A. I think, at the end of the day, they still would be under a six-year permit, so they're still in a transition phase, it would still then get captured under the NPSFM framework following that short-term kind of rollover of the permit, and so further investigation of the application, their efficiency, and all of the other aspects in the environment under the new plan could be dealt with at the end of that six-year term. This is not people going for a 20-year permit through that process.

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Q. So the risk, precisely, that I'm asking you about is the risk of applicants ramping up their take ahead of the point in time that their application is processed so as to achieve a higher maximum rate of take to justify a higher grant of consent on renewal, and whether that risk should be borne by the environment or by the abstractor?

30  
A. I just don't see that there's a huge risk that it could occur under that. I would need to see the numbers that are – probably the only way to see it would be to look at the water use records of those permits that are due to

expire up to 2025 and their consented rates and look at what the differences are to actually determine what the real level of risk is.

Q. And just so I understand that, are you saying there simply aren't that many permits out there that have the headroom available within them within which to take at a higher maximum rate, say, on a one-off occasion?

A. I couldn't tell you exactly the number, no.

Q. I want to understand next your opinion in relation to the restricted discretionary activity pathway that's been recommended by some of the planners and I should caveat that. It's not all planners that have recommended that that pathway change in the way that the joint witness statement has changed it. So when you think about the restricted discretionary activity that had been put forward by Mr De Pelsemaeker in his 14 March rendition of plan change 7, the restricted discretionary pathway applied only to the situation where there was a technical reason as to why data wasn't available. Is that your understanding?

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A. Yes, I'm just going to just quickly have a look at it again but from my memory, that is the reason that basically there was an issue with the water metering data. There was a technical issue or missing data.

Q. Yes. Now, the version of the RDA that you and some of the other planners recommend has broadened out its application. Is that right?

A. Yes, that's correct.

Q. And can you explain to me how it's been broadened out to pick up what types of situation?

A. So I think Ms Bright mentioned a couple of the types of situations that were sort of discussed as who it might apply to, those parties that haven't had water meters in for as long enough period to actually represent their historical use, so they might have only had a really accurately operating meter for the last two or three years. They might have had one in place but I am well aware that there has been a number of issues across Otago with water meters and their accuracy, learning to cope with the climate that we have in terms of, you know, freezing and thaws and the flood flows and flushing flows that come down from the high country takes. So they have had meters in place maybe since they were required to but they

haven't been working very well. So in that situation, you've had a meter in place and it might not be that there's any data missing or that there was necessarily a technical issue. It's just it might not have been the right setup. They wouldn't be captured or ones that just had manual records and didn't have a meter until the last couple of years, that's not a technical issue as such. So there was quite a number of potential applicants that might then fall outside, go straight to non-complying and we thought that there needed to be a pathway for those. We did, however, note that we didn't want to allow for just those people that went, oh, water meter regulations, can't be bothered putting in a water meter, not going to do it. Those people that have clearly flouted the rules, we catered for the fact that there needed to have been a water meter put in place so that they had to have actually committed to some metering and regulation of their take and not just the ones that just didn't want to put something in. So they wouldn't be able to be captured by this.

Q. And when you think about the restricted discretionary activity, do you still consider that that, only to enable volumes and rates of take that reflect historical use?

A. Yes, it just to reflect historical use.

Q. And so the other relevant methods referred to within a matter of discretion A shouldn't be used in a manner that seeks to elevate or increase above historical use?

A. No.

Q. And insofar as there might be a risk of that occurring, that risk should be dealt with in the drafting?

A. Yes. If other interpretations of the way that's been drafted view it such that, you know, with a legal interpretation that that's not the way it could be interpreted, then that's not the intention. The intention was always that it reflects historical use but that there might need to be other information be able to be put forward to further explain what was historically taken if those water meter records don't give you enough picture.

Q. And when you look at the wording then that's been recommended and the phrase that I've highlighted as: "and other relevant methods and data", do you accept that's a very broad phrase?

A. It is and we spent a number of hours going over this and I don't think we ever managed to reach – we could, we just didn't have time to take it any further. The intention there is that it is relatively broad so we didn't think you could effectively go through and list every single possible type of data that could be used off the top of our heads potentially with more time and more investigation that could happen, but in that timeframe, there was no way of us getting an exhaustive list that could capture everything.

5

Q. Do you see that there could be a risk with the way that this matter of discretion is currently worded, that an applicant might choose to apply under the RDA and point to, for example, the Aqualinc Guidelines as another method and say well, that's another method shows what my historical use could be? Is the wording here tight enough?

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A. The wording allows for something like Aqualinc to be used as part but I don't think you could just – I think it's tight enough that it couldn't be just Aqualinc because it does still have to be within the limits of historical use as established through these methods, so within the limits of historical use is still set aside as the initial part of that matter.

15

Q. And this is perhaps where the challenge arises in terms of using the likes of an Aqualinc model to demonstrate what historical use is because that's not what Aqualinc does, does it?

20

A. No, it tells you what is needed for your property at any, you know, for nine out of 10 years. So, no, I recognise that and I don't think that just having Aqualinc would be sufficient and I think because we did discuss this and considered that it was still a full matter of discretion, it's not a matter of control and you have to grant consent. The Council still have full discretion here that they can, it can be probably evaluated. We're still talking about a six-year term, recognising we don't want people to increase beyond their historic use but there's substantial matter of additional work if an applicant wants to go down this pathway as opposed to controlled activity when really the only difference is that their water meter and records don't accurately reflect historic use because that's the only real difference in this RDA rule as opposed to the controlled activity rule.

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Q. I have some questions now for you about the recommendations that you have made in terms of changes to plan change 7 and the version that I am reading from is the version that you've attached to your supplementary statement of evidence.

5 **WITNESS REFERRED TO SUPPLEMENTARY STATEMENT OF EVIDENCE**

A. Yes.

Q. Now, I'm a little unclear as to precisely what your opinion actually is in terms of the provisions of the plan change and that's perhaps a reflection of the fact that this thing has moved iteratively along the way and you've also participated in some conferencing. So it may well be that some of the drafting you'd put forward in your appendix, you've moved on from as a result of the conferencing. So –

A. Sure.

Q. – you might need to tell me where that has actually occurred and in fact I'll start with that. That might be a more efficient way to do it. In terms of that which you have recommended and attached to your supplementary evidence, what have – what changes would you now be recommending in light of the conferencing that's occurred?

A. So I would recommend that Policy 10A21 have the, retain the points (c) and (e) in their amended form.

Q. Just pause with me. 10A21, retain?

A. (c) and (e) in their amended form from the planners JWS. So that's the, reflecting the historic rate of take.

**THE COURT: JUDGE BORTHWICK**

Q. Sorry, are you now wanting to – I can't see a (c). Is there a (c) there?

A. It may look like an (e) –

Q. Can you read out –

A. – because it's –

Q. Is it: "there is no increase in natural instantaneous"?

A. Yes.

Q. Okay. So that's the (c). So you recommend that that be retained?

A. Retained in its amended form from the planners' JWS. So, which is that there is no increase in historical instantaneous rate, I think.



Q. But what you're wanting to do is to put in words from the planners?

A. Yeah, I think it's probably going to get really confusing if we're just going through point by point now, changing, keeping. Points, I mean, I've kind of made a couple of notes on, to that effect for that. That's mainly to that policy to be fair but, and I would remove my added in (b), that's in highlights.

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

Q. Where do you want to go with this? I mean I understand why you're asking because like I'm not – I was a little surprised that planners got into the objectives policies and rules but, you know, there they go and I thought that we're just dealing with the schedule –

A. As I had –

**THE COURT: JUDGE BORTHWICK**

Q. But they didn't, they got into the objectives and policies and rules and so I'm a bit like you, I don't know. This is the conundrum. I know that you and the previous witness liked the discretionary activity rule but that doesn't appear in the JWDS for planners. If you were still thinking about – if you were getting into those provisions you would have gone, "Yeah let's have a discretionary activity rule", or you would have – you know what I mean to be comprehensive. So what the JWDS looks like is that you've actually retreated from your March supplementary. But that might not be correct.

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A. No, so that's not correct so we – whilst there was movement into those policies and objectives in that planners' conferencing at the time we all felt that the changes made to the schedule needed to have those reflected changes in those parts of the policies and so we did only limit the changes that anyone would suggest or recommend as they related back to the questions that arose out of the technical conferencing and then the changes that were subsequently required to the schedule. So I appreciate that it then looks really confusing 'cos there's yet another version of this – of the plan change sitting out there and it doesn't

incorporate the other changes that someone like myself of Ms Dicey might also still want to see. We did note, I know with Mr Twose that things like the community water supply, they may still seek for that to be completely not included within PC7 and we did note that in the conferencing –

5

Q. Mm.

A. – but that we proceeded on the basis that if it was included this would be the types of changes that would be required and agreed upon or something like community water supply. So it was difficult to try and separate things out and – but we did try and keep to, as related to the schedule –

10

Q. Yeah I know.

A. – but some things came backwards.

15 **MR MAW:**

I'm struggling to figure out which version of Plan Change 7 the witness is now pursuing is -

**THE COURT: JUDGE BORTHWICK TO MS PERKINS**

20 Q. Well I think it would be the JWS version plus a discretionary activity rule. Is that right?

A. Effectively yes.

**MR MAW:**

25 I think that's right.

**THE COURT: JUDGE BORTHWICK TO MS PERKINS**

Q. And have you tackled -

A. – some sort of long-term pathway rule.

30 Q. Some sort of long-term pathway rule and I mean I don't know in that – I have view about this that non-complying activities are not an odd, you know the non-complying activity rule is not your ordinate to a discretionary activity it's just not – it's not conceptually how I view the two forms of activity. So you've got, you want (inaudible 17:22:20) discretionary –

pathway and I don't know whether or not you were going to add any changes to the non-complying policy provision. Assuming that it stands on its legs.

5 A. Yes I think I would need to do some more work on this because – from the changes and just the change in thinking that's happened through the planners' JWS and the changes to the RDA pathway I don't and to be fair I didn't try and re-draft another discretionary version, I took what Ms Dicey has said and put that and said something, you know something like this without trying to confuse matters with yet more versions. If it's helpful I  
10 can like pare back or pare that back to more what I might word it as.

Q. Well I don't know it should be in your evidence, eh?

A. Yeah, I mean I did note that this was taken as hers and generally the intention of that – I supported the intention of that without re-wording further and further but I can go – I can do that for you if you like overnight.

15 Q. I think it should be in your evidence actually. Why would it not be in your evidence already? You've adopted – I thought you adopted what Ms Dicey...

A. I effectively have adopted what Ms Dicey suggests.

Q. Yes. So in a sense it is in your evidence.

20 A. Yes.

Q. And it stands and falls with the cross-examination?

A. Yes.

Q. Yes.

## 25 **THE COURT: COMMISSIONER EDMONDS**

I guess my suggestion only related to taking the things out of the JWS planning that had gone on after the various groups had looked at the scheduling and they'd taken it a step further. That if we could have a version that made that clear in terms of this witness, only those things that came out of the planning  
30 conference and where this witness is sitting. It more be a better use of the back end of the afternoon than struggling through each line. That was my only suggestion.

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

Q. Yes. I mean – this – I guess what you don't what (inaudible 17:24:31) are to go in, if you liked that JWS, if that's now the template that we're working from. Ms Dicey's policy and maybe something to do with non-complying activities?

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A. Yes and what I have in front of me is the version attached to the supplementary evidence of 23 March which has the, I'll call it the Ms Dicey discretionary policy plus the Ms Dicey discretionary rule. And I was not super clear as whether this witness was still pursuing on the same terms this framework or not, and I think the witness is. She hasn't

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**MS PERKINS:**

15 Yes, I would still like to see that. I still recommend there be a pathway like that in there.

**MR MAW:**

And I have some questions about that which I will pursue that.

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

Q. Yeah, no, you should acknowledges those, and then I think there's this big question about non-complying activity, policy and rule, and what's the go there.

A. Yes, and in terms of looking at what's changed, and, yeah, I'm unclear as to where this witness is now going with that.

25

Q. Okay.

**THE COURT: COMMISSIONER EDMONDS TO MR MAW**

Q. So that's all a lot of elements, then. There's the first one, to do with the (inaudible 17:25:50) conferencing we had and the planning one, which is where you started, so I just wondered if there was some cut-through we could get on that so that you didn't have to lead out? Do you agree with

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this one, do you agree with that? I mean, it may be clear reading the JWS, but it's quite hard to deal with provisions on that basis, isn't it?

A. What would make my job a whole lot easier would be an amended version of the plan change 7 attached to the supplementary evidence that has this witness's current position in terms of the changes which she's recommending be made to plan change 7, and then I can cross her on that. Now, that may be a reasonably straightforward exercise in terms of tracking into this version the differences, and they may not be significant, I just don't know, and whether that could be done overnight and circulated, that might speed things up in the morning.

**MS PERKINS:**

I can effectively, 'cos I know what's critically missing from the supplementary evidence version is an RDA pathway, and I do recommend that that be in there as we agreed, the planner's JWS, so that's obviously not in the supplementary because that was part, you know, so that's something that's come post the supplementary, through the planner's joint witness, so, yes, what is in one or the other alone don't accurately reflect my exact position, so I can see the difficulties you're having.

**20 CROSS-EXAMINATION CONTINUES: MR MAW**

Q. Well, I wonder whether, could that be prepared overnight –

A. I could do that overnight, yeah.

Q. – with relative ease, and have that circulated, and I'd use that as the basis for then stepping through the provisions, which I think I still need to do.

**25 THE COURT: JUDGE BORTHWICK TO MS PERKINS**

Q. You do. Mhm, okay, well, I know it is homework, but it sounds like it is relevantly straightforward. If you continue to support what Ms Dicey said or continue to have a view on the non-complying pathway and what that looks like, and I accept do not remember what the original supplementary said in relation to that, that can be brought forward into the JWS document. Have you got that in Word format? You should do. I thought somewhat there was an email floating around about that.

A. Yes, I think it was circulated. I will double check, otherwise I think it was sent through to Michelle, so.

1728

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

5 Q. Do you want to call it quits now?

A. Yes I think we should sensibly do so.

Q. Very good. All right, so that means, you remain in your oath so you can't talk about this case to anyone and if you could that homework and perhaps email Frieda the documents so we can get it printed off.

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**THE COURT: JUDGE BORTHWICK TO MS PERKINS**

Q. When do you think you'll have that done by?

A. Well if I do it tonight then it should be able to be circulated before I turn the lights off tonight rather than trying to do in the morning.

15 Q. Yes that will be good. It's just that counsel needs to prepare his questions but he's got something to go –

A. It wil–

Q. – you mean – you're following the Ms Dicey for direction.

A. Ms Dicey plus the – some of planners' JW stuff pulled in so it –

20 Q. Yes.

A. – it will expand out a little bit because of that. Yes.

Q. Okay. Very good. So as soon as we get that if you could yes, you know who to circulate it to. So if you circulate to the Court so it can be printed as well as all the other parties. All right. Thank you. That's us. Do we need to start at nine to get a push on? Yes, okay good. We'll start at 25 nine o'clock. You would have heard all of our questions to Ms Dicey and with her two – Ms Bright. You might want to cut through to the chase and think about concrete examples of deemed permits. And think about the Court's minutes. The question of, is there a missing – is there a policy gap, how might it be filled. If it is not just simply to repeat as a mantra and deemed permits because I bet you that's not going to mean much in 30 five years' time, though it's just to me it's – you know so we're assuming that there is a pathway either because we can create a pathway under

the RMA or because there is pa- you know the statutory (inaudible 17:29:57) can somehow survive. Do we need to do it? Why do we need it? No more anecdotal evidence from anybody. We need good concrete examples. Can they operate by themselves? Do they need to operate in tandem with water share agreements. Now we listened to this evidence and we wonder whether there's just simply a marketplace for water out there and that's what we're grappling with is that farmers seem to have the market, is a crude way of putting it. Or maybe there's some social licensing that goes on out there but if there is and that is important, how do we reflect it. Yes. And Ms Baker-Galloway is nodding, Mr Maw looks quite quizzical if that's a sickening thought but you know – might it be one that you need to grapple with. What's the reality out there? And what are the – what is the likelihood of any adverse impact on other abstractors I think first and foremost but also the environment, secondly if these things aren't brought forward.

**THE COURT: COMMISSIONER EDMONDS**

Well perhaps that (Inaudible 17:31:08)

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

A. Yes that differently to ensure that those things are not precluded. They seem to be happening anyway without.

Q. I know because there's a market and the people are regulating themselves now I know I should never use that word in the context of water but there's a lot of regulation already happening. So do we need to step into the frame?

A. Mm. Maybe or maybe not that's –

Q. Yes.

A. – yes, it's a good question.

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**THE COURT: JUDGE BORTHWICK TO MS IRVING**

Q. Yes, so difficult question also for you Ms Irving. Do we need to step up or do we go, "I bet you the value will do something this when it comes to exercise of consents".

A. Yes, it's like catching a cloud in a way I think because every catchment –

Q. Is doing its own...

A. – is doing something different.

Q. Pardon? Yes.

5 A. So, there's no one answer about whether people are exercising priorities or not. Even within a single catchment –

Q. Yes.

A. – some maybe, some maybe not and so to try and encapsulate that in a matter of discretion on a rule or is really hard and –

10 Q. So how does that echo...

A. Yes.

Q. Does it need to be echoed in this plan and how is it echoed?

A. Yes.

15 Q. Such that the direction to this marketplace is set by the regional plan and I know that's really poor choice of language, there being a market as to water but it seems to be that there is a lot of non-regulatory – it's not so much control but non-regulatory determine a flow sharing mechanisms afoot. So, how is that echoed in a way that that can be carried over, if there isn't a full-term consent because that's the risk you know we take if there isn't one and you haven't actually, you got good case in place. How are we – what is the signal to that marketplace? Is that a problem or not a problem that the signal is – there's an absence for signalling in the plan. I don't know. What I do know is that I'm not sure how to – yet that we've got a clear idea as to what our potential tools are.

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25 A. Yes I'm – in some ways, I feel that the existing regional plan water has had quite a few signals in it.

Q. Mm.

A. About its expectations of water users and certainly they have heeded those signals and begun moving. So it's I think a question of the extent to which they can be re-tooled for a transitional regime but I think the ease of that isn't going to be universally applicable because as I think has been described by a number of the witnesses and in some ways the re-tooling has been done in anticipation of the renewals with its associated limits and so in those contexts, you know the water sharing anticipates an extra

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piece of the puzzle which we're not adding in through the controlled activity pathway and other examples and I think the Falls Dam agreement, you know that's a more concrete example that is been working and that there's some structure around. So, it's a -- it's horses for courses in different catchments, different sub-catchments which makes it really hard to draft –

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Q. Yes.

A. – a rule that...

Q. And it may not be a rule that may be a matter of consideration.

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A. Yes.

Q. Either on our control – presumably on a control, that's the easiest pathway if people want to avail themselves of that or IDA I think in the minute but you may have policy – yes, it could well be re-tooling or re-purposing policy signals which are already there. They're already signals if you like to the community, then being picked up again in non-regulatory methods –

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A. Mm.

Q. – after all that's how people are organising themselves anyway and that's without any consents – the potential for you know, that's with the current situation. They are living there or organising their lives that way. So that's what the controlled activity rules (inaudible 17:35:49) pick up an echo back.

20

A. Mmm. I think one of the challenges perhaps from the council side is traditionally they've taken a very hands-off approach to that water sharing regime and it's a question of whether that continues to be a sustainable way of dealing with that you know...

25

Q. It might be.

A. Yes.

Q. In the absence – well it might be – or, yes I don't know. It might be for six years and then thereafter not. Yes. Okay. Still a lot of thinking I think and be looking forward to your responses. You know do you send policy signals as the councillor has done under the operative plan and you know can you pick those signals up – should you pick those signals up and matters of control and matters of discretion, should not even do that, just

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you're sending a policy signal and let the community organise itself because it has organised itself for the last 30 years in fact the last hundred years. Yes.

**5 MS PERKINS:**

I have been giving it some thought and I can give you some hope – some help tomorrow but I will signal that I haven't personally dealt with priorities on any permits that I have looked at.

**10 THE COURT: JUDGE BORTHWICK TO MS PERKINS**

Q. Okay.

A. So I can't give you anything more helpful on that and I don't think it would be helpful if I'm just taking you through generic answers –

Q. No.

**15** A. So I personally haven't dealt with priorities.

Q. But that's helpful to know. Yes.

A. So, yes I have given some thought as to one way you might be able to include them which I can talk you through tomorrow but I haven't yes, pers– can't put an exact example in place for you. Because I just haven't – haven't had that experience.

**20**

Q. Good. All right, no, it's good to know, you're off the hook to that extent.

**THE COURT: JUDGE BORTHWICK**

All right, thank you so we'll adjourn through to nine o'clock tomorrow.

**25 COURT ADJOURNS: 5.37 PM**

**30**

**COURT RESUMES ON TUESDAY 13 APRIL 2021 AT 9.01 AM****THE COURT: JUDGE BORTHWICK**

Nothing arising from us overnight. Anything arising from anybody else? Okay, very good. You remain on your oath, and Mr Maw has got some more questions  
5 for you.

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. Good morning.

A. Good morning.

10 Q. Thank you for sending through your updated appendix. That will hopefully make this exercise a little easier, at least for me.

A. Yes, and just on that, I didn't make any changes to what had already been presented 'cos I didn't think that was the time to be doing that. This is just purely an amalgamation of the joint witness statement plus what was in my supplementary evidence originally.

15 Q. Very good, thank you. Right, I do have some questions for you about the drafting that you've put forward. So using this appendix, and for the record, it's updated appendix A to the supplementary evidence of Claire Perkins, dated 12 April 2021, and I want to start with the objective or the objectives on page 14 of the document.

20 A. Sure.

Q. And I see that you have recommended the insertion of a second objective, and my first question to you is was this additional objective sought in the submission of Landpro.

A. Not explicitly as an objective, no.

25 Q. Was it sought as a policy or something else?

A. No, not explicitly, but it comes back to the intention in that submission to have some form of longer pathway available, and there obviously then needs to be supporting objective and policies and rules around that pathway, but the actual wording or need for words saying we need a new objective or a new policy were not mentioned, no.  
30

Q. Can you describe what you see as the purpose of this new objective that you recommend for insertion.

- A. So this objective is there to support the discretionary activity policy and rule that's behind that. There needs to be something that then, you know, you follow up the chain from having that discretionary pathway, so that's really the intended purpose of it there, to enable those environmental gains that we could achieve, that otherwise, we could end up in a position where they are lost completely in the next six years, as has been, you know, put forward in the case of a number of scientists as hearing to date.
- 5 Q. So when we look at this objective, do you accept that it only covers some of the values that the new NPSFM requires a council to address?
- 10 A. Yes.
- Q. And when you look at this objective, can you tell me which of the values it excludes?
- A. It's primarily focused around those threatened species within the freshwater ecosystem, so it's effectively excluded most other things in terms of specific reference.
- 15 Q. So it excludes consideration of cultural values?
- A. As far as the wording itself goes, yes.
- Q. Well, the wording's important, isn't it?
- A. Yes, it is.
- 20 Q. And it excludes consideration of recreational values?
- A. Yes.
- Q. And it excludes consideration of amenity values?
- A. Yes.
- 25 Q. And when you think about the paradigm shift – or let's go back a step, do you accept that the transition in the national policy statement 2020 confirms the paradigm shift towards a new way of thinking about water management?
- A. Absolutely.
- Q. And it approaches the management of water in a water-centric manner?
- 30 A. Yes.
- Q. And what do you understand that to mean?
- A. Where the health of the water body and everything around it comes first.
- Q. And when you say "everything around it," what do you mean?

A. So everyone that has interest in the water in terms of the values it provides, so for ecosystem health, for cultural interest in the waterway, for the mana and the Māori that it represents as well.

5 Q. So when you think about the breadth of those matters and you read this objective, do you accept that this objective is not furthering the concept of “te mana o te wai” or capturing the essence of that water-centric approach.

A. Not in a whole sense, no, but it is going some way towards some of the direction that is going to be needed.

10 Q. And when you think about the discretionary activity that hangs off this objective, what’s the duration that might be sought?

A. So this is something I have given more thought to since it was put forward in the supplementary evidence. My view now is that probably a 15-year duration is probably more appropriate than 20. I think that’s reflected in it still comes within a transition time as far as water and water use is within Otago. There is always a transition period intended within the NPS itself as well, not that it’s specifically stated in terms of durations, but there is the acceptance that there will be some transition time, and I think 15 years also then picks up on the reflection of part of that duration of a slightly long-term that was picked up in the notified version of PC7.

20 Q. So when you think about this 15-year time period, you’re of the opinion that it’s acceptable to exclude consideration of cultural values for the next 15 years?

A. I think because it’s a discretionary pathway, you wouldn’t be excluding all of those values. I accept that there isn’t any words at the moment in the objectives or policies specifically mentioning cultural values, but in any application, the full range of values can be considered for a discretionary pathway.

30 Q. Well, that’s where it gets a little bit difficult, when you’re assessing an application against, in this instance, only two objectives. When you sit down and write an application, you’d look carefully at these two objectives as providing information or the outcomes that you’d be seeking?

A. Yes, but we’d also consider the wider information available and wider documents that we need to consider under s 104 as well.

Q. So how would you go about assessing cultural values in the context of your discretionary activity application?

A. It's challenge because we're not cultural experts. You know, the only way that they can be assessed is with that, you know, close input from iwi.

5 Q. And you've listened to or you've at least read the evidence from the witnesses from Ngāi Tahu?

A. Yes, it was a while ago, but yes.

Q. And what did you understand that evidence to be saying?

10 A. That at the moment, there isn't a clear picture of what those values are and that they need to participate in the development of the regimes and what needs to go into the land and water plan.

Q. In fact, it went further than that, didn't it, to the evidence, and I'm thinking of the evidence of Mr Ellison, where cultural considerations had been cut out of the process to date.

15 A. In my experience, I don't think they have been cut out, but I'm not a cultural expert to know exactly the feeling that they have in terms of how that's been dealt with. The applications that I have been involved in, particularly the last chance one, there was a lot of consultation to try and pull out from iwi what those values were. I think we made some headway in that, but I don't think we were able to get to a sound conclusion as to exactly what those values are for those water bodies of concern.

20

Q. And when you think about that last chance decision, do you recall what the decision-maker said in relation to the consideration of cultural values?

25 A. The restricted discretionary pathway put a significant limiting factor on that.

Q. In fact, the decision-maker found that they couldn't be considered, is that right?

30 A. Not as a broad statement as cultural values, no. It was only insofar as part of their concerns could be addressed within part of the matters for discretion.

Q. And so the evidence from Te Rūnanga was iwi was placing significant weight on the new land and water regional plan and the process to properly articulate "te mana o te wai" in a regional plan as providing it the

opportunity to ensure that cultural values are not put to one side. Do you accept that that's a fair reading of that evidence?

A. I accept that broadly, that is, yes.

5 Q. And so putting in place a flow regime for the next, you say, now 15 years in terms of discretionary activities would push out the consideration of those values through a new flow regime for at least 15 years, wouldn't it?

10 A. Yes, for those specific values, but I think it comes back to the significant concerns about do we have six years to wait completely and do nothing for six years on some of these critical water bodies in terms of threatened species?

0910

Q. So you essentially say it's more important to do something about the potential risks to threatened species than it is to ensure that a flow regime is put in place that properly expresses "te mana o te wai"?

15 A. No more important, no, not at all, more that that's something that we could do now to take a step in the right direction, and that after that, if you're talking about a six-year term and then 15-year term, within that next period of seven to eight years, you can make those additional, either through reviews or there's another short window of time to bring those consents that manage to go through that pathway, if any, into line with that, with the cultural values as well.

20 Q. When you think about the review of a consent, so let's say you have some discretionary activities that have been granted under your recommended rule and policy, would it be your expectation that those consents are reviewed after six years and brought into line with the new flow regime and the new land and water plan?

25 A. It will depend, in part, on what flow regime is then put in place in the land and water plan and how close or not that is to what may have been put in place for those discretionary permits. It would then depend on which catchments are considered more of a priority by ORC, the resourcing, timing, there'll be a lot of factors at play. I don't think there's one anyone could say it will happen right on that day.

30

**THE COURT: JUDGE BORTHWICK**

Q. Sorry to interrupt, could you just slow the pace of your responses? I really am having trouble following what you are saying and understanding at the same time.

5 A. Sure.

Q. I know it is nerve-wracking and all the rest of it, I do not pretend this is easy, it's the last thing I would want to do, but you just need to take it down a notch.

A. Sure, I can do that.

10 **MR MAW:**

Now, where was I?

**THE COURT: JUDGE BORTHWICK**

Sorry, sorry, sorry. You could be anywhere, you are going so fast I am not actually tracking what has actually been said and making sure I understand it.

15 **CROSS-EXAMINATION CONTINUES: MR MAW**

Q. Consent reviews and the likelihood of them occurring. The reality is consent reviews are challenge for a council?

A. Yes, I would accept that.

Q. And resource-intensive?

20 A. Yes.

Q. And, if you think about it, it's highly unlikely the council's going to be able to review all consents as soon as the new land and water regional plan, say, is made operative.

A. No, they won't.

25 Q. And so, again, the risk of long-term consents is a risk borne by the environment in terms of the time it might take to put in place an NPS-compliant flow regime.

A. Yes, in effect.

30 Q. We can move on to the policies now. My first question relates to your deletion of what was the text in policy 10(a) 2.3, so you'll see there that



you've replaced that policy with what I describe as your discretionary activity policy.

A. Yes.

5 Q. When you think about the controlled activity framework, and you're retaining a controlled activity framework here, what is the consent duration that applies in relation to the controlled activity framework?

A. Six years.

Q. And where would I find in the policies that you now recommend the policy support for that six-year timeframe.

10 A. Yes, I appreciated this last night, as I was going through it again in a bit more detail, that there is a gap, that there does need to be a policy reinserted directing that, unless otherwise able to follow pathway provided by 10(a) 2.3, that discretionary pathway, there does need to be a policy alluding to six years as being the preferred duration for anyone else in terms of the controlled and restricted discretionary activity pathways.

15

Q. Does that then also leave a gap in relation to the way you've framed your noncomplying activity rule?

20 A. Yes, I also recognised that last night, that there would need to be something, and on further reflection last night, my view is actually that the non-complying pathway should actually come back to six years as well. I don't think there should be the ability, as was currently drafted in the rule, for a duration longer than that 15 years that I would indicate.

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

25 Q. So how does it work?

A. I mean, at the moment, what was drafted in there was a controlled rule for six years.

Q. Yeah.

A. An RDA rule for six years.

30 Q. Yeah.

A. A discretionary rule for what was drafted as up to 20, but I would suggest that be up to 15, and then there is currently a non-complying rule for durations longer than that 20 or 15 years, but on reflection last night, I

think that should actually restrict it to six years as well, because I don't think there should be a pathway for longer than the 15.

0915

5 Q. And so in order to achieve that drafting outcome, what changes would you now be recommending be made to the policies?

10 A. There would need to be a new policy or, you know, re-hash of what was previously included by Mr De Pelsemaeker indicating that a duration of six years was what should be granted outside of those applications or catchments that might fall within the discretionary pathway. So effectively it would have to be a 10A 2.4 inserted and it would need an exclusion that said except where Rule 10A 3.2 didn't apply.

Q. Sorry, 10A 3.?

15 A. 3.2, which is the discretionary rule. So if the discretionary rule didn't apply, then the duration would be six years. It's similar to the way it was drafted where it originally said except where Rule 10A 3.2 applies, so a similar type of drafting.

Q. All right. I have some questions for you now about Policy 10A 2.1.

A. Sure

20 Q. And I see there that you have changed the emphasis of the policy in terms of making it perhaps a more positive looking policy by removing the reference "to avoid".

A. That was to pick up the similar way it's phrased in the other policies.

Q. So what – so it's a change for consistency as opposed to a change for another reason?

25 A. Effectively I view it as consistency. It makes easier reading when it's referred to in the same way across all the policies.

Q. Right. Tracking down through to your next change, subparagraph (b), you've recommended that the increase in irrigation or irrigable land criteria be deleted?

30 A. Yes. So this is more in reference to where there has been a time limit restricted on it but also accept, I think as Ms Bright mentioned your evidence, there are some cases where there are horticulture owners who have purchased trees and have set up areas ready for irrigation that will still be within their historical limits of use because the water is being

spread more efficiently, say from pasture to horticulture, there is a reduction in how much you actually need across the whole property, so you could use what was used on one paddock for grass for two paddocks for trees.

5 Q. So I want to be really careful at understanding what your reason is for removing the restriction on increase in irrigable area and you've given a couple of answers there.

A. Sure.

Q. So I wonder whether you just might give them to me one at a time –

10 A. Separately.

Q. – so we can explore them.

A. Sure.

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

And slowly.

#### **15 CROSS-EXAMINATION CONTINUES: MR MAW**

A. So two parts. One being, as Ms Dicey alluded to yesterday, and in my views and knowledge of property owners within Otago, that it's really difficult to go back to a date and know exactly what was being irrigated and when. So –

20 Q. Right, so – keep going.

A. Typically a lot of the farmers I have been working with have a command area, a block, an area on their property which could be irrigated but at any one time in any one season, some of those blocks might be irrigated and not others and so the challenge then is that if you say a certain date, that  
25 that might not account for some of those paddocks that were being irrigated at that time and how do we have a, where the farmers actually have a record back in time, or whether it should just be the area of irrigation at the time of application of consent.

0920

30 Q. Right. We're now reading multiple reasons. So I want to look at the first explanation you've given first and I just want to make sure I've understood

this. So the first explanation for the deletion is that it might not be possible for a farmer to know what area of land was irrigated at a particular date.

A. Correct.

5 Q. So when we look at the reference to particular date, are you referring to the period of time within which the controlled activity rule referred to in terms of the maximum area of irrigated land?

A. Yes.

Q. And what do you understand Mr De Pelsemaecker to be recommending for that period of time?

10 A. That there be a limit on the area tied to those dates.

Q. And what are those dates?

A. 1 September 2017 to 18<sup>th</sup> of March 2020.

Q. So we're dealing with a three-year period?

A. Correct.

15 Q. And are you telling me that if I asked each farmer who appears before this court whether they can tell me what area of land was irrigated on their property, or the maximum area of land irrigated between those dates, they couldn't tell me?

20 A. They could broadly tell you a command area. I don't know if they could tell you exact.

Q. And when you say they could broadly tell me the command area, if I gave them a map and asked them to highlight the areas over which they irrigated during that period, do you think they'd be able to do that for me?

25 A. I think they could give you an outline on the map of where they have irrigated. Whether they're exactly within those dates or not, I don't know.

Q. And then having that map highlighted, it would be relatively straightforward for you to apply that handwritten highlighting onto a GIS programme to convert that into an area of irrigable land?

A. Yes, we can do a command area map quite simply.

30 Q. And so it's not an insurmountable hurdle, is it, in terms of trying to understand the maximum area of land between those two dates?

A. I think the dates are still quite specific. I don't know why there needs to be specific dates, why there couldn't just be a command area, this is the area that we have irrigated up to the point of lodgement.

Q. Let's stay with the first thread, which is, is it possible to articulate the area irrigated between those dates?

A. Possibly.

Q. Possibly?

5 A. I, without being a farmer, and talk to enough of them exactly about that, those dates, I couldn't tell you how easy or not.

Q. Well, you've been – how long have you been planning for?

A. Planning for 15 years but in Otago for two-and-a-half.

10 Q. And in those two-and-a-half years, you've had discussions with the rural community?

A. Yes.

Q. Is it fair to say that farmers have a pretty good idea about what's happening on their farms?

15 A. Yes, but I don't know exactly how well their records are kept for exact years.

Q. Right. So that's the first reason why you say this criterion should be deleted, because you say it's simply not possible for farmers to explain or to articulate the area of land? So we've explored –

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

20 Q. She didn't say that. She said she didn't know. I mean I'd be surprised, if I just go to why we've got problems in Otago farmers can't articulate what they're doing on their land but that's your evidence. It's not necessarily farmers' evidence. So we'll leave it there.

25 A. Well, I think they can articulate. I just don't know exactly how well they can articulate to specific dates.

Q. You need to be careful with this because the impression being, you risk the impression that farmers have little or no management over their farming activities.

A. Yeah, I'm not trying to say that at all, no.

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. Right. Let's move on now. You have a range of or a number of reasons as to why this should be, this criterion should be crossed out. So let's move on to the second one.

5 A. So the second one there is to allow for those properties or farmers or companies that have already invested in some relatively minor expansions of irrigation areas within their historical use. Particularly I'm referring to here sort of horticultural businesses. Really it's, and potentially this then needs to come into the RDA process so it could be  
10 evaluated rather than in a controlled activity pathway, to be fair, so that where there are some minor increases as a result of already sunk investment, that that could be accounted for.

Q. Right. So that you'd be recommending a change to the policy framework and the rule framework to pick up that type of a change?

15 A. There would be a change required, yes.

Q. And when you think about those that expand during the life of a permit, so let's pick up say a horticultural example where there's been some investment. That investment would have been made through the lens of understanding the terms of the current permit?

20 A. Yes.

Q. And is there any expectation as to whether you can renew a permit on the same terms in the future?

A. Yes, there is. There is indication within the Plan that you're not going to be granted, within the current Regional Plan, that you will be granted or  
25 that it'll be looked at, what you've actually used from a water use perspective, not so much an irrigation area perspective.

Q. But plans change, don't they?

A. They do.

Q. And in terms of water permits, there can be no expectation that a permit  
30 will be granted again when a fresh application is lodged?

A. No.

Q. And so investment decisions ought to be made taking into account that risk?

A. Yes.

- Q. And again, thinking about this from the perspective of risk, this is a question of who should bear that risk?
- A. Yes.
- 5 Q. Should the environment bear the risk or should the abstractor bear the risk?
- A. Probably the abstractor that should bear more of the risk but I also come back to the duration with which these permits would sit and this would still be the six-year timeframe.
- 10 Q. But we're talking about the new, the next round of permits, aren't we? So investment that's been made historically will have been made based on the existing terms of the existing permit?
- A. Yes.
- Q. Right. Was there a third reason as to why you say this restriction should be deleted?
- 15 A. I don't think so.
- Q. Do you accept that increasing the irrigable area of land has the potential to increase adverse effects on the environment associated with additional nutrient loss?
- A. There is that potential, yes, depending on the land use and depending on the historic water use method.
- 20 Q. And plan change 7 does not contain any provisions to manage those types of effects?
- A. No, it does not.
- Q. And the current regional planning framework, does that contain any provisions which manage those effects?
- 25 A. No, it does not.
- Q. And so if ongoing increases in irrigable area continue to occur without any restrictions in place, the environment bears the risk of those effects, doesn't it?
- 30 A. Yes, although I do also make reference to the National Environmental Standards for Fresh Water, which put a limit only relating to increases of irrigation area for dairy land uses of 10 hectares.
- Q. Yes.

A. And so that, in my view, has been accepted that there isn't as significant a risk for other land uses with increases and in Otago, the majority of those increases have been generally as a result of conversions from flood irrigation to spray, which would generally reduce the amount of runoff in nutrients you would then resulting in receiving, waterbodies receiving.

5

Q. And were you here when or have you heard, I think it was Dr Olsen's evidence in relation to the potential adverse effects associated with the conversion from boarder diking to spray irrigation?

A. No, his was one that I have not yet managed to listen to.

10

Q. And right, I recall his evidence was that whilst there might be a reduction in the types of contaminants associated with runoff, the likes of E. coli sediment phosphorus et cetera, that there is potentially an increase in nitrogen leaching as a result of the conversion to spray.

A. I'm not a water quality scientist so I couldn't make any comment on that.

15

Q. And I want to move down to the next change, which occurs in your policy. Now, so the changes recommended to 10A 2.1(d) and this is, as I understand it, these are changes that have come through following the joint planning conferencing?

A. Yes.

20

Q. And I want to move on now to what I'll just refer to as your discretionary activity policy.

A. Yes.

0930

25

Q. And I have some questions in relation to that policy, the first of which relates to the duration expressed in the policy and here in the written version in the, I'll describe it as the third paragraph, where it notes for a duration of no more than 20 years. Now, this morning you said that you've been thinking about this overnight and you now recommend that the 20 years should be moved or reduced to 15 years?

30

A. Yes.

Q. So I should cross out the 20 and write 15 in there for the purposes of understanding your current opinion?

A. Yes.



- Q. And now I want to work through each of the matters referred to in this policy, so starting with the first one, where the application relates to a waterbody that contains threatened species likely to be affected by the activity. The application poses measures to enhance or protect the habitat of the species. So the first part of that I want to ask you about is the reference to containing threatened species likely to be affected by the activity.
- 5
- A. Yes.
- Q. Now, just so I'm clear, when you refer to the activity, which activity are you referring to?
- 10
- A. The water taken use.
- Q. So this is the proposed activity, the activity for which consent is proposed and then threatened species likely to be affected by the activity. How does – how is that worked out?
- 15
- A. That is an assessment required depending on what species are in the waterbody, where they are located, whether there are other barriers in place, fish screens, the fish passage component, there's a number of factors that would be required and require scientific input.
- Q. So this is a question of science in your mind?
- 20
- A. Yes.
- Q. And then you go on to say that the application proposes measures to enhance or protect the habitat of the species. So when we look at that drafting, an applicant has a choice as to whether to enhance or protect. It's an either/either?
- 25
- A. Yes.
- Q. And when you think about measures to enhance, when you've used the word enhance, that might amount to any small amount of improvement would be considered enhancement, wouldn't it?
- A. That's correct, yes.
- 30
- Q. And so what this first part of the policy is requiring of an applicant is that they might do just a little bit of enhancement in relation to threatened species?
- A. Yes, recognising that this, the intention of this is to stop the decline that may occur within the next six years if we do nothing. So it is effectively

to draw a line and make improvements beyond that if possible, not to allow things to degrade further as could happen without something like this approach.

5 Q. When you used the word enhance in this context, what's the environment against which you are assessing a degree of enhancement?

A. The current state.

Q. Does the current state include consents which have expired, in your mind?

10 A. No, we don't have consents that are expired at the moment, generally speaking.

Q. How do you conceptualise the environment for the purposes of this policy with reference to the expiring permit? Are the effects of the expiring permit considered to be part of the environment against which you are assessing some enhancement?

15 A. I think the complexity of some of the catchments we're dealing with is that that is the case, yes, because in effect what has happened, from my knowledge of some of the science and some of the catchments, is that these abstractions have then potentially in some cases an abstraction is below a population of threatened galaxiids and has lowered the waterflows in that lower reach and therefore prevented competitive species like trout from reaching those habitats. So in some respects, yes, the actually the exercise of those permits that may be expiring has led to the benefit to those populations.

20 Q. When you think about the concept of the existing environment, does that include the exercise of permits that are the subject of an application to replace them?

A. Technically it shouldn't, no, from an assessment point of view.

25 Q. So when you think about that, and then you think about what might be required in terms of enhancement, does that change the position or the level of enhancement that you have in mind here?

30 A. I think really when I'm thinking of enhancement, it's thinking of improvements to those populations of threatened species, whether that be by enhancing the level of protection that they can receive through the

flow patterns or fish barriers or whether that be by increasing flows that are in that waterbody to protect them and enhance their habitat.

Q. Perhaps I put my question this way. Improvement compared to what?

5 A. There's improvement compared to the number and spread of their population that is occurring now.

Q. Which is an environment inclusive of the permits that are expiring?

10 A. Yes, and I think the challenge here is trying to be able to remove the effect of those permits and understand then what that population might be without them occurring and I don't know that there's an easy answer for that.

Q. In fact do you accept it would be particularly complex and difficult to undertake that assessment?

A. Yes.

15 Q. I want to move on to number 2, roman ii now. So this is picking up a situation where a waterbody or fresh water ecosystem is likely to be degraded or degrading as a result of the activity authorised by the permit that is expiring. Now, when you have used degraded or degrading in this context, are you referring to the state of the environment as it is with the existing permits in place?

20 A. I think in a way you have to because as I mentioned before, it's very difficult to remove them completely but understand that from a technical point of view, you can't consider the environment as if that was part of it, so it's, you have to look at both I think in the situation.

25 Q. And where you've used degraded or degrading, what do you mean by those terms?

30 A. They are, do have a definition included in here, as they come through from the MPS. Effectively, so it's either below the national bottom lines or, and understand that we don't have objectives set for these catchments, so you would have to refer to the national bottom lines and the current level of water quality or habitat that is present and make an evaluative call from a scientist as to where that may sit and then for degrading look at whether there is any trend of decline for any of those matters and attributes.

Q. So when I read your recommended definition, it doesn't tell me to do those things does it?

A. No, not explicitly, no.

**THE COURT: JUDGE BORTHWICK**

5 Q. So do you understand degraded in the MPS means you're below a national bottom line? Is that your evidence?

A. Or a level that's been set by a Regional Council, which we obviously don't have at the moment.

**CROSS-EXAMINATION CONTINUES: MR MAW**

10 Q. So that's quite a different thing to the definition that you've recorded or recommended in this version of the plan change.

A. Yes, I think there that we obviously don't have a target attribute state set for these waterbodies yet.

15 Q. And so when it comes to applying this policy in the absence of that information, what is a decision-maker to do in light of your definition, which is pointing in a different direction?

A. I think that definition then potentially needs some tweaks to it for this period of transition before those target attributes are set.

20 Q. And then you move on in this matter, roman ii, that the application proposes enhancement to the waterway or instream ecology. So we have had a discussion about what enhancement means. Are you using that in the same way as we've discussed in terms of the first matter?

A. Yes, I would be.

25 Q. Now, you've introduced here the concept of enhancement to the waterway or instream ecology. What do you mean by enhancement to the waterway in this context?

A. That could be flows or other values for the waterway but except that we're primarily focusing this around threatened species or it could be an enhancement to water quality. It's not limited in this.

30 Q. Well, this matter doesn't say anything about water quality or threatened species, does it?

A. No.

Q. Do you accept that the way that you have worded this, in terms of referring to waterway, is particularly broad?

A. Yes, accept that.

0940

5 Q. And so, again, when it comes to a decision-maker trying to apply this policy, it would be particularly difficult for them to understand what it was that was meant by this policy or this part of the policy.

A. Yes, I accept there probably needs to be further consideration of the way it's drafted and what it's referring to, but effectively, you'd be looking at those attributes in the NPS as part of your degraded or degrading assessment, and so it would be whether there's any enhancement to those attributes for the waterway.

10 Q. Do you see that, let's say, in five years' time, somebody's trying to interpret this policy. Connecting between what's written here and that which you've just said, the dots really don't connect, do they?

A. Not clearly at the moment, but one matter I did note when considering this overnight is that one, I'd need to be more clear on what permits and what catchments are in play that will be expiring between October of this year and 2025, but from my broad understanding is that the majority of those catchment-based or sub-catchment-based groups that could apply under this rule are primarily in the deemed permit camp and have actually already been lodged. We're probably not looking at the large number that would be able to fix under this rule in the next four years, it's probably mostly just those that have already applied at that catchment group level.

20 Q. So that's an assumption that you've been relying on, rather than knowledge of the factual situation?

A. Correct. I don't know exactly, but that would be my assumption from my current level of knowledge.

Q. All right, staying with (ii), the alternative to enhancement of the waterway is enhancement to the instream ecology. So what do you mean there? What do you mean in terms of enhancement to instream ecology?

30 A. It would be on the lines of improvement to the habitat breadth or numbers of species present. I would need a scientist's input here to actually make those sorts of assessments.

Q. And again, the policy doesn't really explain precisely what you have in mind in terms of that enhancement.

A. No, it probably doesn't.

**THE COURT: JUDGE BORTHWICK**

5 Q. Probably does not, or does not?

A. No, it doesn't.

Q. No, okay, because what Mr Maw is getting at is that there is no outcome stated.

10 A. No, and I accept that there are significant improvements to the drafting that would be required.

Q. And your evidence is not informed, aside from Ms Bright, beyond that, you have got no evidence of a technical nature informing the words that you put up here –

A. No.

15 Q. – and what they mean and where they may go, even if you were to express an outcome?

A. No, I accept that, and it has been somewhat informed by the experts of other parties present, and I think the only way this could probably be drafted in a really robust fashion is with a group of planners represented  
20 by different parties.

Q. You see, I beg to differ. I think you need technical input to this.

A. Yeah, fair point.

**CROSS-EXAMINATION CONTINUES: MR MAW**

25 Q. To move on to (iii), so where measures to achieve protection or enhancement. Now, we haven't talked about protection, have we, in relations to (i) and (ii). Do you see that protection sets the bar higher than a little bit of enhancement?

A. It can be or it cannot be. It could be protecting the current level or it could be protecting an ideal level.

30 Q. So when you say "protecting the current level," what do you mean?

A. Protecting the habitat or species that are present now.

Q. With or without the exercise of permits expiring?

A. I think both matters have to come into consideration.

Q. Again, your drafting doesn't make that clear, does it?

A. No.

5 Q. So staying with (iii), where these measures, you say, are necessary. If you're adding another layer of decision-making required in terms of decision-maker having to determine that it's necessary for enhancement or protection. What do you mean by having used the word necessary in this context?

10 A. No, I think that's potentially a drafting issue, and it's more saying where one or two, where you've sort of met the thresholds of one or two, and the only way to enter this rule is where one or two apply, so it's more that where one or two apply, not that they are necessary.

15 Q. Well, when you say that they're necessary to enter the rule, let me just have a look at the rule. So I'm looking at rule 10.A.3.2. Where does it say that those are entry conditions into the rule?

A. No, so it doesn't, and that's something that needs a bit of further consideration if they should be, actually, entry conditions, but recognising that it's complex to write something like that as an entry condition.

20 Q. So in your mind, the entry conditions into the discretionary activity rule require that the application is in an area where it contains threatened species likely to be affected by the proposed activity.

A. Yes.

25 Q. And, or is it "or," that the freshwater ecosystems are likely to be degraded, putting aside the complexities we've discussed about that? Is it both of those things, one or other of those things?

A. I think, actually, it could be one or other. I don't, I mean, yeah, probably one or other. It could be an "or" there.

Q. It could be, but –

A. It should be an "or" there.

30 Q. You envisage an environment that has species likely to be affected by an activity that isn't also degraded?

A. I would need a scientist's input to confirm that.

Q. All right, let's get back to (iii). So we've talked about necessary, and I'm still a little uncertain about what you mean there, other than you say there

should be an entry condition on the discretionary activity rule. That's what you mean by necessary?

A. Well, it's more meaning that if one and two are triggered, then three follows on from that.

5 Q. Right, staying with three, these should include consideration of fish passage. I want to focus on the phrase "include consideration." So consideration doesn't require any action?

A. No.

10 Q. So an applicant just needs to say I've considered all of these things but I'm not going to do them?

A. I think those words potentially could be changed to something like "should assess" so that they have to actually assess the effects, not just say I thought about them, I'm not thinking about them any further, and that's not the intent, that it's just a passing thought, it's that there actually needs to be an assessment.

15 Q. Right, so you assess them and then say: "Well, here's my assessment." Then what?

A. Well, it depends on what the assessment concludes as to whether fish passage is required or needs to be protected, for example, and that's where you need the science input on what's actually going on in that water body.

20 Q. So where does this policy say that?

A. Reading it as it's written, it doesn't, specifically. It's more identifying matters that you do need to assess and consider as part of the application process, and the outcomes from that are informed by the scientists, and then the discretion that is there from the consent authority to make a decision as to what may be then required as flows or limits or consent conditions.

25 Q. There's a lot of assumption required to get to an outcome that's not clearly expressed.

30 A. I accept that. It's somewhat similar to the position we currently have been taking under the RPW as to assess all those matters, and they're not necessarily explicitly laid out any more than we're sort of seeing here.



Q. Which perhaps highlights the current predicament the council's in in terms of its existing water plan.

A. Yes.

5 Q. Right, (iv), the application enables and is part of an integrated management approach, including as a minimum. So when you say "the application enables," what do you have in mind when you've used those words?

10 A. That they're basically part of a group that are looking at an integrated management approach, and by putting those parties together, you're enabling that to occur. If you didn't bring parties together, you could all well and good to have an approach set, but if the parties aren't on board with it and all in there together, you can't enable that approach.

0950

15 Q. So when you think about that, do you require then multiple consent applications or this one joint-consent application, what do you have in mind when you have used these words in this policy?

20 A. It could be either but you'd be looking at whether they were individual applications coming in together as a group that have then considered similar science or management approaches. That are similar across both applications and that is similar to way the likes that the (inaudible 09:50:48 Manuherikia???) has been approached to-date in its applications.

Q. What happens for an individual consent holder say on a tributary, this pathway's not available?

A. I wouldn't think so, no.

25 Q. And in so far as there might be these risks you've highlighted and on a tributary and your recommendation in terms of the discretionary activity doesn't deal with that situation?

A. Not this won't capture everyone or every population of threatened species.

30 Q. How many people within a catchment will be required to fit within this policy in your mind, is it all, consent holders in a catchment is it some of them, is it two of them?

A. I think the preference would be the majority.

Q. And where does it say that in your policy?

A. It doesn't specifically say that in there or the definitions, no.

Q. When you think about taking a coordinated catchment-wide approach, would a simple majority actually achieve the environmental outcomes that might be sought and let's start by examining that in the context of a minimum flow.

5

A. It will be challenging if there is a number of consents with large quantities of water being taken that are not part of that group, then you're not likely to achieve that, no. But it is dependant on how many permits the water body flows, the levels – it's very case specific I think.

10

Q. So isn't it more appropriate to step back and assess at a catchment-wide level what the appropriate flows and minimum flows and allocation blocks are through the new water and land plan, rather than doing it through consent by consent?

A. Yes I accept that but the risk is if you don't do anything on some of these catchments you're going to end up in a far worse state in six years' time, from my understanding of some of the science evidence that we've heard than we would be waiting six years for a rollover and then undertaking that work then.

15

Q. Now you've broken your Roman IV into three sub-paragraphs as well?

20

A. Yes.

Q. And there you refer to *Surface Water* including through flow-sharing membership in a water management group and imposition of flow limits?

A. Yes.

Q. Is there any policy guidance as to what those terms mean in the context of plan change 7?

25

A. Not in PC7, no.

Q. And so a decision-maker seeking to implement this policy would be – may be left in a position of uncertainty about what those terms mean?

A. The way it's drafted now, yes. There may need to be some reference back to those aspects in the current plan.

30

Q. Well when you think about how plan change 7 is drafted, do you understand that it operates as a code or do you understand it acts together with the existing water plan?

A. It's mostly sitting on its own. Apart from the reference, the policies to new water permits.

5 Q. So that's the only one which would apply and so further changes would need to be made to the text of plan change 7 to bring in other policy considerations?

A. Yes they would.

Q. And that would be a significant change?

A. Yes.

Q. And a change not signalled in the Landpro submission?

10 A. Not explicitly, no.

Q. And to move on to sub-paragraph (b), *Consideration of the Impact of Land Use*. So, we've had a discussion about consideration and what that means, so would your evidence in relation to the use of consideration under Roman III equally apply here?

15 A. Yes I think that could easily be – should be changed to *assessment*.  
0955

Q. But again let's, well assessment doesn't require action does it?

A. No.

Q. Assessment's in fact no more than consideration?

20 A. No, you could interpret that word both the same way.

Q. So is it your evidence that that is all that is required?

A. I don't think that's necessarily the case, I think it's saying you need to assess the impacts and if your assessment concluded that there was significant impacts, I don't think any decision maker would then be able to grant a consent under section 104 for a discretionary pathway, well they may be able to, they may decide to, but that would be a significant consideration if there was to be significant adverse effects on water quality as a result of this.

25

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

30 Q. Is that what you're after, significant adverse effects in water quality?

A. No I haven't used the word "significant".

Q. No.

A. No.

Q. So again what's your outcome?

A. So I was saying that if an assessment concluded that there was adverse effects that needed to be addressed, that could be dealt with through the consent process and through the decision maker's recommendation.

**5 CROSS-EXAMINATION CONTINUES: MR MAW**

Q. And when you then are assessing against that outcome, now that outcome is not captured in the policy as currently drafted is it?

A. No.

10 Q. So hold that thought, if that's what you're seeking to achieve, what mechanism does Plan Change 7 have in it to properly assess the effects of land use on water quality? How would you do that?

A. Would be purely a scientific assessment rather than referenced back to a specific policy.

15 Q. And what does it do? So in practice, have you been involved in any applications that assess the affect of irrigation on and land use activities on water quality?

A. Not substantial amount recently, no. Not Otago.

Q. So when you have recommended these changes, what technical input have you relied upon given you haven't had the experience?

20 A. That is technical input from other colleagues at Landpro who have -

Q. So -

A. - but it's not referred to in any evidence, I accept that.

25 Q. I want to move onto subparagraph (c) and here you say that the minimum flow limit set in Schedule 2A should be imposed on the replacement consent?

A. Yes.

Q. And you say any minimum flow set out in Schedule 2A, which minimum flow are you referring to?

30 A. Well there is a minimum flow separate to an allocation limit in Schedule 2A for specific water bodies.

Q. Right. So it doesn't say that does it?

A. No you could any to the minimum flow.

Q. And do you understand how those minimum flows in Schedule 2A were set?

A. I am not specifically up to speed on exactly how they were set, no.

5 Q. Have you assessed the appropriateness of those minimum flows for a 15 year period?

A. I haven't taken that step, no.

Q. And so you've just recommended this change because you feel that's the sensible thing to do?

10 A. Well they exist in the plan at present. There was obviously some basis for setting them, so that is better than not having something in place in terms of any minimum flow on some of these catchments.

Q. The effect of bringing through these minimum flows would lock in place a pre MPSFM 2020 flow and allocation regime?

A. For the term of that consent that's granted, yes.

15 Q. So we're talking about this 15 year term that you're now recommended?

A. Yes if it wasn't reviewed to change that minimum flow during that term.

Q. And we've covered the complexities –

A. Yes.

20 Q. – associated with reviews? Onto Roman v. I've read the regional policy statement and I can't see any reference to time frames to meet Te Mana o te Wai objectives relevant to the activity?

25 A. No that is in reference to the upcoming RPS which I understand will include time frames for that. It's more the intention that we know that there are time frames coming and I accept that if a decision was to be made on this tomorrow, that wouldn't work because that's not in that, it's more of – what's in the proposed RPS as opposed to the current RPS.

Q. So your drafting's a long way away from reflecting what you've just said is the intention of this part of the policy?

A. Yes it is, I accept that. That would need work.

30 Q. As a planner, is it appropriate to refer to a draft regional policy statement that's not before the decision-maker and that parties haven't seen?

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A. No, generally, you wouldn't take that approach, no. It is just really trying to come up with something relatively quickly that captured the intent of

the direction that I thought an interim kind of 15-year longer-term pathway should achieve.

Q. How do you assess the efficiency and effectiveness of incorporating a document that's unknown?

5 A. I don't think you can.

Q. Right. We move on now to (xi), the allocation proposed is the lesser of the rate, using the methodology in 10.A.5, or efficient volume as set out in schedule 10.A.5.

10 A. Yes, I accept there's an error with B and that I haven't actually included that schedule in here.

Q. Right, so what schedule are you referring to? Are you still recommending that an assessment occur in relation to efficient volume?

15 A. Yes, I think for a longer term, efficient volume should definitely come into play. I know this is particularly the case where, in this situation, in order to achieve the protection or enhancement required, a lot of water-users will be required to upgrade their systems that might currently be flood, and if you just included a historical rate limit and allocation from what's now schedule 10.A.5 in my documents, but actually, if we refer to it as schedule 10.A.4 for how we've generally been referring to it, that wouldn't necessarily be an appropriate number for a longer-term permit.

20 Q. So where do I look at to consider the appropriateness of your wording for a schedule 10.A.5 for the reasonable use?

25 A. There isn't that volume there, but effectively, that's referring to the Aqualinc guidelines, so that could be changed to an efficient volume as assessed using the Aqualinc guidelines rather than schedule 10.A.5 and B.

Q. And have you assessed the appropriateness of using those guidelines to inform reasonable use.

A. I've used those to inform reasonable use applications, yes.

30 Q. Have you assessed the appropriateness of using those guidelines for this reasonable use assessment? What technical input have you had as to the appropriateness of the use of the Aqualinc guidelines?

A. I have not had specific technical input into this, but I have had discussions with Ms Bright, who had mentioned the appropriateness of Aqualinc and

mentioned that in the primary sector joint witness statement. It was an outcome from that joint witness statement that Aqualinc has a place in plan change 7, and this, I think, would be the place for it as well.

5 Q. My reading of the joint witness statements from the technical witnesses was that the reference to Aqualinc guidelines might be used to inform historical use when water-metering data didn't accurately reflect water-metering data. Have I misread the joint witness statement?

A. No, that was part of that as well.

10 Q. So where do you say that the joint witness statement says Aqualinc can be used to do a reasonable use assessment in the context of a discretionary activity rule?

A. It may not be specifically mentioned in that. I could be getting confused with the conversations I've had with my technical expert, Ms Bright, with regards to the use of Aqualinc for efficiency assessments for all applications.

15 Q. Right, onto the matter number (vii). To exercise the replacement water permit on the terms proposed in the application would require substantial investment in new infrastructure. What is substantial investment?

20 A. I accept substantial is not defined. It is going to be applicant specific, substantial to one farm will be not substantial to another, so I accept that there is not clarity in that at the moment, but the intention behind that is that there will be upgrades, for example, as I mentioned before, from a flood irrigation system to a spray irrigation system, which is a substantial investment, and the level of investment will change depending on what type of spray system, for example, the farmer was to use.

25

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

Q. So is your evidence that this only applies where changing irrigation systems to improve efficiency, or something else?

1005

30 A. No, it's not just that. It's that's one level of investment in infrastructure that may be required. Another one may be the way the water is conveyed around the property or the intake point, so an open race system could be upgraded to a pipe system for example, which would increase its

efficiency and may potentially reduce the amount of water that may be required. I think there's a whole lot of different infrastructure upgrades that could occur.

Q. I'll return to you, Mr Maw. I'm interested in what does substantial mean.

**5 CROSS-EXAMINATION CONTINUES: MR MAW**

Q. So when you think about your discretionary activity rule, there's no restriction on the irrigable area?

A. No, there's not in there.

10 Q. And so simply increasing the irrigable area by extending out an irrigation system might be substantial investment?

A. Yes, I accept that potentially there should be a limit, much like there would be in terms of what you've historically irrigated, accounting for any existing investment that's already been accounted for.

**THE COURT: JUDGE BORTHWICK**

15 I'm not quite sure whether that was what Mr Maw was asking. Do you want to put your question again?

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. Yeah, I'll try again. So we'll do it in bite-sizes.

A. Mmm.

20 Q. Your discretionary activity has no restriction on the irrigable area?

A. No, it doesn't at present.

Q. And so if the irrigable area is to be increased, and infrastructure is required to facilitate that increase in area?

25 A. I don't, what I was then saying was that I think now, looking at it, potentially there should be a limit like there is on the other –

Q. No, that's –

A. – like there could be.

30 Q. – that's – let's not get to what needs to happen. I'm just trying to understand the effect of the drafting that you have put forward to understand whether it means what you think it means or means something else. So looking at this drafting, so we're increasing the



irrigable area, an applicant could say” “I require, oh, that’s required substantial investment because I’ve had to increase my irrigation infrastructure to increase my area”. That would tick the box under 7?

A. The way that’s drafted, yes, that would but that’s not the intention.

5 Q. Right. So tell me what your intention was in relation to this matter?

A. The intention behind this is that the changes that may be required to achieve the enhancement or protection outcomes talked about earlier, that may require significant, that may result in significant changes in the reliability of supply or the quantity of water with which an applicant might be able to take. Therefore, they may need to make substantial changes on farm or to their intake infrastructure to actually action those changes or to buffer the changes in reliability, such as storage dams, changes to spray.

10

Q. There’d be nothing stopping an applicant saying: “well, I need to increase my efficiency on this part of my farm and the only way to do that is if I increase my productivity by expanding my irrigable area and that’s my substantial investment”.

15

A. I accept the way this is worded that that could cover that, yes.

Q. So your wording is a long, long way away from what your intention is here. It doesn’t really pick up what you’re describing to me as your thinking behind this?

20

A. No, and I accept that this is drafted in a short period of time and having questions like this actually makes you think a bit more about some aspects of it and the way someone else could read it. So I accept that there’s a lot of benefit in that.

25

Q. You need to be very careful when you’re recommending these sorts of provisions as part of a planning framework. It requires really careful thought, doesn’t it?

A. I accept that, yes.

30 Q. And so to wrap up the discussion on substantial investment, you’d accept that as drafted this provision is ambiguous?

A. Yes.

Q. And it doesn’t clearly articulate the outcome that you had in mind when you drafted it?

A. No, it doesn't.

Q. Right. I want to move onto the controlled activity now. You've deleted the restriction on the irrigation area?

A. Yes.

5 Q. And I'm assuming, and correct me if I'm wrong, that's for the same reasons we discussed when we discussed the policy?

A. Yes, they're linked together.

Q. You've recommended a change to roman (iv), so a matter of control (iv).

A. Yes.

10 Q. And this relates to the rate of take?

A. Yes, it's consistent, this is from the planners joint witness statement, attachment 1.

Q. Now, not all planners agree with this change?

A. No, that's correct.

15 Q. And the Council's planner, Mr De Pelsemaeker, doesn't agree with this change?

A. That's correct.

Q. And he's expressed a view that allowing for any data or any water years after effectively the notification date of plan change 7, gives rise to a risk that consent holders could ramp up their takes for a small period of time in order to justify a higher grant on renewal?

20

A. Yes, and I think we discussed this yesterday in similar questions that I think the risk is relatively low that that will happen but it is a risk there it could happen.

25 Q. And so when you think about a plan through the lens of Te Mana o te Wai, who should bear that risk, the environment or the abstractor?

A. I think the abstractor should bear that risk but I don't think there is a significant risk for six years.

Q. Well, if there's not a significant risk, let's not take the risk and leave the date of June 2020 in there. Isn't that the right thing to do, vis-à-vis Te Mana o te Wai?

30

A. I mean you could do that and it would mean that effectively I would imagine that most applicants after this point in time would not be able to take a control pathway. Basically –

Q. Well, you just told me there's –

A. – anyone that's up to 2025 would want to use their most recent data to explain what their historical use has been.

5 Q. But you've just said to the Court that there's not a substantial risk of rates of take ramping up but you're now saying all applicants who don't have a permit expiring through to 2025 would want to use their most recent data. That presumably would only be because that data gives them a higher allocation of water under the schedule. So there is a substantial risk.

10 A. Not necessarily. It's potentially, I mean the schedule, as we've talked about, there is a risk that if you – well, there's a, there's some applicants that might only have two or three years of data prior to this point and their use of data beyond 2020 may give them a clearer picture as to what their use has actually been and I don't think there is any real risk of including that versus not. I think it would be preferential based on the expert  
15 evidence from Ms Bright to include that data.

Q. Well, Ms Bright's evidence was that there was a risk associated with an increase over that period.

A. And I have said that yes there is a risk as well.

Q. And you've said that the environment should not bear that risk.

20 A. No.

Q. So why is it that you maintain your position that the date range should be extended out?

A. I just, I think there is clear examples that I have where that would mean that people can't take the controlled activity pathway when there hasn't  
25 been a ramp up of use for any adverse reason but I accept that if this is a point that we can't get agreement on between parties, potentially that that then call fall into the RDA pathway but I'm making assumptions that all users would take that pathway but there is a potential that there might be users that had justified reasons for reflecting historic use beyond  
30 June 2020 that then are unable to use that in the controlled activity pathway.

Q. I'm struggling to understand what your evidence is on this point. You accept that there is a risk that allowing water use or water years beyond June 2020 may result in increases of water take?

A. Yes, there is a small risk, yes.

Q. And you'd say that that's a small risk?

5 A. I couldn't quantify it but I don't think it would be a large risk but without looking, I think as I said yesterday, without looking at the data, and the consent limits for all the permits between now and 2025, I don't think you could quantify it explicitly.

Q. And then you say that when it comes to allocating that risk, the risk should be borne by abstractors and not the environment?

A. I don't think the environment should bear that risk, no.

10 Q. So then the logical conclusion, isn't it, that the controlled activity date is June 2020?

A. It could fall from that but I just, I would need to see the level of risk in more detail to say for certain that that should be the case that has to follow from that.

15 Q. But you've just told me that the environment shouldn't bear the risk.

A. But if there is not really any risk, then why shouldn't an applicant be able to use that data?

1015

20 Q. We'll move on. The same applies to Roman VI. Roman VI relates to the volumes as opposed to the instantaneous rates?

A. Yes.

Q. And presumably the same discussion we've just had on the instantaneous rate would apply in terms of your recommendations for change to Roman VI?

25 A. Yes.

Q. Again when it comes to volumes of water, the environment shouldn't take the risk of increases?

A. No.

30 Q. Right, when we look at the matters of control, I think yesterday we did talk about *Matter A*?

A. Yes we did.

Q. Well we need not traverse that territory again. Well I have no questions for you in relation to the restricted discretionary activity rule. And we've talked briefly about your recommended discretionary activity –

A. Yes.

Q. – and you mentioned that there would need to be drafting changes made to your discretionary activity to properly reflect the entry conditions that you had in mind that are currently included in the policy, have I understood that correctly?

5

A. Yes, I think the way – reading that discretionary rule, it doesn't effectively limit who should be taking that path and I think there does need to be some way of reflecting that not anyone could just take that path in terms of a rule entry.

10 Q. And so the wording that you've put forward is flawed in that regard?

A. Yes.

Q. I want to move on to the non-complying activity. Now we did have some discussion about what your evidence now is in relation to the non-complying activity. Now when I read these provisions last night, as they are drafted in this document, I was left with the impression that there might be a gap in the planning framework that you've recommended in relation to activities or applications which don't meet the conditions of either the controlled activity where the RDA doesn't apply or the RDA or potentially even your discretionary activity consent. So, when we think about these rules operating as a drop-down, I don't understand what the activity status should be for activities that don't meet some of those conditions. So can you help me understand what your thinking is, if particular conditions are not able to be or not complied with, what is the drop-down and I should say the drop down in circumstances where – well, actually no, if you could just help me understand your thinking?

15

20

25

A. Yeah, so actually I just noticed that it's repeated twice, that non-complying activity rule is this version.

Q. I did wonder about that.

A. So just strike out the first version of it because the second version actually has the numbering convention corrections.

30

Q. Okay.

A. That was a copy and paste error last night.

**THE COURT: JUDGE BORTHWICK**

So delete, for the record delete the first version of 10A3.3, a non-complying activity rule.

**CROSS-EXAMINATION CONTINUES: MR MAW**

5 A. And so you're asking Mr Maw then if something didn't comply with the controlled activity condition and it didn't then fit within a RDA condition then effectively unless it could meet the thresholds for entry that I think would be required for discretionary, that would be non-compliant.

Q. What if it was a permit expiring on 1 October 2035?

10 A. So this rule should be changed to, as I think I mentioned earlier, only a six-year term. I don't think there should be the ability for an application to be lodged for greater than the 15-year term allowed for by the discretionary rule as part of this transition.

Q. So what would you recommend we change to achieve that?

15 1020

A. You would need to take out the words: "where the terms sought would result in a permit expiring after 1 October 2041", just strike that out and make a change to (b). I can't give you, can't come up with the exact words but effectively saying unless it's provided for under Rule 10A 3.2.1 for six  
20 years.

**THE COURT: JUDGE BORTHWICK**

Q. Just pause there for a second. Did that make sense? So unless provided for under the controlled activity rule, the term is six years?

A. Yes.

25 Q. But the controlled activity rule, the term is six years.

A. Yeah, so the controlled activity rule is already covered by the rule and that's six years. The RDA is six years. The discretionary is 15 and so this rule would then basically say that that has to be the term.

Q. What has to be the term?

30 A. The six years has to be the term. I can't on the hoof come up with the wording for you.

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. So is that conceptually an entry condition into the non-complying rule?

A. No, so I'm just looking at that actually now. No, that needs to be the policy and this rule just really needs to be that unless, that anything that's not provided for under the other three rules is a non-complying and then the policy then needs to be there that says that that should be for six years. I was just confusing myself between the rule and the policy there.

**THE COURT: JUDGE BORTHWICK**

Q. So amend, so I've just noted it should say: "anything not provided for under" –

A. The other three rules.

Q. Under the other three rules is non-complying but then you would also need to amend the policies to make clear the terms for each of those policies and controlled in RDA being six years and discretionary being 15.

A. Yes, and I think I mentioned that earlier that that is something that's missing at the moment in terms of those policies. It didn't get pulled through a policy still relating to the duration with the change to the discretionary rule, or the discretionary policy.

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. Do you accept that you'd need to be very careful with the wording of how the non-complying activity rule is drafted to ensure that there wasn't a gap in the framework?

A. Yes, I accept that. I don't think it would be any really different from what was drafted in the 14<sup>th</sup> of March version where it previously said it does not meet any one or more of the conditions of those two rules listed there and you would simply be adding a third rule in there with the note that you'd have to amend the discretionary activity rule as we've just discussed.

Q. And the reason we need to be careful about this is because an activity that might otherwise fall through a gap would be an innominate activity and processed as a discretionary activity?

A. Yes.

Q. I'll turn over to the definitions now. Now, we've explored the definition of degraded or degrading so we don't need to traverse the challenges there.

A. Yes.

Q. Now, I see that there's a definition of community water supply?

5 A. Yes.

Q. And my understanding is that that's come about through the conferencing in relation to how community supplies are to be treated?

A. Yes, that's correct.

Q. Did you participate in that conferencing?

10 A. I wasn't part of the community supply conferencing but the planners conferencing where we came up with the definition of that, yes, I was part of that.

Q. I have some questions about the definition and I wonder whether I might be better placed to put those questions to the planning witness for the territorial authorities.

15

A. Probably best place. He did start the drafting and we spent a bit of time on it and it is tricky but we also acknowledge that this was for the short-term, that was for PC7's definition only. It's not a wider definition that would necessarily be carried through into the land or water plan.

20 Q. I'll pick that up with Mr Twose later today. Now, the final set of changes are changes recommended to be made to the schedule. My understanding is you've just pulled through the changes recommended from the planning conferencing?

25 A. Yes, and you'll note that I, instead of keeping the other changes in my previous version, attached to my supplementary evidence, which was slightly different from those that came out of conferencing. I then just put the yellow highlight saying that there would be further changes required to those schedules for the record there.

Q. I understand. Thank you. No further questions.

30 **THE COURT: JUDGE BORTHWICK**

Thank you. We can take the morning adjournment. I think because we're going to be hearing from you, Ms Baker-Galloway, next.



**COURT ADJOURNS: 10.27 AM**

**COURT RESUMES: 10.45 AM****CROSS-EXAMINATION: MS BAKER-GALLOWAY**

Q. Good morning.

A. Morning.

5 Q. So I just want to start, first, by looking at your objectives, and the new objective in particular, 10.A.1.2.

A. Yes.

10 Q. In sort of a more high-level point of view, what I'm taking from that objective is that you see a place in this plan change for an environmental objective to be expressed, not just a process-related object?

A. Yes, as it relates to that slightly longer term pathway for some catchments.

15 Q. The reference in your objective, in the second-last line, you do refer to halting of reversing degradation of an FMU. Do you agree that that part of the objective would apply to any decision made under the PC7 framework, so even the controlled activity pathway should have the objective of halting or reversing degradation?

20 A. My interpretation of the pathway for the control is to put a line in the sand now, effectively and just roll over for six years, but I think from the evidence we've heard that that may not halt degradation, because there is a risk for some of those threatened species that just stopping now may result in further degradation in that six years.

Q. Yeah, okay. Have you had a chance to read Mr Farrell's supplementary evidence for Fish & Game?

25 A. I realise that that's the – I don't think I have read his supplementary. I've read his full one, but –

Q. Okay, if I could get madam registrar to find that for you. So it's dated 24 March.

**THE COURT: COMMISSIONER BUNTING**

30 Can you check the date?

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

Q. Oh, yes, it's got 23 March on the cover, yeah, that's right. Have we got success?

A. Not, yet, no.

5 Q. Oh, sorry. Apologies, ma'am, I should have prearranged this.

A. Cool, yes, I have a copy now.

Q. Thank you, so in the appendix, you'll find Mr Farrell's redrafted objective 10.A.1.1.

**WITNESS REFERRED TO OBJECTIVE 10.A.1.1**

10 A. Yes.

Q. I'll just let you read that.

A. Yes.

Q. So as you'll see, rather than, if you like, picking and choosing particular values that Mr Maw took you through, and – excluding other values if you like, you'll see that Mr Farrell's objective tries to stay at the level of the MPS objective 2.1A, the top priority for Te Mana o te Wai? So, if and it focuses on protecting the health and well-being of water bodies from further adverse effects from water abstraction activities, so it's a holding of the line objective. Do you agree with that interpretation?

20 1050

A. Yes, though the only point I note on that is that we may yet see in the next year or so some further change for some applicants particularly where there has been perversion to spray. I know of one applicant in particular, in just the last season so from the time that was decided there still may be further decline on the odd one. I accept that probably that's not all of them.

25 Q. But if you were to draft a more generic environmental objective, this expresses it at that general level doesn't it?

A. Yes it is at t--

30 Q. The aim of this plan change is to stop further degradation at the very least, isn't it?

A. Yes.

Q. Yes. Now with Mr Maw you agreed that when assessing effects of new consents one of the points of comparison is the water body in the absence of consented abstractions and –

A. Yes.

5 Q. – consent of activities? And do you agree that that assessment is relevant, not just for a section 104 assessment for a consent? It would also be relevant when assessing how to give effect to the national policy statement?

A. Yes.

10 Q. And in particular you'd agree that to assess the first priority of Te Mana o te Wai, how to protect the health and well-being of water bodies and freshwater ecosystems, we need to have that understanding of what that water body would have supported or could support if it was restored to an abstraction-free state?

15 A. Yes I think there is some discussion around that baseline still needing to account for, if we were looking at an individual consent, the other consents such as for example the impact, like the Clyde dam has on the you know, it's the consented take, if we're looking just at takes say in the Manuherikia, there is an impact of that authorised consent on the actual  
20 baseline environment.

Q. Of the structures of the Clyde dam?

A. Yes.

Q. But they also have a finite term?

A. They do, yes.

25 Q. Yes. Now you referred to the set of consents that you have applied for recently, that you helped people apply for recently were any of those considered under the non-complying pathway?

A. Every single one has been.

Q. Every single one has been.

30 A. Even for six years.

#### **WITNESS REFERRED TO NEW POLICY, 10A.2.4**

Q. Right, so still in Mr Farrell's evidence if you go down to *New Policy*, 10A.2.4?

A. Yes.

Q. I'll let you read that and the table that follows it.

A. Yes.

Q. So just to give you the context, in, originally the table was proposed in reliance on Dr Hays' evidence –

5 A. Yes.

Q. – aimed to set a presumptive set of thresholds in relation to naturalised MALF that would help interpret the words no more than minor, that were originally in the policy –

A. Mm.

10 Q. – so you're familiar with that?

A. Yes.

Q. And then with the suggested re-drafting from Mr de Pelsemaeker and the removal of that word which Fish and Game and Mr Farrell support, the suggestion is now that you could use those presumptive thresholds for when the, "no more than minor" test is used either for notification or the alternative limb for non-complying activity. So in your experience, having an objective signpost to when – it's presumed that effects are no more than minor unless comprehensive assessments otherwise establish it. Is that of any assistance in your role, based on your experience with applicants?

15

20

A. No. And particularly – well for those ones that may be seeking a longer term, then yes but for those that are still seeking a six-year term then no because it – at this point in time the key – one of the key drivers for why they (inaudible 10:55:06) considered non-complying under the notify plan relates to the schedule and the assessments under that schedule and I don't think that an assessment such as this could be undertaken without significant science and hydrological work as is been pointed out in that objective and that requires a lot of time and money invested for what is ultimately a six-year term still being sought which is intended to still be reflecting the intent of PC7, of rolling over, putting a line in the sand but there was – purely been issues with the notified version that meant that they were non-complying. And I think for the six-year terms that we have recently applied for, under the version of the controlled activity that is now being put forward, the majority of those would be controlled.

25

30

1055

Q. Right so let's assume then that the majority of those that by accident, previously fell into the non-complying category that they now have the controlled route for an application that was substantively non-complying, do you see assistance in certainty and not having to have a debate with the Regional Council about whether or not an application should be notified for starters?

5

A. Yes although I come back to it only probably being beneficial for those that are seeking that longer term under that non-complying, not the shorter term. And in a sense, this sort of assess– this would form part of any scientist assessment of what a recommended minimum flow would be but not being a scientist, I couldn't tell you the exact details around this and whether that's appropriate or not.

10

Q. No, that's okay. I don't want you to comment on that.

15

A. Yes.

#### **CROSS-EXAMINATION: MS IRVING**

Q. I just have a couple of brief questions your Honour. Ms Perkins do you have a copy of the schedule 10A4 – Technical Conference Statement available to you?

20

A. I've got the planners one but I don't have the primary sector one, is that what you're meaning?

#### **WITNESS REFERRED TO PRIMARY SECTOR – JOINT WITNESS STATEMENT**

Q. Primary sector one. I'm just wanting to clarify I suppose the source of the changes that Mr Maw discussed with you regarding the period of time or dates for the monitoring data that would be assessed to calculate the take rates and volumes.

25

A. Yes.

Q. Now can you please have a look at paragraph 19 of the primary sector, joint witness statement.

30

A. Yes.

Q. Can you read that please?

A. “All witnesses consider every full year, 1<sup>st</sup> of July to 30<sup>th</sup> of June the following of available verified water meter data should be used.”

Q. And if we look at the updated set of provisions that were attached to the planning conference statement –

5 A. Yes?

Q. – particular the control activity rule 10A3 1.1, Romans IV and VI.

A. Yes.

Q. Is it your understanding that the changes in those two provisions reflect the agreement reached in the technical joint witness statement?

10 A. Yes that was the intention behind those changes.

Q. And if we go to the planners’ statement –

A. Yes.

Q. I’m just trying to find the...

15 **MR MAW:**

(Inaudible 11:00:00) accurate.

1100

20 **MS IRVING:**

Well, no if you let me finish Philip, I think I’ll round out the questioning, just as a point of clarification.

**MR MAW:**

25 Well you’ve put a question to the witness which indicated that all witnesses had agreed with that, whereas that’s not what the joint witness statement says.

**MS IRVING:**

The technical one?

30

**MR MAW:**

Yes.

**MS IRVING:**

I think paragraph 19 says that.

**MR MAW:**

5 Well look at paragraph 22.

**THE COURT: JUDGE BORTHWICK**

I'll just read it.

**THE COURT: COMMISSIONER EDMONDS TO MS IRVING**

Q. Sorry, which one am I looking at, which ...?

10 A. The technical conference, paragraph 22.

Q. Sure, but there were three technical conferences?

A. Oh sorry, the primary sector one, yes.

Q. Well in that case there were four technical conferences because the planners also have a conferencing –

15 A. Well yes.

Q. As a planner, I think planners are technical too –

A. Well yes.

Q. - but in a different kind of way perhaps.

A. Yes so paragraph 22, would you like me to read that for the Court's  
20 record?

**THE COURT: JUDGE BORTHWICK TO MS IRVING**

Q. No I just want to read it to myself and I'll read all four paragraphs, 19 to  
25 22. Yes, so I think what Mr Maw's objection is, is that, I think it's Mr Wilson is saying, all witnesses are considering every full year but Mr Wilson's got doubt as to whether or not including the records, post June 2020 could influence behaviour of water users.

A. Yes.

Q. So it's more nuanced than just simply saying, all users?

A. Yes, yes and my next question was going to be that that is effectively  
30 what's picked up in the planners' conference where there's set out in paragraphs 13 to 19, the differences on that particular issue.



Q. You can ask the question.

**CROSS-EXAMINATION CONTINUES: MS IRVING**

Q. So is it your - I suppose we go to paragraphs 13 through 19 of the planners' conference -

5 A. Yes.

Q. - there were differences that are recorded there about whether or not that agreement at paragraph 19 should be pulled across from a planning perspective?

A. Yes there was different views on that.

10 Q. Thank you. I have no further questions.

**THE COURT: JUDGE BORTHWICK TO MS PERKINS**

Q. Before we get to the Court's questions, (inaudible 11:03:38) chance to ask yourself whether there's any need to - just picking up on any questions asked by any of the three lawyers, by the three lawyers, whether there's any matter that you feel ought to be clarified because, yes, any matter that you think ought to be clarified or where perhaps you weren't given a full opportunity to give a full response and so this is your chance now and then the Court will ask you some questions.

A. I think I'm okay with where I got to with those.

20 Q. Okay, that's good. Right, I'm going to hand you over to Commissioner Edmonds.

A. Sure.

**QUESTIONS FROM THE COURT: COMMISSIONER EDMONDS**

Q. Morning. So I've just got a couple of matters I want to explore, that's all?

25 A. Sure.

Q. And so I'd like you to turn to the controlled activity rule?

A. In the version that was sent through last night?

Q. Yes -

A. Yes.

30 Q. - in the version that you sent through and I'm looking at Roman iv -

A. Yes.

- Q. – and really Roman vi which say the same thing, but one's in relation to volume and the other's in relation to the rate of take, but there's a similar principle applying, so my understanding is that in terms of the metering regulations, they came in in 2010?
- 5 A. I can't recall the exact date but yes it sounds about right.
- Q. Yes I think that's stated in one of these -
- A. It is stated in –
- Q. – entry conditions somewhere isn't it? Yes.
- A. Oh yes it is, yes in the (inaudible 11:05:28) RDA one, yes.
- 10 Q. It's actually in Roman vii so it talks about –
- A. Yes it is.
- Q. - the regulations there. So if you think then that you may be able to go back to the 2010 situation, and then you think about what this looked like, this iv and vi, the little Roman ones?
- 15 A. Mhm.
- Q. There was previously a period, 1 July 2015 through to 30 June 2020?
- A. Yes.
- Q. And that's been struck out and it just says, for which water litre data is available.
- 20 A. Yes.
- Q. So my question to you is, if so you had 2015 that was a very particular date, we've had quite a lot of evidence about the amount of more efficient irrigation that's been going on, some of that presumably would date 2015, would it?
- 25 A. I would be guessing but I think that's probably true, yes.
- Q. True. So quite a lot of that flood irrigation and the borderdyking irrigation, still some around, we've heard that –
- A. Yes.
- Q. – but quite a lot of it has gone now and you had more efficient, the K-Lines
- 30 and then the Pivot irrigation systems –
- A. Yes.
- Q. – now and other efficient methods of doing things -
- A. Yes.

Q. - including storage. So I guess my question to you is, why wouldn't you stick with the 2015 date? Why do you need to open it up to earlier periods?

5 A. Sure I think, this was addressed by Ms Bright as well but from my understanding from discussions with her and from her evidence is that the water meter data that's available prior to 2015 is still valuable data as well. It won't always be the case that it was just relating to flood irrigation at that time, so I think it still needs to be considered because part of my understanding from the hydrologist concerns is that the 2015 to 2020 limit  
10 may not capture all climatological years that might apply in terms of dry or wet seasons, so that might be adversely unfairly impacting on an applicant who might have completely valid data from 2014 that might better reflect say a year in which they irrigated more but it was not necessarily because of flood irrigation that it's higher volumes. I don't  
15 think you could say clearly one way or the other but it's only because if the data from those years before 2015 was higher in volume or rate, than the data from 2015 to 2020, I don't think you could categorically say that that was just because it was flood irrigation happening. That may be the case, for some applicants potentially, but it may not be the case for  
20 everyone. Does that answer your question?

Q. Well it does in one way but it doesn't in another, because if you've got a completely different pattern of use that's been going on post making all those improvements in the efficiency of your irrigation, why would you be going right back to get the highest figure, the maximum figure that you can work to right back to the period that predates all those improvements?  
25

A. Well I think the risk is that even though you've made those changes with irrigation, the 2015 to 2020 years may still not have accurately reflected the most that you may need under that system or may have historically taken even if you'd put the spray in a different season, I just don't think  
30 you can clearly work out what the climate – you'd have to go back and look at individual climate data in each year and compare it to what you've used to work out if even under spray you might have taken more historically, prior to 2015.

Q. So is there anything in the matter that control is reserved to that's going to allow the decision-maker to look into the kinds of issues that you're just talking about now?

5 A. Not explicitly, no. There is still a matter within the limits of historical use, so there is still some interrogation of the data required and provided for within that matter, so it is still a matter of control with regards to the actual volume and rate that gets placed on the consent.

**THE COURT: JUDGE BORTHWICK**

10 Q. Say that again? So the proposition is your period of data includes a time at which inefficient or less efficient irrigation systems were being employed on farm, and consequently, higher volumes and rates of take. So that's the data that you have captured.

A. Mhm.

15 Q. How does that then get filtered out, if I could put it that way, because it no longer represents the current irrigation system?

A. It doesn't explicitly get filtered out.

Q. Should it be?

A. No, I don't think it should necessarily be.

Q. Why not?

20 A. Because the evidence that I've heard from the hydrologists are that that period of time, of 2015 to 2020, still might not accurately reflect the historical use that is required and has been used.

25 Q. I'm not bothered by any particular therefore or years. Our interest is in the shift in efficiencies is irrigation systems. How is that captured or thought about in the controlled activity?

A. It's not.

Q. Should it be?

30 A. Then you have to look at efficiency of use calculations, that then, you couldn't apply it to every situation, because there will be some that are still flood irrigating, and it wouldn't be fair to impose an efficiency of use upgrade requirement for a six-year controlled activity pathway.

Q. Yes, I understand that, but just say they were flood irrigating, to use the totally out there example of an inefficient system, and have now moved

to a lateral, more efficient. What do you do? Do you allow them to say, well, my historical use is based on flood irrigation?

5 A. I absolutely see the point. I don't know how many this would apply to. I'd have to talk to the hydrologist about which situations have shown that data prior to 2015 is a lot higher than post that time, so I think it is a situational examination required as to whether that actually is a real risk in this situation.

10 Q. I do not know. I mean, most of your evidence, or a lot of the evidence that we have received is that there has been substantial investment to improve the efficiencies of irrigation systems, so on your own evidence, that would apply to most people that you've got knowledge of.

15 A. Yes, there has been investment by, I think, most clients that I have knowledge of to some extent, whether it's their full property or some of their property, there has been investment to improve things, yes, in light of knowing that their renewal process was coming up.

Q. With that in mind, how do you capture their historic use is really what we're interested in.

A. Yeah.

**THE COURT: COMMISSIONER EDMONDS**

20 Q. Yes, well, perhaps answer that question, then I'll have another question.

A. Sure. The only way you can include it would be if there was an additional requirement to outline details of your system and –

**THE COURT: JUDGE BORTHWICK**

Q. Your current irrigation system?

25 A. Yeah, current irrigation system.

Q. And any change? Okay.

30 A. And any changes they've made, but then you'd also have to reflect on, well, that maybe only happened in 2017, and so it would have to more fall, I think, under the RDA pathway rather than the – but then, at the same time, that maximum through the schedule is for this control, so there would have to be another matter of control to address that if that needed to be addressed, and I don't know how much of a concern that is to know

whether I think it should be included, and the effort goes into adding an additional matter, but I think, in the essence of keeping this as simple as possible for a six-year rollover, knowing that at the end of six years, the full efficiency and what water is needed scenario will be addressed through the new land and water plan permits, so I think I still come back to the intent of the plan change to be as simple as possible, and the moment you start adding in, then, you need to look at when systems changed, what changed, what years, have they been wet years, have they been dry years, adds another layer of complexity.

## 10 THE COURT: COMMISSIONER EDMONDS

Q. So a follow up question is you have struck out three, which was the total land area under irrigation and the maximum area irrigated period, the 1<sup>st</sup> of September 2017 to 18 March 2020. Now, that, perhaps was a bit more of a safeguard that, in fact, any efficiency measures that had been undertaken might, in some way, be locked in because it's an entry condition.

A. Yes.

Q. Or would be locked in.

A. Yes, I accept that.

20 Q. So if you were to put that back in, would that deal with some of the matters that we've just been talking about in terms of –

A. Yes, yes, it probably would, because you couldn't, even with a spray system, if that's in place, you couldn't – no farmer's going to go and flood their property with their spray system. The irrigation is designed to be purposeful for the pasture or crop that you're growing. You're not going to put far more water on than is needed, particularly if you're earlier in a season, you don't want to use your annual volume up too early and then have nothing left if autumn becomes dry, much like it has been, so that would provide another backstop to not using that historic that may be a flood irrigation volume over any more area.

30

Q. Okay, thank you. So I guess that's the controlled activity rule, but if we could just go back to the policy A.2.1, and you've got D, and so now we've

got this word “historical” that’s come in here. So that’s not defined in any way, is it?

A. No, there is no specific definition of it, no. It came through the planner’s joint witness statement. It’s not meaning anything different than actual, it’s just a reflection of the fact that in the RDA pathway, it may not be solely water meter records that you have the actual point in time, day, timestamp of that water taken on that day, and if there are other methods used, one that comes to mind that we discussed quite a bit at that conferencing was the use of something like synthetic records for hydroelectricity generation, so that effectively does go back and show what water was going past the intakes on those dates, but it’s not an actual record for a water meter, so the use of historical instead of actual reflected that, that it is reflecting the historical use, but it’s not through an actual water meter record that you could hold up.

15 Q. So that term, “historical use,” that’s come over, for example, in the matters of control, hasn’t it?

A. Yes.

Q. So do you think there might be a lack of clarity with that term, could that –

A. No.

20 Q. – potentially arise, result in arguments subsequently? Do you think that it’s clear?

A. I think all the planners were fairly clear on the use of historical and what it meant, in the sense that it was reflecting what has actually been taken, you know, whatever method is used to demonstrate that. It wasn’t purporting to suggest that it would be future or demand-based assessments of what you might need. It was – I don’t think historical would cover that.

Q. So you don’t think there’s a need to define it?

A. No, I don’t.

30 Q. So I just want to make sure that I’m clear about the restricted discretionary activity. So we’ve had this discussion about the controlled activity conditions, 1B and B1, but I’m just having a look at the RD, the A one that you’ve got here.

A. Yes.

Q. So you haven't suggested that (inaudible 11:20:00) 3, which was the one about the area under irrigation over a certain time period, you haven't suggested that that be struck out of the RD, that's still there in A, is it pre-entry – is the entry condition...

5 1120

A. That is and it's probably just an issue last night as I pulled over the RD rule from the planners' joint witness statement which we didn't address the likes of whether three should stay in or out as part of that conferencing because that wasn't related to the schedule.

10 Q. But in the light of the discussion that we had on the controlled activity, wouldn't it be logical if you were following that that line of direction –

A. That it would, yes.

Q. – that the three should stay?

A. Yes in the line if irrigation areas, yes.

15 Q. As an entry condition. Yes. So what kinds of activities would you envisage coming in terms of this RD rule?

A. The intention behind that was really the – originally as it was drafted it was only capturing those that had an issue with their data, like a technical issue or missing data and a lot of our discussion was around the fact that that may not capture everyone. So, it may not capture someone who's got a very good data record for three years. There's no missing data, there's no technical issues with that data but it only captures the three years and that's not reflective of historic use. They might have manual records and other information reflecting what they took prior to that point in time and so this would allow for those people or those that might only have one year of record to actually include additional data with their application to demonstrate what their historical use was – has been, so that actually is representative of the historical use and not just one or two years of water matter.

20

25

30 Q. So what's been the limitation on any activity coming under the RD category?

A. Well I think the incentive is still there to follow a controlled path with a guaranteed grant. The RD path doesn't have that same certainty for an applicant and if they're just going, oh I can just try and use something else



for an extra one or two litres a second, that's not enough incentive I don't think in the RD path, when you're still having to provide a lot more information at more cost and you're still got a six-year term. The incentive is still there for the controlled activity pathway where their data is representative that you have.

5

Q. Is this pathway though, this would be attractive to someone who thinks they can make a case for a greater historical use that would be available to them?

A. That potentially – that is available to them but there is still the discretion for the council to look at that data and assess it and they don't have to grant a consent on that basis. There is still the discretion for the council officers to disagree with what has been put forward by an applicant.

10

Q. But when you look at the matters that the discretion is restricted to, they are quite narrow, they're just about that really aren't they?

15

A. They are. And that's the only exception.

Q. Water metered data and other relevant methods and data and I think there has been other evidence and questions about what that might mean –

A. Yes.

20

Q. – I think you – were you asked about that, I'm sorry I can't recall.

A. I think it might have been Ms Bright that was asked about that.

Q. Ms Bright, that's right. So, I think that was quite thoroughly explored so the council officers are going to have a fairly, well I don't know, what sort of discretion do you think they're going to have in terms of A?

25

A. I think it will still come down to their audit of the data and other relevant methods or data that's put forward. At the current point in time where there still is robust debate between applicants and consultants and the council with regards to analysis of automated data and there always has been, even before PC7 was introduced so I think that will still come down to the same method and if there is a significant disagreement it may be that things progress to a hearing between the council and the applicant if agreement can't be reached on that and an applicant doesn't agree with proposed draft conditions that may come from council. So they still have

30

full discretion over an audit and review of that data. Much like any consent application, there's a full audit of the information provided.

1125

Q. Sure, but they won't be able to get into efficiency, presumably.

5 A. No, this isn't intended to cover what is an efficient use.

Q. And so what sort of time period could this data go back to? Just going back to those discussions we were having about an efficient borderdyking and flood irrigation. What would be your understanding on that?

10 A. There is no limit where it would go back to, but it would come down to an applicant having to have a reasonable record of their historic use in some form that they can talk to what has been historically taken. I think from discussions at the planner's conferencing, the likes of hydroelectricity that has the tools and systems to generate synthetic flow records, for example, they might be able to go back further than an applicant who has  
15 been irrigating could in terms of having a reasonable record of historic use.

Q. So the AA, the community water supplies, so that one –

A. Mhm.

20 Q. – that talks about existing water permit volume and rate limits, so what do you understand by that term “existing water permit volume and rate limits”?

25 A. So the intention here was that A still applies to community water supplies, so it still has to be historic use, but we recognise that the schedule only looks at historic use, and in order to provide for some population growth requirements, but that an additional volume, potentially on top of what has historically been taken, could be provided for here, but that it still had to be no more than the existing water permit limits. So, for example, say your consent limit is 50 litres a second, historically, you've taken 40, but  
30 as a community supply, you know your projected growth might mean you need to take 44, so you're still within your consent limits, but there is ability to allow for some growth, but potentially Mr Twose's, or in the TAs, are more suited to answer that, but from a planning perspective, that's where we came to with the drafting of that.

Q. Yes, I was asking from that perspective, but I'll leave exploring that a little further (inaudible 11:27:48) we'll see him soon. Thank you.

**QUESTIONS FROM THE COURT: JUDGE BORTHWICK**

5 Q. I have not got many questions. As you indicated yesterday, you have got no experience with rights priority and deemed permits, that is okay. Just turning to your proposed policy, 10.A.2.3, and matter noted at (vi), and here, we have got an allocation that is the lesser of the rate and volume assessed using the methodology in the schedule, or alternatively, inefficient use of water, and you said that could be amended to say "using 10 the Aqualinc guidelines, inefficient volume of water." I thought that the Aqualinc guidelines could also be used to determine what is a reasonable volume of demand, excluding or setting to one side whether the system is efficient or not. So, for example, if I was (inaudible 11:28:55) and I had poor records, if I was using (inaudible 11:28:58) poor records, I could go 15 to that Aqualinc guideline and that would tell me what would be a reasonable demand for my farm, and you're agreeing with that?

A. Yes, I'm agreeing with that.

20 Q. Okay, and so the issue here, is it one of efficiency or is it one of – I thought the issue here is what to do if you have not got good records for your data. The issue with Aqualinc is not efficiency of use, but it is actually demand, is it not? Or is that what you are meant to be covering off in the RDA?

25 A. So where it is talked about here, for this discretionary pathway, Aqualinc gives you an estimate of demand, but it is on the assumption that it is an efficient irrigation system.

Q. So it cannot produce demand –

A. For flood irrigation.

Q. – for flood irrigation?

A. No, it could not.

30 Q. Or for borderdyking?

A. No.

Q. What about K-line?

A. It's for a spray system.

Q. It is for a spray system only? Wow.

A. For a spray system only for Aqualinc, or, potentially, it was like a dripper process for trees.

Q. Yes.

5 1130

A. I'm not entirely sure on that but I know it's on the demand on the assumption that the system is efficient and there is a specific percentage efficiency included in those guidelines. I can't recall what that is.

Q. Okay, so many irrigation systems in fact would be excluded?

10 A. Yes, but the inefficient ones that we would typically refer to as inefficient, anything that's got that sort of surface application via flood or contour or borderdyke –

Q. Yes?

A. – they would not be accounted for within a Aqualinc demand.

15 Q. Okay, oh that's good to know. Now the second question I had relating to your same draft policy and in particular Roman numeral vii and Mr Maw's already asked you about what is required for a substantial investment –

A. Yes.

20 Q. – and you said, "Case by case", and I think he reflected back but there were these, the individual's tolerance for investment or for accruing of debt might vary and I think you acknowledge that that –

A. Yes.

25 Q. – would also be true? My question is more to do with the phrase, "require substantial investment and I understand from that phrase, "require", that this is investment in the future, so it's not already investment which has been made?

A. Yes.

Q. And your proposing that this – or are you proposing that this future investment be for securing items 1 and 2 of the same policy?

30 A. Yes.

Q. So it's not –

A. It's not sitting on its own –

Q. Yes.

A. – in the sense of someone just wanting to have investment that means they could come under this policy, it's all tied back to 1 and 2.

5 Q. – to securing those two. And so with that in mind, I read over your additional statement which you made yesterday, on behalf of several farmers, I couldn't see how they would themselves avail themselves of this discretionary policy because each of those farmers by and large have made substantial investment or I think in the case of a hydro wasn't proposing substantial investment, was proposing just a roll over of the consent, is that correct?

10 A. That is correct, yes.

Q. And so for all those farmers that you note in your opening representation on behalf of Landpro and others, they're all going to be six year consents?

15 A. The majority of those probably wouldn't fall within that discretionary pathway. I think Mr Naylor is only one that might do but potentially actually on the reading of that, possibly not.

Q. Okay.

A. More that it falls within the wider catchment and there's other pe- yes, it is...

Q. It's not your clients? Yes.

20 A. No, Mr Naylor is my client -

Q. No, no, no –

A. – but –

Q. – none of these people take advantage of what you propose here?

A. No they haven't, not directly.

25 Q. No, okay. All right. So who does?

1133

30 A. There is a, I would imagine that the majority of the applicants that can take advantage of this would be those that have had deemed permits because there's a big number all together in specific catchments. It would be those falling within the Manuherekia, the Cardrona and the Arrow primarily and probably some of the Taieri bit. I don't know the Taieri well enough to be able to –

Q. But you do know Manuherekia and you do know Cardrona and you do know Arrow and, correct?

A. Not the Arrow so much but Cardrona and Manuherekia.

Q. Okay, you know them sufficiently to know that they could bring themselves under your drafted policy?

5 A. Not to the level of detail that every single one in that group would and I guess that's part of the drafting is that if changes are required to 80% that fall within that sub-catchment of the applicants and maybe 20% are part of the whole group, but they have already made infrastructure upgrades, on reading that now, there is concern about whether they could then still be part of that. Yes, I accept that now, thinking about that. There is some  
10 difficulty with that.

Q. There is some difficulty and that's with Manuherekia and Cardrona or just one or other or you can't say?

A. Probably both but I –

Q. Probably both.

15 A. Probably both.

Q. Because you have, within those groups, you have a population, if you like, who have already made that substantial investment.

A. Yes.

Q. So therefore, policy wouldn't apply to them?

20 A. 7 wouldn't but the rest probably still would.

Q. Yeah, you see I don't understand that because I look at the words "and"  
–

A. Yes.

Q. – it's a conjunctive.

25 A. Yeah.

Q. You actually have to qualify?

A. Yes, and that isn't –

Q. Yeah, it's future investment. They've already made it. They're out.

A. Yes.

30 Q. And so for them just the six-year consent?

A. But then you wouldn't, the difficulty is that you wouldn't achieve the benefits that could be achieved through some of these sub-catchments with all of those parties being on board because they, yeah, there is difficulty where they couldn't necessarily all be on board with that,

although they have made the investment. Whether that's sufficient, depending on what the outcome is of this, and whether they have to make more, I couldn't say.

5 Q. And so was this policy drafted with those two catchments in mind, Cardrona and Manuherekia?

A. Yeah, those were two of the priority catchments that were in mind that, that – experiencing those concerns with regards to threatened species and degradation.

10 Q. And I think it may have been in relation to hydro. Unfortunately I can't locate my pad, my, you know, notepad but in relation to hydro, and in response to a question from Mr Maw, the greater risk, I thought it was hydro but it might not have been, the greater risk for companies seeking replacement consents where they are involved in hydro, was not PC7, but was a future plan to come, the future Land and Water Plan. Do you recall saying something to that effect?

15

A. I can't recall it.

Q. But is that correct? The greater level of uncertainty and therefore risk going forward is not this plan but it's actually a future plan?

20 A. Yes, potentially and I think the other part of the risk that comes with some of those hydro is if they are linked to large dams that then are requiring a lot of investment on that six-year term. So I think sometimes it comes with those two aspects combined rather than just sitting on their own.

Q. And if that was true for hydro, is it also true for primary sector?

A. Yes.

25 Q. And is that risk to do with what the future Regional Plan, Land and Water Plan, might say about overallocation?

A. Yes.

Q. Yes. And so in seeking a 15-year consent, which is what you now propose, is that to in some way future-proof the taking use of water?

30 A. No, I don't think it is in any way. I think the Land and Water Plan will still come in and will still set its limits and consents will either be a short-term now and apply within six years under that or within 15 years, either get to the end of that 15 and apply under that new plan or be reviewed in respect of allocation of flow limits, for example in that timeframe, so, no, I don't

think it's a future-proofing that. It's more providing for the duration needed to be able to secure investment to make those changes and upgrades that are required to protect those critical ecosystems with threatened species and degradation occurring and I think that's where the term comes in, is that six years doesn't allow for that level of investment to undertake those changes to the systems and to reflect those minimum flows that may be required there.

5

Q. I thought you'd agreed with Mr Maw that it was unlikely that the Regional Council would review every permit.

10

A. Yeah, I don't, I don't think that they will review every permit and it may just depend on which catchments and which concerns.

Q. And is that because of the sheer volume of permits to be reviewed and the depth and capacity of the consents officers that would be required to be engaged, or external consultancies required to be engaged, to undertake that task throughout Otago?

15

A. Probably both and I think it's important to point out here as well that it wouldn't be only consents granted under PC7 but a part of that review process I think is the Council has pointed out there is a large number of consents across Otago for water that don't expire in this timeframe and they also would form part of the need to whether or not they need to be reviewed and I think Ms Dicey mentioned the Taieri, which has a large number, large percentage of its allocation, 20, 35-year consents, so that obviously is not part of the PC7 process but are also consents that may then need to be reviewed.

20

25

Q. And I understand, with that in mind, your answer is unlikely that the Regional Council would engage in a review exercise across the region.

A. I don't think there would be one across the region. There may be catchment-specific ones where it's more critical but I couldn't say what, without knowing what the Land and Water Plan outcome is and which catchments there would need to be substantial change in, and the level of time required, I couldn't say on behalf of the Council what that would be.

30

Q. And so what do you think would inform what catchments there may be the need for substantial change?



A. I think it would depend on what the limits are that come through the new Land and Water Plan compared to what is on existing permits and what is occurring in the environment at the time as to, just putting a number out there, say the minimum flow that comes through the Land and Water Plan is 500 litres a second, but all the current consents are bringing everything down to a 100, that might signal a significant need to make some change straightaway but, yeah.

5

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Q. And moving in the opposite direction of that review would be considerations of viability, wouldn't it, as a matter that the Council would have to consider on a review?

10

A. Yes.

Q. That viability is linked, is it not, to efficiency of use?

A. Yes, but I don't think it limits the ability to remove some allocation or limit on that consent in terms of their rate of take or volume of take.

15

Q. So my proposition to you is if I am a farmer with substantial new investment in irrigation systems which are efficient, how could that be reviewed backwards and not impact the viability of the farming system, both in relation to land and the efficient application of water to land? Presumably the two are geared or correlated considerations is the first question?

20

A. Yes, they are correlated.

Q. They are correlated, and so if I am efficiently using or applying water to the requisite area of land, how could you take water, how could you diminish either the rate of take or the volume without excluding land under irrigation? One would follow from the other, wouldn't it?

25

A. I think there would have – the only way you could do it would be to exclude land or to reduce the amount of time each area of land was being irrigated if you were to claw-back volume or rate.

30

Q. Right. And then you'd get into questions of viability where the irrigation system is, where investment has been made in an irrigation system, assuming certain parameters as to efficiency and, yeah, efficiency relative to the total area to be irrigated. Is that not so?

- 5 A. Yes, there may be in part. It probably depends on the system set up on each property, for example one large pivot on the property and that was it. There would be significantly more impacted by that than in a property that had a K-Line systems where it's just as easy not to run a K-Line out over one area than not. So it's more those bigger systems and whether they'd, whether a property just has one or has multiple or, I mean I'm not an irrigation specialist to know how you'd change it really, so.
- 10 Q. So for relatively inefficient systems, such as guns and K-Line and putting, you agree that guns and K-Lines are not as efficient as laterals and other spray irrigation systems?
- A. I couldn't, I couldn't recall the exact figures but they're still far more efficient than flood, you know, flood and border dyke systems, yeah, on the spray.
- 15 Q. Well, I'm only focusing on I know I can shift it, a K-Line, and in theory you could shift a gun relatively easy as well?
- A. Yeah.
- 20 Q. Yeah. So for those systems where there's no fixed infrastructure, if I could put it that way, related to the land, you could remove the systems, not irrigate the land, don't know whether a farmer would think that's viable or not. Depends on whether they've planted cherries I guess.
- A. Yeah, I think it's very dependent on what the system is that they've got and how much of an area it would change. I don't think it's easier saying it's not going to make a property viable or it will always still allow it to be.
- 25 Q. No.
- A. It is a case-by-case.
- 30 Q. So there's a huge, quite a degree of uncertainty if you have to go to a case-by-case assessment of the impacts of a future Land and Water Plan and how those might be rolled through, if you like, in terms of the consents that, replacement consents that are under consideration today. Would you agree with that?
- A. Yes.
- Q. Okay. All right. Deemed permits. I know you're not involved but you said you had a thought yesterday. So what was your thought?
- A. My thought was –

Q. All thoughts welcome.

A. – was just with regards to how that one item of priorities might be covered and the only thoughts I had is that it probably just has to fall into the matter of discretion or matter of control whereby it's effectively an existing aspect of existing conditions on some of those deemed permits but an evaluation in the application phase would be required whereby maybe it's just set out in the application form. I don't know exactly but, you know, an applicant would have to just identify firstly if there is any priorities attached to their deemed permit. Secondly, do they exercise them? And thirdly, the only time it really matters, I think, is if the lower priority is higher in the catchment. So it doesn't really matter if the person at the top of the catchment has highest priority.

Q. No.

A. It doesn't make any difference.

Q. No, it's going to get the –

A. So there's three components.

Q. – water. Yeah.

A. And so I don't think you'd get every priority that exists rolling over and I think, I was looking through Ms Dicey's supplementary and she'd put, you know, inserted a couple of the tables that are, they way they're currently worded and I think obviously there's a legal component that then comes from that but I think the need for that is so that there is effectively something in writing that holds the line for those priorities in terms of particularly between applicants knowing that that exists because obviously those sections of the Act state that, you know, they don't continue beyond 1 October. So those sections of the Act don't apply then and so it's just having some formal record of those for the future conversations for water sharing regimes as they might apply under the Land and Water Plan. That's my only thought.

Q. Yeah, no, that's all right. I had a similar thought, you know, could it be a matter of control or a matter of discretion under an RDA. Wasn't sure. I mean, and this is assuming that you can –

A. Yes.

- Q. – bring it down that there's some good reason for doing it. So I wasn't sure and then I think I was asking Ms Dicey that maybe there needed to be a policy signal and I think she said maybe and Ms Irving put quite well, you know, re-tooling existing policies. So I thought, you know, that maybe we should look at that, could we look at that, do we need to even and of course that might be a 293 matter, unless there's scope. Certainly scope in some, there may be some scope in some submissions.
- 5
- A. I think there's potentially scope because it's kind of like an existing condition and we've always talked about existing conditions coming through, so it's just a legal matter of whether that's a condition or not.
- 10
- Q. Yeah. It's a creature.
- A. Yeah, which I couldn't help on.
- Q. I think it's probably a creature statute but I have to talk to all of the lawyers about that. You said, you know, subject to whether they've ever exercised them, how would you even know? And the fact that I might need to do it this year but not need to do it for another decade, that actually might be the case?
- 15
- A. Yes.
- Q. But it's important.
- 20
- A. I think really my view of it is that if they haven't exercised it historically, it goes because everyone was assuming it would go under a new full replacement anyway. So it, but it is relying on the word of the applicant in the application. So, yeah, that, that – I couldn't give you any more help because I don't think any historic use records can demonstrate, because the flows vary timing-wise whether you're taking it or the natural flows are lower. So there's nothing to tell you in a water use record if they've been exercised as a proof kind of component.
- 25
- Q. Is there any value in this, in the record of priorities, either all of the priorities or just, you know, the ones that you want to capture, priorities which are not at head of catchment but I guess in mid-catchment, lower-catchment, not quite sure where you draw the line there, but is there any use in that as a method sitting outside of a plan, as in, you know, this is the record that parties might have reference to going forward in terms
- 30

of forming water management groups, and saying that I suspect they all no darn well who's got what.

5 A. Yeah. The only way you can do it is to go look at every single deemed permit and pull out the priorities that are listed on them. I mean they're all there. It just would require someone to spend a few days doing an administrative task.

10 Q. Not me. So, now some easy questions hopefully, and if you don't know, just say so, because you've only been working in Otago two to three years. For those catchments, so this is the questions that I asked in the minute, broader questions, for those catchments which are outside your Schedule 2A areas, and deemed permits have already been replaced under the RMA, I asked: "is the new water permit subject to right of priority". Do you know?

A. The ones that I have dealt with, no.

15 Q. Okay, no. Allocation limit in minimum flow.

A. Yes. Oh, not an allocation limit, sorry. Well, the allocation hasn't changed from the current allocation limit under the RPW, which is anything prior to 1998 is the primary allocation limit.

Q. So that's Policy 642?

20 A. Yeah, so that hasn't changed, but there is minimum or residual flows on the ones I've dealt with.

Q. So there's minimum and residual flows. Cessation conditions?

A. Well, they are effectively from a residual flow, your cut-off, yeah.

25 Q. For those replacement permits, are there any other type of conditions that we should know about that are regulating availability of waterflow within a waterbody as between abstractors? So here we're talking about abstractors, not the environment.

A. Yes.

Q. What are –

30 A. I wasn't the planner preparing the Luggate catchment ones but I have just recently been helping the Luggate group prepare their low-flow rationing agreement, which is a condition of their consents, and that effectively the five matters identified that form that agreement are a communications protocol amongst themselves, how they will give priority to domestic

users, what are the triggers levels for when they will start reductions, what is their agreed abstraction reduction methodology, so whether they go one-to-one with each other alternate days and then the process they will use to notify ORC when they start those reductions.

5 1150

**THE COURT: COMMISSIONER EDMONDS**

Q. So are (inaudible 11:50:25) in addition that consent that relate to that?

A. So that's a low, yeah, the consent condition requires a low-flow rationing agreement, and those are the five components of that agreement and all  
10 of the consents have a minimum flow for the irrigation season and outside the irrigation season for primary takes and then they also have two supplementary limits, a first supplementary band and a second supplementary band and residual flows below their individual points of take.

15 Q. So that's a 2019 decision is it?

A. Yes, or possibly 2020. Can't remember exactly when it was. I've just been helping with the, trying to start drafting that agreement for them, or with them.

**THE COURT: JUDGE BORTHWICK**

20 Q. Okay. For catchments inside of Schedule 2A, have the minimum allocation limits been applied to existing permit holders on review? So there's a review now done.

A. Not that I have been involved in or aware of.

Q. Okay.

25 A. The only one is that Luggate hearing. There was a, I wasn't involved in it but looking at it now, there was a 2A limit and that was part of the conversations at the hearing but I couldn't give you any more detail on that.

Q. Was Luggate a replacement or a review?

30 A. Replacement.

Q. Okay. Again for catchments inside 2A, where deemed permits have been now replaced under the RMA, are those permits subject to a right of priority?

A. I haven't been involved with any.

5 Q. You haven't been involved with any –

A. With any 2A catchment ones.

Q. – replacement 2As?

A. No.

Q. Okay. All right.

10 A. Not that have got to the point of replacement.

Q. So there's no sort of singles?

A. No, I mean the last chance one that was dealt with –

Q. You know, the odd, the odd permit out there.

A. – is the tributaries of the, of the, of Lake Roxburgh and the Clutha and  
15 then other ones that I've been involved with are all applications in process. That's the only one granted so far.

Q. Okay. So they're my questions.

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

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

20 Your opportunity, do you want to add anything to any questions that the Court has asked? Anything arising, counsel, from the Court's questions?

#### **QUESTIONS ARISING – NIL**

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

Q. No, nothing. And do you want to add anything?

25 A. No.

Q. In terms of anything we've just put to you?

A. I think I've covered any little note that I'd made.

Q. Very good. All right. Sounds like we might see you back again, though, by the time we finish the JWS exercise, so thank you very much. Again,  
30 it's been very helpful.

**WITNESS EXCUSED**



**THE COURT: JUDGE BORTHWICK TO MS IRVING**

Q. All right. Where to?

A. So I'll start with opening.

Q. Yes.

5 A. Feels kind of momentous to be moving on.

Q. I need a new copy of that.

A. Yes, I've got copies here.

Q. Thank you.

10 A. Just before I start on the submissions, just as a flag for you, I'm just tweaking the order of the witnesses slightly just to accommodate some availability now that we're a bit later in the day than planned on the schedule. So I'll call Mr Heller, followed by Mr Twose and then Ms Muir and Ms McGirr. The order of those two might just depend on the afternoon and whether we think it's just easier to bring Ms Muir back  
15 tomorrow. So we'll just keep that in mind during the rest of the day.

Q. Okay. Thank you.

A. All right.

**MS IRVING MAKES OPENING SUBMISSIONS**

20 So, as I think we've heard a number of times now, plan change 7 has been described as a process or interim framework devised to address the gap between the replacement of deemed permits and other water permits expiring prior to 2025 and the notification of the Otago Regional Council's new NPS compliant land and freshwater management regime. The primary mechanism  
25 for achieving this is a consent duration of six years for all new and replacement water permits regardless of the purpose for which the water is intended to be used. Unfortunately, this term limitation creates a significant issue for the territorial authorities that are required to maintain and develop community water supplies. In addition to being a second-tier priority within Te Mana o te Wai,  
30 provision of safe and secure supplies of drinking water is legislatively mandated through the Local Government Act 2002 and the Territorial Authorities also have obligations regarding water supplies pursuant to the Health Act 1956 and the Civil Defence Emergency Act 2002. As set out in the evidence on behalf of the TAs provision of these services necessitates long-term planning both from

a financial point of view and due to the nature of the infrastructure. As such, it is not amenable to short-term water permits. Requiring Council's to develop infrastructure without the certainty of long-term access to water puts them in an unenviable position with respect to their obligations to ensure prudent stewardship, efficient and effective use of resources including planning effectively for the future management of resources. Plan change 7 captures a small number of existing community supplies and will also impact on planned developments for new or upgraded supplies. It is the position of the TAs that in doing so, Plan change 7 fails to address the mandatory obligations of both the TAs themselves and of the Otago Regional Council. Including community water supply within the ambit of Plan change 7 prevents both the TAs and the ORC from satisfying their obligations under the Partially Operative Regional Policy Statement, the National Policy Statement for Fresh Water Management and the National Policy Statement for Urban Development and the Resource Management Act itself. In addition, the six-year term for all new and replacement permits will inhibit the TAs from fulfilling their community water supply obligations under the Local Government Act and to the Health Act 1956 by jeopardising the TAs ability to manage and provide efficient and effective community supplies now and in the future. It remains the position of the TAs that Plan change 7 should not apply to community supplies. Alternatively, if it is to apply, a number of key issues need to be addressed. Firstly, the amendment of the Schedule IOA so that it is more appropriately calculating historic use for community supplies, provision made for replacement permits for community supply to include increased rates and volumes to account for projected growth, and provision made for new permits to be sought where greater rates and volumes are required than under existing permits or where new community supplies are being developed. And finally, that consents for community supplies are able to be obtained for longer than six years. Now, in these submissions I am not traversing the statutory analysis law because you've heard that from a number of my counsel, other counsel, and I don't have a quarrel with their submissions in that regard. So I'm focusing on what we consider to be the key issues for the Territorial Authorities and I set those out there at paragraph (a) to (g) and will work through those one by one. Firstly looking at community supplies in the context of Regional Plan Water. I think it's

important to understand how these community supplies have been have been treated under the Regional Plan Water. Community water supply has not been a defined term within the Regional Plan. The term 'Town and Community Water Supply' is defined, although it is only utilised in the context of the  
 5 Waitaki Catchment. Town and Community Water Supply means reticulated water supplies servicing urban areas, rural-residential and residential subdivisions, including all commercial and industrial premises and schools and other educational facilities located within the reticulated area.

**THE COURT: JUDGE BORTHWICK**

- 10 Q. Can you pause there a second. So you've got town and community water supply but it's only a term that applies to the Waitaki catchment?
- A. It does.
- Q. Nowhere else?
- A. No, not so far as I could tell.
- 15 Q. Are they special for a reason?
- A. I think it was linked – pardon.

**THE COURT: COMMISSIONER EDMONDS**

- Q. If it was a special plan.
- A. Yeah. It's linked to the fact the Waitaki, I think, allocation issues are dealt  
 20 with essentially by Environment Canterbury under the Waitaki Water Allocation Plan, so it does have its own sort of set of special character in that sense.

**THE COURT: JUDGE BORTHWICK**

- Q. Okay.
- 25 A. There are, there's a few definitions that we work through. It's, yeah –
- Q. Okay. So that's Waitaki.
- A. – interesting in that respect. Yes.
- Q. And I'll just re-read that.
- A. Mhm.
- 30 Q. Okay. So that's fine.

## **MS IRVING CONTINUES OPENING SUBMISSIONS**

So we also got a definition for registered community drinking water supply, which is a drinking water supply which is registered under section 69J of the Health Act and serves a community of more than 25 people for more than 60  
 5 days a year. Registered community drinking water supplies are afforded special status within the Regional Plan Water in recognition of their importance. For example, under Policy 6.4.2A such supplies may obtain more water than previously to account for growth.

## **THE COURT: JUDGE BORTHWICK**

10 Q. Now, I'm not sure that that's correct. I know that, I think it is correct that there's no definition of community drinking water supply. Your planner certainly doesn't. Are you going to take us through to the, what in fact is regarded as being of importance under the Regional Plan because it's the, under Chapter 5 is dealing with drink water.

15 A. Well, Chapter 5, I think, talks about the water supply values, which is the defined term and references water supplies for the existence of takes for human consumption, which have come to be relied on by the community, and it would be fair to say, as you work your way through the provisions, or the various chapters, that there are a variety of terms that are used.

20 Q. Yeah, that's true.

A. And where I get to is although that's a bit disjointed, that a lot of those terms are essentially used in a synonymous fashion.

Q. Well, you're going to have get me over the line. You certainly didn't get me over the line for the Clutha decision, which you've appealed, and I  
 25 don't know whether you've appealed that aspect of it but I certainly wasn't over the line. So you're going to have to now take me over the line. Are your submissions dealing with Chapter 5?

A. No, they're not.

Q. And that's, is that problematic in terms of not bringing forward all relevant  
 30 provisions to the Court's attention?

A. Well, I think we've got to look at that, I suppose, in the context of this is a case about plan change 7 and whether or not community supplies need to be incorporated into that plan change. So –

Q. What's the purpose of your submission on community water supply?

A. In terms of what it means?

Q. Yes.

5 A. I'm just trying to set out for you what I think is the context under the Regional Plan Water about how that term is used.

Q. But you're not going to take me to Chapter 5?

A. No.

10 Q. No, and I know your planner doesn't as well, and we had questions for your planner, why would you exclude something which appears to be relevant? That's problematic or potentially problematic.

A. So, you mean why would we exclude community water supplies from plan change 7?

Q. No, I mean –

A. Or why has Chapter 5 not been referred to?

15 Q. Yes. That's right. If it is relevant, and it appears to be relevant because it's looking at the values associated, particularly pertaining to drinking water supply, why would you not put that relevant consideration before the Court or why would you not say it is there but we're excluding it for this reason? Why would you, and you know I know because I've issued  
20 a decision on it, so now I'm expecting you to take me through that decision or at least take me through to the parts that we've referenced in that decision as being relevant to this next question of community water supply, because you know I know that they're there and I was of the view then, still of the view now, they're relevant to an interpretation argument?  
25 Also, if you're arguing interpretation, how does one normally go about arguing interpretation? You set out what?

A. Sorry?

30 Q. In any interpretation argument, it's good practice to set out the statutory interpretation principles that you would rely on or that you consider relevant. Then having done so, apply those principles to the words and phrases which you say support, you know, wherever you're going, you know, your interpretation but you haven't done that and I will be looking at this with a view to what do the words say and what was the purpose and meaning? What's the meaning of the words if they're not clear but

what was the purpose in this subordinate piece of legislation. That is what we're meant to do, isn't it?

A. Yes.

Q. Yes. So if that's what we're meant to do, why haven't you done it?

5 A. Well, I have to say I don't, didn't think that there was a question about the, I suppose, importance of community water supplies.

Q. There is a question, is there not, there's no question about drinking water supplies and the Regional Plan says they're important. That's to paraphrase Chapter 5.

10 A. Mhm.

Q. The question in this whole proceeding is whether supply for a dairy shed washdown, irrigation permit, purposes or any other primary sector potentially, potentially also maybe other urban uses but certain primary uses. That's what's in question, isn't it?

15 A. Yes, and I think in part, and I get to the question of drinking water and what that means further in the submissions because I think that on first blush, it's very easy to say well, drinking water is drinking water. It's the stuff we put in our mouths and swallow and but when we work our way through the definition of that, and the way that I suppose the evidence  
20 from the TAs on that issue, I don't think it is quite that simple.

Q. No, because it could also be flushing toilets –

A. Absolutely.

Q. – down at the local warehouse or it could be, you know, any other number of uses, and so in supporting an interpretation of community water supply,  
25 and the range of uses, both for drinking water for community consumption, as well as to be consumed before other residential and other purposes, you know, is it any range of uses for water which community water supply is to capture or is it less than that? That's always been the matter in issue in this plan for community, for the TAs. Is that  
30 not so?

A. Well, I think that the TAs, I suppose, they know a community water supply when they see one in some ways and so, you know, these are often systems that they have provided and had in place for very long periods of time. The question of, I suppose, divvying that up and deciding well how

much of that is really community supply versus something else is perhaps not a level of enquiry that they undertake and I think that also dovetails in part with their other statutory obligations and the scope they have for turning the tap off and on and I do get into that in a reasonable level of detail in the submissions because there are opportunities or risks of those things butting up against one another and other methods, I suppose, through the likes of the Local Government Act and so on that helps manage, I think, the dynamic you're interested in, which is how much of the supply is not drinking water or community. It's these particularly rural uses that –

Q. Which have a commercial end point.

A. Yes.

Q. But then again, you could say so does the toilet at the local warehouse. So –

A. Yeah, and I think –

Q. – it's problematic. It's problematic –

A. Agreed.

Q. – and to be fair to you, any interpretation argument should be founded on statutory interpretation principles, which should be set out in your submissions because all you'll have the Court do is, for the Court to do the work for you but then to decide what interpretation principles apply, then apply them and if you don't like the answer, you'll appeal. It's actually your responsibility to, you know, to set it out and then for us to pick up the argument in those, were those principles being applied. I'll give you a chance to come back to this overnight. It is not just a matter of telling us, look, it's these principles but it's these principles, how are they applied, but the issue, there are infrastructural issues for, you know, I get, I suspect, for the TAs, but there are also issues to do with the take and use of water for a wide range of purposes which this Regional Council says needs to be held for a period of six years until it puts into effect a plan which is compliant with the MPS.

A. Mmm.

1210

Q. Why is it wrong to do so.

A. Mmm.

Q. So this is, I don't doubt that you've got a hard – you've actually got a really hard case, yeah, in terms of, and it doesn't mean to say you're not going to succeed. You've actually got a hard case in terms of trying to both  
5 meet, if you like, the needs of the TA and the Regional Council. They're both important.

A. Yes.

Q. They both have their statutory drivers and they both do, is really the key message.

10 A. Yes.

Q. Now, do you want to continue with your submissions or do you want to reflect on the law?

A. I think I would like to, I think, continue with the submissions. I can come back to you on, I suppose, a more detailed analysis of the interpretation  
15 issue around community supplies if that's necessary but I think that –

Q. It will be necessary if you haven't given me the statutory principles that you rely on.

A. Certainly.

Q. Yeah.

20 A. Certainly, but I think the questions around the inter-relationship between the other statutory obligations, the functions that both territorial authorities, and the Regional Council have, I think we can carry on with that because I think, yeah.

Q. Okay. All right. Thank you.

25

### **MS IRVING CONTINUES OPENING SUBMISSIONS**

So, what I might – yeah, so we're back at paragraph 15. Well, I've read through paragraph 15, so we'll start with 16. So in schedule 1B and 3B, the Regional Plan identifies existing water takes that are used for public water supply  
30 purposes and the schedule identifies that the communities supplied by these takes have come to rely on them for their social and economic and cultural wellbeing and that links to the definition in the Regional Plan around water supply values, which is a term used in Chapter 5, as your Honour has referred to.



**THE COURT: JUDGE BORTHWICK**

- Q. And what is that? Let's now go into the plan because I think it would be helpful to actually track what you are saying through the plan itself.
- A. Do you want to start with the definition of water supply values?
- 5 Q. Yeah, and the policy that (inaudible 12:13:35).
- A. So volume 1 of the common bundle and the definition of water supply values is at the common bundle, page 447. It's tab 2.
- Q. Is this in the definition section somewhere?
- A. In the glossary, yes, which is actually perversely at the back.
- 10 Q. From memory it was the very last page.
- A. In the schedules.
- Q. Of a very long plan. Water supply values. Okay.
- A. So the existence of a take for human consumption which people and communities have come to depend on.
- 15 Q. Okay. So pause there a second. I just want to annotate your submissions. So water, sorry, I've lost the thread. Water supply values, do you mention that at paragraph 16 or are your –
- A. No, I don't.
- Q. Okay. So water supply values.
- 20 A. Yes.
- Q. As defined. And it means the existence of a take?
- A. For human consumption.
- Q. For human consumption.
- A. Which people and communities have come to depend on.
- 25 Q. Just pause there a second. And you've referenced that because you know I know about it or you've referenced that because it fits into an argument?
- A. No, I was actually, I picked up on that when I was looking back at the glossary for another issue actually and noticed water supply value sitting
- 30 there with a definition which I thought was odd and I hadn't picked it up when I was working my way through the plan in relation to the terms around community supply and so the term water supply value is the one that is used in Chapter 5 and the use and developments, if we're looking at Chapter 5, it's picked up in 5.2.1 as, in issues.

Q. 5. what?

A. 5.2.1, which is the issues that the use and development of water resources may have the potential to have adverse effects on water supply values and then in Policy 5.4, which is to identify the following natural and human use values supported by lakes and rivers, which is the policy that gives rise to the schedules, so in this case Schedule 1B and 3B, which identifies the supplies for public water supply purposes.

Q. So Schedule 1 and 3B say?

A. Yes.

10 Q. But even 5.3 or –

A. 3B is the groundwater takes.

Q. But only Schedule 1 is actually referred to here.

A. Yes, that's correct.

Q. That's probably a fact that a groundwater is being – is groundwater being utilised to supply drinking water, water for human consumption or don't you know?

A. I don't know the answer to that off the top of my head.

Q. Okay. So at least Schedule 1 because Schedule 1 is actually all that's referred to?

20 A. Yes.

Q. Okay. So anyway, so identify human use values in Schedule 1 and that includes human use values, including water supply values, which are the values which for human consumption. That is to come in Schedule 1?

A. Yes.

25 Q. Right.

A. And so Schedule 1B includes that list of existing, what are referred to in the schedule as public water supplies are primarily the water supplies operated by the territorial authorities.

Q. Just pause there a second. So Schedule 1B is a schedule of water supply values which water supply values is defined as being a take for human consumption.

A. Yeah, so if you look at Schedule 1B, which is common bundle page 352, we've got schedule of water supply values and this schedule identifies the existing water takes from lakes and rivers where water is taken and used

for public water supply purposes and the communities identified in the schedule have come to rely upon these water supplies to provide for their social, economic and cultural wellbeing.

1220

5 Q. And so the interpretational question for you is whether water supply values, which are defined to, and it means human consumption, is used differently in this schedule.

A. Yes.

10 Q. And I didn't think necessarily that that was the case, although it may well have been implemented by District Councils that way but the water supply values are those which are there for human consumption?

15 A. That's correct and then when we look at the provisions around, in Chapter 6, that's where we start to see a different, different terms used around the likes of the registered community drinking supply, community supplies and so on. So there is a bit of a disconnect between Chapter 5 and the provisions in Chapter 6.

20 Q. And this is where the legal statutory interpretation, the principles established by case law become really important. Is there a gap between the two chapters, any inconsistency between the two chapters, or can they actually be reconciled according to their purpose. That's all statutory interpretation stuff and that's where the law becomes really important. All right. Any other policies in Chapter 5 because I know that they are?

A. (No audible answer 12:22:00)

25 Q. I'll give you a hint. It's Policy 5.4.2. It's not in your planning evidence but it's there.

A. Yes.

30 Q. So the management of any activity involving surface water, groundwater, dead or margin of any lake or river, to give priority to avoiding in preference to remedying or mitigating water supply values in Schedule 1B?

A. Yeah, adverse effects on the water supply values in 1B. So I interpret that to mean that other activities need to be managed to avoid effects on the water supply values rather than remedy or mitigate those effects.

- Q. Yeah, avoid in preference, it's quite a clear statutory direction but again, water supply values, is that for the purpose of the defined term, which is for human consumption, or something else? And this is where you start to get tension with TAs taking water for a whole host of activities, which in combination with land use –
- 5 A. Yes.
- Q. – have the potential to impact drinking water?
- A. Yes.
- Q. And so then how is – and that's the perversity, if you like, in terms of a take for a range of uses and then how we're managing that or reconciling that under this plan?
- 10 A. Yes, and I think perhaps the issue that came up, I think, in the Clutha case that you are familiar with, was the use of the water for the dairy shed washdown and so on and whether or not the effects of that use would then effect the consumption or the human consumption values and I think the question then is, is that an effective use of water or is that an effective discharge following the use of that water?
- 15 Q. Or is it an effect of associated land uses but –
- A. Yes.
- 20 Q. – and how does the plan in any integrated sense deal with that.
- A. Yeah.
- Q. Who knows.
- A. Yeah. I mean I think the Clutha example is, like we so often find in this case, you know, that's a, certainly based on the evidence, a bit of an outlier in terms of the proportion of water that is utilised for other uses.
- 25 Q. The planner needed to be saying this. I think your planner needed to have been dealing head-on with Chapter 5, particularly in light of an adverse court decision only late last year and needed to be saying Clutha in that one take is an outlier. Actually everybody is pretty much primarily for human consumption, which I don't assume it means just drinking water. It could be any flushing of a warehouse, you know, but needed to be dealing with that as opposed to present uncertainty, but we can follow-up or you can follow-up in questions with that.
- 30 A. Yes.

Q. But your task is what are the water supply values which are there in that schedule? Is it for human consumption or is it, and what does that mean or is it a range of other uses, including the ones noted in, which really the Court was quite troubled about in Clutha?

5 A. Yeah. I can give more detailed thought to that particular issue.

Q. Because I think it's all statutory interpretation to be fair.

A. Yes.

Q. Yeah.

A. Yeah. Shall we carry on?

10 Q. Okay.

A. So the question of community supplies also comes up in Chapter 15, which is the chapter identifying the non-regulatory methods that may apply and that is common bundle 262 and so the relevant provision is 15.2.1, which relates to the restrictions on taking water. So it seems to me that that is anticipating that the uses that aren't human consumption, or at least hosing restrictions –

15

Q. So watering your garden?

A. Yes.

Q. So here you're using human consumption – I had wondered whether human consumption means more than just drinking it but, and again, looking forward to hearing from your planner on that, and also your submissions on that but anyway, community supplies, how does that help us? Yeah, hosing restriction. I wasn't aware of that but I mean, you know, you kind of expect it but so ORC to talk to TAs –

20

25 A. Yes.

Q. – when the consumption of water in a community supply, okay, which is not a defined term.

A. No.

Q. Okay.

30 A. So basically, when, as a catchment comes under pressure and water users generally are beginning to experience shortages, the expectation will be that community supplies will also sort of do their bit by dealing with, what they're referring to is hosing restrictions, and this, I think, dovetails, as I say, with the other statutory frameworks that the TAs work with in

relation to this around water conservation management plans and so on and I think is a acknowledgement perhaps of the practical circumstances we're dealing with with this infrastructure where there are a range of activities and uses that water is put to within a single system and that within that there will be some levers to pull to reduce consumption if that's necessary at particular points in time but –

5

Q. Is that limitation just one of watering, hosing?

A. Well, I think –

Q. I mean I'm assuming hosing means watering parks and gardens?

10

A. Yes, and I think that's right of this liaison provision.

Q. Of this particular provision.

A. Correct.

1230

Q. It's just hosing.

15

A. Yeah, but there are other, as I say, mechanisms that the TAs work with that covers a broader range of issues, which I talk through later in the submissions.

### **MS IRVING CONTINUES OPENING SUBMISSIONS**

20

So I was just, the purpose of that was to really try and pick up on the various terms that are used in the plan and I think, as you work through the plan, it is a little bit, probably generous, but disjointed but that's what we're working with.

25

So I think then I want to turn to what the TAs view is of what community water supplies encompass, which is discussed in the evidence of Mr Greenwood (now Ms Muir), Mr Heller and Ms McGirr and they talk about the existing community water supplies, providing potable water for a range of purposes, including human consumption, commercial and industrial activities and a small proportion of rural uses. The water is distributed via schemes that generally don't distinguish between uses and the TAs regulate the delivery of water within their

30

community supply network according to other legislation. In particular the Local Government Act and the Health Act and under the Local Government Act, it is common for the TAs to establish bylaws for this purpose. Now, other parties, particularly the Ministry for the, or the Minister for the Environment, have suggested that it may be appropriate to provide a carve out from Plan Change 7

for drinking water and it appears from that evidence that drinking water is intended to be a narrower subset of water provided by community water supplies managed by the territorial authorities. Now, drinking water is a defined term under the National Planning Standards, meaning water intended to be used for human consumption and includes water intended to be used for food preparation, utensil washing, and oral or other personal hygiene. As Mr Twose sets out in his supplementary evidence, drinking water has been consistently defined in the Planning Standards 2019, the Resource Management Environmental Standards for Sources of Drinking Water and the Drinking Water Standards for New Zealand 2005. Under section 69G of the Health Act, drinking water is defined slightly differently. It is water that is potable but excludes stock water or irrigation water that does not enter a home or building for drinking, food preparation or domestic use. Now, to understand the provision of drinking water by territorial authorities, it is useful to consider what they actually do. They abstract water from a source, convey it through infrastructure to a treatment plant and treat it so that it may be made available for human consumption. TAs then distribute drinking water from that treatment plant through their networks to a point of supply on a connected property. All of that water is treated to a level intended for human consumption. It is submitted that whether the drinking water is actually consumed by people or used for sanitary purposes is not the determinative feature of drinking water. Concerns about other uses of potable water after it enters the distribution network misapprehends the intention and effect of treating water to a potable standard. The reason water is taken by TAs and treated is to make it fit for human consumption, food preparation and sanitation purposes. The definition reflects this by referring to water intended to be used for human consumption. Water taken for community supply becomes drinking water when it is treated and made potable and able to be safely consumed. It is submitted that this interpretation of the definition aligns with the reality of operating these schemes. It would simply not be practical to separate the provision of water that is actually consumed by humans from water delivered by the same system and used for other purposes. In fact, TAs are not empowered to turn the tap off completely and that was brought in by virtue of an amendment to the Health Act where the territorial authorities power to stop providing drinking water services was

completely repealed. The Local Government Act 2002 provides a limited range of circumstances where water supply can be restricted, and those powers are subject to the TAs obligations pursuant to the Health Act. . Under the Health Act TAs are required to take all practicable steps to ensure that an adequate supply of water is provided to every point of supply.

**THE COURT: JUDGE BORTHWICK**

Q. Just pause there for a second.

A. And what I –

Q. No, can I just, sorry, I just need to read and absorb it and I'll come back to you with any amplification. Yeah, and what do you want to say?

A. I just wanted to, just missed a footnote there. The adequate supply is a defined term in the Health Act, meaning in relation to drinking water supplied to a property, means either the minimum quantity of drinking water that is required by the occupants of that property on an ongoing basis for their ordinary domestic food preparation use and sanitary needs or if there are regulations made the prescribes the quantity of drinking water, or a formula for it, then whatever that quantity is.

Q. Pause there a second.

**20 MS IRVING CONTINUES OPENING SUBMISSIONS**

So, the quid pro quo of being provided with water for water users is set out in Local Government Act, section 192, which obliges them to avoid wasting water. TAs seek to manage this through the implementation of Water Conservation Management Plans that set out the methods to be adopted to ensure that water is used efficiently and the steps that will be taken if water supply shortages are experienced. And again, Councils may also establish bylaws for this purpose. In my submission, this means there's a degree of overlap between the TAs Local Government Act obligations and their obligations under the Resource Management Act. In section 14(1)(h) territorial, and this is under the Local Government Act, territorial authorities must act in accordance with the the principle of sustainable development including taking into account the social, economic and cultural wellbeing of people and communities, the need to maintain and enhance the quality of the environment and the reasonably



foreseeable needs of future generations. So their obligations and the purpose under the Local Government Act directly reflects the purpose under the Resource Management Act. The two things need to mesh together in order to allow territorial authorities to carry out all of their functions. And I just there the proposed definition of community water supply that was included in the outcome of the planners joint witness statement. The proposed definition I think picks up the key aspects of water supply, including the TAs obligations under the Health and Local Government Acts, and the fact that the schemes provide drinking water for a range of uses, not just human consumption.

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

Q. Yes, and that's the thing that you're going to have to grapple with. I mean I understand the infrastructure, at least from the Clutha case. I just I had that in mind and you reflect that back in your submissions, that the TAs are treating all water to a human consumption standard and that's fine. The fact that you deliver it to mechanical workshop is neither here nor there. It's treated to that standard but that's not, that is not the issue that we're dealing with here. The fact that they have to treat it to a certain standard does not mean therefore, is that to confuse, and I'm sorry, I'm not sure where you're, I haven't quite pinned where you're going with the statutory interpretation. Are you interpreting the, something, either the Regional Plan or PC7 you want to now come on PC7, by making the equivalent the treatment standard of water to the purpose for which water is supplied or the value of the water in terms of the Operative Plan definition. Now you're losing me because the treatment standard is not equivalent.

15

20

25

A. So this is, I think, I mean I keep saying this is all very hard but –

Q. It is to be fair. You've actually got one of the harder cases because it is hard because your clients are actually supplying for a full range of uses, which this Regional Council says may be drink water, human consumption excluded but hey, why are you continuing to supply, and the good example is dairy shed, when we've got PC7 sitting there.

30

A. I think –

Q. PC8 sitting there.

A. Yes. I think that the key, I suppose, feature for me was in the definition of drinking water and what is drinking water and it's not just water that is consumed. It is the water intended for consumption. So when I look at  
5 the way that councils operate their water supply infrastructure, it is drinking water when it has been treated and it's ready for that purpose. Whether it actually goes out into the network and is used for that purpose I don't think matters in terms of whether or not the whole take, I suppose, should be captured by Plan Change 7, I think that there are the other  
10 mechanisms that the territorial authorities use through the Local Government Act and the Health Act and so on that manages the, I suppose the demand side when there are restrictions or issues around the availability of that supply but that the significance of water supply being available to the community is such that we shouldn't be, I suppose,  
15 shutting the gate on those wider range of uses prior to, I suppose, the treatment plant.

Q. So again that's a statutory interpretation approach, both statute as well as the Regional Plan. It has to be founded on statutory interpretation principles which apply to the argument that you're running, including  
20 potentially provisions within legislation and provisions within PC7 and the Operative Plan, which in some way are inconsistent, would require a finding of inconsistency or not and trying and always with a view to interpreting or smoothing out any inconsistencies such that the purpose of the provisions that you are relying on can stand according to their  
25 purpose. It's all statutory interpretation. You're not there. Well, your proposition is, as I understand it, that if a TA treats water to a standard which is fit for human consumption, the purpose of its use is irrelevant and completely irrelevant. Is that correct?

A. Yes, I think that's right.

30 Q. With that in mind, you need to go back and now, with that principle in mind, the use of the water which has been treated for to a standard for human consumption is irrelevant. You now need to land that potentially both in your TA-type, you know, LGA, Health Act, blah, blah, blah, you know, that and the Resource Management Act itself, just to iron out or

see whether or not there's any inconsistencies in provisions and then you also need to do that, I think, within the Regional Plan itself and PC7 but is that your key proposition provided that the TAs treat water to a standard which is fit for human consumption, it's use is irrelevant?

5 A. Yes.

Q. All right. Now, I understand the key proposition. You've got some work.

A. Linking that through.

Q. You've got some work, yeah, and do you appreciate why I'm saying there's some work here?

10 A. Yes. Yeah, no, I understand the issue.

Q. Okay, good. All right.

### **MS IRVING CONTINUES OPENING SUBMISSIONS**

So turning to the territorial authorities obligations to provide water infrastructure.

15 So under the Local Government Act and the Health Act, the TAs are tasked with providing safe drinking water, maintaining that existing water supply infrastructure, protecting water supply as a lifeline utility, anticipating future demand for water supply and planning for future growth and capacity. The TAs must develop long-term plans to satisfy these statutory objectives. Under the

20 Local Government Act 2002, section 93 requires the territorial authorities to have a long-term plan which identifies the work they will do over at least 10 years and the funding required for that work. In the LTP, the TAs set out how they will achieve identified community outcomes and at what cost. Generally, 25 to 35% of a TAs LTP expenditure relates to three waters infrastructure. So

25 that's stormwater, water supply and sewerage infrastructure. A TA must ensure prudent stewardship and efficient and effective use of resources in the interests of its district and planning effectively for future management of assets is specifically recognised as part of this duty. It is not one the TAs cannot abrogate responsibility for. The TAs must also, as part of the LTP process,

30 prepare an infrastructure strategy identifying how community water supply infrastructure will be managed for at least 30 years. The strategy must include indicative estimates of expenditure for the first 10 years of the strategy and for each subsequent five-year period following that. To provide projections like this, TAs must canvas scenarios about the levels of service, life cycle of assets

and the level of certainty in the assumptions underpinning the canvassed scenarios. It is submitted that the six-year term in Plan Change 7 is at considerable odds with the long-term planning horizons that territorial authorities must operate to under the Local Government Act. Turning to the

5 Health Act. Drinking water is governed by Part 2A of the Health Act and the purpose of this is to protect the health and safety of people and communities by promoting adequate supplies for the safe and wholesome drinking water from all drinking water supplies. The public health obligations on TAs with respect to water supply are significant. As drinking water suppliers, TAs must

10 take all reasonable steps to protect the source of their water supply and that in all aspects the drinking water supply system is free from contamination. They must have a water safety plan which is reviewed every five years with respect of their network. In addition, they must monitor the supply and ensure it complies with Drinking Water Standards. The Standards divide the drinking

15 water supply system into source, the treatment plant, and the distribution zone. This encourages management and planning to be structured across these three areas. Compliance with these obligations is supported by the territorial authorities work programmes through their infrastructure strategy and long-term plan. Turning to the Regional Council and the TAs respective functions under

20 the RMA. Those are obviously set out under section 30 and 31 and the ORC and TAs have some shared obligations with respect to integrated management and to ensure sufficient development capacity. Starting with development capacity, in response to current housing shortages, an obligation to ensure sufficient development capacity has been placed upon both the Otago Regional

25 Council and the territorial authorities. Development capacity, in sections 30 and 31, has the same meaning as in the NPS for urban development and therefore includes network infrastructure for water supply. It is submitted that limiting community water supply permits to six years and not enabling the provision for growth is likely to compromise the ability for sufficient development capacity to

30 be provided, particularly in the medium term, being three to 10 years as it will inhibit investment, long-term planning and development.

**THE COURT: JUDGE BORTHWICK**

Q. Just pause there. So what is the meaning of development capacity in that you've got at paragraph 48? Is that a defined term somewhere?

5 A. Yes, it is. It's in the National Policy Statement for urban development, which is in the common bundle at tab 6, at page CB787.

Q. And I'll just read that to myself.

A. Certainly.

10 Q. So development capacity in the NPS Urban Development 2020 has two components. It's the capacity of land to be developed for housing or business use and it's based on zoning and adequate development of infrastructure to support the development of housing and business use and my question for you is, housing – no. All about business use or business the meaning of business use referable from the definition of business land?

15 A. No, there's no definition of business use.

Q. And what about business, yeah, but can that be, is the meaning to be ascertained from business land, business use or business land?

A. Yes, I think that would be right.

Q. Yeah, okay.

20 A. So land zoned for those purposes.

Q. And it's in an urban environment?

A. Correct.

25 Q. And so this submission, and again bearing in mind we're dealing with rural TAs as well as urban TAs, or I suppose they will have an element of urban, is this submission focused on urban environments or is it focused on rural and urban environments?

A. I think it has to cover both because in –

Q. Now, that's statutory interpretation, so why are we now looking at the rural environment?

30 A. Well, I think there's the Council's obligation to provide the infrastructure applies to not just it's urban environments. This submission is in relation to the Council's functions in relation to development capacity, so to that extent, it will apply where we are dealing with an urban environment as it's defined. So that is limited but I'm, the point is that the TAs will provide

water infrastructure to communities that may not qualify as urban environments under the NPSUD. This is part of the equation, not the complete equation.

5 Q. This is statutory, this is again statutory because I read this, and I think you are correct insofar as TAs have to provide water for housing.

A. Yes.

Q. And that could be urban or rural, it doesn't really matter where its location is but business starts to bite in terms of where it's location is or do you say that's wrong?

10 A. Well, I think that we've got to go back to 1.3 of the NPS, around the application of the policy statement, which is to apply to urban environments.

Q. I haven't got it printed. Okay.

A. So have you got common bundle 786?

15 Q. No, and I seem to be missing – 786, maybe we do. Okay, 1.3.

A. Yes.

#### **THE COURT: COMMISSIONER EDMONDS**

Q. And there's a definition of urban environment?

A. Yes, that's right.

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

Q. Yes.

A. So I think in terms of the application of the NPSUD, that is going to apply to those urban environments as defined.

Q. Yeah.

25 A. And so the submission in relation to the functions, the development capacity, are linked to that. So it doesn't extend to the communities that the Council may provide drinking water or water supply to that are outside an urban environment.

30 Q. So I've annotated your submission adjacent to the subtitle development capacity at page 9 to say this submission is limited to urban environment.

A. Yes.

Q. Okay.

A. So I think, and I think that the issue of providing infrastructure, development infrastructure, will be to housing and business land within urban environments.

Q. Right.

5

### **MS IRVING CONTINUES OPENING SUBMISSIONS**

So the submission is that impeding the planning and development for network infrastructure for water supply by truncating the term and scale of community supply permits is contrary to the Regional Council's obligations under section 10 30(1)(ba) and potentially places the territorial authorities in the position of being unable to satisfy their development capacity obligations pursuant under section 31(l)(aa).

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

Q. Where are you reading from?

15 A. This is my submissions.

Q. Sorry. Did you read paragraph 49? I might have had my nose stuck in an NPS.

A. Yes, I did.

Q. Okay. Why did you say three to 10 years?

20 A. Well, it was – so that's the medium-term time horizon within the NPS and the six-year term under Plan Change 7 sort of fits in the timeframe that the territorial authorities will be planning their infrastructure or implementing infrastructure, infrastructure upgrades to provide development infrastructure in that particularly three to 10 year medium-term window. So because of the way that the NPS for urban demeanour 25 anticipates that Councils will try and get ahead of housing demand, business land and have the infrastructure ready, the reality is they need to be moving say now to put in place water supply infrastructure to provide that development capacity in that three to 10 year window.

30 Q. So I found that there is a definition of medium-term and it is as you say three to 10 years in the NPS for urban development.

A. Yes.

Q. And six is sort of half way there and you're – so what is your submission in that regard? Are you saying that if it were 10 years at least, that that would dovetail with the medium-term or the, you know, the full extent of the medium-term?

5 A. So what you'll hear and probably read in the evidence from the territorial authorities is that, and particularly within Central Otago, there are works planned like in the next year to two years to improve water supply infrastructure and to anticipate the growth that they have seen or are seeing and their evidence is that because of their other obligations around  
10 prudently managing their infrastructure and so on, a six-year renewal for those permits is going to present some significant challenges for them in terms of whether to push ahead with that work and run the gauntlet on whether or not those consents get renewed in six years' time or whether they have to push pause on those projects to await the outcome of the  
15 subsequent renewal.

Q. And so again –

A. And then that puts them in a position where they are behind on providing their development infrastructure under the NPSUD.

20 Q. So the uncertainty again is not so much Plan Change 7 but it's the plan to come and any changes in the plan to come which is, you know, the plan which is fully compliant with the NPS for fresh water?

A. In some respects, yes.

Q. In all respects. Is that not where your uncertainty goes?

25 A. Well, I think, I think the, one of the primary reasons that Mr De Pelsemaeker gave for preferring a six-year term rather than longer terms and then relying on review, was his view that the Council needed to be able to essentially refuse consent. So the territorial authorities have to operate on a basis where at the end of that six-year period, they may not get a consent back.

30 Q. Now, if the consent is for water which use is human consumption, how likely do you think that is, given what the RMA also has to say about human consumption.

A. Yeah. Yeah, and I think that's a, you know, that's a good question. You would assume or you could assume that it's really unlikely that the



Regional Council would want to refuse a consent for community supplies of drinking water.

5 Q. Well, I'm actually being very specific here. I'm here actually saying whether taking is actually for human consumption. So that's my proposition.

10 A. So I think that, I think it's right. So it's unlikely. So my question, in relation to this, if it is that unlikely, why not grant a longer term consent and if there needs to be a review in order to implement a minimum flow, then that could be done. We know that with the territorial authorities we're dealing with a relatively small number of permits and the infrastructure is of such importance to these communities that I don't think, or my submission is that the term of the consent should be shortened because as you say, why would or how – why would the Regional Council want to refuse a renewal of that application but if the term is critical, and that's what the 15 TAs are telling you, to their ability to invest in the infrastructure in the interim and to deliver on their long-term planning obligations, then let's give them the time to do that.

20 Q. Well, probably two responses to that. Firstly, it does rather depend on the use for which water is put to and your submission is the use is irrelevant provided TAs treat to a drink water standard, that is all that is relevant. So maybe the Regional Council is rightly concerned as to the use in an integrated sense because that's what's coming, land and water. It is concerned about the use to which water may be put. So that might be room for movement for your client if it is – if the take and use is for 25 human consumption, then maybe there's less of a concern but it may be that it is quite considerable concern if the use to which the TAs may put the water is irrelevant, none of the Regional Councils concern. That's quite a different proposition.

A. Yeah.

30 Q. And I'm going to leave it there. You think about it over lunch. You think about it over lunch but I think you've just confirmed yes, your problem is not with this plan. Your problem is that the consenting environment might change under the Land and Water Plan and so what you're doing is trying to manage your risk by obtaining long-term consents.

A. Yes.

Q. Where use is taken away, effectively removed from the Regional Council under your argument.

A. I'm sorry, can you repeat that?

5 Q. Where the use of water is effectively removed from the purview of this Regional Council, its oversight. Its regulatory oversight and its obligations.

A. Yeah. I'm not quite sure.

10 Q. Well, you've said to me that the use of water is irrelevant and I would have thought, yeah, that's a statutory interpretation matter because I think this Regional Council's got statutory obligations there.

A. Yes. Yeah. Yeah, there's a few parts to that question.

15 Q. Yeah, there is a few parts, but there's also, if you're going to grasp the medal, surely it is actually agreeing to recognise that both take and use are matters in relation to which the Regional Council itself has statutory obligations. Both are relevant, treating to a drink water standard and use for human consumption means whatever it means, might be a way through this but it's, it just seems, yeah, anyway. Okay. All right. Time for lunch. Back at 2 o'clock.

20 **COURT ADJOURNS: 1.07 PM**

**COURT RESUMES: 2.02 PM**

**THE COURT: JUDGE BORTHWICK**

Over to you, Ms Irving.

**5 MS IRVING CONTINUES OPENING SUBMISSIONS**

So we were up to paragraph 51 on page 10. So turning to integrated management. Now, the Regional Council is required to manage natural and physical resources in an integrated way and it is submitted that integrated management in this context is a systemic obligation requiring integration across  
 10 RMA documents, agencies, legislation, and time. Therefore, the ORC must ensure that Plan Change 7 achieves consistency with superior RMA documents, co-ordination with other territorial authorities and agencies so provisions work together, co-ordination with TAs so that various functions can be achieved, and that the decision-making is forward-looking. It is submitted  
 15 that Plan Change 7 conflicts with the ORC's integrated management obligations under the RMA due to its inconsistency with higher order planning documents, including the NP-FM second priority in Te Mana o te Wai; the National Policy Statement for Urban Development and the Partially Operative Regional Policy Statement and the adverse impact that this has on the territorial authorities  
 20 long-term planning imperatives both in the RMA context and under other legislation. So turning first to the National Policy Statement for Fresh Water Management. In the NPSFM 2020, the hierarchy of obligations in Te Mana o te Wai prioritises the health needs of people above everything except for the health and wellbeing of water bodies and freshwater ecosystems. It is  
 25 submitted that the role of community water supply is to provide for the health needs of people placing it in tier 2 of Te Mana o te Wai. Plan Change 7 as notified

**THE COURT: JUDGE BORTHWICK**

Q. Is that right? Well, it may be right in some instances but is it right in every  
 30 instance, as far as the distribution of water goes across the TAs network?

A. In terms of the, is this a question about the various uses that –

Q. Yeah, it's again it's a use question.

A. Yeah. I think that there will be some shades of grey in individual circumstances where the, and I think, you know, if we take the Clutha example, that the extent of water used for those rural productive purposes wouldn't fit within the tier 2 category but I think, looking more broadly and

5 at the other schemes that we're talking about here, then yes, I think that those community supplies are for the health needs of people.

Q. Can I ask, is your planner or perhaps your representatives from the TA or in fact both, are going to be addressing the schemes and the purpose, yeah, and what uses of water those schemes have? Has there been any

10 considered analysis of that, to substantiate your submission that –

A. Yes.

Q. – the Clutha scheme, now in appeal, is an outlier?

A. I think they will certainly be able to answer questions about that issue if you're after more detail on that.

15 Q. Well, to have any confidence in your statement that they are in fact an outlier, you will need to lead evidence.

A. Certainly.

### **MS IRVING CONTINUES OPENING SUBMISSIONS**

20 So paragraph 57, Plan Change 7 as notified, and the 14 March version, treats all water uses equally and in my submission, this fails to recognise the priority accorded to water uses that support the health needs of people. Counsel believes it is agreed by all parties that Plan Change 7 needs to give effect to the NPSFM to the extent that it can and the blanket approach to all water uses

25 taken under Plan Change 7 doesn't do that. A more nuanced approach to community water supplies is required, in my submission and this now appears to be addressed to a degree in the amendments set out in the Planning Joint Witness Statement, although, it is submitted that more is required, particularly with respect to the provisions that will apply to new water permits. Turning to

30 the Partially Operative Regional Policy Statement, so this was developed with reference to the National Policy Statement for Freshwater Management 2014, and Plan Change 7 must give effect to the provisions of that document. Community water supply supports the outcome identified in Part B of Chapter 4 of the Partially Operative Regional Policy Statement that communities in

Otago are resilient, safe and healthy. Objective 4.3 requires that infrastructure is managed and developed in a sustainable way and the Proposed Regional Policy Statement affords protection to community water supply as a regionally significant infrastructure where it qualifies as a municipal infrastructure and/or  
 5 as a lifeline utility.

**THE COURT: JUDGE BORTHWICK**

Q. Just pause there a second.

A. And I have included in the footnotes there the references to the definition of municipal infrastructure. Do you want to go to that or would you be  
 10 happy to look at that later?

Q. Well, my question for you is does the RPS, proposed RPS, does it have a definition of community water supply or does that have a definition of a regionally significant infrastructure?

A. Yes, it does.

15 Q. So it does have community water supply as defined term?

A. No, it has a definition of regionally significant infrastructure.

Q. And you're saying that community water supply, where there is no purpose attached to the same, is regionally significant infrastructure?

A. In part.

20 1410

Q. In part. What do you mean by that?

A. Well, it again, I think it will come down – so if we, perhaps if we go to the definition of municipal infrastructure, which is at page CB651, so it's tab 3 of the common bundle.

25 Q. Just pause there a sec.

A. Tab 3, CB651.

Q. Right. Haven't got that one. Have I got that with me? No, I haven't got that with me. CB?

A. 651.

30 Q. Just pause there a second. I've got that and what are we looking at?

A. The definition of municipal infrastructure.

Q. And I'll just read that to myself. So I've read that. The definition dealing with aspects of Three Waters.

A. Yes.

Q. And limited to urban environments, which means Dunedin, Queenstown and Oamaru and any other urban area within Otago.

A. Yes, or –

5 Q. Which qualifies under the NPS for urban development capacity, on urban development capacity.

A. Yes, and (b) an area of land containing et cetera, et cetera.

Q. Et cetera, et cetera. So and again to understand, and this important because you've got various TAs which don't look like each other.

10 A. Mhm.

Q. Dunedin does not look like Clutha District for example.

A. Yes.

Q. I don't know. This submission is made as if it's to read or applies equally to all territorial authorities and maybe it does because there's urban areas which qualify under this definition but again, because I don't have evidence before me as to the area that the TAs are reticulating water to, I don't understand how your submission would apply to all areas of reticulation.

15

A. Mhm. I think, if I can perhaps assist in part on that, there are, in the evidence there's a discussion of which territorial authorities have permits that come up for renewal in the life of Plan Change 7 and that is Queenstown and Central Otago.

20

Q. It's your submission on the prior page, at 59 say, there is a problem for those who are going to apply for new water permits. So it's not just replacement consents and we can have a look at them, but it's also new water too.

25

A. It is and I think each of the territorial authorities have assessed what, because of their long-term planning processes, what may or may not need to be applied for within the period and we, I think in the evidence, Mr Heller, Ms McGirr and Mr Greenwood identifies the projects that will fall within the life of this plan change. So I think there is or can be drawn from that evidence the extent to which there are areas of municipal infrastructure or urban environments that are affected by Plan Change 7.

30

Q. So it's going to be important, for me personally, having gone through the Clutha District Council appeal, to understand the four corners of the relief sought by territorial authorities and as I said before, whether Clutha District Council is simply an outlier or whether that actually applies generally across all territorial authorities. It's your responsibility, I think, to lead that from your witnesses and again I just, I'm struggling to understand the ambit of the submission. You know, is it just about municipal authorities and urban development or is it actually any person to whom that TA may choose or contract to supply water? Certainly your planner's evidence brings in everybody. So I don't know where you, you know, you need to be clear what your ambit is. If you haven't satisfied as to ambit, you're almost certainly going to luck-out on this process. So you need to be, your witnesses need to be clearer. So this submission, is this to do with your urban authorities and specifically urban authorities and their interest in your municipal infrastructure in urban environments as defined in this document?

A. Well, that, I mean that's the extent to which the provisions of the RPS will guide what needs to be in Plan Change 7, so where we are dealing with municipal infrastructure within an urban environment, then the objective and policies that apply to that infrastructure in the RPS need to be given effect to. Now, I think Mr Twose will be able to speak to this further but there are urban environments within Central Otago and Queenstown that are being provided water supply with permits that will need to be renewed, replaced or sought during the life of Plan Change 7. So to that extent, these definitions are relevant to Plan Change 7. The next part of the submission –

#### **THE COURT: COMMISSIONER EDMONDS**

Q. The area of land containing or intended to contain a concentrated settlement of 10,000 people or more, I mean how many locations are we talking about in that category, rather than being so general about it that I haven't got a picture. I mean Central Otago hasn't got a huge population for example.

A. No, it doesn't. I mean Cromwell, and this is discussed in Mr Greenwood's evidence, has been through its spatial planning exercise and identified its urban environment as being one captured by the NPSUD and I think Queenstown have done, Queenstown Lakes have done the same and from recollection, they have essentially identified two urban environments that encapsulate urban environments within the Wakatipu Basin and urban environments within the Upper Clutha.

Q. So that's all you're –

A. Those are the ones that are relevant in terms of the –

10 Q. The argument you're advancing now?

A. – Council's, yeah, that have permits that need to be renewed or replaced within the life of Plan Change 7.

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

Q. Replaced. When you say renewed, you mean replaced, don't you?

15 A. Well –

Q. Technically, because you never renew anything do you? You replace it.

A. Well, that, yes, that's right.

Q. Yeah. Okay. And so I'm not sure why you need to draw a link between community water supply and regionally significant infrastructure. I'm not sure where you're going there but what you're saying is that the RPS has policies about municipal infrastructure.

A. Mhm.

Q. And we'll look at that. Don't, you know, don't make it more difficult for the TAs by saying oh, that's community water, if your definition of community water is just simply treating all water which is treated to the drink water standard which is a water regardless of its purpose because here now there is a purpose, which is, you know, municipal water supply within urban environments.

A. Mmm.

30 1420

Q. And it's defined. Well, that's a purpose.

A. Yes. The other component of the provisions in the RPS is around lifeline utilities, which –



Q. What does that mean?

A. Lifeline utilities has its own definition in the Civil Defence Emergency legislation and relevantly includes an entity that supplies or distributes water to the inhabitants of a city, district or other place. So there are – so that's probably slightly broader than the definition of municipal infrastructure but –

Q. Yes, but what does it mean for this case? Does it mean you can start irrigating land with it?

A. Beg your pardon?

Q. Does that mean then you can irrigate farm land?

A. No, I don't think it does mean that.

Q. Okay. All right. And again, don't make it harder for the TAs. You know, there's, you're going to have to overcome the doubt in my mind created by evidence which is yes, you can have all of these other non-urban activities and non-residential activities and it's perfectly, and you don't have to look at use, just supply for whatever, just supply. The region's only got an interest in the supply side of, in the fact that you are taking, not in the use of it because that's your case, isn't it, regions not interested, has no, should not be encroaching –

A. Well, I think, I mean the applications, if we work through I think what would occur, is the territorial authorities will make an application to replace their community water supply permits and I appreciate that in the Clutha example, there was not a whole lot of enquiry or information provided in the application around the use and that, that was one of the issues that I think exercised your Honour in that case was –

Q. Well, to be fair, that's right, because it wasn't disclosed by Clutha District Council that there were a number of rural uses.

A. Yes.

Q. Goodness only knows why you think you can use the water for that seeing as there was a taking use application but anyway, regions not taking any issue with that. So the fundamental problem with the application going forward.

A. Yeah, and I acknowledge that that was a particular, that created an issue in that case. I don't think that that means that every application for

community water is going to suffer from the same issues and I think if we

–

5 Q. And that's for your witnesses to actually satisfy me about that because they haven't, because those range of uses are clearly envisaged in the planning evidence and I'm not sure what you are saying. I'm not sure where you're going with it.

A. Yeah.

Q. And I need to know the four corners of your case.

A. Understood.

10 Q. So what is the submission. This submission is about, it's about it's a limited submission and it's dealing with municipal infrastructure and urban environments. That's all it's doing.

A. Yeah, so I think, I mean like, I mean as you know, this plan change needs to give effect to the provisions of the Regional Policy Statement. So to 15 the extent that community supplies that also qualify as municipal infrastructure, are captured by Plan Change 7, then the objectives and policies associated with that infrastructure need to be given effect to.

Q. Mhm.

A. So at 65, I talk about Policy 4.3.1 and 4.3.3, where the ORC is required 20 to provide for the functional needs of the infrastructure captured by those provisions and in my submission, the treatment of lifeline utilities and municipal infrastructure within the RPS protects and provides for community supplies at a higher level of priority than other water takes and this is consistent with its status as a tier 2 priority under the NPSFM. So 25 I take your point that we need to establish the extent to which community supplies are health needs or providing for the health needs of people and that that's a question we need to flesh out the answer to.

Q. Yeah. So, where there was a definition of lifeline?

A. Yes, that's in the Civil Defence Emergency Management Act.

30 Q. Okay. Not in the RPS?

A. No.

Q. Right. So –

A. Well, it is in the RPS but it refers back to the Civil Defence Emergency Act, so I've set out –

Q. Civil Defence?

A. – at footnote 27, the relevant part of the definition of lifeline utility.

Q. I see, here it is. Okay.

5 A. So the blanket six-year term in Plan Change 7 treats community supplies in the same way as other takes, which is inconsistent with the priority given to municipal infrastructure and lifeline utilities in the RPS and means that the functional needs of those uses has not been adequately provided for. It impairs the ability of the territorial authorities to fund upgrades and maintenance of community supplies, develop medium and long-term  
10 plans for the efficient and effective management of those supplies, and to make infrastructure provision for growth as required by the section 30, 31 and the NPSUD.

Q. Okay, and that again is a submission which is strictly limited to municipal infrastructure and an urban environments.

15 A. Yes.

Q. Okay.

A. And to the extent that crosses over with whatever we decide community water supply is. So turning to the obligations under the NPSUD, so this requires local authorities, including both the Regional Council and the  
20 territorial authorities to provide sufficient development capacity to meet expected demand over the short, medium and long-term. As we've talked about, the definition for development capacity is defined and includes the network infrastructure for water supply. Local authorities are separated into three tiers and within the Otago Region, Queenstown and Dunedin are both tier 2 and the other centres and districts served by the TAs are  
25 in tier 3.

Q. No, I'm sorry, I'd like to go back to that definition again so we're tracking you.

A. This is urban development capacity.

30 Q. Which volume is that?

A. So that is, I think it's volume 2. Sorry, volume 3. It's tab 6.

Q. And again, is your submission that development capacity is a term which is limited to an urban environment or is it something else?

A. I think it is limited to providing that capacity within an urban environment. So for the purposes of giving effect to the NPSUD, I don't think we could argue that this would apply to the provision of development infrastructure outside of an urban environment.

5 Q. Okay.

A. So Mr Greenwood, I think, sets out some of the significant growth that has occurred within Central Otago. So whilst it's not a tier 2 authority, it is experiencing some of the same issues as the authorities that are captured by the tier 2 requirements in the NPS. Now, local authorities in  
10 all tiers are required to work together to implement the NPS and in particular the Regional Council is required to work with the territorial authorities in relation to water supply to achieve integrated infrastructure planning.

Q. Just pause there a second. So your citing in your footnote initial policy  
15 development statement urban development, Policy 10A. What page is that on?

A. That's CB793. It's at the bottom of CB793.

Q. Okay.

A. For water supply to be sufficient, both the Regional Councils and TAs  
20 must ensure that in the short-term, so that's within three years, there's adequate existing water supply to support the development of land, but in the medium-term, the three to 10 years, there is either adequate existing water supply or funding for adequate water supply identified in a long-term plan, and in the long-term, the next 10 to 30 years, either the  
25 short or medium-term conditions are satisfied, or the necessary support is identified in the local authority infrastructure strategy. And so that, I think shows you how the obligations under the various pieces of legislation are to be meshed together. And in my submission, these obligations are rolling obligations that requires Councils to proactively  
30 plan to provide development infrastructure and the evidence of Ms McGirr and Mr Greenwood (now Mrs Muir) identify a number of projects that are in the pipeline in accordance with those territorial authorities obligations. The reality is that community water supply infrastructure does not materialise overnight and planning for it needs to begin ahead of the

actual need, otherwise it acts as a bottleneck which would undermine the objectives of the NPS urban development. Now, the approach taken to the NPSUD by Mr de Pelsemaeker results in a triumph of form over function, in my submission. It effectively places the territorial authorities in a holding pattern, unable to take active steps to ensure that they continue to meet their rolling obligations to provide infrastructure-ready development capacity. The costs associated with water supply investment are often in the millions and tens of millions of dollars. To be affordable and equitable for the community, the cost of this needs to be spread over many years, not dissimilar to the life span of the infrastructure itself. Plan Change 7 short-term sinking lid focus singularly fails to reconcile the range of obligations placed on territorial authorities with respect to community supplies. How can a Council set a rate that spreads the cost of the infrastructure over its expected economic life when the water itself may only be available after six years? I thought I should mention drinking water reforms, although we've got obviously a review of the drinking water supply by the Government as part of its Three Waters Review, which was in response to the Havelock North Drinking Water Enquiry. Currently before the house, the Water Services Bill proposes to replace Part 2A of the Health Act and although we can't speculate on the outcome of that, the obligations that exist in relation to the provision of water will require long-term certainty, in my submission, regardless of which organisation those obligations fall upon. So in conclusion, it is submitted that Plan Change 7 was devised as a narrow method to pause time so that the new Land and Water Plan can become operative. Yet the scope of activities captured by it is not commensurately narrow. This has given rise to unexpected complexities. The ORC's approach fails to give due consideration and weight to the full range of obligations on local authorities. As a result, the plan change does not implement the superior planning documents as they relate to community water supplies or nor does it integrate the water supply obligations on the ORC and territorial authorities across statutes. By treating community supplies in the same fashion as all other water uses in Plan Change 7 brings the ORC into conflict with its resource management obligations

and the TAs into conflict with their resource management and other statutory obligations. As set out in the evidence for the TAs, the exercise of their water supply functions cannot sit idle for six years. Works are planned and need to be carried out within the life of Plan Change 7 to ensure that they meet their obligations. Replacement consents that fail to provide for growth will compromise the ability for the TAs to ensure adequate supplies are available in the short, medium and potentially the long-term. Consents of only six years duration will also place TAs in an untenable position with respect to their obligations to be prudent and ensure efficient and effective infrastructure management and planning. Provision of safe and resilient community supplies are a fundamental service of such importance to our communities that it simply should not be subject to the Plan Change 7 regime. Community supplies are completely ill-suited to short-term planning.

15 **THE COURT: JUDGE BORTHWICK**

Q. Oki doki. I have made a note, and just correct me if I'm wrong here, but your key proposition is that water treated to the standard which is safe for human consumption, is community water supply regardless of the use to which that water is put. So it's the treatment which drives the definition community water supply.

A. Yes.

Q. And you'll have to come back overnight.

A. Yes.

Q. Fairly significant areas there of statutory interpretation and planning interpretation.

A. Yes.

Q. So that's the one note that I have made. The second note is from paragraph 47 to 50, that is a submission which is set specifically in the context of the NPS for urban development and is a submission limited to urban environments as defined by that NPS, correct?

A. Mhm. Yes.

Q. Likewise, your submissions from paragraph 60 to 68 is a submission set in the context of the proposed RPS and the proposed RPS and is a

submission set in the context of an urban environment as defined by that instrument, I think.

A. Yes, in relation to the provisions that apply to municipal infrastructure.

Q. And municipal infrastructure.

5 A. Yeah.

Q. Yep. I made a note that your submission in relation to paragraph 69 through to 75 are again as set in the context of the NPS for Urban Development 2020 and is confined to development capacity within an urban environment.

10 A. Yes.

Q. Okay. All right. Your first witness. No.

1440

**THE COURT: COMMISSIONER EDMONDS TO MS IRVING**

15 Q. Well somewhere in her you suggested that while the planning witnesses might have gone so far with things that more was required, so I was left scratching my head as to actually what it was that you were seeking now.

A. Yes, so in the evidence from Ms McGuirr and Mr Greenwood they talk about the projects that are on foot now that will require resources – resource consents to be sought within the life of plan change 7. And in 20 both cases there are projects that will require new resource consents to be sought as opposed to replacements of existing resource consents and so policy 10, what it 10A 2.2 or 10 2.2, whatever the numbers are. Is the policy that will bite in relation to those new applications and that is obviously a policy that requires that consents only be granted for six years 25 and because those permits are not replacement permits they couldn't avail themselves of the third policy in the notified version that gave a pathway to at least a 15-year term and so what we – that's an issue I think that needs further consideration. If community supplies are to be subject to plan change 7 then do we need a framework that enables somewhat longer term consents for new applications as well as replacement 30 applications. And there's sort of two, I suppose two parts to that in a way as well because and this was something that was discussed a bit during the community supply conference in terms of the need to provide for

growth. So if there is headroom, as we're calling it within the existing rates and volumes on the consent then a replacement consent could be sought within that headroom but providing for some growth. However if the community supply is already tapping out that existing consent and to provide for growth needs to take more water, over and above that existing consent, then that again would be a new application that the policy 10 2.2 would apply to rather than the policy –2.3 policy would apply to.

5

Q. And the other thing you mentioned, you did mention the definition that had come out of the expert conferencing in terms of the, was it community water supply?

10

A. Yes.

Q. And I just wondered with the second part of that, I suppose there's just a couple of things that occurred to me. The first thing was in terms of this discussion that we've been having about the use dimensions, how that might fit in with that definition because the second part of it, I don't think I've ever seen a definition that uses the words "enabling". That part of it seemed quite broad in terms of the responsibilities. Then we've got the next part which talks about, "for the supply of drinking water". So I thought that might be something –

15

20 A. Yes.

Q. – that you might need to consider in terms of the additional work that you were going to get under way.

20

A. Yes and that, the use of the term "drinking water" in that definition, yes, didn't escape my attention and I tended to think that it lent, in some way support to my view or the submission I've made around the definition of "drinking water" in the planning standards and its referenced to intending to be consumed or whatever the words are. So it is less about whether it is actually used for human consumption and more about whether it is intended for that purpose and that would be consistent I think with what's been captured in that definition of "community water supply" where there is reference to the likes of the industrial and business uses. Now some of the water that would get delivered to those activities would obviously be consumed or it may be used for other sanitary purposes that are captured within a definition of "drinking water" and other things may not

25

30



but the water that is delivered to those people is all intended to be able to be consumed. So I thought in that sense those definitions did mesh together. I think that obviously they've narrowed the scope of uses that could be, for within a community water supply and so I think in this definition, wouldn't capture the Clutha district example that your Honour is familiar with because I think in that case, from memory there was about 20% of that water that was being used for going to domestic uses and the balance was rural supply and so I think in that instance based on that information you would have to say that that was not the primary purpose. So it creates a slightly interesting dynamic given that that particular Clutha supply is identified in schedule 1B.

Q. Oh you see there – there you got the interpretation argument, what is identified in 1B?

**THE COURT: JUDGE BORTHWICK TO MS IRVING**

15 Q. It's a bit of a beast that document.

A. Yes.

Q. But I would have thought 1B under the sub-title, *Community* – or is it – *the values...*

A. Well it's *Water Supply Values*, yes.

20 Q. Yes that's right, it's the *Water Supply Values* which is define, which is consumption.

A. Yes. There's a dis-

Q. You know, so it's like, so that's my drinking water, it's – so where the purposes where, yes the purpose of the supply, is drinking water whether it's used for that or not, I guess but whether – that's what it is. It's not irrigation supply or maybe it's being co-opted or these schemes have been co-opted or have morphed out of, you know from their original purpose to serve or meet the needs of community, whatever they may look like. I don't know how the Clutha got itself to the position that it's in but anyway that's what Region's trying to manage.

30 A. Yes, I mean I think if we were to take, so we would imagine for a moment, this definition of "community water supply" went into plan change 7 –

Q. Mm.

A. – then I think in that situation, if Clutha came along and said, “look we’d like to replace our permit”, then it couldn’t be considered as it is now as a community water supply. It would come in under the other provisions. So in that sense dif–

5 Q. Come under what other provisions?

A. Well into the standard plan change 7 provisions because it wouldn’t qualify –

Q. No, yes.

A. – as being for the primary purposes. So in that sense this definition would  
10 act as a bit of a drafting gate for that *use* issue.

Q. And no doubt counsel and the Court will test the definition but is that your,  
you know if your instructions are now. You know, so you’ve got new  
instructions, that it’s, you know that community water supply is primarily  
for this definition, you should tell us that because I’m – when I read your  
15 submissions I’m going, “nah, they’re trying to get the gate open to  
everything else”.

A. Mm.

Q. You now the entire rural primary sector uses and so I’m, you know this is  
where you’re creating doubt in my mind and where I’m saying, “no, you  
20 have got to put the four corners before me and don’t in the next, you know  
lest it be said in the future well that was before the Court surely they knew.  
I really want to pin you to what are the four corners which isn’t to constrain  
what your case is, but to understand yes that is your case or no,  
something else is your case.

25 1450

A. Yes well I mean I don’t, the changes have been discussed and  
recommended in the conferencing were on the basis that if it was decided  
that Plan Change 7 would apply to community supplies, then this was a  
solution that could work. So I don’t at this stage, have instructions to walk  
30 away from just a (inaudible 14:50:47) just take community supplies out of  
Plan Change 7 which was the relief set out in Mr Twose’s  
evidence-in-chief.

Q. Okay, no well that’s very clear and so then Mr Twose is going to have to  
establish for the Court what the four corners are at this moment –

A. Yes.

Q. – they're quite unclear?

A. Yes.

**THE COURT: COMMISSIONER EDMONDS**

5 Q. So how does that last statement relate to what you were outlining before in terms of a pathway to a 15 year term that was as was in the notified version?

A. Yes, well I think it's I suppose goes to the same point doesn't it, that if Plan Change 7 is to apply, then we're saying it needs to be amended to provide that longer term pathway for community water supplies.

10

Q. And what do you mean by longer term? Is that the 15 years or is it something else?

A. I don't have a instruction -

Q. Oh are you still thinking about it and –

15

A. – yes I don't have instructions on - for that –

Q. Okay, all right.

A. – to be honest.

Q. (Inaudible 14:52:00) clarifying that –

**THE COURT: JUDGE BORTHWICK**

20 Q. And the planners didn't deal with that?

A. No they haven't.

Q. They got to the definition part, but they didn't –

A. Yes.

Q. – deal with duration part?

25

A. No.

Q. As per that definition, so that remains at large?

A. Yes.

Q. Okay.

A. Yes so I think what's in the joint witness statement is a partial solution to the issues if community supplies are to be captured within Plan Change 7.

30

**QUESTIONS FROM THE COURT: COMMISSIONER EDMONDS**

- 5 Q. I didn't have any more I don't think, oh I suppose just the one area that I was left a little confused about, there's quite a lot said about the Municipal Water Supply and Urban Environments and things like that but when you drive around the Otago region and you look at all these houses in the rural environment and you think, well, they probably don't actually relate to the urban environment definition –
- A. Yes.
- Q. – in terms of the MPS?
- 10 A. Correct.
- Q. So you haven't taken us specifically to any document provisions that specifically speak to that question –
- A. To the urban environment question or...?
- Q. No, to the non-urban environment?
- 15 A. Yes.
- Q. And in terms of, I guess even in the rural environment, you think like the urban environment, there ought to be some integrated planning going on in terms of any zoning or resource consents and all those sort of things, so the water isn't – supply issue isn't being driven in one direction and the pattern of development being allowed to go in another direction, so I just wondered whether, how your case might be addressing that issue?
- 20 A. Yes, I don't think I quite follow your question. Are you – can I perhaps pose what I think –
- Q. Well you can, I suppose I was partly thinking about well we've got a land and water plan that's surely going to have to look at making sure you get a sort of integrated pattern of future possibility in terms of land use as well as the water resource use, so how is that being factored into the work that might be being done by the Councils on future –
- 25 A. Yes.
- 30 Q. – development, future demand, future supply –
- A. Yes I mean –
- Q. – all those things, a bit like what's attempting to be done with the MPS on urban development capacity –
- A. Well it –

Q. How's that being done for the rural area, and you did mention somebody doing spatial planning along the way –

A. Yes.

Q. – I notice, but I mean, to me, that left a bit of a question mark?

5 A. I don't, I mean the short answer is I don't know the extent to which the Regional Council's land and water plan is going to I suppose look at how rural land use might be changing which may place demand for water infrastructure, that, I don't know the answer to that. I, from the TA's point of view, they have perhaps unsurprisingly focused on the areas where  
10 they are responsible for the provision of that infrastructure and so the extent to which water supplies that they don't manage, may be effected by land use change, hasn't been something that we've been thinking about in the course of this process.

Q. That may be enough of an answer -

15 A. Yes.

Q. – and I've – if I think of anything I can ask some of the individual witnesses –

A. Yes, I mean I –

Q. – but it's not something that you've been factoring into your case, so that's  
20 what you're saying?

A. No, no.

Q. Okay, thank you.

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

Q. I just had one question to do with the definition from the planners where  
25 they've got an exclusion. It says 25 or more people on at least 60 days a year, how's the balance addressed? Is this covered under the various Local Government Act or something like that?

A. Yes, so that there I think is pulled from the definition of registered  
30 community water supply which is currently in the regional plan water and is also from the Health Act, so that's sort of the smallest type of community supply that is referred to in the Health Act and so I think that's been brought across to essentially capture any supply, I suppose bigger than that, so serving at more than 25 people or for more than 60 days,

anything smaller than that wouldn't qualify as a community suppliers is my understanding of how that definition is to work.

Q. So could someone want drinking water for a community, a small community –

5 A. Mmm –

Q. – of 25 or less people etc?

A. Well I suspect that, I mean they could, there could be people that are applying for water for domestic –

Q. Yes.

10 A. – that are smaller than that, absolutely.

Q. But not captured by the –

A. But not captured by the –

Q. No.

A. – community supply definition.

15 Q. And could it be that the quantities of water are so small they don't warrant?

A. Yes, yes I mean, I think that's right, I suppose the current sort of Health Act framework is I think focused on I suppose risk in some respects, how many people are served by these suppliers that may be at risk and there are of course permitted activity rules in the regional plan water for taking water for domestic purposes.

20

Q. Okay.

A. That would cover some of those smaller uses –

Q. Okay.

25 A. – perhaps not up to 25 people, but there is certainly some provision there for smaller takes.

Q. Okay. Thank you your Honour.

### **THE COURT: JUDGE BORTHWICK TO MS IRVING**

All right, your first witness.

30

**MS IRVING CALLS****THOMAS BRENDAN HELLER (SWORN)**

Q. In your full name Thomas Brendan Heller?

A. Yes.

5 Q. And you are a director of Environmental Associates –

A. Yes.

Q. – Limited in Dunedin?

1500

A. Yes.

10 Q. And you have prepared a brief of evidence in these proceedings dated the 3<sup>rd</sup> of February 2021?

A. Yes that's correct.

Q. And you are also a signatory to the joint witness statement for Community Water Supplies dated 31 March 2021?

15 A. Yes and I don't have a copy of that with me.

Q. Do you have any amendments that you wish to make to your evidence?

A. Not specifically although I'd like to talk to the Court about general positions that I have with respect to what has occurred with (inaudible 15:03:04) and so forth.

20 Q. Okay. I'll perhaps get you to confirm your evidence-in-chief and then I think you've got a summary that you wish to use and you could perhaps elaborate on those matters during that?

A. Okay, yes.

25 Q. So do you confirm that your evidence is true and correct to the best of your knowledge and belief?

A. Yes I do.

Q. Thank you, so if you'd like to go through your summary and then answer any questions.

30 A. It may be helpful to the Court if I were to just firstly provide my position on the focus of my evidence and then run through this amended summary and then I can get to what is – and this should really help the Court, my position on where we've got to with the plan change 7 schedule 10A 4 – Water Allocation for Community Water Supplies.

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

Q. I thought the focus of your evidence was the (inaudible 15:04:04) was the schedule.

A. Yes.

5 Q. Yes. That doesn't step beyond that in terms of dealing with duration –

A. No.

Q. – or does it?

A. No.

Q. So it's just the schedule and the methodology in the schedule?

10 A. Yes, just the water allocation outcomes of plan change 7 for the Community Water Supplies.

Q. Well outcomes are quite a different proposition.

A. This schedule.

Q. The schedule, okay, right.

15 A. Yes.

Q. All right, no, I understand that's what your evidence was.

A. Okay thank you. So just moving to the amended summary.

Q. Mm.

A. And would you like these read out in full your Honour?

20 Q. Yes.

1505

A. Okay. Point 1, Community Water Supplies and that's including – that's inclusive of those in schedules 1B and 3B of the regional plan water operates on a peak water supply requirement with an acceptably sized storage facility to buffer water use on a daily basis and to provide continuity and reliability of supply. Schemes configured in this way are considered to be the most efficient method for delivering community water. Water-metering data shows that daily, monthly, and annual water abstraction for community water schemes is not fixed and can vary significantly according to seasonal water requirement, and where required, growth of a scheme over the consent period. Large storage facilities to enable reductions in peak abstraction over short-to-medium periods are expensive and are effectively not utilised during the balance of the seasonal scheme operating period. The PC7 schedule 10.A.4

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allocation method, as notified and as amended, did not provide for the efficient and reasonable allocation of water for water supply takes and their associated scheme, planning, and operation. The issues with the notified method were set out in my evidence-in-chief. Expert conferencing regarding schedule 10.A.4 has taken place, and this is assuming that the community water supplies would be subject to plan change 7. The outcome of that caucusing enables the full array of water metering data to be used, and applying legitimate maximums of rate, daily, monthly, and annual volumes of take to community water supplies. If those amendments are accepted, it is my opinion that schedule 10.A.4 is able to accurately reallocate water to enable a community water supply to continue to operate up to previously taken rates. However, that doesn't enable any future growth and demand. The method to enable increased water allocation to support growth and demand for community water supplies was to the planning caucusing. It is my professional opinion that six-year terms for community water supplies is too restrictive on that basis for territorial authorities to operate and plan infrastructure facilities in order to meet future water supply needs. In my experience, territorial authorities carry out infrastructure and water-supply planning for at least, or up to, a 30-year timeframe. This is to ensure that water-supply provision is anticipated and that mechanisms are in place to provide that water when needed. Mr Twose, in his evidence-in-chief, explains the planning regulations that direct territorial authorities in matters of water supply, infrastructure, and provision. The facility to encapsulate projected community growth out to a 30-year timeframe within a water permit, enabling the abstraction of water, is fundamental to territorial authority, water supply, infrastructure planning, and execution." Your Honour, if I can perhaps just then identify where my position is now with respect to water allocations for the community water supplies under plan change 7? And this is specifically in respect of schedule 10.A.4. As identified in my amended summary of evidence, I agree with the other technical experts, including the regional council experts, in relation that schedule 10.A.4 can be modified to account for water supplies to community water schemes, and this is with the incorporation of the water-metering data that we

discussed and confirmed, and taking the maximum rates and volumes as was confirmed in the caucusing document. That is all, I agree with all of that and that's my position. Secondly, the provision for growth that was undertaken at the planning caucusing. I agree with that position and with the planning experts that growth can be incorporated into the community water supplies upon reapplication or application, and that I also agree that where it's within the headroom of a consent, that will be dealt with under the existing replacement as opposed to any water that was required over and above the headroom of the existing consent would be a new application, so I'm agreed with that, which came out of the planning conferencing. The only point that I have concerns with is that the term of consents, whether it be replacement or new consent under plan change 7 of six years is insufficient in itself to provide for water supply projection and planning out to a 30-year timeframe for the territorial authorities."

15 **THE COURT: JUDGE BORTHWICK**

Q. Sorry, to provide for growth, is it?

A. To provide for the growth, it's just for the growth, your Honour.

Q. Out to 30 years?

A. Yes.

20 Q. Why is that?

A. And that is my only concern.

Q. Yeah, so why is that? So, first off, why 30 years, and why is that remaining concern?

A. Yes, the reason being is that I think we have heard that there is an onus on territorial authorities, and I am not going to get into the relative legislation and so forth because it's not part of my evidence, but territorial authorities have a planning requirement up to a 30-year timeframe for water supply to try and keep ahead of their water supply requirements. That would be in excess of a six-year period for growth which has been agreed to at the planning caucusing, so the terms of consent of six years obviously only incorporate a six-year projection for growth. That will be difficult where there is significant growth, because that doesn't provide the confidence to the territorial authorities to be able to then go ahead

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and install infrastructure and to make the necessary upgrades on the basis of a 30-year projected population increase and water-use increase, with the thought in mind that, you know, in six years' time, they may not get that extra tranche of water. So it's a technical and it's an application, it's a logistics problem for the territorial authorities.

5

Q. Thinking about the Clutha case, and this is not the application before the Court, but there was some evidence from a Clutha engineer that we heard that at least part of his thinking was that the Clutha District Council take, which is now in appeal to the High Court, that that take could be used maybe as a replacement take or instead of or, I guess, as an alternative take to at least one or two other community water schemes in the area, which schemes were unreliable because the flow in the water body was unreliable or the flow in the water body from time to time got heavily silted up, for example. Would it make any sense for those other two supplies, on whatever water bodies they were on – so this is quite different from the permit before us, but we heard evidence about it – well, firstly, do you recall evidence about that?

10

15

A. Yes, I do, I think, yes.

Q. That part of the strategy for the engineer was to think can we also use the permit before the Court to supplement or to replace these other two unreliable takes?

20

A. Sort of branch across schemes.

Q. Yeah, that's right.

A. Yeah, yeah.

25

Q. That's what they were thinking, and I'm not quite sure whether that required new infrastructure or not. Would it make any sense to renew those other two permits for 30 years, given reliability issues and water quality issues?

1515

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A. Dare I say it your Honour, that will be on a case-by-case basis. No two – you know, no application will be the same and no schemes will be the same. They can be vastly different. I think if we take one example that is in my evidence-in-chief of the – well I think it's in my evidence-in-chief, for Clutha District Council to develop what is a, a sort of mega scheme at

Clydevale. That's one of its current community water supplies, sourced from wells they're riparian wells to the Clutha river at Clydevale. They would like to take other schemes which are reliant on tributaries which have you know, flow problems –

5 Q. Mm.

A. – and silt problems, water quality problems and bring them all to Clydevale. Have this one big mega scheme supplying the lot. Now that is in the pipeline, so to speak for Clutha district in – within the next six years. And that would be captured by plan change 7 but the intent there is to surrender the existing permits from the tributaries and take it all from the Clutha.

10

Q. Assuming that there's – that's a lot of assumptions around Clutha ability to provide.

A. Yes.

15

Q. Yes.

A. The tributaries are tributary of the Clutha –

Q. Mm.

A. – upstream of the take. One's upstream, one's downstream.

Q. Mm.

20

A. Yes.

Q. So any way. Your evidence is – yes, okay. You seem to be wanting at least 30 years on the basis of the council's long-term planning under the MPS urban development. Yes?

A. Yes but that. I'm not addressing this as a – from a planning perspective your Honour.

25

Q. Mm.

A. I'm – this is a technical and sort of – infrastructure installation-type perspective that it's – it would be very difficult for a TA, territorial authority sorry, to go ahead and increase pipe sizes for a water scheme projected to have growth out to the next 30 years where they only have water for that projected growth for six of those 30 years.

30

Q. And I think we heard the same for the primary sector as well.

A. Is – okay.

Q. So, you're all in that category.

A. Okay.

Q. How then are we to distinguish you, I think is the key issue for TAs. Are TAs are continuing to look for water supply, for primary sector and non-urban uses?

5 A. There are few very primary sector water cons– there are very few primary sector water consumptions from Community Water Supplies that I know of your Honour. I know of one commercial irrigation take form the Tapanui water supply in Clutha district and that is for a nursery.

Q. Mm.

10 A. And that is only able to take water because the rate and volumes it uses are relatively low and they can be obtained from the pipe sizing network that the council operates. Essentially any large irrigation take will not be able to take water from within a municipal – a community water supply because the pipes are just too small.

15 Q. Okay.

A. And if they go and take water then somebody else misses out.

Q. Thing is, counsel have left this all in play, creating uncertainty at least in my mind.

A. Right.

20 Q. I don't, yes – and you know, a permit before the Court now on appeal to the High Court is described as an outlier were 80% of the water was destined for the primary sector. I don't know that because there's been no analysis by anyone to say, "yes it is a true outlier and all other permits held by territorial authorities are to provide water for urban development  
25 in an urban setting".

A. Yes.

Q. Yes. I simply don't know. I've not seen the analysis so – and would need to hear it from each territorial authority. And you're representing who here? Clutha?

30 A. Waitaki district and Clutha district.

1520

Q. Yes, and so have you gone through each and every permit held by both those district councils to ascertain what percentage of use is for purposes other than human consumption and associated with industrial business use within an urban setting?

5 A. No I haven't your Honour and that is not focus of my evidence.

Q. Whose evidence is dealing with that?

A. I am unsure.

Q. Okay. All right.

10 A. I think that there are a couple of territorial authority officers presenting information that may be able to elaborate. Certainly with regard to their own councils.

Q. Mm.

15 A. I mean I could try to elaborate on behalf of Waitaki and Clutha but it would be just off the top of my head but again that is not the focus of my evidence. It is really about how a water allocation model would look under plan change 7 for those community water supplies. And the community water supplies that I'm talking about your Honour are those ones that are scheduled in 1B and 3B.

Q. Okay.

20 A. But that was my primary focus.

Q. Yes, no understood. Anyone else giving evidence specifically for the Waitaki and Clutha or council or no?

A. No.

Q. Thank you.

25 **CROSS-EXAMINATION: MR MAW**

30 Q. Good afternoon. I want to start by just understand the scope of your evidence because you gave some further explanations when you added some further opinion to the end of your summary in relation to some outstanding areas that you perhaps expressed some concern about. One of which was in relation to the onus on territorial authorities and the planning requirement out to a 30-year timeframe, now you said when you commenced the giving of your evidence that you were focused on the schedule. It strikes me that you are now straying beyond the schedule,

into the planning realm and I want to be really clear that I understand that whether you are entering the planning realm in terms of the obligations on territorial authorities over, you say a 30-year period or not. Because that's either within your area of expertise and I can ask you some questions on it or it's straying beyond, so can you clarify that for me please.

5

A. I can confirm counsel that I am not entering the planning realm and that the statement I made to the Court which is within my amended summary is mostly based – or it's entirely based on the technical and provision aspect of infrastructure. Typically when a district council or city council re-applies for water with their consent, that they look 30 years ahead and say, "well do we need any extra water?" and at that time they will ask for water for growth. And this is really just a technical and an infrastructure provision requirement that if they don't get that water then they probably wouldn't install that infrastructure.

10

15

Q. So, in relation ...

A. So it can be dealt with by the planners, in answer to your question sir.

Q. Well at – it did seem to stray beyond your written material where you had stayed focussed on the schedule. So I understand you to be saying to me that your clients say to you that, they'd like a permit for 30 years but you can't tell me what the planning rationale or the planning basis is for that, in a technical sense, a planning technical sense, RMA planning documents etc.

20

A. Counsel I'm not saying that there should be a permit there for 30 years. what I am saying is that, "yes we've identified that the schedule 10A 4 can work", there are aspects of it that can be changed and I'm all absolutely fine with that and we left the growth part to the planners. And I'm absolutely fine where the planners got to. I was just pointing out my concerns from that operational perspective that it is a 30-year growth which is envisaged by the territorial authorities not a six year and look the assessment of that and the provision for that rests entirely with the planning group.

25

30

Q. I shall direct my questions then about that to the planner for the territorial authorities. So just rounding back on to the joint witness statement and

you've just summarised again for me where your thinking's now at and am I correct to understand that you're comfortable that the schedule and the modifications that have been made to the schedule, so schedule 10A 4 to enable the calculation of takes for community water supplies now addresses the concerns that you'd expressed in your evidence-in-chief?

A. Yes, that's correct.

**WITNESS REFERRED TO PARAGRAPH 19 OF EVIDENCE-IN-CHIEF**

Q. Now I had some questions for you about the particular water takes within the two districts for whom you are giving your evidence and you've traversed some of this information and questions from the bench a moment ago but I want to explore a little more further if I may, this question of the uses to which community water supplies are put. Now you touch on this in your evidence-in-chief at your paragraph 19. And there you set out some of the additional uses but I'd be interested to know, in your opinion are you able to list the types of uses to which community water scheme water is put in terms of the two districts for whom you are giving evidence?

A. There are many uses counsel. Yes, I have listed some. I can't go any further than that but just to re-affirm that there uses of that water.

Q. Can you describe some of those uses for the Court?

A. I think that's in paragraph 19.

Q. Right, so let's look at paragraph 19, *Household and property water needs*, so when you say household and property water needs?

A. Yes, I also think that it is identified in other paragraphs of the evidence, counsel just to help. We can rely on paragraph 19 and we can also rely on additional paragraphs where I describe each of the schemes that I have made as examples in relation to assessing water allocation from schedule 10A 4. So I provide an explanation of the uses of water in those schemes and that is the Waihemo, Palmerston water supply. The Milton water supply and the Balclutha water supply. So just to reiterate, the Waihemo supply supplies the town of Palmerston. It also supplies some rural stock water. It supplies one dairy shed – one dairy farm of which



the discharge from that dairy farm is permitted activity. The Milton water supply supplies...

Q. Let's just press pause on the Waihemo –

A. Okay.

**5 WITNESS REFERRED TO PARAGRAPH 36 OF EVIDENCE-IN-CHIEF**

Q. – for a moment. As I read your paragraph 36 of your evidence, it also refers to stock water being supplied to the balance of the rural command area.

A. Yes.

10 Q. So what size command area are we talking about here?

A. I'm not sure.

1530

Q. No understanding of knowledge of the number of connections or the volumes of water?

15 A. Not specifically. The predominant use of that water is for Palmerston township, though, I do know that.

Q. Right, tell me about the Nelson –

A. But there certainly are other uses in various schemes. I mean, that seems to have been discussed earlier as well with counsel.

20 Q. I wonder whether I might put a list for you from a memo put together by Ms East, and you can confirm whether it perhaps accurately covers the range of uses to which community water scheme water is put.

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

Q. Who's Ms East? Given me so many folk.

25 A. Now, Ms East has prepared a memorandum, which is attached to the evidence of Mr Twose. Ms East is not before the Court, but he confirmed the contents of it.

Q. So it's an attachment to Mr Twose?

A. Yes.

30 Q. Okay, all right.

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. And there, she described the wide range of uses, aside from human consumption, as including bathing and toileting, rural and stock purposes, irrigation, watering of the garden, washing the car, firefighting, watering sports fields and parks, water-intensive commercial and water-intensive industrial processes, like commercial vehicle-washing, water-blasting, commercial laundries and manufacturing. So does that list sound, or does that accord with your understanding as to the wide range of uses to which water is put from these schemes?

5  
10 A. I'm unsure about the term "irrigation" that you use. I mean, you've used the context of the watering of lawns and then sports fields, and then you have irrigation separately. Are you talking about, like, commercial farm type irrigation?

Q. Well, you tell me, what is the water used for? Or is it simply you don't know the range of uses?

15  
A. There's a lot of range of uses, and we can distil down to, you know, the filling of duck ponds and, you know, various other things that are – I mean, imagine how many different water uses there would be in Dunedin City, for example, for water, just within the city itself. Quite a lot, so, look, the main uses that I consider are for, essentially, household supply, from the scheme that I have had experience with, household supply, community supply – so that's businesses and so forth, that's supplying the regional council with their cup of tea water – and also when you extend out to beyond the urban and you get into the rural, some of those schemes also incorporate stock water, and a few schemes even supply water to dairy sheds, but I'm not aware of any other commercial irrigation supplied by these schemes apart from the one that I –

20  
25 Q. So apart from the nursery in Tapanui.

A. – apart from the Blueskin Nursery at Tapanui.

30 Q. So it's a fairly broad range of uses, you'd accept?

A. It's use that I would expect from a municipal community water supply.

Q. Now, when you think about the community water supply and the range of uses, and then you think about the proportion of water that's used for human consumption, do you have, or are you able to give an opinion on

what percentage of the water that is taken might actually be consumed or would fit into the category of “for human consumption”?

A. My evidence doesn't extend to that, counsel.

5 Q. Have you considered any of the schemes within the Clutha or Waitaki Districts and carried out any analyses of the breakdown of water use?

A. Only insofar as previous resource consent applications.

Q. And in relation to those previous applications, you have been able to conduct that exercise?

10 A. Yes.

Q. Yes.

A. To various extents.

15 Q. And recently, you've provided evidence to the Environment Court in relation to an application by the Clutha District Council with the respect to, I think it was the community take at Stirling? Do you remember that evidence?

A. I do remember. I don't seem to recall it in my evidence here, though, counsel.

20 Q. No, there's no reference to that evidence or the analysis that he had carried out with respect to that water supply, but as luck would have it, I have some copies of your evidence and I can provide a copy to you to refresh your memory if that would assist.

25 A. I'm unsure if I'm able to comment because it could be outside the scope of my evidence. I'm definitely comfortable in terms of, you know, there are ranges of uses within a community supply for, you know, the provision of water.

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

Q. I don't think counsel is confined to what you decide your scope of evidence is. He can cross-examine on what he likes.

30 A. Yeah, okay.

Q. And the obvious line of questioning, it is obvious to the Court that the region is going to get into what are the range are the range of uses, and at the moment, this is quite opaque, where we are going. So how about

you refresh the witness's memory with his own evidence, and we will take a cup of tea and allow time for reading. How does that sound?

**MR MAW:**

5 A. Very good.

**COURT ADJOURNS: 3.36 PM**

**COURT RESUMES: 3.52 PM**

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. Now Mr Heller do you recognise this document?

A. Yes thank you counsel, that jogs my memory very well thank you.

5 Q. And the document is a brief of evidence of Thomas Brendan Heller dated 13 May 2020 and the document was produced as evidence in the case of Clutha District Council and the Otago Regional Council?

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

Q. If you could just say "Yes" for the record?

10 A. Yes.

Q. Thank you.

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. Do you now produce this as exhibit, and I'm going to say Territorial Authorities One or?

15 **THE COURT: JUDGE BORTHWICK**

Q. Yes I think that's exhibit Territorial Authorities One, it's the first exhibit for the Territorial Authorities? That will be right? Yes, okay.

**EXHIBIT 1 PRODUCED – TERRITORIAL AUTHORITIES ONE – BRIEF OF EVIDENCE OF THOMAS BRENDAN HELLER (MAY 2020)**

20 **THE COURT:**

So, I'll just for the record, exhibit Territorial Authorities One is a brief of evidence of Thomas Brendan Heller dated 13 May 2020 and it pertains to proceedings Clutha District Council and Otago Regional Council.

**CROSS-EXAMINATION CONTINUES: MR MAW**

25 Q. Now in relation to this evidence, it was given in the context of an application to replace a community water take at Stirling?

A. Yes.

- Q. And you carried out some analysis as to the uses to which water was being put in relation to that community take, is that correct?
- A. That's correct.
- Q. And in relation to those uses, you prepared a table in your evidence and set out the range of uses?
- 5 A. Yes, Table 1.
- Q. And where would I find Table 1?
- A. Page 11.
- Q. And if you can step me through that table, so the total annual average scheme water use was what in terms of cubic metres per day?
- 10 A. 1353.
- Q. And of that what proportion related to properties and household water within the scheme?
- A. 208.
- 15 Q. And as a percentage?
- A. Well probably about 20% roughly.
- Q. Suggest it be maybe closer to 15%?
- A. 15, 20, yeah, stock water.
- Q. Yes, what was the majority use in that context?
- 20 A. Stock water and dairy shed and there was 1077 metres cube per day and I make the statement in paragraph 35 that that comprised approximately 80% of the water taken.
- Q. And then there's a comment that you've provided in relation to each of the uses, but before we get to that, let's finish the exercise, there was some unaccounted for water referred to?
- 25 A. Yes, 68 cubic metres per day.
- Q. And approximately 5% according to your comments?
- A. But that was by my calculations.
- Q. So when we look at the stock water and dairy shed uses in this context, you've provided some comments in relation to those uses?
- 30 A. In what way counsel?
- Q. Well you've added some comments in the box to the right of the 1,077?
- A. Oh yes, yes, sorry, comments in the table, yes.
- Q. And here you describe, my words, a command area for that use?

- A. Yes, yes.
- Q. And what's that for the record?
- A. That's 4 - 4594 hectares.
- Q. And then a range of animals supplied by that water?
- 5 A. Yes that's correct. And it also includes 28 dairy farms.
- Q. And the water used on those dairy farms for what purpose?
- A. That is for both stock water and dairy shed use.
- Q. So dairy shed wash down?
- A. Yes. Well there's also milk cooling and so forth so it's a – it's not just the
- 10 wash down.
- Q. How would you describe those uses? Would you consider them to be primary industry uses?
- A. I would consider them to be stock water and dairy shed uses and that's what the scheme supplies.
- 15 Q. Now in relation to this particular scheme, and this is the only scheme that you have a working knowledge of within the Waitaki and Clutha District in terms of these types of uses?
- A. Please repeat that? That doesn't sound correct.
- Q. Right, the breakdown of uses of water within community schemes and this will be the only scheme that you have numbers to hand showing the
- 20 breakdown of water and the different uses to which it is put?
- A. When you say, "numbers to hand", are you also including knowledge of the schemes and their specific uses?
- Q. Yes, well you told me before the afternoon tea break that you didn't have
- 25 an understanding of matters like the command area or the volumes of (inaudible 15:58:20) to particular uses?
- A. No, no, no, not to that detail, you're quite correct, counsel.
- Q. Now you describe the water take, well in fact I put to you, how did you describe this water take?
- 30 A. It's a community water scheme in Schedule 1B.
- Q. Your paragraph 36 you've described it as well?
- A. Yes, yes.
- Q. And there you say, "The water take is primarily used for human consumption and stock water and also supplies water for dairy shed use"?

A. Yes.

Q. Now reference to the word “primarily” caught my eye in relation to this brief of evidence because that word is also used in the joint witness statement for planning when describing community supplies and I wanted  
5 to ask you some questions about what your understanding of that word is?

A. But, was that the planning conference counsel?

Q. Yes it was. Let me get that document.

A. I was not in attendance in the planning conference.

10 Q. Have you read that planning -

A. I have, I have briefly read that.

Q. Did you have a – you’re about to be given a copy hopefully.

A. Thank you. All right, page – which paragraph?

Q. Page 8 under, “Definitions” and it’s to the Appendix.

15 A. Which paragraph is it?

Q. Right, so let’s make sure you’re looking at the right document. You’re in the Joint Witness Statement For Planners?

A. Yes.

Q. And attached to that is a marked up version of the plan? Page numbers  
20 on the plan?

A. Okay.

Q. One of which hopefully is an 8?

A. Not particularly, 6, 8. “Definition”.

Q. And you’ll see there a recommended definition for community water  
25 supply?

A. Yes.

Q. Starts with, “Means a water supply for the primary purpose of supplying drinking water to communities. It may also be used for industrial and business uses and is for the purpose of enabling territorial authorities to meet their responsibilities”, etc. When you read that definition, would you  
30 include or would the Stirling scheme described in your evidence-in-chief from the previous case fit within that definition?



A. I'm not a planner and so I can't under- I don't try to understand exactly where the planning (inaudible 16:01:59) was coming from when they're talking about primary purpose. There is a, there -

5 Q. Well you've used that phrase in your evidence-in-chief, so what do you understand it to mean?

A. Yes, and I specifically used that as being one of the primary purposes of that scheme and I have said that it is for consumption and stock water and also supplies water for dairy shed, that they are the three primary purposes for which that scheme operates and when I read the definition, 10 it says the primary purpose of supplying drinking water so one of the primary purposes in my paragraph 36 is drinking water. There I, I can only, therefore, assume that it fits with the definition.

Q. Do you consider that each of the uses in the Stirling scheme is a primary use?

15 A. I just said it was primarily used in my 36, "primarily used".

Q. I'm just trying to understand when you use that word, what you mean, so what do you understand "primarily" to mean?

A. Is that the three major uses or the three primary uses are for the drinking water and the stock and the dairy shed.

20 **THE COURT: JUDGE BORTHWICK**

Q. Just pause there a second.

**THE COURT: COMMISSIONER EDMONDS**

Q. Sorry, I've lost track of your paragraph, in 36, thank you.

**THE COURT: JUDGE BORTHWICK**

25 Q. So all three major uses which from recollection, human consumption was between 15 and 16% stock water and dairy shed cumulatively be 80% primarily supplying drinking water to communities?

**MR MAW:**

30 That appears to be the evidence, so...

**THE COURT: JUDGE BORTHWICK**

Q. Yes, you might want to – break – just press into this, just a little, and just for the record you were there, you did actually write the application for the Stirling water permit?

5 A. That's correct.

Q. You did?

A. Yes.

Q. And you also appeared at the Regional Council in support of that application, at the Regional Council hearing, you know, one below the  
10 Court?

A. The Court hearing I did.

Q. At the Court hearing –

A. At the Court hearing.

Q. – did you appear at the Regional Council level hearing or not or was it –

15 A. I don't think there was a –

Q. Don't think there was a hearing –

**THE COURT: COMMISSIONER EDMONDS**

There was no hearing.

**THE COURT: JUDGE BORTHWICK**

20 Q. So you prepared the application?

A. Yes, yes.

Q. So you are somebody who is familiar with reading –

A. Yes, yes.

Q. – plans and applying plans because this is all Council wants to press into  
25 is how would you approach this definition which is actually a reasonable question –

A. Yes.

Q. - given that you work in this area, correct?

A. Yes, yes, yes and –

30 Q. And you do work in this area don't you because you prepare –

1605

A. There's I think there's two factors there your Honour that are in play. One is the – is about the primary purpose and the other we're talking is a measure of volume.

5 Q. Yes, well counsel is going to ask you, because you confirm that as a resource management consultant, I think that's how you describe yourself at the Stirling hearing in front of me that you prepare applications for water permits, correct?

A. Yes.

10 Q. And I think counsel is just interested to see how you would apply that definition which is being proposed in the joint witness statement for planners which is, I think a reasonable approach.

A. Yes, I think – I was actually a hydrologist.

Q. You were a hydrologist on there.

A. Hydrologist in that and I'm a hydrologist at this hearing.

15 Q. Okay but anyway you did prepare that application –

A. Yes, most definitely.

Q. And you prepare other applications too, is that correct?

A. Yes I have.

Q. Okay.

20 A. And that is really just in terms of an efficiency function for the client.

Q. But you are somebody who prepares resource consent applications and therefore somebody who –

A. Yes.

Q. – deals with regional planning and district planning documents?

25 A. Yes.

### **CROSS-EXAMINATION CONTINUES: MR MAW**

30 Q. So, I want to understand whether the Stirling scheme would fit within the definition of community water supply as has been recommended by the planners in their joint witness statement and I understood the answer that you gave me was, "yes it would for a number of reasons". And I just want to make sure I've clearly understood that. So is that your evidence?

A. My evidence is that the – in the definition, it's got a primary purpose of supplying drinking water to communities. The definition makes no – has

got no indication of volume or percentage of that use so, I'm taking it as being read as for a primary purpose of supplying drinking water and the Stirling scheme, one of its primary purposes is for human consumption, drinking water. So without having any greater context of that definition counsel, I think it could fit – it could fit.

5

Q. It's useful to understand how you read that –

A. Yes, from a technical...

Q. – particularly through the lens of having put an application together for a territorial authority to replace a community water supply permit. So just on following your logic, you say that one of the primary uses of the Stirling community water scheme water was properties / household water within the scheme –

10

A. Yes.

Q. – and therefore the definition in proposed to plan change 7 for community water supply, as meaning a water supply for the primary purpose of supplying drinking water to communities, you say that that use fits within that part of the definition?

15

A. Yes. The scheme supplies that water to that use.

Q. In your mind do you draw a distinction between the phrase “drinking water” is used in the proposed definition and the range of uses which might fit within your category of property / household water within the scheme? Is that all drinking water?

20

A. Yes. My consideration of a drinking water supply for households, yes.

Q. Where is – so in looking back at this scheme again, is any of the water used for other domestic purposes? How's the garden watering accounted for here.

25

A. That is also part of household water use.

Q. Right, so drinking water is a component of the 208 cubic metres of water. Understood that correctly?

30

A. Correct.

Q. Any idea what proportion?

A. No idea.

Q. None the less you're satisfied that it's one of the primary purposes and thus fits within the proposed definition?

1610

A. Yes the water supplied to those 208 properties is true to drinking water standard and is supplied for the primary purpose of drinking water to those properties.

**5 THE COURT: JUDGE BORTHWICK**

Q. Just point of clarification, is the primary purpose the purpose delivering water treated to a drinking water standard or, which means that you can deliver, you know, it's a standard of water which is delivered to cows to drink or is the primary purpose dairy shed wash down? I don't understand where your evidence goes?

A. In my evidence your Honour I state the dairy shed wash down is one of the primary purposes.

Q. And frankly, aren't we only interested in the primary purpose because that's the language of the definition, means water supply for the primary purpose. Line up them, which one's your primary purpose in the Stirling case?

A. On a – that may be evident in terms of the planning fraternity your honour, but to a technical person, I see no indication of volume or percentage. Therefore, if I see a community water supply that is supplying water to the requisite number of households that enables it to be a community water supply, and that is drinking water, then I see that broadly, that fits within this definition. It may be just that the definition is not tight enough.

Q. Or it may be that you're ignoring the word "the primary purpose" singular?

A. Yes. It's a primary purpose.

Q. Yes which in Stirling's case it would be –

A. I can't make that judgement call your Honour –

Q. No.

A. – on whether or not different community water supplies fit with that.

Q. No, but your evidence –

A. That's not my –

Q. And this is critical, because again, if, and it may be the Territorial Authorities' case that any use goes provided all you – provided

you're delivering water to a certain standard, which is a drink- which is the drink water standard –

A. Yes.

5 Q. – it doesn't matter what use and maybe that evidence fits with that. It doesn't matter the use, what's been supplied is water which has been treated to a certain standard which is counsel's submission?

A. Yes and that is definitely the case that all of the water is provided as a drinking water quality water.

10 Q. And then it doesn't matter what you use it for, you can use it for 100% dairy shed wash down if you wish, you could use it for 100%, I don't know, irrigation, K-lines, for example, if you wish, it doesn't really matter?

A. Yes that is not the intention of these water supplies and that is not the model for these community water supplies. They do not supply irrigation water.

15 Q. Okay – so we're trying to – the uncertainty that's been created is the Territorial Authorities' own uncertainty with the manner that they're approaching this definition, so we're just trying to clear up in our mind how would an experienced resource management consultant go about applying this definition, but I think you're saying while that definition does want for clarity because if its purpose was to identify one purpose which is the primary purpose, yes the primary purpose can involve a multiplicity of purposes, is your approach. Now that might be your approach and, you know, your planner might say well that's certainly not the way that it's intended –

20

25 A. Yes, yes.

Q. – but if it is your approach –

A. Yes.

Q. – being a well-qualified by experience –

A. Technical person.

30 Q. - resource management consultant then, the definition wants for clarity doesn't it?

A. I believe that it -

Q. Unless of course it is your case that any use goes –

A. Yes.

Q. – so then in that case it probably is fine?

A. I believe it doesn't, it's, it may not be tight enough your Honour, there is scope there for, such as the Stirling scheme which – and I've been very open to the Court about what the uses of water are in the breakdown.

5 Q. But you weren't – anyway let's not get into the Stirling scheme –

A. Yes, yes.

Q. – and what was in the application and what was not, so –

A. This is just one scheme and –

Q. Yes it is one scheme.

10 A. – not all of the schemes are like this.

Q. And my expectation was that the Territorial Authorities would have done an audit to see whether there were other outlier schemes as it's been called, but at the moment we haven't got that evidence?

A. Yes, I'm not aware of any that –

15 Q. Yes.

A. – that are captured by Plan Change 7 that are like this?

Q. Yes and I – frankly I'd have to go very cautiously with this because of –

A. Yes.

1615

20 Q. - of what is now in play with the definitions and legal submissions in the absence of a proper audit, full audit of all permits.

A. Would that occur at the time of an application?

Q. That would occur in this hearing.

A. Okay. I don't have that information on me, your Honour.

25 Q. No, I know you do not.

A. And, in fact, that really wasn't the focus of my evidence.

Q. I know, I know, it was not.

A. My evidence was about water allocation irrespective of what the schemes supply their water for, and I have no control over that, but certainly, getting plan change 7 and the schedule 10.A.4 in a good way that is useful for that water allocation has been my focus.

30

Q. Yes, and I do not think – anyway, that is a matter for us.

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

Q. Where do you want to take this? I mean, I look at like it does not mean any and all purposes. It does not say that, but, wow, if that is how a consultant would apply it, then maybe we do need to be looking at this further. It may want for other issues.

5

A. I can't advance it much further with this witness, I don't think, you know. It's certainly highlighted some of the challenges with its application, but also the fundamental issue as to use of water within these schemes on which we have very little evidence. In fact, the only evidence is now this evidence here in terms of a breakdown and a little bit of evidence in terms of the Dunedin City Council, which I'll ask some questions about as well.

10

Q. Well, yes. This witness is only concerned with Waitaki and Clutha, though, as opposed to Dunedin.

A. Oh, yeah, no, I was going to put those questions to the witness who has appended to his evidence some of that information, but otherwise, there is simply no other evidence in terms of the breakdown, and hence the council's concern in light of what it observed to unfold in the context of the Stirling case.

15

**20 MR HELLER:**

Your Honour, sorry, if I may speak. In my evidence-in-chief for this hearing, your Honour, I have provided a breakdown, as such, for the Waihemo – that's the Waihemo Palmerston – the Milton, and the Balclutha water supplies insofar as I discuss the uses of the water for those water supplies, and I provide the rate and volumes of water that are taken, and I think they would be three good examples to the Court of what a typical community water supply would look like because I think the Stirling example is a bit skewed towards what was probably inheritance by the District Court of a rural stock water scheme into their community supply scheme, so it's ended up being morphed into a community water supply scheme. They're supplying the Benhar and Stirling community, and some of the Balclutha, but they also ended up supplying, you know, the stock water and dairy shed uses to that rural area, and I think there are quite a few community water supplies around the country that have ended up that way, basically inherited from old stock water supplies, and in that, they've ended up

25

30



having to treat to drinking water standard, because the stock water supplies that supply the properties also supply the households.

**THE COURT: JUDGE BORTHWICK**

5 Q. And I understand all that, and the question that I think the Court is grappling with is whether, when you have schemes that are treating water to a drinking water standard but supplying for non-human-consumptive uses, they should all get a 30-year consent, particularly where, in the short term, you have got a registered six years' time, hopefully before then will have a comprehensive land and water plan that then looks at  
10 integrated management of uses, and that is the council's dilemma that it is faced with, because it has got a water plan, as I understand it, that does not effectively manage the discharge of contaminant to ground or to – onto land or to land in circumstances which may enter water and doesn't have other methods to integrate land use discharge and air contaminants  
15 which might be associated with the water take in use permits. There's no integration and it's wanting to get there and you're saying, well it doesn't matter, so do you consent?

1620

A. I'm not saying it doesn't matter your Honour.

20 Q. What are you saying then?

A. All of the uses matter, my response to the Court then was about the proposition that counsel provides the Court that you could only rely – the Court could only rely on, on this breakdown for the Stirling as an indication of community water supply make-up, that is incorrect in my view.

25 Q. Because -

A. I disagree with that your Honour, I –

Q. Yes, well that's good to know –

A. Yes.

Q. – and that's because you've addressed three schemes –

30 A. I've addressed –

Q. – one in Palmerston –

A. Yes.

Q. – one in –

A. Milton.

Q. Milton?

A. And Balclutha.

Q. And so you do the percentage breakdown of uses?

5 A. I state what the uses are and –

Q. In a narrative sense?

A. – the analysis is that for the Milton and the Balclutha –

Q. Yes.

10 A. – takes, there is no water used for dairy shed or rural stock water whatsoever. It is purely for those townships.

Q. Okay, and then for the other one, Palmerston?

A. The Waihemo, Palmerston? There is water supplied to one dairy shed. I think I mentioned this a little bit before and it's also supplied –

**CROSS-EXAMINATION CONTINUES: MR MAW**

15 Q. Well let's press pause on Waihemo, we did go over that, paragraph 36.

A. It is supplied to one dairy shed and it also supplies stock water.

Q. Also supplied to the balance of the rural command area?

A. Yes, yes.

20 **THE COURT: JUDGE BORTHWICK TO MR HELLER**

Q. What for?

A. For stock water.

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. But you just said it wasn't provided for stock water?

25 A. No I don't think I did, I, I've been always –

Q. All right, might have been the -

**THE COURT: JUDGE BORTHWICK**

No, he d- yes it's stock water.

**CROSS-EXAMINATION CONTINUES: MR MAW**

A. In my evidence it says quite clearly that it provided for Palmerston township, for stock water for the balance of the rural supply area or command area and also to one dairy shed.

5 Q. But the difficulty we have here is we don't know what the proportion of use is and when you read the narrative it could be anything and the best breakdown that I've seen is the one from your earlier evidence which had 80% of the water going to that type of use?

10 A. That is a misconception counsel, that is biased towards a scheme which is predominantly sending water to rural by volume, as I said – my knowledge of the Waihemo scheme is that the majority of the water is supplied to Palmerston township. Secondly, for the Milton and Balclutha schemes, all of the water is supplied to the townships, there is no water supplied to dairy sheds or rural stock water uses whatsoever.

15 Q. Well, let's just press pause so you said the Milton scheme then?

A. Milton?

**WITNESS REFERRED TO PARAGRAPH 37 OF WRITTEN EVIDENCE**

20 Q. Yes in your evidence, your written evidence says, paragraph 37, "the Milton water supply serves the Milton township and some adjacent stock water requirements and industrial uses".

A. Okay let's get to that. 37 was it?

Q. Yes.

25 A. That is incorrect. As far as I'm aware it provides the Milton township and some adjacent industrial premises. As far as I'm aware it's not supplying stock water because the stock water for that area is served by another scheme which takes water from the Taierei catchment and it goes all around Milton. The Milton supply currently just supplies the Milton township.

Q. So tell me about the other supply.

30 A. The other supply, the Balclutha supply. The same applies counsel, it is solely supplying water to the township of Balclutha. The other schemes that are sort of the you know, it's got the rural component, they are supplying water to all of the farms you know around the outskirts of

Balclutha. In the same way that the scheme supplied Milton rural properties.

Q. So would those schemes be captured by community water supply schemes?

5 A. In terms of the definition, those schemes do also have a primary purpose of supplying drinking water. So...

### **THE COURT: JUDGE BORTHWICK TO MR HELLER**

10 Q. Who owns that scheme? The one that does Milton which isn't the Milton – who...

A. That's the North Bruce that's supplied out of the (inaudible 16:25:40) elevation above Lake Wai– over the hill from Lake Mahinerangi.

Q. Who runs that one? Whose scheme is that?

A. Clutha District Council.

15 Q. So, Stirling is in fact not the only example of a scheme run by Clutha.

A. Oh, no.

Q. Which primary purpose is not household use, as in people drinking.

A. Well, there are quite a few schemes in the Clutha district –

Q. Yes.

20 A. – that supply water to rural areas. I can think of the South Richardson scheme also supplies to rural areas that also picks up the town of Kaka Point and I think it provides water to around the Finegand area. So again it's sort of what the district councils inherited from the old stock water supply schemes where they've picked them up and they basically had to  
25 treat them to drinking water standard to supply the – supply drinking water.

### **CROSS-EXAMINATION CONTINUES: MR MAW**

30 Q. How many others like that and let's stay with Clutha for now, that you're aware of?

A. That I'm aware of? There's also the Waitahuna scheme, Laurence supplies Laurence –

Q. So where does that supply?

- A. – there’s a Tuapeka scheme, there’s also the Clydevale scheme, I’m just trying to think of other schemes, there’s one at around the Clinton area. I know that the Clinton township is supplied separately, that may even come out of the Clydevale scheme now. I think there’s a (inaudible 16:27:21) scheme which also supplies rural. Now I’m not sure all of these schemes are actually in schedule 1B or 3B in the current ORC water plan.

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

- Q. But they’re district council schemes?
- A. They are district council schemes. Quite right.
- 10 Q. There would – quite a number of them –
- A. There are...
- Q. – have deemed permits, the old mining privileges?
- A. No, I’m not aware that there’s any...
- Q. No they’re all – after that I think. In terms of when they started.
- 15 A. From my knowledge they are all resource consents.
- Q. Okay.
- A. Yes.
- Q. And do all of those permits have a range of uses? One of which will be supply potable drinking water for human consumption?
- 20 A. Yes your Honour and again that necessitates the treatment of *all* of the water.
- Q. Yes I know, I understand that you treat it to a drinking water standard but...
- A. Yes and there’s a considerable cost to that.
- 25 Q. But your evidence, the Court must not be left with the impression that Milton and Balclutha solely supply for township – potable drinking water for human consumption because that it incorrect in relation to Milton and Balclutha.
- A. Yes my apologies at – adjacent industrial premises.
- 30 Q. Mm, yes what do you mean by that? Is that the prison or something else?
- A. The prison is earmarked to be supplied. It’s partially supplied at the moment.
- Q. Yes, what’s industry to you?

A. It is partially supplied –

Q. Yes.

5 A. – by Milton at the moment and it's earmarked to be fully supplied. And there are also other industries in that area which have their own ground water supply but the ground water has proved to be insufficient.

Q. Mm. Anyway, Balclutha is solely township supply for potable drinking water for human consumption or –

A. Supplied to –

Q. – sanitary?

10 A. – supplied to the township your Honour.

Q. Okay.

A. You know as I said, even in Dunedin city there are a mix of uses.

15 Q. Okay but a range of other – but a number of schemes also run by Clutha, of which there are a range of uses and those uses can be both rural and urban and are not limited, where in the rural area, not limited for human consumption?

A. Yes but they are for human consumption and also other uses that's qui-

Q. And also other uses, yes okay. And so, that's interesting.

1630

20 A. I don't think that those sorts of rural schemes are reserved just for the Clutha District Council, your Honour.

Q. No, no, no. I expect if we press into the other councils, that is also the case, but the question is there are issues, very significant issues in play here in terms of the management of the water resource.

25 A. Yeah, I think, certainly, that will be a function for the new land and water plan. I don't think any of those other rural schemes would come up or come into play for plan change 7 for the duration of PC7, you know, very limited, but the one that would come into play would be when I talk about the Tuapeka and the Waitahuna schemes. They've got problems there  
30 in terms of flow and water quality and, as I said before, your Honour, like to combine those into a mega-scheme at Clydevale, adjacent to the Clutha River, effectively surrendering and making good on the tributaries with sort of an equivalent take, albeit indexed to growth, so that the new

infrastructure can be appropriately designed and installed, giving the territorial authority confidence moving forward.

**CROSS-EXAMINATION CONTINUES: MR MAW**

5 Q. And again, in relation to the range of uses in play on those consents, broad range, including the rural?

A. Yes, yes, broad range, counsel, that's correct.

Q. We haven't spent much time on the Waitaki, but what's your understanding in terms of schemes across the Waitaki?

10 A. Now, a lot of the Waitaki District schemes are now covered by ECan, and that's because the Oamaru water supply, which comes out of a race from in the lower Waitaki, and it's sourced from Black Point in the Waitaki River, that's an ECan consent, and now Waitaki have effectively distributed that water so far south that there are very few water supplies remaining that are to be consented by the Otago Regional Council, and obviously, Waihemo Palmerston is one of those. So very few, counsel.

15 Q. I want to pick your hydrology brain next. When you think about a flow-on allocation regime on a river, when you think about a minimum flow imposed on a river, for that minimum flow to be effective, do you accept that all takes need to have that minimum flow limit accorded on them?

20 A. That is not in my evidence, counsel. I am not at this court, I have not provided any evidence on that. That would go to other scientists who were toying about effects on rivers and so forth, don't you believe?

**THE COURT: JUDGE BORTHWICK**

Q. It is beyond your area of expertise, is that what you are saying?

25 A. Yes, and that's beyond my expertise as it relates to the –

Q. No, no, is it beyond your area of expertise as a hydrologist? You cannot comment on that?

A. You're sort of putting me into a corner here. Okay, what was the question again?

30 **CROSS-EXAMINATION CONTINUES: MR MAW**

Q. You've regularly given evidence and held yourself out as a hydrologist.

- A. Correct, sorry, correct.
- Q. So you understand what a minimum flow on a river is?
- A. Yes.
- Q. And you understand that where you have a range of water permits  
5 abstracting water from a water body, a river –
- A. Yes.
- Q. – in order for a minimum flow to be effective on that river, all takes would  
need to be so limited.
- A. That is not absolutely necessary.
- 10 Q. Why?
- A. If the river is large enough to sustain all takes whilst also sustaining the  
minimum flow.
- Q. Right, so in that situation, provided the minimum flows were set well  
above the minimum natural flow in the river, then the issue wouldn't arise?
- 15 Perhaps I'll put my question a little differently. Is there a risk in terms of  
achieving a minimum flow on a river if not all water permits have a  
minimum flow restriction that is the same?
- A. That's not necessary either, because there are other examples of stepped  
minimum flow restrictions or stepped environmental flows to preserve an  
20 instream allocation, and I would look to the Mata-Au River water  
conservation order as an example of that.
- Q. Well, we don't need to get into a discussion about the Mata-Au water  
conservation order now.
- A. Okay. You just said I was a hydrologist.
- 25 Q. Well, yes, as much as I'd like to go there, I won't go there in the context  
of this.
- A. But you do understand that that's about, you know, preserving the  
proportional flow within the river. It's just another way of providing for a  
minimum of an environmental flow stepped regime.
- 30 Q. Yes, a series of bands to ensure that no more than 5% of the flow is taken  
above the (inaudible 16:36:36) Gore.
- A. Gore, or above the Wyndham. Wyndham? Yeah.



Q. Well, let's stay there. So for that flow regime to be effective, all consents need to subscribe to that same regime, don't they? Otherwise it wouldn't work.

5 A. It wouldn't work insofar as it would be about timing and duration. I'm not necessarily saying it wouldn't work, per se, but there would be a potential for a duration of time where possibly minimum flow thresholds were breached.

10 Q. When you are establishing a flow and allocation regime to protect values in a river, do you accept that in order to ensure that flow and allocation is properly implemented, consistent conditions need to be applied to various consents, or all consents abstracting water from that resource? You can't have permits with different minimum flows.

15 A. Yeah, yeah, yeah, yeah. Also, just into the mix there is things like primary minimum and supplementary minimum, and there is a distinction, so not all permits may have the same minimum flow. You sort of understand where I'm coming from?

20 Q. Let's make it really basic so I can understand it. You've got five takes on one river, the minimum flow in the plan says that the river shall not drop below a flow of one cumec. You would expect to see that limit, then on each of the five resource consents.

A. If they were party to that particular minimum flow regime, yes.

Q. That's as far as I shall pursue that line of questioning.

A. Great.

Q. Right. Thank you, no further questions.

25 **CROSS-EXAMINATION: MS BAKER-GALLOWAY – NIL**

**RE-EXAMINATION: MS IRVING**

Q. Mr Heller, if I could just refer you please to appendix B of your evidence-in-chief.

**WITNESS REFERRED TO APPENDIX B OF EVIDENCE-IN-CHIEF**

30 A. Yes, yes.

Q. Can you just tell us what is included in appendix B, please?

A. This is a list of all water take consents held by the Clutha District Council and the Waitaki District Council and the Dunedin City Council, and this is in relation to each specific territorial authority community water supply.

5 1640

**THE COURT: JUDGE BORTHWICK TO MS IRVING**

Not sure I've got that. Maybe I do.

**THE COURT: COMMISSIONER EDMONDS**

(Inaudible 16:40:20) impossible to read (inaudible 16:40:22).

10 **THE COURT: JUDGE BORTHWICK**

The Clutha one is quite small, I would agree. So I've got -

**THE COURT: COMMISSIONER EDMONDS**

Perhaps we could have a size we could read.

**THE COURT: JUDGE BORTHWICK**

15 Font which is plus one, so I've got Clutha, Waitkai, Dunedin, is that it? Just the three?

**MS IRVING:**

A. Yes that's right.

20 **THE COURT: JUDGE BORTHWICK**

Okay, so perhaps you can go -

**THE COURT: COMMISSIONER EDMONDS**

It's just the Clutha one that's got the font problem.

25 **MS IRVING:**

Yes. Yes I'm sorry about that, I suspect it was intended to be printed on A3 but.

**RE-EXAMINATION CONTINUES: MS IRVING**

Q. So perhaps Mr Heller if we can start with the Clutha one and if we look at the columns, the fourth column from the right-hand side of the page?

A. Yes. Yes.

5 Q. Is that the column that identifies the expiry date for the permits?

**THE COURT: JUDGE BORTHWICK**

Fourth column from the right.

**RE-EXAMINATION CONTINUES: MS IRVING**

10 A. I can't see it. Yes I'll agree there is an – I think there is one there for expiry date, fourth. It's not fourth –

**THE COURT: JUDGE BORTHWICK**

Fourth from the right I think.

**RE-EXAMINATION CONTINUES: MS IRVING**

Q. Are we look- so perhaps if –

15 A. Yes that, yes that is expiry date and I can just make it out.

**THE COURT: JUDGE BORTHWICK**

It's going to make re-examination difficult.

**RE-EXAMINATION CONTINUES: MS IRVING**

Q. So you've found where that is and –

20 A. Yes.

Q. – you can read it?

A. Just.

Q. Just, all right, okay, that will do. If you move down that column, how many of the permits held by Clutha District Council expire prior to December  
25 2025?

**THE COURT: JUDGE BORTHWICK TO MS IRVING**

Q. And that includes the dates they've gone. You know, because quite a few dates have gone previous years?

A. Yes.

5 Q. Yes, okay.

**RE-EXAMINATION CONTINUES: MS IRVING**

A. Yes. One that I can make out if I'm reading it correct.

Q. And is that for 25 litres a second from the Clutha River for the Kaitangata town water supply and Wangaloa rural water supply?

10 A. And that expires in 2024, is that what you're reading?

Q. Yes.

A. That's the only date I can see that's prior to, you know, including 2025, I can't make out the rest of it, I'm sorry.

15 Q. Probably without the witness actually being able to read the document it's not overly helpful?

**THE COURT: JUDGE BORTHWICK**

Right, because I can make out a heap, so.

**MS IRVING:**

20 Yes, yes.

**THE COURT: JUDGE BORTHWICK**

Just. What do you want to do?

**MR HELLER:**

25 That, okay, Wangaloa, Kaitangata.

**THE COURT: JUDGE BORTHWICK**

No, don't do eye strain, this is like – this should not have been presented this way, so don't worry about it, I just really want to know from Ms Irving, where does she want to go? Because we'll have to call him over tomorrow if, and  
30 hopefully produce an A3 size document.

**MS IRVING:**

Yes, yes.

**THE COURT: JUDGE BORTHWICK TO MS IRVING**

5 Q. But I can count a fair few number that are due to expire before that date that you've just given?

A. Yes I think –

Q. Including the dates which are past.

10 **MR HELLER:**

Your Honour, I'm scheduled for surgery very shortly and I have –

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

Q. Oh, as in tomorrow?

A. – consultant tomorrow. I've been holding off surgery for this –

15 Q. No, no, that, this stuff's, (inaudible 16:44:32) probably more important.

A. – and just for your information, I was in hospital the night before the caucusing –

Q. Yes, okay.

A. - but I managed to get out in time.

20 Q. Okay, all right.

A. So it's a bit of a knife edge so to speak.

Q. Well just talk to Ms – it will be unfortunately. Just talk to Ms Irving about the importance of it because –

**THE COURT: JUDGE BORTHWICK TO MS IRVING**

25 Q. Where do you want to go with this line of questioning?

A. Well the purpose of this line of questioning was to provide context around the number of applications for community supply that are going to be subject to the plan change 7 framework.

1645

30 Q. Well, my rough count, and it's really rough, is about 13, plus applications for new water, so we've got those two.

A. Yeah.

Q. So if you agree with 13, I do not know.

A. Well, it struck me when I was looking at this, there's obviously some there, that it extensively expired a couple of years ago.

5 Q. Yeah, that is right.

A. So I'm not sure what's happened with those.

Q. No, so that is why I said including the dates that have expired. So, including the dates that have expired, I think I got up to about 13, but that is pretty rough.

10 A. Yes. If those have been renewed already, which is possible, then they may have different dates. Because you have, perhaps in the questions earlier, and in some of the discussion with Mr Heller, I think you mentioned needing a full audit of the permits, and I suppose it is a question of how you would like us to death with this moving forward, whether you want to continue with the territorial authority case tomorrow, where we carry on in this mildly excruciating fashion, or whether you would like us to –

15

Q. Why is it excruciating?

A. Well, just that we have obviously got Mr Maw asking questions based on potentially limited evidence about this issue, and the impression I've got from your Honour's questions is that you are interested in more detail.

20

Q. I am interested to know what are the four corners of your case. I would be interested in everybody, in every party, on the same issue, what are the four corners, and there is work to be done overnight on the legal submissions. I think we have a definition which might (inaudible 16:47:12) in some respects, but I did not think (inaudible 16:47:15) in terms of your witness now opening it up, I would interpret the primary purpose as meaning a purpose. Well, that is a bit surprising, and the same issue came up with Claire Perkins yesterday, when she used "primarily included," and I queried her: "What do you mean, 'primarily'?" because she had grabbed all water uses when she was talking about "primarily the uses," and in fact, it was all types of uses, it was not the main use, and she came back and said, no, primarily is the main use, so there seems to be, you know, maybe the definition once, but the four corners of the

25

30

council case is not clear. How do you handle it? I do not know. I mean, it is your submission, but you do not have evidence – in fact, probably now contradicted by this witness – that Stirling is an outlier. I do not know what you mean by outlier, but this witness is clearly saying the community water supplies, the supply of water by district councils to its rural and urban communities includes a large range of uses, he is clearly saying that. I do not know that Stirling is such an outlier on that basis. Now, you know, if you agree, yeah, it is not an outlier, there are other cases, and the proportions might differ, but there are other cases, then it seems to me, then we move, perhaps, to the planner case, and then that is the real rub, is it not? Why should district councils supply water for undocumented uses when there are wider issues in play, and those issues are the integration of natural and physical resources, which regional council is tasked with. That is more the planning case, though.

5  
10  
15 A. I mean, I suppose what I am slightly concerned about is that we spend a whole lot of time trying or concerned about or trying to bottom out the extent to which Stirling may be an outlier or not, and in that we might –

Q. You said it. That is the problem, when council offer, from the bar, something which is not substantiated in evidence.

20 A. Well, that was my understanding on the basis of the evidence that I had, so the conversation where this has gone –

Q. Has taken you beyond what your understanding was?

A. Yes, it was, and that was why I was wanting to come back to, well, what are the permits that are actually going to be subject to this regime?

25 Because if it isn't all in sundry and there aren't a whole lot of rural schemes that come up within plan change 7, then maybe the issue is not as acute, so I think –

1650

Q. Meaning the District Council can perhaps compromise its case?

30 A. Well, either that or where we are at the moment, which is the community supplies that we understand will be subject to plan change 7 don't suffer from the Stirling issue, and so we can carry on with those, and I have to confess, I don't know the answer, which way that would go.

Q. So it is an evidential problem, I think, for you.

A. Yes, agreed.

Q. And it may be that Stirling is the true exception, but I don't think that this is the evidence from Mr Heller, but if it was, then why would the environment bear the risk, which is Mr Maw's line of questions for other witnesses. Why would that be visited upon the environment when there is a land and water plan to come? If it was truly an outlier, all of the other TAs would say for goodness' sake, get on with it, it is all about urban use, or water for human consumption, that is what it is about, get on with that, let us focus on that. That is how I imagine the TAs would go if it as truly an outlier, but you do not know that, and now there is actually doubt that that is true.

A. Yes, yes, and so, I mean, we can carry on tomorrow and try and draw that out, or it may be more efficient for us to have an opportunity to go away and actually resolve that, prepare.

Q. I do not know about that.

**THE COURT: COMMISSIONER EDMONDS TO MS IRVING**

We still have questions remaining to the schedule, quite important ones, following on from what we were asking in relation to the Landpro witness and what now seems to be in the joint witness statement, that perhaps is specifically targeted at the TA activity, and there are two of asking questions on that, maybe three.

**THE COURT: JUDGE BORTHWICK TO MS IRVING**

Q. No, I was not going to ask any questions, but the thing is, you could take some time out to ascertain from your clients the facts, or you could take instructions in terms of the water supplies that they wish some latitude for. Is it urban growth in urban areas, is that what it was, and does this definition apply to uses within urban areas, and secondly, drink water for human consumption, rural, or is it everything? So I think that is actually a question for client instructions overnight. That is my sense of it. Where do you want to take this? And if you want to take it wide, then, if there is not a good evidential basis, you know, that we are missing some facts and we are going on the fly, then perhaps we do have to come back.



A. Yeah, I'm just slightly conscious of how we just keep blowing out the schedule and that there's other parties coming in, and if we may more efficiently deal with this if I have the chance to work through these issues with the territorial authorities, reach a position where we can clearly articulate to you the four corners of the case in a way that may avoid a lot of toing and froing with witnesses in the witness box that, you know, at short order may not actually advance matters, and everyone just gets more confused.

5

Q. I do not think I am confused, but what we want is an evidential foundation to say that Stirling is an outlier. That has now been contradicted. I do not think the cross-examination has been confusing, it has been helpful.

10

A. Yes.

Q. It was almost inevitable that counsel would press into Stirling.

A. Yes. What's not clear, what I don't know the answer to is the extent to which there are other cases like Stirling that will be caught by plan change 7 or not, and I don't know whether I'm going to be able to resolve that overnight.

15

1655

Q. So we will finish the Court's questions because the Court does actually have some important questions which are only about the scheduling. That has been off-topic as it is, but thoughts about perhaps adjourning the TA case in its entirety?

20

**MR MAW:**

25 This matter has been at issue and signalled pretty clearly by the regional council as to the reason as to why it hasn't been making an exception for community water schemes. That has flowed right through – excuse the pun – in Mr de Pelsemaeker's evidence, so the TAs have been on notice that there is an issue here, and it is up to the TAs to rebut that from an evidential perspective.

30 The TAs have sought to put forward some evidence in relation to a range of uses, and for example, Ms East's memo, which I've put to Mr Heller today, refers to the range of uses. Mr Twose attaches to his evidence a report from the Dunedin City Council that provides a breakdown for the uses within that scheme, so there is evidence before the Court which I would describe as

inconvenient to the case which counsel for the TAs is or has been pursuing today, and in terms of seeking to backfill that evidential gap, which may or may not now exist, my concern is delay at this process, and the time that we may lose, noting how much has been pushed into our last two weeks of the hearing.

**5 THE COURT: JUDGE BORTHWICK TO MS BAKER-GALLOWAY**

Q. Which is a fair amount. Well, I shall talk about it with my colleagues and let you know. I do not want to make a decision off the hoof. You have not got an interest in this, have you, Ms Baker-Galloway, would you?

A. No, ma'am, no, I defer to Mr Maw on that.

10 Q. Okay, so you agree with?

A. Yeah, agree with him, yes.

**MS IRVING**

Can I just add, on the scheduling issue, I mean, I appreciate the timing issue  
 15 and all of those things, and, you know, I am as reluctant as anybody to push things out, but because I think we could consume a whole lot of extra time tomorrow trying to work through this that it actually might be a worse outcome in terms of getting this dealt with as efficiently as possible, and also have other implications for the cases of the parties to follow, who I understand have other  
 20 timing issues and constraints with other cases and mediations and everything, and that if the TA case pushes on into tomorrow and takes a whole lot of that time, that we then have, you know, follow-on effects that arise from that. Mr Cooper might be able to share with you some of those scheduling challenges. So, you know, I appreciate it might appear like I'm playing for time,  
 25 but I'm really trying to find a way of dealing with this as efficiently as possible so that we minimise the timetable blowout to the extent that we can.

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

Q. All right. I am wondering, thinking about it, is it worth hearing from Mr Twose to understand what his understanding was?

30 A. I've been thinking about that through the lens of whether my cost should follow hearing the facts from the underlying representatives from the councils before he can give a useful planning opinion.

Q. Strangely, he is on next.

A. Yes, which struck me as odd.

1700

Q. Yes.

5 A. In terms of the order.

Q. Mmm.

A. I would have thought he would follow those others.

Q. Yes the evidential basis having been established.

10 A. Yes. I mean I'm ready to cross him and the foundation in a sense the evidence today has given me enough, what I need to cross him on.

Q. Yes.

15 A. And I was ready to go, had we reached him today. So, yes I me– and just in terms of what it is the TAs might do if they are given an opportunity to file further supplementary evidence for that to be of assistance I would have thought it would need to look like a breakdown by category of use for each of the schemes for which a replacement permit is going to be required under the PC7 regime.

Q. Mm.

20 A. And also a breakdown in relation to the range of uses for which new schemes might be put. Now it strikes me that that information, well no to be fair I don't know how easy it will be to obtain that information. It's either there or it's not.

Q. And then in terms of its long-term planning or five-yearly cycle (inaudible 17:01:16).

25 A. No in terms of the breakdown of the uses for water within schemes –

Q. This is for – yes for new permits though. They – that information should be there. In the medium to long?

A. It ought to be there when for example, applications are lodged –

Q. Ah yes.

30 A. – but when one looks at previous applications in the light touch in terms of the explanation of uses, I'm not sure whether the TAs have really turned their minds to this question.

Q. Yes I know and that was also a matter of interest from us to hear from Mr Twose on – what sort of, what goes into an application for a resource

consent and yes. Was the evidential foundation to establish for example what is growth? And what are the – on a new permit, what uses? Yes, what information is it? Yes. We had an interesting conflict in Sterling where the engineer disagreed with the planner on that and I appreciated his candour and I could certainly understand where it wanted to take the scheme but it wasn't for the reasons of growth or that wasn't the primary motivating reason. I think, we'll talk about it amongst ourselves, the bench. There may be some value in seeing what – hearing from Mr Twose initially and perhaps recalling him when we can try and establish through him what he sees the four corners as being, which might differ from you and that's okay because you got client instructions and he's, you know a witness. Okay, so once we hear from him, maybe adjourn at that point, but we need to talk that through ourselves, lift and shift the TAs to somewhere else, might actually be to shift them into a JWS environment, where we can start to push around the corners of this matter.

A. Yeah, that may well assist, particularly the understanding of the case and where it's at, and I appreciate my friend will take some instructions overnight. The more clarity around what is being pursued by the territorial authorities, the more efficient this process is going to be. At the moment, I'm a little unclear as to what's being pursued, which necessitates broader cross-examination.

**THE COURT: JUDGE BORTHWICK TO MS IRVING**

Q. – finish our questions from Mr Heller and any re-examination that you may have, and we will hear from Mr Twose as the independent expert for the territorial authorities. We expect him to be able to provide assistance to the Court in terms of the ambit of the territorial authority's case, and then, at that point, probably consider an adjournment for directions as to supplementary evidence, if, in fact, it is needed as to new takes, and those takes which are to be reconvented, and may yet direct into a JWS environment. That might prove more useful, may direct into planning JWS where the issues can be debated there. Would it be useful to get

your client's instructions? I do not think there are going to be too many dairy sheds in Dunedin.

A. Not in the city.

5 Q. I might be wrong, though, it is a big city and it does include a lot of rural area.

A. Yes, yeah.

**THE COURT: COMMISSIONER BUNTING TO MS IRVING**

Q. Did you have to go to each of the councils separately?

A. Yes, in short.

10 Q. Yeah, okay.

**THE COURT: JUDGE BORTHWICK TO MS IRVING**

15 Q. Each of the councils, because of their demographics, may have different interests in the outcome here. It could just be Clutha which is holding up the others, if you like, if they actually do have an urban and potable water focus – potable water, which is actually consumed by people, focus, but maybe that is not right, maybe they want a supply for all uses. It would be good to know what your client's instructs are, and it may differ from territorial authority to territorial authority.

20 A. Yes. Well, I do know that there are some differences between the territorial authorities about the extent to which they are exposed to plan change 7, and so some of them may say, well, we're not worried because we're not having to renew any permits, irrespective of where things land. Others, it's an issue that is of particular concern to them because of the level of consenting that's going to be required, and the proportion of their urban communities that that impacts on.

25 Q. Yes, but that is their urban community, and they may not be interested in stoush over how many dairy sheds get supplied by the Clutha District Council. So that is what I mean by the differing interests, they may not be commensurate interests in terms of an outcome here, and you can try for client instructions or we can just see how we go with Mr Twose and his evidence and how that reflects the different character of each of the district councils and then take instructions.

30

A. Yes, well, I'll see what I can do overnight.

Q. And what about legal submissions? I mean, I know the time it would take me to work up these statutory principles and then apply them, so it not just a case of giving me them, because I probably know them, but actually applying them, and that's actually a big job.

5

A. Yes, and I know from the time I have spent in trying to unpack all the various definitions that it is not a straightforward task.

Q. No, no, it is not.

10

A. So I was not looking forward to the lack of sleep, although I am well used to it at the moment, I have an 18-month daughter, so maybe I have been training for this for the last 18 months.

Q. But again, it might be an unreasonable ask, so it may be that you should not be doing that overnight, because I know for the time it would take me to research the relevant principles that I thought applied, then apply them, having established what the facts are, it would not be a job I would do overnight, so you need to think about that, but you do need to come back to it, and it may well be that your issue is not competing definitions as between competing pieces of legislation and competing planning documents, it may well be that the issue is focused squarely on what is a community water supply so that is just an issue in chapters 5 and 6, 15 and possibly 12, I don't know, of the water plan or maybe it's not that, maybe it's something that you're introducing to this PC7, but yes.

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1710

A. Yes.

25

Q. Yes but we need to have a clear idea where you wish to go, we don't want to create the argument only to get it wrong?

A. Well and that's I think, I mean in some ways, that question may well be further informed by what instructions –

Q. Yes it's client interest.

30

A. Where we sort of land in terms of the extent to which community water supplies might be affected by this and the ambit of that, so –

Q. And also -

A. - in getting to the bottom of that issue is probably going to inform that question.

Q. In terms of your litigation risk, if, for example, you've got a municipal water supply for urban use, and it's squarely forming, falling within the MPS4, what is it called, Urban Development?

**THE COURT: COMMISSIONER EDMONDS**

5 A. UDC Urban Development (inaudible 17:11:23).

**THE COURT: JUDGE BORTHWICK**

Q. Whatever it is, it's squarely in that category, plus you've got 20% dairy shed wash down. Then the question then becomes, well if that's actually what it looks like, should you get a 30 year consent with that? Should the component dealing with, should it be a 30 year consent for what is falling within the urban capacity, should it be 30 years at all? Should it only be six if there's no land and water plan in play, in other words, no integrated plan and play, I don't know, you see the – maybe part of your problem is that there's just a water plan, there's not an integrated plan, that's to come, so why is it that TA's are putting up their hand wanting 30 year consents when the land part of the plan is to come?

A. Yes, well and I think their answer to you in relation to that would be because we have other functions, particularly making sure we're providing adequate water supply infrastructure in that instance.

20 Q. But the thing is you can't supply infrastructure until you've got the land park there?

A. Into a vacuum.

Q. So yes I mean that's part of the problem as I understand with this current plan, is that you're planning to an evidential vacuum. You want a 30 year consent for Stirling for urban growth, putting aside the difficulty with that, how is that scaled up? Is that in strategic planning? Is it in its long term plan? Did they have sewers on tap and with plans to put sewers in for whatever urban growth was meant to be coming to Cherry Lane in Balclutha (inaudible 17:13:10) –

30 **THE COURT: COMMISSIONER EDMONDS**

Q. And was the land re-zoned, as well, you know, because -

**THE COURT: JUDGE BORTHWICK**

Q. And was the land (inaudible 17:13:12) for that? Don't know, so you know on, so that whole integration, how is that known under this regional plan or is that to come?

5 A. I don't, I think, I would, yes I think –

Q. That's for planning, yes?

A. – in terms of the regional plan, no. The regional plan is, has -

Q. And in even in terms of the district plan?

A. Well the district plans are at various stages.

10 Q. Yes.

A. And some of the counsellors have done their spatial planning and that's talked about in some of the evidence, we've got Queenstown, what would you say, half way, two thirds of the way through their district plan review, so they're certainly are, they're down a pathway towards identifying where  
15 their growth is and Dunedin of course, as your Honour knows, is – and its review in variation 2 has been notified which identifies more land for zoning, so they are on, at different stages in that process, there is very little I think communication across the district planning documents and the regional planning documents currently, but I don't think that the TAs I think  
20 would say well they can't sit and wait for the regional planning documents to pick up new areas of zoning and so on, they have obligations themselves under the MPSUD if you we take an urban environment example to have that infrastructure available and they need to be doing that now and not waiting six years. So it's –

25 Q. So, yes.

A. – the process is in some ways tripping over one another but practically the Territorial Authorities need to be able to continue to progress their infrastructure planning and so it's a question of how we best reconcile those different challenges.

30 Q. And yes it is a question of how do we best reconcile it and is it just as simple as saying, well just give us a deeded permit?

A. Yes.

Q. Don't know.

A. Yes.



Q. Yes. Thirty year permit for what?

A. Mmm.

Q. Mmm.

A. Yes I understand that's a question you're exercised by.

5 Q. Oh very exercised by it. So anyway that's the plan going forward, we'll finish with questions for Mr Heller so he can get off. We'll have Mr Twose so we can have a look at his evidence, may refer it to our expert conferencing or we just may allow you opportunity to take client instructions to attend to the statutory interpretation matter and bring back  
10 your client's – witnesses with or without – it may or may not include directions around the evidence about the need to establish a firm factual foundation in relation to new permits and also replacement consents?

A. Mmm.

Q. How does that sound?

15 A. Yes.

Q. Probably want to get that transcribed Freda for the record, so I can remember what I've just said. So questions, and you had, you might have actually, it may be that you can't pursue the minute –

A. Yes I won't pursue the teeny tiny writing –

20 Q. Yes.

A. – so I'll leave that issue I think, because I think it'll –

Q. Okay we can come back to that if we need to?

A. Yes.

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

25 Q. Right, so questions from the Court Mr Heller and I'm going to hand you over to Commissioner Bunting.

#### **QUESTIONS FROM THE COURT: COMMISSIONER BUNTING TO MR HELLER**

30 Q. Yes it's going to be very brief which you'll be relieved to hear. Can I ask you to pull out from your evidence-in-chief, there's page 6, page 7 and page 19 which have got information about the Milton permit?

#### **WITNESS REFERRED TO PAGES 6, 7 AND 19 FROM EVIDENCE-IN-CHIEF**

Q. So I think in your early part of your evidence you were concerned about using the average maximum and the effect that that would have, is that a pretty brief summary of what it's about, yes?

A. Correct.

5 Q. And then the second part you said if you could use the actual maximum, that would solve your concerns, is that a fairly simple way of describing it?

A. Yes and that's in relation to the previous use or the past use up to current, present day.

10 Q. And that's what has been agreed in the - by the -

A. Yes as I understand it, yes.

Q. - your hydrology?

A. Yes.

15 Q. Yes. Can we just, I was just looking at those three plots in figures 1, 2 and 3 and one of them is daily take and then that one at the top of the next page, I think the heading's at the bottom of the previous page but anyway, that's monthly, is that correct?

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

20 Q. And then you've got annual. You seem to have one particular record there which is substantially above the rest and when it's around about 2018 or thereabouts is that - would that be -

A. That's, yes, t-

Q. Can you read it, it's pretty small writing, but -\

A. 2018, '19?

25 Q. Yes somewhere about there.

A. 2018, '19, yes.

30 Q. Given, and there's one other spike further back in 2011 or something like that, I suppose the question is, when you come to look at that, would that, is there, would there be some reason that you need to investigate to say why is that one so much higher?

A. Yes definitely Commissioner. Most definitely.

Q. And how would that be captured for within the schedule? I mean you've got a method for capturing, exceedances, for margins or error and all this?

A. Yes.

Q. But is this an outlier or?

A. I'm, to the best of my ability –

Q. Yes.

5 A. – in reviewing that data, I don't believe it is an outlier. No just to give you  
some context to this, the data that I received for this from the Regional  
Council had already gone through the process of them pushing the button  
for a PC7 outcome, so this data should be good. They've already gone  
through and assessed that data. Now there was some – there's an  
10 appendix A in my evidence which talks about some concerns that the  
council had with the data but it was with the later 2021 data which I  
haven't used in this evidence Sir. I reviewed that data, I found spikes,  
gaps, outliers still contained within the data that the Regional Council had  
supposedly pushed the button for PC7 and said, "this was all good". So  
I've further gone through and checked that data and with removal of all of  
15 the errors that I still found in that data, Sir, this is what I've ended up with  
in terms of the record for that water supply.

1720

Q. So you haven't gone back and tried to gain some sort of understanding  
as to why and make particular (inaudible 17:21:06)?

20 A. I haven't gone back to the District Council to get their breakdown if you  
like in terms of whether or not that was, you know due to an unusual  
circumstance –

Q. Yes.

25 A. – but I – the period that we're talking about is actually not a one-off period.  
It's quite a reasonable duration of time and that again is a – that's a filter  
in terms of looking at data and trying to establish where you've got  
outliers, spikes and so forth. So, there's no indication that that isn't  
correct. And it's certainly within the consented regime for the take, so it's  
not exceeding the...

30 Q. The current consenting?

A. The current consent regime, yes.

Q. Okay.

A. And that's really just, you know in terms of being able to analyse data, it's  
not just as simple as pushing a button.

Q. (inaudible 17:22:09).

A. I mean, you know, you need expert people to be able to go through this data and analyse it. It took me a day, per data set to go through and analyse it because we're looking at different types of data. We're looking at the instantaneous, the daily, the monthly and the annual data sets to actually look and see where there were errors and in some cases where the Regional Council had provided the summaries of the data, it didn't add up, some of the monthly volumes were inconsistent with the annual volumes and so on and so forth. So I've had to through and correct that. But, I'm not saying that that's a fault with the Regional Council that is just data and the point I'm trying to make her Sir is that there is no simple push of the button.

Q. Sure.

A. That's going to do that.

Q. I just wondered because it is – as it stands out rather that whether you might have gone and talked to the council, discussed with them, you know as there something in the system that caused that happen was it...

A. I've taken the audited data at face value Sir but I must admit, I did remove more errors and gaps that were presented to me in the data by the Regional Council.

Q. So in terms of the schedule as it's now agreed with your technical colleagues, that would represent then the maximum which would be the agreed figure under schedule 10A 4, a replacement permit?

A. Yes and that's for legitimate data.

Q. Okay well...

A. Yes, so as far as I can determine this data is legitimate for the purposes of the schedule 10A 4 assessment.

#### **THE COURT: COMMISSIONER EDMONDS TO MR HELLER**

Q. When you say *legitimate* do you mean that all the steps that have to be followed have been followed under the methodology at the beginning of – well throughout schedule 4A, under the heading *Methodology*?

A. Yes well, you know it's pointless having data that you're analysing that still contains errors. So all of those errors have to be removed or treated

to a standard where you are making a reasonable analysis. However in saying that, with this move with my caucusing colleagues that the taking of the maximums over the – for the periods in terms of the rates and the volumes, it does make it far simpler to analyse the data.

5 Q. So I'm just puzzled why you're referring to *legitimate* when you mean legitimate are you saying, provided you are following the methodology then the end result is what is legitimate?

A. I haven't – I think I made some comment about the methodology in my evidence. I can't remember what comments I made but what I'm saying  
10 here is that if the methodology provides the sorts of data files that I ended up with from the Regional Council in respect of these water supplies, then I'm not confident that the methodology works. However in saying that, through caucusing, the methodology is sort of changed away from the averaging to the maximums and that does make it far easier to pinpoint  
15 those particular items from a data set.

Q. So I had a question in relation to the methodology for calculating the rate of take and so we have a series of steps to go through, things to be calculated and removing --

A. Yes.

20 Q. – something and then rounding something else down and then we have four – a step which it seems that isn't to apply to applications for community water supplies. Now I am unclear as to the reason for that so, I wanted you to explain to me why it was felt to be necessary to make that step four not apply to applications for community water supplies. You  
25 probably need to have this marked up version of what schedule A4 looks like, we provided with an order to answer this question. To you have that there?

A. No I don't. I'm a bit confused by that. The schedule should look, like along the lines of, for the rate it takes essentially the maximum of the  
30 prevailing data set once it has been assessed for validity. And this is why I talk about data that is applicable to deriving those items. It's just a matter of removing all of the errors and what you're left with is the real data.

Q. So I'm sorry but I very confused as to what it is –

A. Okay.

Q. – that you're accepting of here or not accepting and what the reason is so, perhaps I'll just park that for the moment and go to another question that I have and that is the – in the *controlled activity rule* which is where this schedule comes into the play, if the community water supplies are going to go down the controlled activity rule path at all, there used to be a limitation on the water years for the data that could be considered and that was the period 1 July 2015 to 30 June 2020.

A. Yes.

Q. And so I was wanting to understand or, one whether that was something that you had seen as particularly important in terms of community water supplies and whether that was a reason for the striking out of the limited time period.

1730

A. In the technical expert caucusing, we all agreed that the, as large a length of dataset would be applicable to or for analysis of community water supply takes under the schedule and that is, I believe, included the water metering dataset right up to present day.

Q. Okay, but going back the other way.

A. Yes.

Q. So going backwards, how –

A. Going right back.

Q. – far back were you thinking you might be going?

A. Well, I think, you know, water metering regs around about 2010, then that certainly is a, is a point to go back to, some territorial authorities will have water metering prior to 2010 that they're collecting through these data systems and all their, their evaluation systems in house and that data is still good data.

Q. So you're suggesting just any data, not limited by the 2010 metering regulations or anything, just any data?

A. I believe that we agreed that a, that there wasn't a limit on, on that data period.

Q. So I guess my question is what might have happened between, at the stage at which you were initially exercising these consents and things that might have happened since that that in fact might have meant that you

were perhaps more efficient in terms of what you were taking under the approval. There may have been things that had been done to in fact reduce the, perhaps even the demand for water in terms of leak tracking down and fixing and those kinds of things.

5 A. Yes, that, that certainly can be –

Q. Yes.

A. – the –

Q. So –

10 A. – you know, part of that dataset. The, probably the largest variability is, and I won't refer to it as seasonality because that's more akin to the primary sector. It is just the, I suppose the demand seasonality in the community water supply and then couple that with, with a growth factor over a period. That's where the major differences lie.

15 Q. So what you're suggesting is that you might have got efficiencies but you've also got a growth in demand, whether it's a whole lot of people coming on holiday and requiring more water for –

A. That, that's certainly a seasonality.

Q. – example. Is that one thing?

20 A. That is a seasonality effect and there's also a compounding growth effect on that as well.

Q. Of people servicing that?

A. Yes. I mean more people choosing to stay in Kaitangata for their holidays but I mean it's a –

Q. Not a place I've ever thought of going but anyway. Sorry.

25 A. But it's, it's the example. The reality is that the larger the dataset gives us more of an appreciation of where the water supply has come from and where it is going to. I would expect that the community water supplies that are experiencing growth would be, we'd be seeing the larger numbers in terms of the volumes, if they haven't yet reached a peak yield under the consent, they would be hit later in the period of record but it's not necessarily so because this example that –

30

Q. The Milton example?

A. Yes. This example shows that it is not necessarily the, well, it's certainly later in the piece. It's around 2020, 2019, 2018, 2019, but certainly not in

the latest annual period. So there's, whilst there's that growth component, there's also that variability year on year.

Q. So we're looking at what looks like a bit of a spike back in, is it 2010 or 2011 or something as well. Is that what we're looking at?

5 1735

A. Yes.

Q. And what do you think might be the reason for that?

A. I think that was just a very short period where a lot of water could have been used, or was used, and that may well have been, you know, where storage reservoirs had been drawn down within the scheme.

10

Q. So refilling.

A. And you've got to refill.

Q. Refilling storage reservoirs.

A. And that is, you know, part of a scheme operation as well.

15 **THE COURT: COMMISSIONER BUNTING**

Q. (inaudible 17:35:35) seems to me that the later one (inaudible 17:35:40). If that was on my workload, I'd want to try and get behind the numbers. You know, you crunched the numbers okay, but wouldn't you want to go down to the council and say, look, this seems not typical of what's happened over the last few years, and try and get some understanding of that, rather than just accepting the numbers at face value after you're done your sifting out and all that sort of stuff?

20

A. Yes, I agree, that would be an approach, perhaps, that the regional council would take as part of a reapplication process, I agree. However, I've got no information to hand that suggests otherwise.

25

Q. So you've just taken the data and analysed it and checked it and so on without going to that step?

A. No, I haven't been back to the district council for them to validate, and I doubt that the district council will have another set of records to be able to validate, sir, unless they had record of a specific event that may have caused that, but this is, as I said before, it's quite a long period of time, and it doesn't to me look like it would be a one-off event. It looks to me like it's a seasonal event.

30



Q. So you don't do a seasonal comparison to try – you know, that's another check, if you like.

A. I just have to take the data at face value. If I'm comfortable that all of the errors have been removed.

5 Q. Okay, all right, well, thank you.

A. And that's what the schedule –

Q. Provides for, yes, I know.

A. – 10.A.4.

10 Q. But this just sort of stuck out there and thought is there anything else that needs to be included?

A. Yeah, no, that is a valid point, you know, if you get things like that, you could possibly resolve that by going back to the applicant.

Q. Yes. Okay, thank you, thank you, your Honour.

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

15 Q. It is late in the day, and so I think I have missed what your answer was to Commissioner Edmonds as to, I think, the reason why the community water supplies are excluded from step 4, which has been introduced into the schedule methodology. Could you just go over that again?

A. I'm actually surprised, what was step 4 again?

20 Q. Have you got the JWS in front of you?

A. Yes, I have the –

Q. It is incapable of being summarised.

A. That was 4?

Q. So you have got to look at it.

#### **25 THE COURT: COMMISSIONER EDMONDS**

This was the version that was attached to the planner's JWS, and then they had a set of provisions, and they'd changed the schedule 10.A.4.

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

Q. So have you got the planner's JWS?

30 A. I've got the planner's, yes.

Q. Okay, and you've got their edits to the plan change?

A. Which page is that?

**THE COURT: COMMISSIONER EDMONDS**

It doesn't look like you do, it looks too skinny for that. Oh, well, maybe not.

**THE COURT: JUDGE BORTHWICK**

5 Q. Yours is too skinny. (inaudible 17:38:57), could you just have a check to see what the witness has got?

A. This is the joint witness statement planner's schedule 10.A.4.

Q. So you were wanting this. This is the attachment to the –

A. Ah.

10 **THE COURT: COMMISSIONER EDMONDS**

Q. Might be stapled on the back, might not.

A. I don't think so. Oh, what's that? Yeah, that looks like it's marked up.

**THE COURT: JUDGE BORTHWICK**

Q. That looks like it, okay, so just have a –

15 A. That's it?

Q. Yeah. So we are under the, again, it is not page numbered, but we are looking at schedule 10.A.4, methodology for calculating assessed actual usage for surface water and connected groundwater takes methodology. So it's clause 10.A.4.1, have you got that?

20 A. Yes.

Q. Yeah, last line: "Except that step 4 does not apply to community water supplies." What was your reason for that? Or what do you understand the reason to be for that?

A. Yeah. I was not aware of this, your Honour.

25

1740

**THE COURT: COMMISSIONER EDMONDS**

Q. This might just be the planner's take on what they thought had come out of your community water suppliers JWS, so if you have a different take

on it, perhaps you should explain to us what that is, what you think should be there.

- A. I'm actually uncertain as to why step 4 does not apply. I mean, there's obviously somewhere in step 4, which is not useful for community water supplies, or where we've got hydroelectricity generation.

**THE COURT: JUDGE BORTHWICK**

Q. Yeah, but the person they would have got that from is you, isn't it?

A. It is not.

Q. It is not?

- 10 A. Correct. I'm not sure what's going on here.

**THE COURT: COMMISSIONER EDMONDS**

Q. So would there, in other words, in your opinion, there, would there not be a problem having four applying to that step 4, applying to community water suppliers?

- 15 A. I would have to analyse what step 4 is.

Q. I guess I do appreciate that there were two of the technical witnesses that might have been involved in your community water suppliers JWS that were present at the planners conferencing, so they may have had an influence on this, I don't know.

20

**MS IRVING:**

I think 4 might have been a response to the issue in the primary sector conference around legitimate overtaking, and so that perhaps because Mr Wilson and Ms Bright were part of the planners' conference, they've sort of put in a solution to deal with the primary sector and just left out the community and hydro because that legitimate overtaking issue, I don't think kind of came up.

25

**THE COURT: JUDGE BORTHWICK TO MS IRVING**

Q. Because they always legitimately overtake?

- 30 A. Yeah.

Q. Oh, no.

A. I mean, the legitimate overtaking thing –

Q. No, I think you could well be right.

A. And so I just –

Q. Okay.

**5 THE COURT: COMMISSIONER EDMONDS**

Q. Well, perhaps we won't trouble you any more.

A. I can explain now.

Q. All right, would you please explain?

A. I think where this is coming –

10 Q. Yes, do that, thank you.

A. – where this is coming from, it's looking at general patterns of taking, and so I think that at the planner's conference, there's been a recognition that there's a different pattern of taking that emerges from community water supplies. It's not the same as the primary sector pattern of taking, so  
15 whilst you can apply 4 to the primary sector, I'm not making a statement about that, but that appears what it's been applied for. It's not necessarily applicable to community water supply or hydrogeneration because there isn't that set pattern, there is a variability.

**THE COURT: JUDGE BORTHWICK**

20 Okay, Mr Twose can confirm that tomorrow, though.

**THE COURT: COMMISSIONER EDMONDS**

Q. All right, well, thank you for helping me get to the bottom of that.

A. Thank you for pointing it out.

**THE COURT: COMMISSIONER BUNTING**

25 I think we were going to (inaudible 17:44:30).

**THE COURT: JUDGE BORTHWICK**

Q. Well, maybe. I think what had to happen was that it had to be taken back to the technical group, and for their confirmation, and it may be just a primary sector matter, as Ms Irving has said, of no (inaudible 17:44:52) to

community and hydro, but Mr Twose can confirm his own understanding about tomorrow.

## QUESTIONS ARISING – NIL

### THE COURT: JUDGE BORTHWICK

- 5 Q. Well, sorry to let you go in circumstances that you have got tomorrow, you know, with the consultancy, and I hope all that goes really well, yeah.
- A. I won't be available until mid/end of May, your Honour, from here, so that's the recovery time.
- Q. Yeah, well, that is important information.
- 10 A. Mid-May.
- Q. No, I have forgotten what the schedule looks like, it is just a blur at this stage. What is another week? Where are we running to? Second to last week of May? Okay, all right.
- A. The community water supplies and their proposals for schemes, we could
- 15 get that quite quickly in terms of which ones, but it's just that breakdown of the uses will take some time.
- Q. And I think it is the consideration from a planning perspective, whether all uses are, notwithstanding the plan to come, have long-term consents, or whether what is important to the territorial authorities is that the long-term
- 20 is secured for potable drinking water for human consumption and other urban uses, and shorter term consents, if that is possible. I do not know.
- A. It is all the same pipe, though. That's the issue.
- Q. Oh, I know, and I have reads Mr Twose's evidence, it is all the same pipes, so, sorry, we cannot do anything about that, and there is a risk in
- 25 maintaining that approach.
- A. I mean, be great if we could separate it out, different pipes, but –
- Q. Yeah, and it may well be the answer in six years, unless you can get creative.
- A. – really expensive, I wouldn't like to say.
- 30 Q. It is not about new infrastructure, it is about the ability of this council to go in and review permits in line with its new plan, and that is not really a

matter for you. It is now a matter that we have got quite conflicting evidence about, even for the primary sector.

A. I've only told you exactly what I know, your Honour. I mean, it is what it is in terms of those community schemes, but they're all quite different.

5 Q. Okay, all right, well, anyway, best of luck, and we will probably see you again, late May.

A. Thank you.

**WITNESS EXCUSED**

**DISCUSSION - TIMING (17:47:50)**

**COURT ADJOURNS: 5.49 PM**

**COURT RESUMES ON WEDNESDAY 14 APRIL 2021 AT 9.02 AM****THE COURT: JUDGE BORTHWICK TO MR MAW**

Q. Morning anything arising overnight? No, yes?

5 A. Two issues of housekeeping, first I need to seek leave for Ms Mallet's absence today, she is unavailable and secondly, I'd like to seek leave for Mr de Pelsemaeker to sit at the table at the back there.

Q. Yes.

A. If he may so that he can work away on drafting and such likes in a more comfortable manner.

10 Q. No that's fine I think we've got plenty of space now.

A. Very good thank you. That was all.

15 Q. Okay and one thing from me overnight it's just been noticed that transcript is not transcribing the submissions of counsel and they should be. So I'm not quite sure why that's not the case but evidently they were missed from the Dunedin hearing so we'll be looking to get that all transcribed but they are transcribing for this hearing so – my usual practice is transcribe everything yes. So there will be a fix on that shortly, hopefully, yes. Okay so we are with you Ms Irving.

20 **MS IRVING CALLS**

**MATTHEW WILLIAM TWOSE (SWORN)**

Q. Good morning Mr Twose, your full name is Matthew William Twose.

A. It is.

25 Q. Yes and you are the technical director for planning at Harrison Grierson Limited based in Auckland?

A. Yes that's correct.

Q. You have prepared a brief of evidence dated 5 February for this hearing?

A. That's correct.

Q. And a supplementary brief of evidence dated 29 March 2021?

30 A. Yes.

Q. And you have also participated in and been a signatory to two joint witness statements, the first in relation to community water supplies dated 31 March 2021?



A. Yes.

Q. And joint witness conference and statement for the planners in relation to schedule 10A.4 –

A. That's correct, yes.

5 Q. – dated 8 April 2021.

A. Yes.

Q. Do you have any amendments that you wish to make to either your brief or supplementary brief of evidence?

10 A. Not per se to the – both the evidence-in-chief and the supplementary but to both of those I attached the track changes version of plan change 7 and I guess this reflects many of the other witnesses, that's been a movable beast so I signal there's been changes to that.

Q. Okay. So in light of that, will you confirm that...

**THE COURT: JUDGE BORTHWICK TO MS IRVING**

15 Q. We, sorry didn't follow that.

A. Well I think he's – clarify me if I'm wrong Mr Twose, I think just saying that we've got a number of versions of plan change 7 attached to his evidence but I suppose is in part in relation to the conferencing and so on...

20 Q. You'll have to have your witness confirm which version of plan change 7 he currently supports or whether there has been changes since in addition to the JWS – planners' JWS in addition to briefs that he has filed with attachments.

A. Okay.

Q. That's a question after you've confirmed all the evidence.

**25 EXAMINATION CONTINUES: MS IRVING**

Q. So will you confirm that your evidence-in-chief and supplementary brief of evidence are true and correct to your best of – knowledge and belief?

A. That's correct.

30 Q. So if we follow on then to the version of plan change 7, if there's that your currently working off which version would you consider to be your current position on plan change 7?

A. It's the version that's attached to the joint witness statement planners, dated 8<sup>th</sup> of April and the version itself I think was originally dated 1<sup>st</sup> of April but is the version attached to the JWS.

Q. Thank you. Now I don't have any further questions for you so I'll leave you for questions from my friend and the Court.

**CROSS-EXAMINATION: MR MAW**

Q. Good morning Mr Twose. Just want to make sure I've understood that which you have just explained to me in terms of the version of the plan change that is now supported and I understood you to say that you now support the version attached in appendix – as Appendix 1 to the joint witness statement from the planners? Have I...

A. The changes in that joint witness statement, yes I do.

Q. Yes. Now just so I'm really clear that is the version of plan change 7 that the territorial authorities are now pursuing or that's the version that you are now recommending as an independent expert?

A. Yes the – with the joint witness statement version, that was obviously within the scope of what we were able to discuss in the conferencing. So that addresses the schedule 10A for and obviously the policies and the conditions' rules. What we did not address in the joint witness statement was probably the key issue for the TAs which is around duration and so that that still remains as an issue to be resolved through the process. With – in prior editions of my, you know the two versions I attached originally to my evidence-in-chief and then to my supplementary, like the other planners involved, my wording changes around an exemption moved as – and (inaudible 09:09:45) essentially seeking a line of best fit with other witnesses who were seeking similar changes, all with a purpose of ensuring it's – concise and integrated as possible.

0910

Q. I understand, and that's helpful, I just need to be really careful that I've understood what it is you are now recommending in terms of the community water supplies and whether they should be excluded from the provisions of plan change 7 or not, because when I read your

supplementary evidence in the version of the plan change contained therein, there is what I describe as a carve out for those uses.

A. Correct.

5 Q. Whereas when I look at the joint witness statement, that carve out no longer exists, and I don't understand. I think what you're telling is that you've moved beyond a carve out for community water supplies and you're content with the schedule in plan change 7 as addressing the needs of community water supply, but you're flagging an issue with duration.

10 A. That's correct. So just, again, it's more just to reemphasise that point, because I do accept it is an important one, the issue of duration, there were fixed positions which had been clearly conveyed to the Court through prior evidence, so that was, from what I can see from the agenda, that was put to one side.

15 Q. Yes.

A. What the joint witness statements – and I think quite successfully – progressed, firstly with the technical experts and the community water supply conference, and then subsequently, the one with the planner, is to go through the workability, if I can call it that, particularly of the rules and also the schedule, an outcome of the JWS, and quite significantly, in my view, is a definition, now, of community water supplies. So that's not, as you say, a carve out, but we've now got proposed in PC7 a very specific reference to community water supplies, and what are they?

20 Q. So just so I'm following, you're no longer recommending that community water supplies be excluded from the provisions of plan change 7?

A. Well, yes, I am, so the position is around, and to quality that, it is squarely on the issue of duration so for further specificity, the carve out, to use that term, would be to the policy 10.A.2.2 and 2.3, which relates to that term of six years, either, in the case of 2.2, for new consents, or 2.3 for applications for renewed deemed permits for consents expiring 30 4 December '25.

Q. So let's just focus on the policy 2.2, so the new consents, is it still your opinion that plan change 7 and that policy should not apply to those applications?

A. When I looked at PC7, and I'll need to expand out on this to give a full response to you, Mr Maw, I mean, put simply, the purpose of PC7, at the heart of it, was to address this imminent issue, as we know, around the expiry of the deemed permit in October 2021. I think, apart from that, the whole focus and energy of the ORC would be on preparing the new regional land and water plan. In saying that, the focus has brought in a number of quite key considerations from the perspective of the TAs, and in the scope of what I'm dealing with, community water supplies, and that, I think, just reflects the regulatory statutory landscape that we're in with two quite significant NPSs, the urban development and the freshwater management, both of which have to be given effect to in, amongst other plans, the regional plan and water plan. From my perspective, the key thing with PC7 is to ensure there's as best or as smooth a transition to that new regional plan. That is the focus in my view, for the ORC. When I looked at the general tenor of PC7 it was very much around its process orientated, it needs to be kept very clear, kept very simple, as narrow as possible. In contemplating – so essentially to me there were two pathways, the first is community water supplies you just simply carve it out as you say, exclude it. The second you incorporate it, you accommodate it, you anticipate and provide for it within the scope of PC7. For me, that second option put simply is possible but it would involve Plan Change 7 essentially close significant component of it being devoted to community water supply, so possibly with a new, I don't know, an RDA or DA consent regime inserted into that plan, I also had the broader consideration of Te Ngnana o te Wai under the freshwater management MPS, that all councils with regional functions, regional council's unitary authorities are all having to address and it seemed to me that this issue is not one that's specific only to the ORC and through the witness statement we ended up with a definition of community water suppliers in the document and that's addressed some of the workabilities but within that, but – and so for me that just solely leaves the question of duration. It is appropriate that community water suppliers, their term is six years along with everyone else.

0915

- Q. Now that's a very lengthy answer to a question as to whether policy 2. – whether your evidence was that policy 2.2 should still apply to community takes and your answer is leaving me, I guess in a state of confusion as to precisely what it is the Territorial Authorities are seeking by way of relief for Plan Change 7. So I've got the joint witness statement and I understand that and I've got your supplementary evidence and I understand you to be saying that's no longer the version you're pursuing, but I now hear you telling me that there needs to be significant additional text put into Plan Change 7 may be a restricted discretionary or a discretionary activity to manage community water supplies and I haven't seen any text or any recommended wording in relation to any of those options, so I'm left really unclear about precisely what it is that the Territorial Authorities are seeking and you are recommending to this Court in terms of what to do with Plan Change 7. So we might have to go a little slower in terms of step by step.
- 5
- 10
- 15
- A. Sure, yes.
- Q. So that I can try and get a picture of what it is that you are recommended?
- A. Okay, so just to clarify, it is, I signalled there were two pathways but the first pathway which is a carve out and exclusion is both the TA's relief and my view. I outlined pathway 2 just to give an indication of what an alternative could be and the implications of that.
- 20
- Q. Right, so it is your opinion that the carve out for the community water schemes are that PC7 just simply should not apply to those schemes, is that – that's your primary opinion?
- 25
- A. That's correct yes.
- Q. And in terms of the version of Plan Change 7 that I should then look at, that achieves the purpose, which version is it?
- A. It would be the one attached to my statement of Supplementary Evidence where I sought to incorporate changes that aligned with those from the witness for the hydro.
- 30
- Q. Right and then so I've understood what you've described as a second pathway, as an alternative option, if the Court doesn't accept that community water supply should be excluded from the reach of

Plan Change 7, your evidence is that a more bespoke set of provisions would be required to manage consenting of those schemes?

A. That's correct yes.

Q. And also applications for new water permits for those schemes?

5 A. Yes that's correct.

Q. But in relation to the wording that would achieve that outcome, you haven't yet put forward wording that would achieve that?

10 A. No, no I haven't and I would, as I said, this issue essentially runs to the core of implementing the MPSFM. If the Court wished to go down that second pathway, to me practically it sounds like the – rather than just myself preparing provisions, it would be almost what I call a Governmental response, eg, MFE, ORC and myself on behalf of the TAs. The three of us in another witness conferencing session because these are complex provisions.

15 Q. I understand the complexity, but in terms of putting forward provisions for consideration, the opportunity for that is typically in evidence isn't it?

A. That's correct yes.

20 Q. And to be fair, you've put forward in evidence your primary position which is, and I'll describe it as a complete carve out from PC7 in relation to community water schemes?

A. That's correct for the reasons I indicated.

25 Q. Now in terms of those reasons, there are a number of layers to those reasons, as I read your evidence. You referred to some provisions in the regional policy statement and the partially operative regional policy statement?

A. Yes.

Q. You've referred to some provisions in the national policy statement for urban development?

A. Correct.

30 Q. The national policy statement for fresh water management, and you've also taken into account evidence provided by other witnesses for the Territorial Authorities in relation to their operational desires in terms of infrastructure and future infrastructure plans?

A. That's correct yes.

- 5 Q. Now I'm going to need to explore each of those subjects with you, but before I get onto that, I want to explore with you and get an understanding of what your understanding of the uses to which water is put when water is supplied by community schemes across the Otago region. Now you've addressed this issue in your evidence at paragraph 49, if my memory serves me correctly?
- A. Correct yes.
- Q. And you've referred to a memo attached to your evidence from somebody by the name of Ms East?
- 10 A. That's correct and she is a policy analyst at Dunedin City Council.
- Q. Now she's not before this Court, but you have read her statement and you give – (inaudible 09:22:57) essentially adopted that information?
- A. That's correct. I saw it as information and quite informative, so I adopt.
- Q. Yes and when you look at that range of uses, how would you describe them?
- 15 A. All encompassing.
- Q. And when you think about the drinking water component of those uses, do you have any factual information that informs you what proportion of the community water takes are for drinking water consumption?
- 20 A. Looking across the five TAs, the document that I did source was attached to my Supplementary Evidence which was the water conservation management plan, again from Dunedin. There were some caveats in that plan and around the accuracy of the data but they indicated that 57% was for household residential which I would categorise as being drinking water and then the remaining just for completeness, 19% I think was described
- 25 as unaccounted for and then the residual industrial.
- Q. We'll come back to that document shortly, but you were in Court yesterday when Mr Heller was giving evidence?
- A. That's correct yes.
- 30 Q. And I mean you will have heard the evidence he gave in relation to the Stirling scheme?
- A. That's correct yes.
- Q. And there, the proportion of water for drinking water or perhaps household needs approximately 15% in relation to that scheme?

A. That's correct yes.

Q. So I want to explore a little with you, the information that you've appended to your Supplementary Statement of Evidence in relation to the Dunedin water supply and if I can take you to page 16 of that document and there you'll see section 2.2, "Current Water Consumption" and you were bang on with your 57% as indicating the proportion of water in relation to this – I'm going to say this scheme, but perhaps we could go back a step, what's your understanding as to the scheme or schemes that have been taken into account in relation to the proportional use of water in section 2.2?

0925

A. In terms of those categories, the three categories?

Q. No, just what geographic area are we looking at? Are you looking at a single water supply for Dunedin City Council, or are we looking at a range of schemes owned and operated by Dunedin City Council?

A. My understanding from this document is it's urban Dunedin areas.

Q. Okay, so we now look at section 2.2, and we can see there a helpful pie chart showing the 57% for residential need, we have unaccounted use at 19% and commercial industrial at 24%. Now, when you look at that residential component, is that what you look at and think of as the drinking water component for human consumption?

A. That would not be the complete use of water, as we know, but it would be for human uses, so it could be, obviously, ablutions, or it could be cleaning a vehicle or something amenity-related, such as gardening.

Q. When you think about the irrigation of sports fields and the like, would that fit into that category?

A. I would have thought it would fit – unfortunately, the pie chart doesn't have another slice in it for what I would perhaps term recreation or other sort of public uses, but just by way of exclusion, I wouldn't have thought that's residential. Possibly, it fits in commercial or industrial.

Q. So, staying on the residential, this document gives us some other clues as to what might be included in that, and you've touched on one of those uses, being the water used on gardens and such like. Do you recall the percentage of that component that's used for garden watering?



A. No, I don't.

5 Q. I'll take you to page 27, and you'll see there, under the heading "demand strategy – managing customer demand" you'll see some bullet points towards the bottom of the page. In the paragraph immediately preceding those bullet points, you'll see a reference to garden watering.

A. Correct, yes, I see it, yeah.

Q. And that accounts for 25% of total domestic usage, so a quarter of the 57% is used for, we know here, garden watering.

A. Yes.

10 Q. So if we're thinking about the proportion being used for human consumption, human drinking water needs, we'd deduct off that 25% of the 57%.

A. If it was limited solely to drinking water, then yes, that's correct.

15 Q. And so, when we think about the water being used for human consumption, in this context, it's not the majority use, if you're thinking about it as more than 50% of the take.

A. Yes, and I mean, there could be a quibble around, coming back to human consumption, gardening, as in, you know, growing vegetables or crops, but I think, more realistically, it's gardening as recreation as amenity, so yes, I accept that.

20 Q. I want to turn back to page 16, and you'll see there, underneath of the pie chart, some further information about the uses to which some of the commercial and industrial sites' water is placed, and you'll see in that paragraph reference to including some farm/irrigation activities. So some of the 24% water is used for those types of activities.

A. Yes, that's correct, and it's also referenced in Ms East's memo as well, she acknowledged that as well.

Q. And when you think about farm and irrigation type activities, do you think about those as more rural-based activities?

30 A. Yes.

Q. But we don't know from looking at this document the proportion of water being used for those types of uses, all we know is that included within the range of uses are those types of activities.

A. Yes, that's correct.

Q. And you have no further information or evidence in relation to the further breakdown of water use in Dunedin city?

A. That's correct, I don't.

5 Q. And you have no further evidence or information in relation to the breakdown of the various uses across other schemes in the Otago region?

A. No, I don't.

10 Q. So what we do know is that there are a range of uses, and that, in relation to the two examples where we do have that breakdown, the drinking water component is either a relatively minor percentage, 15% in the context of the Stirling scheme, or somewhere in the order of 40%, potentially, in relation to the Dunedin City Council scheme?

A. That's correct.

15 Q. So when you're thinking about how community water supplies should then be treated in terms of the planning framework, were you clear in your mind when you were preparing your evidence that there was a wide range of uses to which the water was being put, extending into areas well beyond the purpose for human consumption?

A. Yes, I was.

20 Q. And when you carried out your analysis of the planning documents in relation to the provisions that you say support treating community water supplies differently, did you have in your mind the range of uses that the water was being put to?

25 A. Yes, I did, amongst other considerations, including the practical one around severability, which was referenced in both my evidence and also in the discussion yesterday.

Q. Perhaps highlights the biggest challenge here, it's the same pipe taking the water from the source.

A. That's correct.

30 Q. And thus you accept there is a real tension in terms of how those other uses should be treated in the context of water allocation?

A. Yes, that's correct.

Q. And that also creates a tension in terms of how plan change 7 should approach this issue?

A. Yes, it does, I agree with that, but I just, as a further additional comment to that, is the fact that as I said at the outset, PC7, although it does not give full effect to the NPSFM, given timing, it will be transitioning to a new plan that has to, and this issue will be fair and square, needing to be addressed.

5

Q. Rest assured, we will come back to the NPSFM, but not just yet. Do you accept that one of the functions of the regional council is the manage the use of water or the uses to which water is put, including for the purposes of managing the quality of water?

10

A. Yes.

Q. I want to turn now to the provisions in the proposed regional policy statement, or I should say the partially operative regional policy statement. You have noted some of those provisions in your evidence-in-chief, and your counsel referred the Court to some of those provisions yesterday, and I want to start by getting an understanding as to what is covered or what your understanding is in terms of the meaning of infrastructure, as that term is used within the document, and to start that exercise, I thought we might usefully start with the definitions in that document. Right, so we're in the partially operative regional policy statement, which is in common bundle 2.

15

20

#### **WITNESS REFERRED TO REGIONAL POLICY STATEMENT**

A. It's on its way, thank you.

Q. Tab 3. I'd like to start on page, common bundle, 649. Now, you're working off the common bundle?

25

A. That's correct.

Q. Very good.

A. Page 649.

Q. Thank you, and there, you'll see a definition of infrastructure, and you'll see, if you cast your eyes down to subparagraph (e), a reference to a water supply distribution system, including a system for irrigation. Now, tell me if you've read that definition or you're familiar with the definition?

30

A. Yes, I am.

Q. That's the relevant part of the definition in terms of community water supply schemes.

A. It would be a subset of (e), yes, that's correct.

Q. And when you look at (e), do you have in your mind that when infrastructure is used, it's the pipes and the system that is being referred to, it's not the water or the allocation of water that's conveyed through the system?

5

A. Yes, that's correct.

Q. And when we move over to page CB615, there's a further definition that was touched on yesterday.

A. Sorry, just bear with me, I just have to find the bundle with that in it.

10

Q. Sure.

A. Sorry, 6?

Q. 615.

A. Oh, yes.

Q. Three pages over.

15

A. I have it now, thank you.

Q. Yeah, and you'll see there the definition of "municipal infrastructure," and it's subparagraph (a) that's relevant in relation to community water supply schemes.

A. Yes.

20

Q. Now, when you read that definition, so that incorporates the definition of infrastructure, so we're talking about the pipes and the systems, not the water?

A. That's correct, yes.

Q. And then when we look at subparagraph (a), it further restricts the parts of a scheme which are covered by the definition of municipal infrastructure to the conveyance infrastructure between source and its point of treatment.

25

A. Yes.

Q. But not beyond that point.

30

A. Yes.

Q. So, in simple terms, I understand that it's perhaps covering the pipe between the river or the intake gallery and the treatment plant, but it's not covering the pipes and the distribution system beyond the treatment plant?

A. That would be my understanding, yes.

Q. So when we're looking at the policies which refer to municipal infrastructure, we're looking about policies dealing with the pipes and the conveyance infrastructure between source and treatment station?

5 A. Yes.

Q. And that's how those policies – that's the relevant part of the policy that should be being looked at in the context of these schemes?

A. Yes, that's correct.

10 Q. So, with those definitions in mind, I'd like to go back to the policies that were referred to yesterday and in your evidence, policy 4.3.1 and 4.3.2, common bundle 562, and you'll see – sorry, are you with me?

0940

A. Yes, I am, thank you.

15 Q. So starting with policy 4.3.1, manage infrastructure activities, that's manage the activities of the pipes and the system, not manage the abstraction of water –

A. That's correct.

20 Q. – or the allocation of water, and then when we look at policy 4.3.2, there's a reference there to nationally and regionally significant infrastructure, which incorporates reference to municipal infrastructure.

A. Yes.

Q. And likewise, that's not dealing with the supply of water or the allocation of water.

A. Correct.

25 Q. And when you look at policy 4.3.4, adverse effects of nationally and regionally significant infrastructure, when you look down that list, it's focused on the effects of the infrastructure itself, as opposed to effects of taking or allocating water.

A. Yes, that's correct.

30 Q. So when you think about these policies and their relevance in the context of plan change 7, they don't really assist us, do they, in terms of the allocation or the supply of water, which is really what plan change 7 is about.

A. Purely in terms of the management and control of water takes, yes, that's correct.

Q. But that's not the end of the matter in terms of the proposed RPS. There are some policies that do deal with the allocation was water within what  
5 I'll describe as the water chapter, and that's chapter 6, as I understand it, and you've referred to this in your evidence-in-chief at your para 20.

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

Q. Sorry, which plan are we looking at now?

A. That's a very good question.

10 Q. Is that chapter 6 of your operative water plan?

A. I think it's chapter 6 of the regional policy statement.

Q. Regional policy statement, okay.

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. Actually, I've taken you back in time to the regional policy statement, and  
15 that's what you're referring to in this.

A. The operative?

Q. Yes, in this part of your evidence.

A. Yeah.

Q. And you accept that chapter 6 is the chapter dealing with water and the  
20 allocation of water?

A. Yes.

Q. And you note in your paragraph, it's at the end of your para 80, which is easiest to find if you look at page 22 of your evidence-in-chief.

A. Yes.

25 Q. You will see a heading there, "proposed regional policy statement."

A. Yes.

Q. So the paragraph immediately preceding that.

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

Q. Sorry, I am not quite with you yet. We are talking about the operative  
30 regional –

A. Policy statement.

- Q. So we are not talking about the document found at tab 3, that is another document?
- A. It is a different document.
- Q. Okay, right. Which tab would you like us to go to?
- 5 A. It is possible that that document is not in the common bundle.
- Q. That is okay.
- A. So I've been working off the relevant provisions that were pulled through into the brief of evidence.
- Q. Yeah, well, what we could do is take a copy of what you need, because  
10 the line of examination is really important. So you are examining now from about para 80 onwards, are you?
- A. Yes.
- Q. Of the evidence-in-chief?
- A. Yes.
- 15 Q. And so that commences the explanation to objective 6: "for one (inaudible 09:46:51) to be able to meet economic and social, cultural wellbeing of Otago's people." Am I on the right page?
- A. You're at the right place, yes.
- Q. Okay, and so you have got two choices, is the text which has been  
20 included in the brief of evidence comprehensive, or should be simply get a photocopy or flick onto the screen the operative RPS? Because we can do that, if we had enough time. Unfortunately, it is not in the common bundle, so we would be needing to take it out of Google. So how would you like to proceed?
- 25 A. I might put my question to the witness, and then, depending on the answer, we might have to go back through the provisions. They are relevant to the issue, looking at the way that they've been pulled through in the evidence-in-chief, I suspect that it's picking out the relevant parts as opposed to the full text.
- 30 Q. Yes, that is what I am concerned about.
- A. Which is the risk.
- Q. That is the risk, you might not have the whole context, and context is everything.
- A. I might check with the witness.

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. So when you've pulled out these relevant provisions, is this the full text of these provisions, or is some of the material excluded on the basis that you didn't consider it relevant?

5 A. I'd be cautious and say it's probably the later. I've tried to be succinct and not verbatim dropped statutory text into the document, so I couldn't be confident on that.

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

Q. Okay, so do you want to see if we can get it up on the screen?

10 A. Yeah, let's see if we can do that.

Q. So, Frida and Charlotte, do you know what we are after? We are after the operative RPS for Otago. There are two documents, there is one for proposed, and one is an operative one, and we are wanting to put that up onto the screen, the operative. We are in the fully operative one now.

15 A. Yes, the fully operative.

Q. Yeah, we are sort of backtracking in time.

**MS IRVING:**

I'm just looking at the council's webpage, so if you search "regional policy statement" on Google, but it does say that the regional policy statement for Otago 1998 is now revoked, so things have perhaps moved on.

20

**THE COURT: JUDGE BORTHWICK TO MS IRVING**

Q. Moved on. If you want to check that through with Mr de Pelsemaeker, he will know.

25 A. So there isn't actually a copy of it on the website anymore.

Q. No, no, I'm struggling to see it when I search.

A. I have a hard copy back in the office.

Q. No, no, no.

30 **MR MAW:**

That's probably why it's missing from the bundle.



**THE COURT: JUDGE BORTHWICK TO MR DE PELSEMAEKER**

Q. Okay, so Mr de Pelsemaeker is not shaking his head. It has been revoked, has it, the operative plan, the operative RPS?

5 A. It was only the freshwater chapter that was not operative in the proposed RPS, but it is now, effectively.

Q. Oh, we are talking about your old document, your old RPS.

A. Yeah, so it's been, yeah.

Q. It is gone, you have revoked it?

A. I will double check, if that's okay.

10 Q. Okay.

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

Q. This, of course, the timing and sequencing of your questions are important. Do you want to take a five-minute break whilst Mr de Pelsemaeker checks through?

15 A. Yeah, that would be helpful, and I can then move on to the proposed regional policy statement, which also includes some relevant provisions.

Q. Okay.

**MS IRVING:**

20 Just perhaps on a timing, public notice of the now operative one was the 5<sup>th</sup> of March, so it's come in following the evidence-in-chief, which is perhaps the source of confusion.

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

25 Q. Okay, yeah, this leapfrogging happens. Okay, so I'll take a five-minute break and come back, and Mr de Pelsemaeker can confirm that that is so.

**COURT ADJOURNS: 9.51 AM**

**COURT RESUMES: 10.04 AM**

**MR MAW:**

Thank you for the indulgence.

5 **THE COURT: JUDGE BORTHWICK**

That's okay.

**MR MAW:**

We have on the screen the partially operative Otago Regional Policy Statement  
10 2019, amended as at 15 March 2021.

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

Q. Okay, right. So it's that which is in the bundle as opposed to some 20 year  
old RPS which is gone is that right?

A. Yes, and so the 20 year old that's gone is not in the bundle.

15 Q. Yes.

A. So that's convenient.

Q. That means you don't have to –

A. Because it's not a relevant matter, so I don't need to go through chapter 6  
of it.

20 Q. Yes.

A. In relation to whether the objectives and policies in that document gave  
any preference to community water supply schemes.

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

Q. Yes, and so just Mr Twose, can you confirm that there is a section –  
25 whether there is a section of your evidence which no longer is relevant  
because the plan is being withdrawn or whatever the technical term is?

A. Thank you.

Q. What are the paragraphs. If that is so, what is the paragraphs?

A. Thank you, yes so that in my evidence-in-chief commencing at  
30 paragraph 74 and concluding at paragraph 80 on page 22 of my  
evidence-in-chief.

Q. Okay, so 74 through to paragraph 80 inclusive, no longer – I get, to be deleted? Because the plan has been withdrawn.

A. Correct.

Q. Okay.

5

**MR MAW:**

“Revoked” is the term used.

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

Q. “Revoked”. I was going to say there will be some...

10 A. It is a bit of an anomaly in terms of the language in the Act.

Q. Yes, no that’s okay.

A. But we say they are “revoked”.

Q. I have never worked for a regional council or district council so I don’t know. So anyway, it has been revoked?

15 A. Gone, right.

Q. Therefore not relevant. Okay. And so now we’re looking at, and indeed there’s now an amended plan as of 15<sup>th</sup> of March 2021 and those provisions are not in the bundle that are on the screen is that right?

A. Yes although –

20 Q. Yes.

A. To be fair, the provisions in the bundle will be pretty close to what’s on the screen, I just haven’t done the comparative analysis in terms of what’s changed.

Q. Yes, okay.

25 A. What I will do is I will provide to the Court hard copies of the 15 March version.

Q. Yes, okay.

A. But in terms of the questions for the witness, as we work through the provisions we’ll have them on the screen. I’ve quickly cast my eyes over them and they appear to be the same in terms of the partially-operative version, so yes.

30

Q. Yes.

A. They do not appear to have been changed.

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. Now, just to check with you, Mr Twose. Have you analysed this most recent document or were you unaware that that had become partially operative since you put pen to paper in your evidence-in-chief?

5 A. I haven't re-reviewed it, but yes like everyone else I did look at the website last night and saw the revoked, yes.

Q. Very good. One step better than me, I'm afraid. All right. So in your evidence-in-chief you've stepped through what you say are the relevant provisions in terms of the partially – or the, I'm going to call it the  
10 “partially-operative regional policy statement”. And just as I've said that, it's probably the operative regional policy statement, the –

**THE COURT: COMMISSIONER EDMONDS TO MR MAW**

Q. (inaudible 10:07:41).

A. No, no I've confused myself.

**15 CROSS-EXAMINATION CONTINUES: MR MAW**

Q. It's the operative regional policy statement.

A. We'll possibly compromise, operative in part. But it's again subject to Council reservation, I guess.

Q. I think it has the seal on it. Yes, no it will be, it's the – yes. It's a quirk,  
20 it's still referred to in the foot, the footer as the: “Partially Operative Otago Regional Policy Statement”.

**MS IRVING:**

If you look at – scroll down a bit further, there are some provisions that remain  
25 subject to court proceedings (inaudible 10:08:21).

**THE COURT: JUDGE BORTHWICK TO MS IRVING**

Q. Yes, exactly on the page that we're on there.

A. Yes.

Q. Is that something to do with Otago Harbour or something?

30

**MR MAW:**

It's the Port.

**THE COURT: JUDGE BORTHWICK**

5 Port, okay.

**CROSS-EXAMINATION CONTINUES: MR MAW**

10 Q. Right, partially operative. Now, you step through the relevant provisions from your paragraph 81. Now, we've already traversed those in parts in chapter 4 in relation to infrastructure so we're not going to go back over those provisions but we are going to look at the provisions relating to water allocation. And you've set out in your evidence what you consider to be the relevant objectives and policies. The first one that you refer to is objective 1.1?

A. Yeah.

15 Q. And when you read objective 1.1 on its face it's a very broad objective?

A. That's correct.

Q. And it does not single out community water schemes in terms of the wording in the objective?

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

20 Q. So perhaps if we could just throw that up on the screen, objective 1.1?

A. It's page 19 of the electronic?

Q. Yes.

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. There we have it. Can you see that from where you're?

25 **WITNESS REFERRED TO OBJECTIVE 1.1**

A. Thank you. Yes.

Q. Yes very good, so when you read that objective, it's a very broad objective as perhaps you'd anticipate in a Regional Policy Statement, it's not drilling down to a level of detail in terms of specific activities?

30 1010

A. That's correct and it just reflects section 59 and it's 1.1 so it's up front.

Q. Yes so some colour is given to that objective and the policies that then follow, policy 1.1.1 relates to economic wellbeing and again a fairly broad policy which doesn't single out community water schemes?

A. Yes, that's correct.

5 Q. And so we then move to policy 1.2, 1.1.2 and we see a little more specificity in relation to that policy?

A. Yes, that's correct.

Q. There's no direct reference to community water schemes in that policy?

A. No, it's still talking very generally around resources in the round.

10 Q. But in fairness you have referred to subparagraph (e) which you point to in your evidence promoting community resilience and the need to secure resources for the reasonable needs for human wellbeing so that's starting to add a little more colour but again it's cast in fairly broad language and that could apply to a range of uses beyond community water schemes?

15 A. Yes, that's right. I'm looking at that and thinking resources, you need to secure water resources as amongst many other resources for human wellbeing.

Q. And it's not about allocation of resources, it's as much about securing the health of resources if we think about a river system?

20 A. That's correct and it's also with the preference to undertaking subdivision use and development, well in fact everything under section 59. It is around giving the fundamentals I'd call it to the community.

Q. So we then move through into chapter 3 which deals with the values including intrinsic values of ecosystems and natural resources recognised and maintained or enhanced. If we scroll through to page 31 of the electronic. Are you familiar with this objective?

25

A. Correct.

Q. And again when you read this objective this is about securing important values, ecosystems and natural resources so it's about sustaining the natural environment. It's not an objective dealing with allocation of water resource?

30

A. That's correct.

Q. And you've referred to policy 3.1.3 which does then provide a little further colour in relation to the water allocation and use and there are three

subparagraphs of that policy and those are the provisions that you've pulled through into your evidence-in-chief?

A. Yes, that's correct.

5 Q. And when you look at those, the language still is very broad, not directed specifically at community water schemes?

A. That's correct.

10 Q. And then you have also referred to 3.1.3 subparagraph (b) which is the avoiding of over allocation and phasing out existing over allocation. Do you accept that community water supplies may need to play their part in relation to how over allocation is phased out?

A. Yes, that's correct yeah and they also, the NPS FM which we'll get to obviously.

15 Q. And then for completeness you've referred to policy 3.1.4 in relation to water shortage and again this is not dealing with the allocation upfront of water resources. This is policy providing some, a policy position as to how water shortage issues may be managed in the event of water shortages?

A. That's correct.

20 Q. So when you look at the objectives and the policies and chapter 1 and chapter 3, those objectives and policies do not single out community water supply schemes for priority treatment when it comes to the allocation of freshwater resources?

25 A. They, they don't by themselves but we've touched on the chapter 4 provisions around infrastructure but no with, with the tapes themselves there isn't that privacy.

Q. Now just so we're on the same page, you did accept that the chapter 4 provisions dealing with infrastructure did not relate to matters associated with the allocation of water?

A. That's correct, purely on infrastructure.

30 Q. I want to move on now to the National Policy Statement for urban development. Now that is in the common bundle volume or at least volume 2 of my folder, no volume 3 I'm sorry, tab 6.

**WITNESS REFERRED TO VOLUME 3, TAB 6**

Q. Do you have that, yes?

A. I do thank you.

Q. Well done. Now if I understand your evidence-in-chief correctly, you point to the NPS UD as a reason as to why you say the allocation of water to community water scheme should be treated differently or excluded from plan change 7 so I've understood that that's one of the reasons?

A. Yes, that's correct.

Q. I just want to work through to understand how you reached that conclusion by looking quite closely at some of these provisions and I want to start with the definitions again so if we look at page 6 of the document, CB787, you'll see there some definitions. The first one I want to take you to is development capacity?

A. Correct.

Q. And you'll see that that definition in subparagraph (b) incorporates the provision of adequate development infrastructure to support the development of land for housing or business use and development infrastructure is then further defined immediately below?

1020

A. Yes that's correct.

Q. And when you look at subparagraph (a) of that definition, network infrastructure for water supply relevantly, that's one of the provisions that you've referred to in your evidence?

A. Correct, yes.

Q. And when you look at this definition, you accept it's the infrastructure, not the actual water supply, that's the focus of the definition?

A. That's correct and that just reflects it is in MPS regarding urban development, yes.

Q. So just to tease that out a little bit, you say the MPSUD is about the infrastructure, it's not about the allocation or supply of water?

A. That's correct yes.

Q. I want to move to part 3 of the document and again this part is dealing with the requirement for providing development capacity?

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

Q. Sorry which – where are we at?



A. Page number 14, CB795

Q. Yes.

**CROSS-EXAMINATION CONTINUES: MR MAW**

5 Q. Now this part incorporates a number of the definitions that are set out at the front of the document including the two definitions that I've taken you to, you accept the focus again here is on infrastructure, it's not about water allocation or water supply?

A. Yes that's correct.

10 Q. And then when you turn over the page to part 3.4, you'll see that this part deals with the meaning of plan enabled and infrastructure ready?

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

Q. Do you want us to read the whole thing?

A. I might just step – it might help actually because I do step through it.

Q. Okay. So just bear with us. Okay.

15 **CROSS-EXAMINATION CONTINUES: MR MAW**

Q. Now throughout this clause there's reference to short term, medium term and long term, those phrases are defined, so short term is what?

A. Up to three years, medium three to 10, long 10 to 30.

20 Q. Thank you. So when we look at the obligation in relation to development capacity being infrastructure ready, so I'm at subclause 3, it steps through the requirements in relation to infrastructure ready in relation to each of those time frames?

A. That's correct.

25 Q. So in the short term, subparagraph (a), the requirement there, so between up to year 3, is that there is adequate existing development infrastructure to support the development of the land, so the infrastructure needs to be in place in the short term –

A. Yes.

Q. – that's the obligation?

30 A. Yes, good to go put simply.

Q. Yes and then we look at the medium term, so years 3 to 10, the obligation changes doesn't it?

A. Yes correct.

5 Q. So the infrastructure can either be in place or alternatively, funding for the adequate infrastructure to support development of the land is identified in an LTP?

A. Yes that's correct and actually one of the quite principal concepts within this is to integrate the long term planning infrastructure provision with land use planning.

10 Q. But the obligation in terms of having infrastructure ready, it's in a three year window isn't it? So the infrastructure doesn't need to be ready to go into the medium term, but the funding needs to be in place or identified in an LTP?

A. That's correct yes.

15 Q. Now when you think about what a regional council is to do with the MPSUD, the document itself provides some indication as to when it might need to give effect to the document and perhaps how it might need to give effect to the document and some information or guidance is provided in part 4 of the document in relation to timing, I can take you to page 30,  
20 CB811?

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

Q. CB811 was it?

A. Yes.

**CROSS-EXAMINATION CONTINUES: MR MAW**

25 Q. And there in clause 4.1 1 it indicates the relevant documents that might need to be amended to give effect to the MPSUD?

A. Yes.

Q. And when you look at those documents, can you explain to me what documents they are?

30 A. Well yes the reference is to local authorities, so both regional in the relevant district or city councils, so they're at the top of the hierarchy, the

regional policy statement and then in terms of the urban development and this is land use planning, so it's the district plan to give effect.

Q. And so what's missing from that list is reference to a regional plan?

A. That's correct.

5 Q. And Plan Change 7 is a regional plan?

A. That's correct.

Q. And when we think about what a regional plan's doing and what Plan Change 7 in particular is doing, it's dealing with the allocation of water isn't it?

10 A. That's correct.

Q. And the MPSUD is dealing with infrastructure, not the allocation of water?

A. Yes that's correct.

Q. And so it has no relevance to Plan Change 7 does it?

A. To the – in terms of the – I guess the, the pathways because behind this  
15 is obviously section 30 and 31 of the RMA which – and in the case of the  
Regional Council it has dual responsibilities around infrastructure  
planning as well as obviously the control and management of water takes  
amongst other things, so it's that integration aspect which I think is the  
key here because no council creates infrastructure out of the ether without  
20 the purpose behind it which is provided for both and to ensure  
conveyance, but I do accept the fact that the actual management and  
consenting of water takes, so it's separate to this.

Q. In terms of the integrated management that you refer to, that you say sits  
in behind all councils' functions, in terms of the MPSUD, that provides a  
25 framework for establishing a future development strategy or an FDS?

1030

A. That's correct, yes.

Q. And in the Otago region and others when is that required to be completed  
by?

30 A. Well, that would be under the 5<sup>th</sup> – sorry, I'll just get back to the provision,  
but it'll be the standard three years, sorry, six years is the – just bear with  
me I'll just find the FDS.

Q. Sure.

A. So that's under, it's on the common bundle page 799 and on that page sub-part 4, it's section 3.12, sub-1 which sets out the requirement.

Q. And so when you think about the establishment of the FDS in the Otago region, it hasn't been done yet?

5 A. Correct.

Q. But it is going to be done over that period? Your obligation is to do it?

A. Is to give effect, yes, it will have to do it, yes.

Q. And in a sense, when you think more broadly about the regional council's planning framework to come, so the new land and water regional plan, the FDS will dovetail quite nicely into the timing around that document won't it?

10

A. Within six years, yes and that comes back to the overall integrated management function.

15

Q. Do you accept it's important not to preclude the opportunity for the appropriate integrated management of resources to be achieved across the region?

A. Sorry, could you please the question, I didn't catch the last bit?

Q. Do you accept – I'll put it a different way. It's important to ensure that the integrated management of resources across the region is important?

20

A. Yes.

Q. And it will be important not to preclude the integrated management of resources occurring in terms of enabling a future planning framework to be implemented?

A. Yes, that's correct.

25

Q. Let's move to the national policy statement for Freshwater Management and you address this document in your evidence-in-chief. Perhaps I could take you to your paragraph 7 in your summary on page 2.

A. Sorry, I'm just not – be the desk, apologies. Yes.

30

Q. And here you record your opinion that the forthcoming land and water plan is the most efficient and effective way to ensure water takes community water supplies are managed in accordance with the NPS for fresh water and in particular the hierarchy of obligations that hiccup to te mana o te wai?

A. That's correct, that is my view.

Q. So when you think about how that framework might be implemented, it will need to be implemented in a timely fashion in order to give effect to te mana o te wai?

5 A. That's correct, in accordance with the requirements in the RMA and the process that's set out in the RMA as well.

Q. And so when you think about that and you think about the importance of that document in the context of the allocation of fresh water, it's important isn't it that fresh water is not allocated for significant lengths of time or significant durations which would preclude the giving effect to or the achievement of the Te Mana O Te Wai outcomes?

10 A. The, with regard to community water supplies I think the key thing with, as we know with Te Mana is the three tiers, so absolutely the first tier, the health and wellbeing of the water space. That's, that is, that is the default and that fundamental concept, but then you do have two gradations below that. As we know with the health needs of people above the social and economic benefit of communities.

1035

Q. Mhm.

20 A. So, the issue then becomes, is, when to achieve priority 1, in instances where you do have — well I'll put water quality to one side if you've got degradation but with water quantity then decisions have to be made around allocation and I think it's outside this, this exercise but it, this sense of priority runs counter to you know like for example of first in, first served type approach. It's, it's that you know it is a — in summary a fundamental change to help water managements exercised in this country.

25 Q. But isn't what the territorial authorities are trying to do here is to perpetuate a, first in first served, philosophy by seeking long-term consents for community water schemes?

30 A. I think they, they have their drivers and they were discussed yesterday, so for example um, they're not in the business of generating new, new water use per se. They're to manage it, they're there, they're, they're there to — they've got the requirements to provide infrastructure as we've, as we've just discussed for you know to accommodate growth. To even

accommodate growth that they may not themselves have planned for and then have a competitiveness margin and the like. What that then means is that the TA's role means that they, they do need, they do need that certainty of the take for their, for their, you know for infrastructure so that they can confidently say that they have sufficient to, you know to accommodate the growth or all their existing communities.

5

Q. So do you say that a tier 2 Te Mana o te Wai requirement or priority trumps a tier 1 in the context of a community take?

A. Absolutely not. That's the priority remains, the health and wellbeing of the water.

10

Q. You can't get to priority 2 until you've resolved priority 1 and the health needs of the water body, can you?

A. That's correct.

Q. And then when you think about the breadth of uses to which water is being put in these community schemes, it's only a small proportion or a smaller proportion that might fit within tier 2.

15

A. It, I think this comes back to just the reality of, of, as, as, I think as we discussed previously, the infrastructure is geared up around single delivery systems, so you're then looking at, well what is it principally used for? and there was very much a sense of you know, a gradation and I think as we discussed yesterday from water supply schemes where the supply (inaudible 10:39:17) which you think would fit within the second tier priority is probably ancillary to the primary which would be, you know essentially rural irrigation purposes. The reverse of that is the major urban schemes which we've just talked about.

20

25

Q. Well is that really correct when you think about the percentages we talked about in relation to the Dunedin City urban area?

A. Well, in terms of the absolute percentages, I think it's more the end use. The provision of the water, it's treated, it's potable, it's circulated to the community. Beyond that, unless there's, you know, exceptions like shortages and things like that, generally, a TA won't involve itself in regulating or manage that, and then there's economic aspect, metered water is obviously expensive, it's not used, generally, for irrigation and

30

the like, or there are other restricted or unrestricted supply schemes in place.

1040

Q. So do you subscribe to the view that once the water is treated, it's water for drinking consumption?

5

A. No, I couldn't say that, given the breadth of uses, which the TA folk have indicated.

Q. And this is where there's a problem or a challenge, when you look at the three priorities in terms of Te Mana o te Wai, perhaps the majority of the uses to which water is put would fit into category or tier 3.

10

A. That could well be the case, yes.

Q. And again, that makes the potential achievement of the tier 1 responsibility in terms of the water-centric approach and putting the health needs of the water body first even further at risk?

15

A. To my way of thinking, there's two sides to the ledger, so with this priority system, with Te Mana o te Wai, the health needs of people, it would be reasonable to me that if priority is accorded to community water supplies, and accepting the fact that that would be at most a principal use or a primary use, you know, for the most part, is used for, you know, drinking or other human consumptive purposes, but there are many other uses. I think the other side of the ledger to this is –

20

Q. Wait, what do you mean by "the most part" in that context? It's important.

A. I'm thinking in terms of if you're defining something (inaudible 10:42:16) primarily, then that would be what I would consider to be – to a primary purpose is, you know, this is the chief purpose, or if it's primarily, then it's for the most part.

25

Q. Does that also – and it's relevant to the definition –

A. Correct.

Q. – but we'll explore it a little bit now, so do you see that as the main part, say, by volume of the water taken, or are you thinking of it in a different sense?

30

A. I think it would be primarily in terms of volume in this case, or possibly rate of take, but more so, I would have thought just the quantum of water that's been used under a headline of community water supplies.

Q. And the quantum of water used for what?

A. If it's principally for human drinking water, then it'll be human consumptive purposes, such as some, obviously, drinking, but also health and those sorts of things.

**5 THE COURT: JUDGE BORTHWICK**

Q. Sorry, that's for human consumption, but also?

A. Well, for example, ablutions and the like. So water coming into a residence is used for cleaning or for washing, drinking and the like, food preparation, all of which would, in a general sense, fit within that, because  
 10 I'm always going back to the Te Mana o te Wai priority too, which refers to the health needs of people, so from what I can see, drinking water is not exclusive, it's an inclusive list, but it's of that nature, health needs of people.

**CROSS-EXAMINATION CONTINUES: MR MAW**

15 Q. When you think about the three priorities, Te Mana o te Wai, do you accept that priority 1 or tier 1 needs to be secured before you move on to tier 2 and tier 3?

A. Well, yes, you'd need to know what the baseline is in terms of health and wellbeing.

20 Q. And when you think about the work programme that the Otago Regional Council has committed to, it will be seeking to establish the allocation framework to give effect to Te Mana o te Wai in its new land and water regional plan?

A. Yes, that's correct, and the associated work, as you reference, the  
 25 freshwater management units.

Q. And that, perhaps, is why you say that it is that plan that is the most efficient and effective way to ensure that water takes for community water supplies are managed in accordance with the NPSFM 2020, and you'll link to that document.

30 A. Yes, that's correct, yeah.

Q. Yeah.



A. And just further to that, as I mentioned before, potentially down the track, there could be hard choices to be made between community water supplies that would generally in tier 2 and tier 3 uses.

5 Q. And that'll be part of the allocation discussion and consideration when it comes to dealing with that framework.

A. Yes, that's correct.

10 Q. And if you're thinking about, more broadly, an over-allocation of water within a catchment, and you start to think about how that over-allocation might be dealt with, do you accept that those priorities might inform how the over allocation is resolved?

A. I would have thought so, given that it is a very clear hierarchy.

Q. And so, again, it's important that tier 3 priorities are not locked in place for significant periods of time prior to that framework being established.

A. That's correct, yes.

15 Q. I want to move next to understand how you consider an application for a community water supply would be processed and treated if community water supplies are carved out from the reach of plan change 7. So I read your evidence and understand your opinion to be that plan change 7 shouldn't apply to community water takes, at which stage, they will be  
20 reconcented under the operative regional plan water.

A. That's correct, yes.

Q. And in preparing your evidence, have you reviewed any of the recent applications that have been lodged with the council to renew water permits?

25 A. No, I haven't.

Q. Do you have any understanding of knowledge of the durations that have been sought in relation to these?

A. No, I haven't.

30 Q. Are you familiar with the Environment Court's decision dealing with the Stirling community water supply scheme?

A. Yes, I am, I read that back in January and reread it more recently.

Q. Do you recall the duration sought in that?

A. Consent was granted for 25, and then the appeal related to seeking the full term available under the RMA, 35 years.

Q. And so the effect of long-term durations will lock in place the allocation made to schemes for that period of time, absent a review?

A. Absent a review, yes, that's correct.

5 Q. Now, you've considered the relevant provisions in chapter 6 of the regional plan water in your evidence-in-chief, and in particular, at your para 103, you have set out and current policy which guides the decision-making as to the duration of a consent to take water.

A. Yes, that's correct, 6.4.19.

10 Q. And when you read that policy, there's nothing in that policy that pushes towards short-term consents?

1050

15 A. Well in some ways this is a policy drafting but each of these policies has a fairly lengthy explanation that follows it but just purely looking at policy 6.4.19 it's just simply the consideration under (a) the duration, the purpose of the use and a TA, that making application we're pointing to the 50 plus year life frame of the infrastructure and then possibly also (f) the cost of that provision of that infrastructure so that would be the fundament – fund, the rationale for seeking that long term but there is, yeah, but I agree with that, that's how I can make the comment.

20 Q. So the platform is there for the argument to be made for 35 year permits?

A. Well that's correct. I mean at the end it's – any applicant can apply for that term, seek to apply for that term.

25 Q. Yes and based on the only application that perhaps you're familiar with having peruse the decision in *Stirling* again confirms or highlights that the territorial authorities are seeking lengthy durations on permits for these schemes?

A. To give themselves certainty around their infrastructure investment then yes.

30 Q. So if we think about your drafting of or your recommendations in terms of the drafting of plan change 7, in respect to community schemes plan change 7 simply is not relevant, that's how I read your supplementary evidence?

A. It comes back to those two pathways and –

Q. Oh no let's not get into the second pathway.

A. Okay so – no, no.

Q. Let's stay with your principal –

5 A. I have no intention of either Mr Maw but no it, yes, that's correct so in terms of the, in term of community water supplies it is and again comes back to the linkage with the responsibilities and drivers you could call it for TAs to plan and provide for growth.

Q. So in a sense business as usual under the current operative plan?

A. In terms of applying for resource consents for takes yes.

10 Q. Yes. And the experience tells us, lengthy duration sought in relation to that infrastructure?

A. It would well be, yes.

Q. So that would be the likely outcome of the business as usual or the status pro approach continuing if plan change 7 doesn't apply to community schemes?

15 A. That would be the case, yes.

20 Q. I want to move now to the second pathway that we just said we weren't going to talk about but we will so this is the work from the joint conferencing of the planners and just to be clear this is an alternative in the event that the community water schemes are brought into the plan change 7 regime and work was undertaken to ensure that the methodology in schedule 10(a)(4) would be able to calculate an appropriate rate and/or volume of water for the community water schemes?

A. Yep.

25 Q. And my understanding is that you accept that the schedule as now amended would be fit for purpose in that regard?

A. That's correct, yes.

30 Q. Now a question was asked by Commissioner Edmonds yesterday in relation to step 4 which is the step in the methodology used to remove atypical data and that is on –

A. It's not page numbered sorry.

Q. It's on page 9, every second, the even pages are numbered for reasons I can't explain but you have the methodology there?

A. I do thank you, yes.

Q. And you'll see there that step 4 doesn't apply to community water supplies or where the primary purpose is for hydroelectricity?

A. Yes, that's correct.

5 Q. Now Mr Heller was unable to advise the Court why that carve out was there because my understanding is he wasn't at the planning conferences for obvious reasons. Are you able to provide some clarity as to why the step 4 isn't used or isn't to apply to community water schemes?

10 A. Yes, I, I certainly can and this, you know without breaching the confidentiality of the joint, I can confirm there was a considerable amount of time on this topic so if we, if you look at the methodology and go back to step 3, the preceding one, there's a change there so if I just read it out. "Any measurement that exceeds the authorised (consented rate)" and then there's a cross out of the words "by less than the margin of error of the water meter," "is rounded down to the authorised rate" so that, if I can, 15 if I can convey what our discussions is that, that meant the headroom of the consent there were pop, exceedances pop out switch, could be poor data, could be errors whatever. They're rounded down. Step 4, again if I can just notionally say this is the headroom of the volume or take of water were ones that were within that and that was occasions and this 20 applies to both hydro and community water supplies where you get random spikes that go up but are still within the headroom and then the discussion was around, well how do you then address those? Community water supply is simply because you do end up with peak spikes, a small community might I don't know, have a large event on a certain day and have the whole equivalent of the population turn up, it's still within that 25 ceiling of the overall allocation but then how do you, when you're working out the take over a long duration of say a year, how then do you then treat that and so the discussion around 4 was actually set out in methodology for that and there seemed to me and two schools of thought around this 30 atypical data is a matter of professional judgment of a hydrologist as to what do you do when you get these instances of error in data as opposed to let's be really clear and set out a methodology for the hydrological staff or consultants to manage this which is the steps for sub (a) to (g).

Q. So why wasn't that relevant for the community water? I just didn't quite – I've lost the thread at some point there?

5 A. It's simply because over a continuum of a year you have this little, small blip which you, which from a hydrologist they, it's atypical data it's an error so rather than counting that as being, you know so again the, the headline is up here, you've got a year, say a calendar year of results and it's a reasonably you know seasonal thing and then suddenly you've got a little blip that goes up or another one here, is how do you address those? That was my understanding of the conversation.

10 Q. So it's perhaps a valid blip if I could describe it poorly I must say compared to say just an error blip. There's a legitimate reason for it in the context of community supplies?

A. That's, that's right yeah so it was to ensure that the measurements reflected are a maximum use but without the data being distorted by small individual one-offs, valid or not valid.

15 1100

**THE COURT ADDRESSES MR MAW (11:00:13)**

Q. Time for a break?

A. Yeah, that'd be great.

20 Q. I know that other five minute break we just worked and you guys were working as well. Right and I take it that you have access to coffee if you need it.

A. Yes.

Q. We will take a quarter of an hour.

25 **COURT ADJOURNS: 11.00 AM**

**COURT RESUMES: 11.16 AM****CROSS-EXAMINATION CONTINUES: MR MAW**

- 5 Q. All right, we will move onto the definition of community water supply as recommended by the planners in the joint witness statement and it's on page 8 of that document. Now I want to understand each of the constituent parts of this definition to get an understanding for how broad or how narrow it is or how it might be applied and how it might be interpreted because if it's to come through into plan change 7, it's important that it says what the draft is meant it to say, if that makes sense.
- 10 You would accept that that's a desirable outcome?
- A. Yes, that's right.
- Q. So when we look at the first few words there, it means a water supply for the primary purpose of supplying drinking water to communities and start with Primary Purpose and I'm interested to understand what the primary purpose means and we touched on this briefly before the tea adjournment. So when you read the phrase Primary Purpose in the context of this definition, what do you understand it to mean?
- 15 A. Well, it's first drinking.
- Q. Sorry, I missed that.
- 20 A. Oh, sorry, correction, it's first drinking essentially, it is the key purpose.
- Q. Now the key purpose in the context of a community take, you were here yesterday when Mr Heller gave evidence?
- A. That's correct, I was.
- Q. Now he read this as meaning "a range of takes could all be the primary purpose". Do you share his opinion on what this phrase means?
- 25 A. In short, no, I don't.
- Q. So when you read the primary purpose, it's a single purpose?
- A. The – well, as a primary purpose, it is singular, but from the exercise we went through, it is the key purpose. So it is a singular, but it is the key, the key one.
- 30 Q. So then when you think about the breakdown of the uses to which water is put, do you think the uses and the proportion of water used for those uses is relevant to determining the primary purpose?

- 5 A. Well, yes, but I think also with the definition as you mentioned at the outset three components and if it assists, we were mindful of trying to strike a line – no, sorry, nothing even as something as that, but there’s an overall quantum from the Stirling example where it’s down at 20% in essentially, the primary purpose is a rural irrigation as I recall it versus the Dunedin or Queenstown end of the spectrum.
- 10 Q. So let’s press *pause* now because I’m interested in the application of this definition to the Stirling scheme. So when you look at the proportionate use of water there what would you say is the primary purpose of that scheme, and it might help if you have the table 1 from Mr Heller’s evidence before the Environment Court which is exhibit TA1 which I’ve filed somewhere.
- A. Got it.
- 15 Q. Page 11.
- A. Sorry, just bear with me, I’ll just read through part of the -
- Q. Yes, please.
- A. – part of it, I haven’t seen it. Sorry, I won’t scribble on it, I’m just making a notation to the paragraph. Thank you I’m at table 1.
- 20 Q. I’ve done some Maths while you were reading that and I’m going to give you some percentages in relation to each of the three uses in that table. So the proportion of properties/households water within the scheme 208/1353 represents 15%. The next category stock water and dairy shed uses 80% and the remainder in the last category 5%. So when you look at this scheme by way of example, what do you say the primary purpose of this scheme is?
- 25 A. Well, it’s the 80% of the stock and dairy shed uses.
- Q. Now, hypothetically, what happens if the numbers in the first two boxes, the household water scheme and the stock water percentage start to get closer together? How is it that the phrase “the primary purpose” might be interpreted? So is it the one that simply take the largest volume for a particular use or was it more nuance than that?
- 30 A. I think it would be more nuance than that. The difficulty and the sole reason why you’ve got in this definition “general terms such as primary purpose” is the difficulty of attaching some metrics around that. So if the

(inaudible 11:23:53) water supply is the single key purpose and you've got two, like two components that say 50% each, then you do have a, yes, you do have an issue there in terms of determining. I think in that case you've essentially got two, two takes of water: One for community and one for the rural use.

5

Q. In your experience have those uses ever been separately consented even though they're taken through the same pipe?

A. No.

10

Q. So the only other example we have to work with is the Dunedin City Council percentages. So we apply the same exercise there. My recollection was 57% for what's described as "residential uses". When you think about that 57% though and you look at the community water supply definition, it means the water supply primary purpose of supplying drinking water, would you have to look at the drinking water component of that 57% as a first step?

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A. Well yes, yes you would but you'd um, the overall evaluation 'cos it does, the definition does proceed on to address the industrial and business uses so it would in some total pass, but yes you're correct and my view is that the starting point would be to ask yourself the question: "what component is for drinking water?"

20

Q. So, what we know so far in relation to that 57% is that 25% of the 57% is used for watering of gardens so that gets the 57 down to about 40% give or take. Now, there will no doubt be other domestic uses that are not uses for drinking water supply such that that 40% may in reality be less than that. So, hypothetically, what happens to that supply if the drinking water component's in the order of 20, 25% does that cause an issue in terms of this definition?

25

A. As terms of it being community water supply which is inclusive of industrial and business, again fact and degree would be difficult to ascertain but I think it would s — the primary purpose would still be drinking, drinking water.

30

Q. Is the intention to have for example the Dunedin scheme covered by this definition. That, is that...



A. I, when I look at the three parts of it, the primary purpose including industrial and business the second part where it references TA's with their responsibilities under the statutes, and then thirdly that that one metric around 25 or more people, 60, then yes, it would.

5 Q. So help me understand the relevance of the reference to industrial and business uses, is that additive to the drinking water component such that those activities together are the primary purpose?

A. The primary purpose remains drinking water to communities and then the comma, that may also be used for industrial and business uses is starting  
10 to send a signal that there's a range of uses additional and I wouldn't term them ancillary 'cos they're not, but additional uses.

Q. I guess the point I'm grappling with here is going back to the Dunedin City Council example if only 20 to 25% of the residential component is drinking water, do you accept there might be an  
15 interpretation that says, well at that level it's not the primary purpose of that take?

A. That could arise where say for example there was a I suppose an out, out of centre development which was primarily industrial or commercial in it's nature, with possibly a small component residential then I that would be  
20 a valid thing to look at, what is — is it a take for a community or is it for an industrial or business use. An airport for example would be a good example of that.

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

Q. I am struggling a little because there has been no explanation of the  
25 community water supply and the wording which has agreed and so, did I hear you say that drinking water supplied to a range of uses including for consumption by households, industry and commerce are all examples of primary purpose of supplying drinking water? Or were you saying something else?

30 A. Well I think it, this I think is a, Ma'am, is a fundamental issue is that it's — nothing is clearly delineated so the definition that's arisen through the joint witness statement is drinking water to communities —

Q. Well that would actually.

A. Yeah.

Q. I will just stop you there.

A. That's all right.

5 Q. Well it maybe different down in Otago but where I am from councils either do or do not treat water to a drinking water standard.

A. Yeah.

Q. And I can think of plenty of communities where you are not meant to drink the tap water, and it says so.

A. Yeah.

10 Q. But assuming in Otago everything is treated to a standard fit for human consumption, all water delivered by a Territorial Authority in Otago is drinking water to communities? Would all water, which is treated water satisfy the first part of the definition "primary purpose of supplying drinking water to the communities" because it has all been treated?

15 A. Yes.

Q. Or is it something different?

A. I think it would be that, yes.

Q. Okay, that is helpful so that we are sort of back onto Ms Irving's definition?

A. Yes.

20 **CROSS-EXAMINATION CONTINUES: MR MAW**

Q. Which I am now grappling with, because my understanding Mr Twose was that you had a different view of what drinking water, treated drinking water was if it was used for those other uses. I put a question to you earlier this morning about that.

25 A. Mhm.

Q. So let me see if I can clarify what your opinion on this topic is. Do you consider that once drinking water is treated, irrespective of it's use, it would fit within the first part of the definition being "supply for the primary purpose of supplying drinking water to communities?"

30 A. Yes, yes I would.

Q. So then when we apply that situation to the Stirling example, all of that water is treated at which stage the Stirling example would fit within the definition.

A. Except that it's not the primary purpose of the overall — mean it's, it's literally an 80/20 rule in that case.

5 Q. You're going to have to help me understand then, when I read the definition how I come to a different conclusion to that scheme compared to the Dunedin scheme.

A. I think it comes down to the primary, the primary purpose and that's if you've got — with Stirling and 80% use going into rural irrigation that's not drinking.

Q. But you've just told the Court that —

10 A. Yeah.

Q. Once it's treated it's drinking water irrespective of it's use, so then the enquiry doesn't go any further.

A. If, yeah, it's the proceeding to a water supply for the primary purpose of supplying drinking water.

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

Q. Would it help if we just took out of the definition the word drinking, so now the primary purpose is one of water supply?

A. Well that would probably —

20 Q. And is that closer to what you are thinking so the TA is delivering water, its primary purpose is what? Is, so it means, I see, yes, in fact you may already be there. So it means water supply, so any water supply for the primary purpose of supplying drinking water. So it is any water, regardless of it's treatment but the primary purpose is drinking water for human consumption.

25 A. Essen —

Q. Is that kind of more where you are at?

A. Yes, essentially so that would include drinking, sanitation, household uses.

30 Q. But if it was just — and to use an over the top sort of example, if it was solely water supply for the primary purpose of supplying a dairy shed, it would not qualify?

A. That's correct and as — when we ran through this in the conferencing, it was I think acknowledged by most the folk present that it's really difficult

to have a metric that establishes a line and so hence there were the three components. The first sentence that Mr Maw has been talking about and then the second one which narrows it to the Territorial Authorities with their statutory responsibilities and then thirdly there is a metric which is essentially bringing over from the regional plan that 25 people. So in other words that's — it is trying to distinguish between what in the circumstances where an assertion is made that this is a community, this is a community water supply therefore we should be exempted from PC7, but the reality is that its primary purpose is something else, albeit a component of its supply does go to for example, households.

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**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. What I'm struggling with is how we draw the line between Stirling and the Dunedin City Council scheme through the lens of this definition. Because if your evidence is that Stirling shouldn't be captured but the Dunedin City Council example should be captured, I don't understand on your reasoning how the interpretation of this definition draws that distinction?

A. I can only say that it would be literally the 80/20 rule in both, in both cases. So with Dunedin, they record 19 as well un – unknown, that leaves the remaining 80% industrial, business and residential. For Stirling from what I could see from the Court's decision and then more recently from Mr Heller's statement is the other way around.

Q. So, you put the industrial and the business use on the domestic? Or the –

A. No, I'm just saying the –

Q. On the community supply line?

A. They would be part of the bundle of uses for a – that a community water supply would, would service.

Q. When you look at the definition for "industrial and business uses", do you accept that water use for dairy shed washdown is a business use?

A. It is, yes.

Q. Water used for irrigation would be a business use?

A. That's correct.

Q. And so on the definition, those activities are captured by the definition?

A. In terms of the primary purpose? No I wouldn't have thought so, because they're not drinking, per se drinking water to communities. So that would be distinct from let's say a bottling plant or something else, which does have – or dry-cleaning or something like that in an urban setting which does require water which has a – I think one of the, and this, it is, it challenged us in the joint witness statement for obvious reasons to arrive at even this definition. But as I've mentioned before, the key driver was to look ahead to the MPS FM again and the 3 tier to priority and have something in place that gives some certainty as to what is tier 2 as distinct from tier 3.

Q. All right. So your definition, sorry, the joint definition.

A. Yes.

Q. And you're first up, which is –

A. Thank you.

Q. An honour and a privilege I'm sure. The definition set out there includes dairy shed washdown and dairy shed use. It fits within those words, but you say they shouldn't fit within those, that's not what was meant?

A. That's not what was meant, no. And I get, I guess even though I am first up as a planning witness, as I suspect other planning witnesses will defer to myself or Mr de Pelsemaeker. So I'll answer as best I can at this stage. I mean, one of – as I say, all unitary authorities, regional councils have the responsibility in the same time. We have a plethora of various water, drinking water-related definitions not just in Otago but you, know, across the country. The genesis of this water supply definition was actually one I actually referenced in my supplementary evidence at para 29, which was from the operative Waikato RPS where it's termed domestic or municipal supply. And aside from terminology such as a reticulated supply rather than a water supply, and also it provides for publicly or privately owned, the general ingredients are there as per the joint witness statement definition.

1140

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

Q. Save that the title is limiting isn't it, "Domestic and Municipal"?

**MR MAW:**

5 A. Yes it is.

**WITNESS:**

A. That's correct, yes.

**THE COURT: JUDGE BORTHWICK**

10 Q. And that's actually the key component missing?

A. Yes.

Q. Possibly missing in your view?

A. Yes, yes.

**CROSS-EXAMINATION CONTINUES: MR MAW**

15 Q. When you think about a municipal use and you think about the Dunedin scheme and you will recall there's reference to some of that water being used for farms and irrigation -

A. Yes.

Q. - there's still a challenge in terms of whether they'd be in or out?

20 A. I don't think so because at the end of the day they've 120,000 residents, so the primary purpose is to supply water to those folk. Yes there probably will be some folk on town supply who are in the rural area.

**THE COURT: JUDGE BORTHWICK**

25 Q. To give you another example perhaps, with the Canterbury context where dairy farms can, you know, take (inaudible 11:41:20) the volume of which represents a small town, so I hear on a daily basis -

A. Yes.

30 Q. - so we've got one large dairy company taking and using water, a large volume of water which is the equivalent of say, I don't know what figures are out there recently, but just say 5,000 households, and the taking use, the demand for the 5,000 households, what would you say is the primary

purpose of that scheme, so the scheme supplying the single dairy farm and 5,000 households, roughly 50/50, what would you say is the primary purpose?

A. At 50/50 it is – it's difficult.

5 Q. Oh I thought you were going to call it for the households?

A. Yes –

Q. I thought volume –

A. No.

10 Q. – would in fact volume in that scenario is irrelevant, the fact that you've got a big farm out there -

A. Yes.

Q. - taking a lot, it's actually still a domestic water scheme –

A. Yes.

Q. – but obviously not and so that's interesting?

15 A. Well my thinking behind this is the fact that again Te Mana, I'm trying to translate it through into that threshold, so that later on when the health and wellbeing of the water bodies has to be determined and then there has to be delineation between what is tier 2, what is tier 3 and what takes priority, that's (inaudible 11:42:46) and when you're into a 50/50 scenario,  
20 that's – it, I don't think it just – I don't have a ready answer for that, but I don't think it would just be solely on the volume, because if there is over allocation and a decision needs to be made, then obviously I'm pitching for tier 2, that the households retain their allocation subject to efficiency and everything else but a decision has to be made around whether that  
25 business can take the amount of water it can.

Q. Yes that's the dairy business?

A. Correct.

Q. Hence my thinking –

A. Yes.

30 Q. – that it's probably, it's still probably a scheme for domestic use, even though you've got one large outside business entity –

A. Yes.

Q. – also drawing down on the scheme but –

A. Yes.

Q. – that’s not your thinking or...?

A. It’s (inaudible 11:43:44) to the example I just gave Mr Maw earlier of an airport, albeit that’s obviously more clear cut since that’s purely usually, purely in, you know, purely a commercial use but where we’re faced when  
5 in the same circumstance we are (inaudible 11:44:06) supply to an airport includes residents (inaudible 11:44:10) and the like, I, yes, I don’t have a – I think it’s very hard to make that delineation if it’s literally the infrastructure based with one pipe servicing both.

Q. Yes but why one pipe servicing both, I actually don’t know that that’s so  
10 relevant, but –

A. Just simply because the infrastructure’s set up.

Q. Yes I understand how it all works –

A. Yes I unders- yes, yes.

Q. But –

15 A. Yes.

Q. Why is that even important when it comes to defining (inaudible 11:44:53) a community water supply or not?

A. Because the other component is the second component around the TAs managing and providing for that infrastructure, yes.

20 Q. Yes that’s a bit that you could drive a bus through with this definition I think –

A. Yes.

Q. – and it won’t, you know, my view is that it can’t stand like that.

A. Okay.

25 Q. Just simply because it’s all things to all people and probably will be when it comes to be implemented?

A. Yes and look I readily acknowledge that and the witness conferencing. We had the time that we had to work through this and it was from the planner’s – or from all of us involved, an attempt to in the absence of very  
30 clear delineations and metrics try and arrive at a definition which kept it as or tried to be as clear as possible put simply and the reason for that is because there was further back into the document, around, there was exception for community supply, so then obviously we were then charged with creating a definition of what that is.



Q. It may be more useful to pursue it – well it's over to you entirely –

A. Yes.

Q. – and I'll shut up in a moment but, to pursue the thinking behind it and I'm more just sort of, let's not look at the words but just broadly, what were we intending to capture and not capture?  
5

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

Yes and I've touched on that and the two examples where we have a breakdown are quite useful examples which might be at different ends of the spectrum we don't know.  
10

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

Yes.

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. But so picking up on that thread, if you think about the Stirling scheme and the Dunedin City Council scheme, was it the intention that both schemes be captured by the definition?  
15

A. The Dunedin scheme yes but I wouldn't have thought that the – from – as it's been described, the Stirling scheme would.

Q. And then we go back into the circular debate about where you draw the line –  
20

A. Yes.

Q. – and it gets really difficult as –

A. Yes I acknowledge that yes.

Q. – as the percentages come down, because again on the math, the Dunedin scheme, if only 20% of that water is actually used for drinking water and the rest is for those other uses which are, you accept, tier 3 uses under the MPS? The industrial and business?  
25

A. Industrial business? Yes they would be.

Q. You may end up in a situation where it's not too dissimilar to the math on Stirling, but it's useful to understand that the thinking behind the definition is to capture the – in this context I may say the urban scheme, but not the one that has a higher rural component if I can – in those terms?  
30

A. Yes that's right and if you were to – because this, I mean it's just this fundamental challenge with any policy drafting is, it's almost like a bell shape curve and we're addressing the, both the out – the ends of the curve and trying to make sure the policy stretches to accommodate 100%,  
 5 it's challenging. One – the only way I would see through that is – as Judge Borthwick mentioned, is that domestic municipal supply is that's clearly understood to be, from what I can read, urban, you probably would need something else around rural which had – which frankly probably may be easier to have some clearer metrics around it. That could be the  
 10 alternate way of drafting a provision such as that to give, as you say, certainty where you're dealing at literally both ends of the spectrum.

Q. So when you speak of putting some metrics in, are you thinking putting some percentages in, for example, as to the volumes used for different uses or?

15 A. I haven't seen percentages in place and I think to be honest, probably all of my colleagues in regional councils and out have probably hit the same thought process and used words such as "primarily" and "primary" as we, as the planners here have, and including myself have. I don't have, I would not have the knowledge base or skill base to say it's 42% or 15%  
 20 or the like.

Q. Do you accept there are some issues with the wording as currently expressed and that it's not capturing the outcomes that perhaps were intended?

1150

25 A. I think it's as with any policy drafting it's not there yet.

Q. Now we've spent quite some time on the first part of the definition. I do want to just ask you a question in relation to the middle part which is a conjunctive part and is for the purpose of enabling TA's to meet their responsibilities for the supply of and where we have drinking water under  
 30 the Health Act and the LGA. Now when we say "or the purpose of," what do we mean there? Is it a subset? Is it all of it? Is it some of it?

A. I think it's all of it because it was again trying to put some degree of certainty and specificity around the breadth of this term by linking it back to TA's and more specifically their statutory responsibilities.

- Q. So when you think about the Health Act, my recollection is that the definition there was perhaps down the narrow end of the spectrum. It focussed on drinking water supply?
- 5 A. Yes, it did and that's obviously you know given the driver of, I understand the Health Act to ensure you know safe, safe water supply.
- Q. Whereas under the LGA the responsibilities are perhaps broader?
- A. That's correct, yes.
- Q. When you look at those two references conjunctively in this sentence and is for the purpose of enabling TA's to meet their responsibilities for drinking water under the Health Act and the LGA, how do the business and industrial uses fit within that part of the definition?
- 10 A. I think they'd fit under the LGA one because if you drill down further into the LGA you've got general and specific obligations which Ms East referenced in her memo so just without having to go back to that document to summarise those, the general one is the all encompassing statement that the LGA provides for the community including industrial business uses. This specific would be the responsibilities that we touched on around like lifeline infrastructure or firefighting, those sorts of things.
- Q. The challenge then that perhaps occurs is that this part of the definition is focussed on drinking water under each of those pieces of legislation?
- 15 A. Yes.
- Q. And so those business and industrial uses, they don't fit within that category of drinking water under those pieces of legislation do they?
- A. No, but they fit in the one above, industrial and business uses, water supply.
- 20 Q. But when you look at the construction of this definition the second part it's conjunctive with the first, isn't it, it's both?
- A. That's correct and that again was the drafting of it. It possibly could be an "or" disjunctive.
- 25 Q. So if you put an "or" in there it has the potential to broaden out the –
- A. That – correct and that was the concern and that sorry that was the, that was I recall one of the concerns in the JWS and the general ethos of "try and keep it as contained and as precise as possible."
- 30

Q. So the joint witness statement definition landed on the more constrained interpretation?

A. Correct and you'll see an example of the alternate to that in the Waikato example which is para 29, in the supplementary evidence where it is a, it was disjunctive, it is an "or."

5

Q. So then when you think about the outcome that was intended and the outcome was you say to include for example the Dunedin City Scheme which is supplying industrial and commercial water, doesn't the second limb of the definition then knock that out given that it's conjunctive?

10

A. In terms of drafting it would be, I'd have to say it would be better if it was disjunct – it was an "or" it was disjunctive but yes it does seem to, it does seem to be the effect of it.

Q. If it was "or" it in fact would serve no useful purpose though would it because the first part of the sentence is much broader?

15

A. Yep.

Q. It would capture those uses anyway?

A. Yes.

1155

20

Q. Now, I do understand the third component in terms of 25 or more people at least 60 days a year and that's, that's reasonably clear and objective, so. So having been through the exercise, do you accept that there is still some drafting uncertainty in terms of whether this definition is meeting the outcome that the planners jointly had on their minds?

25

A. Yes, I think so. And as I referenced before, I mean you know, through any sort of first, first instance of policy development this can occur.

30

Q. I want to test with you now how critical or otherwise the definition is in the context of Plan Change 7. So let's say that the Court doesn't accept the primary position that community water supply should be excluded from Plan Change 7, and so they're captured by Plan Change 7 and perhaps two things might happen. The first situation is that community water supplies are simply captured by the existing framework, as in there's not a bespoke set of provisions added in to deal with the schemes so they would be like all other users able to apply for that six-year permit, either through the controlled activity or the RDA if that finds favour, but it would

be non-complying for anything longer. In that situation the schedule would apply to enable calculation of the volume and the rates of water, and you say that now reflects the use for those or the needs and accommodates growth for the schemes. So in that situation, do you  
 5 accept it probably doesn't matter if the definition's a little, a little broader because in a sense, the uses are being treated like other uses and the critical issue is it's a six-year permit?

A. Well, yes. Also the RDA relates to anticipated growth, that is, that's always within the head room of the consent so that would still leave the  
 10 pathway for a new consent, and then the only consideration as we've mentioned before is this, the duration to the six-year term.

Q. Yes. An alternative scenario might be what you've described as your alternative pathway, which is the bespoke set of provisions to enable a longer duration for community water supplies within Plan Change 7? So  
 15 if you think about that as an option where a longer duration might be appropriate, the definition becomes more critical at that point doesn't it?

A. Yes, that's correct. And further to that, Mr Maw, I think as I've been mentioning several times, because we're in the middle of giving effect to the NPS with a new regional plan then yes, care would need to be taken  
 20 with this because I imagine it would be brought over into the new plan and knowing planning in this country probably adopted by other regional councils and possibly unitary authorities as well at the same time.

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

Q. Don't put that on me.

25 A. Yes, it's just – it's just this, the amount of – I mean both – I mean just as an aside, I mean both of those NPS's are almost in my view they're de facto planning statutes, so they do establishing a new platform, they're very sig- yeah, they're significant changes.

**CROSS-EXAMINATION CONTINUES: MR MAW**

30 Q. All right. I think we might leave the definition there for now. I want to move on to what hopefully will be the final topic of questions, and that relates to the drafting in your supplementary statement and I see that

you've gone in to bat for hydro and have recommended that the hydroelectricity schemes are carved out from the reach of Plan Change 7 as well? And I'm looking at your attached version of the Plan Change with some yellow highlighting on –

5 A. That's correct, yeah.

Q. Your supplementary evidence? And you say that hydroelectricity generation should not be captured by Plan Change 7 either?

1200

10 A. Yes, sorry, I'm just trying to find the preceding paragraph where in the supplementary evidence – oh yes, sorry, I've got it now, it's para 14 on page 4 and where I say, and sorry, it's about four sentences down: "Having now read through the other planning witnesses supplementary evidence, I have sought to ensure my recommended wording changes align more closely with those put forward by my colleagues." So just as a clarification it's for yourself and for the court, I'm not advocating for hydro-electricity generation, I'm just trying to bring together and there were – I'm not sure how many different versions of PC7 were in the various bits, but I was basically trying to get in line with the best fit with other evidence just to streamline things a little bit, so I don't have any position of hydro-generation, but I just thought the approach was good.

15 Q. So and in a sense the place to tack-on the "carve out the community water supply" has fitted neatly with the carve out being sought by the –

A. Correct –

Q. – hydro generators?

25 A. – that's correct, but I emp, as a point of emphasis, that's just as I said before just to ensure – well, it's you know, a streamlined approach. If hydro resile from that, then those words come out and the community was supplied it could stay.

30 Q. Right, so you're not expressing an opinion on the appropriateness of carving out hydro-electricity generation?

A. Absolutely not, this is just simply trying to ensure drafting is consistent.

Q. And do you have an opinion on that topic or is that simply not something you've turned your mind to?

A. On hydro, no, I haven't turned my mind to it.

Q. I just want to say I did have a question with you about your drafting in relation to policy 10(a)(2).

A. Point?

Q. 10(a) 2.1.

5 A. Yes. And Mr Maw, I just put the joint witness statement the one alongside the changes to that as well.

Q. Yes, sure.

A. The plan is joint witness statement.

10 Q. Now, you've sought to add in some categories of use into this policy, the first of which appears at sub-paragraph (b) and you've constrained the application of the following four sub-paragraphs for consents to take and/or use water for irrigation.

A. Correct.

15 Q. And then at (c) you have dealt with consents relating to hydro and community water suppliers?

A. Correct.

Q. So when you think about the range of uses to which water is put, are all uses covered by irrigation electricity generation or community water supplies?

20 1204

A. (Inaudible 12:04:10) I should answer that directly but I'd also just go back to my (inaudible 12:04:16) is that we work through the joint witness statement and the hydro planning specialist was there and as I affirmed at the, I think close to the outset of this, I was happy with the 10A.2.1  
25 change as the result of the joint witness statement, so for point of clarification, they supersede the changes that were in my supplementary evidence. In there you'll see in the joint witness statement at 10.2.1, actual- probably – a simpler and clearer way of doing it because that's – the takes other than community water supplies and then you've got the  
30 two ones around the instantaneous- and volume of extraction, so that seems to me to be a clearer way of addressing 10A.2.1 than what I had proposed along with my colleague for hydro.

Q. Sure, so the gap that I'm perhaps concerned about disappears with the joint witness statement wording and that is your preferred wording now?

A. That is correct yes.

Q. For that policy?

A. Yes.

5 Q. No that clarifies that for me thank you. Thank you, I have no further questions.

**THE COURT: JUDGE BORTHWICK TO MS IRVING**

Q. Re-examination?

A. Yes just a few.

**RE-EXAMINATION: MS IRVING**

10 Q. The first one I'd just like to go back to is the conversation you had with my friend about municipal infrastructure, so if we could perhaps go back to that definition in the partially operative regional policy statement which I think was Volume 3, Tab 3?

**WITNESS REFERRED TO VOLUME 3, TAB 3**

15 **THE COURT: JUDGE BORTHWICK TO MS IRVING**

Q. It may be Volume 2?

A. Yes sorry.

Q. So you want to go to the wording or the ...?

A. Yes, so the page CB –

20 Q. The old wording, not new wording?

A. How do you mean sorry?

Q. Not the absolutely current up to date wording?

A. Well yes I think the municipal infrastructure definition is the same across the versions we had on the screen and the one that's in the bundle.

25 Q. Okay.

**WITNESS:**

Thank you I've got the document.

**RE-EXAMINATION CONTINUES: MS IRVING**

30 Q. Yes so CB651 in the common bundle?



**WITNESS REFERRED TO CB651 - COMMON BUNDLE**

Q. And looking at paragraph (a), I just wanted to clarify I suppose the extent of the infrastructure network that is captured by that paragraph being the conveyance of untreated water from source to and including the point of

5 its treatment, because I think my friend put to you a question that it was simply the conveyance infrastructure from source?

A. No this would include the, well the treatment, but then the (inaudible 12:08:13) - excluding its distribution within the urban environment –

Q. Yes.

10 A. – eg, local –

Q. Yes.

A. – pipes down, subdivisions and the like.

Q. I understand that. Can I also take you to the definition of functional needs in the RPS which is back at page CB648?

15 **WITNESS REFERRED TO PAGE CB648**

A. Yes.

Q. And if you could read that definition please?

A. “The locational, operational, practical or technical needs of an activity including development and upgrades.”

20 Q. And if we’re thinking about the operation of water supply infrastructure, what is your opinion about whether or not it is a functional need of that infrastructure to have access to water?

A. It’s essential.

**THE COURT: COMMISSIONER BUNTING**

25 Q. Say again?

A. It’s – to, - if it’s water supply infrastructure, then the ability to source water is essential.

Q. Thank you.

**THE COURT: JUDGE BORTHWICK**

30 Q. So water supply infrastructure is essential to source water? Okay.

**THE COURT: JUDGE BORTHWICK TO MS IRVING**

Q. Was that the point of your question or not?

A. Yes.

Q. It was, okay.

**5 RE-EXAMINATION CONTINUES: MS IRVING**

Q. And so if we could go please to the provisions that relate to infrastructure in the regional policy statement, so that's CB564 to start with perhaps? And policy 4.3.3 which relates to the functional needs of infrastructure that has national or regional significance?

**10 WITNESS REFERRED TO CB564 AND POLICY 4.3.3**

Q. And you'd agree with me that municipal infrastructure is identified as regionally significant in the RPS?

1210

A. That's correct, yes.

15 Q. So does your view about water availability being a functional need of water supply infrastructure influence your view on whether policy 4.3.3 is relevant in the context of Plan Change 7?

A. It would be relevant insofar as you need, yeah, as I said before, you need water to — the take of water to support the infrastructure or for the, it was conveyance via the infrastructure.

20

Q. And if we go back one page to CB652 and looking at policy 4.3.1, would your view be the same in relation to providing for the functional needs of lifeline utilities?

A. Yes I would, yes that's correct.

25

Q. I'd now like to —

**THE COURT JUDGE BORTHWICK ADDRESSES MS IRVING (12:11:25)**

Q. Just pause there a second. All right carry on.

**RE-EXAMINATION CONTINUES: MS IRVING**

30 Q. If we could go please to the national policy statement on urban development, which is tab 6, and so CB782 and over to the definitions of infrastructure ready at CB796. Would you consider development to

capacity to be infrastructure ready if the pipes are in the ground but they can have no water in them?

A. Functionally no.

5 Q. Finally, oh that's actually two, two more parts. My friend asked you some questions about the terms that have been sought in relation to community water supplies and I think he specifically referred you to the Stirling example. Now, is it your understanding that that application was made prior to the MPS FM 2020?

A. Yes, that's correct and also prior to PC7.

10 Q. So, if you were preparing an application for the renewal of a community water supply today, what would your approach be to the matter of term?

A. I would be most interested in the actual function of it which is actually delivering water to people and so it's the, it's the planning and provision of the infrastructure. The water itse — to get that water and treat it and convey it.

15

Q. So it would be, well perhaps if you could elaborate. Is it simply going to be a matter of just asking for the maximum term or would it be a more nuanced exercise than that?

A. I think it would be a more nuanced way because you are giving effect to the MPS, or sorry correction it's the resource consent application, so having regard to that but presumably there will be at some later date a plan, you — for me I think the key considerations around the term would, coming back to infrastructure would be alignment with, speaking as a if it was a TA applicant with their design planning including long-term planning processes and as has been signalled, or sorry, set out in the various pieces of evidence, that's quite a long-time frame. So in other words LTP is a 10 year term and refreshed every triennial period, every three year period. So include the design of infrastructure on top of that you're looking at a 15 year term. That would be my, that, if you're, if you're asking a question around the, essentially a shortened duration, then that would be, that would be what I would consider to be the minimum.

25

30

Q. Lastly, I'd just like to take you back please to the appendice to your supplementary evidence that Mr Maw discussed with you at appendix 2

and the page of the document with the pie chart setting out the proportions of water consumption.

A. Thank you I've got that.

5 Q. Now he took you through I think, the various uses that might be encapsulated within the residential component of that, but I'd like to talk to you about what is encapsulated in the 24% of commercial and industrial and ask you to look at the paragraph above the pie chart.

A. Yes.

Q. Can you tell us what is included within that 24%?

10 A. As described, diverse water use such as industry, farming, retail, restaurants, hospitals, university and schools.

Q. So would it be fair to say that there are some uses within the commercial industrial component that would relate to the health needs of people?

15 A. Yes I would, particularly where it's the institutional, the schools, the universities and the like and then also obviously restaurants, food preparation and possibly also retail, they'll have potable water acquired for their staff.

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

20 Q. So we have heard a lot of paradigm shifts to come out at Te Mana o te Wai and then you MPS, so I guess my question for you is, wouldn't a paradigm shift under the new way of looking at water also be required for territorial authorities going into the future, and I am thinking of things like garden watering, people thinking about how to provide for that themselves, whether it's large tents and roof water collection or whatever  
25 it is, I mean are we going to get into more of the Australian sort of pattern in terms of grey water and separate systems, what about metering, there is quite a lot that you read about metering changing behaviour and driving down demand when people realise it is going to hit them in the pocket specifically not just in terms of general rate? Do you think in the future  
30 but I guess is also is part of the land and water, plan exercise that's going to go on that these things are going to have to be more actively thought about and addressed?

1220

A. The short answer is yes absolutely and if I can just expand on that. For me there's two sides to the ledger. Territorial Authorities are seeking exception from PC7 but the other side of the ledger if I can summarise it Commissioner is around efficient and sustainable use and might be slightly coloured by the fact that I reside in Auckland and you know we are subject to a water shortage and with the nature of climate and that, that's going to continue on so I would, I would see that efficiency side being quite paramount with, if you look back, 15, 20 years ago its sort of methods or its encouragement I think we'll be stepping more into regulation as we're, as we're seeing with efficient use for example rainwater, detention reuse for household residential purposes that don't need potable water, veggie gardens or all the, you know the toilet or laundry. I think it's very much, say following the Australian example as we have to manage water more efficiently. In terms of how that's affected in a RMA sense, efficiency is touched on in the existing plan so could conceivably go through into consent conditions for future consents or perhaps through the, possibly through the review of consents because one of the things I did see when I saw that water conservation and management plan is the exercise that Dunedin City Council says it is going through to encourage efficient use so I think there will have to be a step change but that's the starting point.

Q. So just thinking about the duration of consents forming, you have very long consents, what's the driver for a step change?

A. Well I think if, as I mean there are a number of means, I mean the first one would be once the new land regional water plan is operative then you know there is, is there any opportunity to use section 128 to review those consents from TA's or a selection of them? The other way I think as I said before is to and maybe this is just the, delineation between regional and district city councils in the Otago region but when I saw that water conservation management plan conceivably it could be recast as an RM type document that requires certification by the ORC in different instances as a condition of a consent for a, for a take.

**THE COURT: JUDGE BORTHWICK**

Q. Sorry can you say that again? I was just making a note of your previous comment.

A. Yes.

5 Q. What was the second comment you just made yes?

A. So the second comment was around, the water conservation and management plan which Dunedin City Council has produced under their, as are required to do under the Local Government Act. It seemed to me that that, a document such as that could translate quite well into an RMA sense of being a management plan required for certification by the ORC in an RMA regulatory sense. I think that's probably a little bit too general at this stage but there could be clear metrics around for example that 19% that is lost unallocated in terms of a condition which sought to bring that 19% down in theory that –

10  
15 Q. Yes, in theory. We've heard a lot about that on *Stirling* how that was not possible but, for its losses?

A. Yes, yes.

**QUESTION FROM THE COURT CONTINUES: COMMISSIONER EDMONDS**

20 Q. So just, you talked about the review potential in terms of consent reviews but by that time you've already done your planning and your design and you built something and you've got a whole lot of sunk investment so how realistic is it to think that you're going to get a paradigm shift?

A. I think it would be –

Q. Without starting on thinking about that now?

25 A. Well yes I agree, the thought needs to start, needs to definitely start now. I think that it would, the consent review has said that two sides of the ledger would be more around that second side around efficiency as looking at how the consent has been or the end uses of water for which the takes have been used because if it's, if it's resulting in wasted water then to me that would be the key or one of the key drivers of a review process would be to look at that.

30 Q. So I'm thinking that you talked about headroom?

A. Yes.

Q. But if you were to do or if you were to look at some of the measures that might be possible in terms of the Territorial Authority itself, limitations on what can be used for watering gardens and all those kinds of things, couldn't you use some of that headroom for the future development?

5 A. Well yes I agree because I mean the concept of a TA treating, having all that infrastructure and the cost of running it in place to produce potable water to you know spray across the lawn, that's I guess that's what I'm coming back to around the inefficiencies. You would want to see a sinking lid on that sort of use through things such as you know rainwater reuse and detention of reuse and those sorts of initiatives to ensure that coming back to the three priorities that you're making the best use of the water you currently have allocated to you before seeking further volumes or rates.

10 Q. So I guess I was just trying to understand the JWS planning, the revisions to that and how that might relate to some of the things that we've talked about so if you have that there –

A. Sorry I just – yes, I have it.

Q. So I'm just looking at the 10(a)(2)(i)(d) which I think Mr Maw asked you about.

20 A. Yes.

Q. So that one carves out community water supplies, that policy?

A. Yes.

Q. So that means that you're not looking in terms of community water supplies to have no increase in the historical and simultaneous rate of a distraction?

25 A. Yes, that's correct.

Q. So I might have missed your answer to a question in relation to the RD so I just need to make sure that I'm clear about it so if we could just have a look at the RD?

30 A. Yes.

Q. Now so the RD we've got matter (a) which talks about within the limits of historical water use and then we've got (aa) for the community water supplies so my question to you is the limits of historical use, they wouldn't apply to community water supplies?

A. In terms of (a) well yes they would because (aa) is referring, is the need within the headroom of the consent, if I use that term again, for population growth, but with A, that's more around just basically getting the data together, and importantly, the period within which the data is collected.

5 For community water supplies, and bearing in mind, a prior version had 2015 to 2020 –

1230

Q. I'm going to ask you about that next.

A. Oh, sorry, okay, sorry, yeah, okay.

10 Q. So perhaps we won't go there. I was just trying to understand the answer to your question, Mr Maw's question, I think, in terms of I came and had a look at A and B and I thought that you said that you'd still be working, community water supplies would still be working within the limits of historical use, but then, when I had a look at AA, it talks about within

15 existing water permit volume and rate limits, so that's what the permit says, that's got nothing to do with the historical use. They may be the same, they may not, so I was just unclear as your answer. I know it says "and" so I mean that (inaudible 12:31:29) A and AA, so I just didn't think that I was clear.

20 A. Oh, sorry, yes, and that's on my part for not being clear enough in my response. AA is, as you say, additive to A, so it is within the limits of historical use, with the extra over to accommodate growth, but all within the envelope of the water permit.

Q. The existing water permit.

25 A. Correct.

Q. Volume and rate.

A. Yes, correct.

Q. So if we could just now come back, then, to the historical use and the move away in the drafting that we have from the window that the council

30 had in its version, five years or whatever it was.

A. 15 to 20, yes.

Q. 20 back to 15.

A. Yeah.



Q. So I just wanted to find out what is your understanding of what that might mean in terms of community water supplies, removing that window?

A. Well, I think it just reflects when, as distinct from, perhaps, other uses, rural irrigation and the like, with community water supplies, because of growth, you'd want to look at the period as close as you can get to the period within which you're applying for a renewal or a new consent. In other words, you know, communities grow and it may not necessarily be for the 2015-2020 freeze frame, there may be a need to consider what's happened since then, so that within the scope of the headroom of the consent, you're not – let's say, for example, that a significant development occurred in 2021, with a large subdivision or the like. So it's for a community water supply, it's just ensuring, and this is just generally, it's that you just basically look at the data, and from what I recall, up to or close to the time within which you're making an application.

15 **THE COURT: JUDGE BORTHWICK**

What data are you talking about? Sorry, are we talking about – I thought my colleague was asking you a question around 15 years and what justifies that, yeah. Is that right, Commissioner?

**THE COURT: COMMISSIONER EDMONDS**

20 Q. No, I was obviously not clear in my question, but you've got – the original council version had a date in 2020, going back to 2015, and that was when the historical use was to be ascertained during that period, and that period has now been struck out.

A. That's correct, and sorry, just to clarify again, that seems to be appropriate, in my view, for community water supplies because of the nature of continuous growth, with urban growth in particular.

Q. Well, I guess there's two elements to that, and I don't think all the planners are on the same page over going right up to the point at which you might put your application in.

30 A. That's correct, yes.

Q. I think there's some disagreement over that, but you're suggesting that, for community water supplies, I guess there still remains that issue,

doesn't there, about what is community water supplies in terms of the discussions that have been had, but if we lead that to one side, thinking about it in terms of population growth, for example, that's why you're suggesting that it should be the nearest date to when you're going to put your application in.

5

A. Yes, because it would probably work hand in glove with the capacity work, where the TA would start from the most recent data in terms of population projections rather than looking back in time to the 2015-2020 period as a starting point.

10

Q. So that's the forward-looking stuff, but what about the backward looking stuff? Why is there a need to be going further back from 2015 and to have it so open-ended, particularly when it may not be very clear as to actually what was going on at a very early period in terms of what the water was being supplied for?

15

A. I don't disagree in relation to community water supplies, because yes, why would you go back in time when, potentially, the population was a smaller population of what it is when you start commencing your development planning?

#### **THE COURT: COMMISSIONER BUNTING**

20

Q. Yes, just to follow-up on that thing about population growth, and Commissioner Edmonds talked to you about more efficient use of water, and we've seen how the water is used for drinking water and other purposes, should there be a wider consideration than just population growth if you're applying for a replacement permit in terms of those other uses, whether they could be some of that water shared or used more efficiently?

25

A. Yes, I'd agree with that, in terms of justifying your take of water as being as efficient as you can make it.

30

Q. So do you think that warrants any reconsideration of the matter of discretion for community water supply, in terms of the way you've drafted it currently with your colleagues?

A. In terms of the considerations for consent?

Q. Population growth, which is what, 10.A.3.1, it's matter AA.

- 5 A. Coming back to AA, commissioner, that's an interesting point, commissioner, because the question of efficiency is not anywhere on A to F, so yes, in terms of the regional council discharging its responsibilities in terms of the efficient use of the end use of water, then that should be a consideration, in my view.

**THE COURT: JUDGE BORTHWICK**

- 10 Q. I just want to turn back to that definition, which you have discussed at large. I was not entirely sure where you're landing in terms of what you're hoping to communicate via the definition, so I'm not asking you to redraft it on the hoof, but just speak to it generally. What were you trying to include and what were you trying to exclude?

1240

- 15 A. I guess I can just come back to that analogy, Ma'am of the 80/20 and I guess the earlier comment I made in response to one of Mr Maw's questions around the drafting is inherently challenging, because it's difficult to – you know, and I use the analogy I think of a bell-shaped curve is to try and cover the, the I guess the extreme ends, one situation being a rural supply for rural industrial, you know, rural uses I should say, irrigation probably predominantly but also has a couple of households that are linked in. At the other end of the spectrum is obviously a, you know, a major city.

- 20 Q. Yes, so what were you – and again, what are you trying to – firstly what is excluded from community water supply, if anything? What – again, I don't understand where you, what you wanted to capture within this definition, what falls out of the definition. Yes.

A. And I'll use the (inaudible 12:41:23) if I may so that –

Q. (inaudible 12:41:25).

A. So that, through the joint witness statement.

Q. You and Mr de Pelsemaeker.

- 30 A. Although as I, well that's, yes that's correct.

Q. Yes.

- A. That I think is a somewhat select club within the, the planners involved. But it – and just coming back to you know, the line of questions for

Mr Maw it's just extremely challenging to define or draw a line which is why there is general terms such as prim – you know, "primary" or "primarily" which are used here and in and other regional plan documents. I think the key thing was bearing in mind the Stirling example and others is to give some degree of or enclosure if I can call it that of ensuring that –

5

Q. For human consumption? Or drinking water for human consumption, sanitary, food preparation? You know, some definition under probably the Health Act?

10

A. Yeah, that – correct, so if there was a further iteration then it prob – it would be, should be broadened in that respect.

Q. So I've noted primary purpose drinking water for the purpose described in the, in your evidence I think in under the Health Act or was something else or?

15

A. Yes.

Q. Let me get to it. I just –

A. Yes, sorry that's in the supplementary.

Q. That will be in the supp I think, supplementary evidence. Or maybe not – oh yes, maybe. National planning standard definition, did you have that in mind or did you have the NES sources of human drinking water definition in mind? Or Ministry of Health, yes. What, which –

20

A. I thought it –

Q. Broadly speaking, where's your starting point for drinking water?

25

A. Well, it's broader than solely the – we need, sorry, turn it around the other way. The NPS definition is a subset of community water suppliers, but coming to drinking water if it's a defined term in the, in a regional plan change such as this then it, then logically it is a National Planning Standard definition.

30

Q. Yes, okay. Just let me think about that. So it means water supply primary for the purpose of drinking water as defined by the National Planning Standard 2019? Would that be right?

A. That's correct, yes.

Q. And that's what you've got in mind?

A. That's correct.

Q. That's primarily that?

A. Yeah, yes.

5 Q. Okay. And – okay. But not solely that because it could also be used for industrial and business uses as you've noted?

A. Correct.

Q. Yes.

A. Yeah.

10 Q. And in providing for that primary purpose of drinking water as defined by the National Planning Standard, there's a second purpose and that is that the it's also for the purpose of enabling territorial authorities to meet their responsibilities under the Health Act and Local Government Act –

1245

A. Yes.

15 Q. – but that's limited to drinking water and again it's that drinking water in the second conjunctive part also drinking water with the national planning standards definition in mind or something else?

20 A. Yes. I, I'd have to look at the wording and I'd agree with Mr Maw that it needs to be disjunctive, in other words the responsibility under the Local Government Act includes firefighting which I don't think you need drinking water to close a building down so I think it should be an "or" rather than an "and."

25 Q. Okay so let me think about that. And so if it was a disjunctive "or" then what were the purposes vis-à-vis the Health Act that you had in mind, but again it's actually qualified by drinking water?

A. Yes.

Q. But as you say you don't need drinking water to put out a fire?

A. No, that's right so that should just be simply be water because otherwise there's no point in it being disjunctive.

30 Q. Okay so supply of water under the Health Act, what did you have in mind under that Act?

A. What, I think what we had in mind there was to and this is part of the, coming back to my bell shaped curve analogy of what TA's, first of all there's a specific reference to TA's or conceivably other parties who are

as agencies who are acting on behalf of a TA and under the Health Act it would be the requirements under that for drinking water, well potable. Sorry correction potable water I think is the term in the Health Act.

Q. For what – potable water for what purpose?

5 A. Well that would be as defined in the Health Act which I recall having gradation of for example end uses in terms of population and the like and one of those has come through albeit circuitously via the regional plan of that final statement around 25 or more people at least 60 days a year. I think that is also, had its origin in the Health Act.

10 Q. What section of the Health Act did you have in mind? Is that 56(g) or something else?

A. I think it was section 69 but I stand corrected on that. I'm not certain and it's a fairly lengthy section with subparts so...

15 **MS IRVING:**

Your Honour (inaudible 12:48:12) drinking water part.

**QUESTIONS FROM THE COURT CONTINUES: JUDGE BORTHWICK**

20 Q. I'm really interested in what this witness has to say what he had in mind because it's not, yes, this witness what he has in mind so I've now got the Act up in front of me and it's not section 69 because that's the duties and powers of harbour boards unless you had harbour boards in mind?

A. Most assuredly not no.

Q. Okay so it's not that one.

25 A. I did qualify by saying I stand corrected and I'm very happy to in this case.

Q. Okay so you know for the Court's perspective really important, what do we have in mind the harbour board, possibly not, we've excluded that or something else.

A. Yes.

30 Q. So you know that would be a definition I would be happy with because –

A. Yes.

Q. – as I said you could run a bus through that so what did you have in mind? Again you don't have to take me to the Act because I'll probably get you to take me on some other occasions?

A. No, that's fine.

Q. But what did you have in mind, so potable water for what end use is the question, my question?

5 A. Well it's really, even though it's, well it should – it's either an "or," it's really  
 10 assuring that the – all the statutory functions of the TA's and I referenced  
 firefighting just previously. The specific statutory are included within the  
 definition of a community water supply when I take is you know required  
 specifically for that purpose so in other words the take isn't to ensure that  
 the households or residents have drinking water but also there is a, you  
 15 know a supply of water for the other parts that are essential to the  
 community, eg, firefighting so really there hasn't been a great deal of  
 thought into this I guess co-defying or specifically enabling parts of the  
 Health Act or even the Local Government Act. They're just there as in, in  
 some ways as a distinction point between the TA's which are you know  
 20 creatures of the statute and have statute responsibilities as oppose to I  
 guess any other entity out there that seeks to take water. Ma'am I think  
 that's probably the depth of sort of investigation on that.

Q. I probably would, if we're interested in pursuing this, would direct more of  
 an explanation so that we can understand what you had in mind more  
 25 fully because you know I took from your answer TA's have a responsibility  
 to put out fires and need water for that purpose and that's fine but has it  
 also got a responsibility to meet supply demand from any developer, any  
 residential developer or any dairy farmer?

A. Potentially it's all inclusive of all of this.

25 Q. Okay so yes so that's –

A. Potentially it would be under its Local Government Act.

Q. And it's under the Local Government Act?

A. Yes.

Q. So that's why this definition isn't adequate because it doesn't actually tell  
 30 the Court what are the four corners of the case.

A. Yes, yes.

Q. So just moving away from that. You've talked about efficiency and the  
 TA's having responsibility to ensure that the water that it supplies to users

wherever the users are, is efficiently used as opposed to measuring you know 100% supply and demand from users.

A. Yes.

Q. Do you agree with that?

5 A. Yes, yes.

Q. And I wonder does, insofar as you have an interest in the end use, the water effects, is insofar as Territorial Authorities have an interest in the end use of water and the effects of end use of water, is it simply limited to one of efficiency of use?

10 A. I think it – well there would also be the fiscal component and they have to, I mean it is expensive infrastructure they have to maintain, upgrade it et cetera so it's in their interests to keep it to a minimum, I would've thought necessary for the supply.

Q. So insofar as the territorials have an interest in the environmental effects  
15 of use of water, what is its interest?

A. It's like well aside from, I'm just thinking in terms, I'm just casting my mind back to section 31 of the RMA and how it, because obviously the controlled more rest, the management rests with the regional council under section 30 but in, under the local, I think under the  
20 Local Government Act as I mentioned before there is both general and specific requirements. I think at a high level it would fit under a general requirement of a council of a Territorial Authority.

Q. Of a Territorial Authority so a district council –

A. Correct.

25 Q. – would have an interest in the effects of end use of water?

A. It would if it's resulting in inefficient use and waste.

Q. Yes, that's inefficient use and when you say "waste" are you also meaning inefficient use?

A. Well that's correct yes but it's –

30 Q. Does the regional council have an interest in the effects of end use of water?

A. Well I – water –

Q. Which are not, which are environmental effects?

A. Yes.



Q. Not efficient, not associated with the question of efficient use or in addition to?

A. Okay well aside from water quality and water quantity –

Q. Yes, that's what I'm getting at.

5 A. – should be welded, you know to –

Q. Water quality and quantity need to be welded and by that you mean what?

A. By that I mean if we end up in a situation where there's over allocation of water it's resulting in minimum flows, it's resulting in an impact on the water body then that's, then there's an issue there for water quality as well as for other end uses, increased sedimentation for example.

10

Q. Yes.

1255

A. So yeah it's, it's not that the two can be completely get separate from each other.

15

Q. No, and I was really interested in understanding how this kind of all works because if you've got an application by a territorial authority to take water for a purpose of supplying a scheme which uses include industrial and commercial uses, both rural as well as urban and those end uses of water, the rural and urban end uses may have an adverse effect on the environment. Is that something that the regional council can look at when it comes to assess the territorial authorities' application or not?

20

A. I think it would come down to the wording in whichever regional plan it was under the extent to which they've reserved their discretion, yeah but.

Q. And is it your experience elsewhere, well say Auckland, that when applications are being made for taking (inaudible 12:56:30) permits either urban and/or urban and rural purposes that those applications are usually integrated with territorial zoning decisions, in the case of residential growth urban or rural, discharge permits as may be required, land use consents as may be required. In other words, it's being con – the water permit is then considered in a context of development?

25

30

A. Well, yes at the macro level it is, integrated catchment management planning.

Q. Yes, yes.

- A. And also with you know, Auckland being what it is it's through one Council controlled organisation called Watercare.
- Q. And is that also the case elsewhere in the country that there's integrated catchment planning?
- 5 A. I, I don't have the briefing (inaudible 12:57:24) to extend beyond that, yeah.
- Q. But is this what's been driven in terms of a paradigm shift also in the NPS for Urban Development I think it's called –
- A. Correct.
- 10 Q. So there's – correct.
- A. Yes.
- Q. So there's two paradigm shifts?
- A. Correct.
- Q. You've got the one represented in the NPS for Urban Development –
- 15 A. Yeah.
- Q. You've got one represented in the NPS for Freshwater and they're both driving quite different thinking at a regional and district council level. Correct?
- A. Well yes, that's correct. So the, I mean as I've think I've mentioned, I
- 20 gave my view that they were almost de facto planning statutes given the scale of them, importance of them. But in terms of the urban development one, it is driving TA's and regional councils hard to provide for capacity and then even when they've done that, is add another 20 per cent on as a competitiveness margin, and then on top of that also be receptive to
- 25 whatever else arrives that can, you know, that can provide additional urban, you know, urban growth. So it's quite – yeah, as opposed to the very clear, you know, Te Mana o Te Wai.
- Q. But it's not – but the two MPS's have to be understood together, don't they?
- 30 A. Correct, yes.
- Q. The NPS Urban Development –
- A. Yes, yes.

Q. Or providing for development capacity is not to the expense of the outcomes under the NPS for Freshwater Management and the health of water ways?

5 A. Absolutely correct, and I mean it's not too much of a stretch to go back to, you know, part 2 of the Act and, and I don't think it's ever been the case under the RMA that growth is uncontrolled to the point where significant, you know where there's not a consideration of its environmental effects. So in this case you've got a very – you've got I guess to bring the two together in this context, it seems very clear that  
10 under, with regard to water takes to support urban growth and development it's going to sit in tier 2 or tier 3 and be subordinate to tier 1.

Q. Mmm.

A. Which then leads to potentially hard choices around: "Is your urban growth in the right spot?" or "can you make the end use more efficient if it's, if there is a capacity or allocation issue?"  
15

1300

Q. Yes, and those are hard choices, aren't they? So in other words, supply-demand does not trump the outcomes of the NPS freshwater management, particularly the fundamental principle of Te Mana o te Wai.

20 A. That's correct, that is my view, yes.

Q. And so if this regional council has a concern about whether it has a fir for purpose regional plan, and it's my understanding that it does have that concern, and the Minister for the Environment shares that concern, that might be a legitimate or relevant factor that it takes into consider when  
25 looking at durations under plan change 7.

A. Plan change 7, yes. Well, yes, but again, I just think ahead to when the new land and water regional plan becomes operative, and yes, there's a new regime placing its full effect to the NPS, what then? To me, the process, because the drivers for the TAs, the other NPS is pushing them,  
30 it's driving them towards making quite significant long-term financial decisions around infrastructure provision and the like.

Q. But what is not driving them to look at the critical issues that identified under the NPS freshwater management is my development located in the right water catchment?

A. Correct.

5 Q. Is it efficient in terms of use of water development? Is it development which will result in the lowering of any over-allocation, whether it's quantity or quality? There's no driving ahead of a plan, there's no driving district council's thinking ahead of a land and water plan which is compliant with MPS freshwater management.

10 A. Well, with respect, no, it actually should be the reverse of it, with the responsibility, in this case, with the ORC under s 59 to have a regional policy statement that represents integrated management of natural, physical resources, and also plan their responsibilities under s 30, so elsewhere, there are regional growth strategies which ensure that there are smart choices made around land allocation that represents either areas of high environmental value or significant constraints.

15 Q. So the smart choices are being made by regional councils in terms of where growth is to be directed for land use, or the smart choice is being made by district council elsewhere?

20 A. Well, ultimately, it's actually both, because first, we came back to the MPS UD, it references local authorities, and so for Queenstown and Dunedin, for example, that's a shared responsibility between regional and the relevant TA, but there's also a regional planning function, which can sometimes get – no, I won't say, no, correction, I'll withdraw what I was about to say, but it's an important function, and it's there in the RMA, and it's for regional councils.

25 Q. Both territorial and regional councils have distinct but overlapping functions, do they not, to implement the NPS for urban development and freshwater management?

A. That's correct, yes, they do, and it's most marked with urban development one.

Q. Pardon?

30 A. And with the urban development one, it's almost a shared responsibility.

Q. A shared responsibility?

A. Yeah.

Q. Right, okay.

**QUESTIONS ARISING – NIL**

**WITNESS EXCUSED**

**THE COURT: JUDGE BORTHWICK TO MS IRVING**

Q. Well and truly time to take the lunch break, and that is you for the time being, I think.

A. Yes, I was just wanting to check that that was still the plan.

5 Q. Well, I think so, probably because you sent your witness home.

A. Well, I have. Well, they chose to leave, so, yeah. Spend some time on the phone at lunch if that was not the plan. So if we are adjourning the rest of the TA case now, I think yesterday, there was a flag of possibility of looking at conferencing on the issue, if you thought that was useful. I don't know whether you want to discuss that further.

10

Q. We need to discuss it as between ourselves, and it would only be, now, to answer, I think, the Court's questions, as opposed to not answering the Court's questions. Yeah, anything else, yeah. We could certainly invite questions from counsel, and that might be useful as well. We need to think about that. I am also in a position, like I was in Dunedin, where I have got this minute and it is half way drafted, and it is like, is it in, is it out? So why it has not been released is this very question about do we ask questions or are we just warning people that Mr Maw is going to announce next Wednesday whether there was a deal done or not, and, you know, so we are sort of trying to get ahead of that just to let everybody know what the go is, that they might all be back into conferencing on the schedule, so we needed to alert people to that much, and I have not landed it because, you know, there may be other things we want to do whilst we have them in the same room.

15

20

25 A. Okay, no, that's fine. In that case, I would ask to be excused also.

Q. Very good, okay, no, very good, you are excused.

A. Leaving Philip to run amok.

Q. And we are down to one lawyer. I was going to say you can go and I will take it from here. That is all good, so we will just adjourn for lunch, and we will make it quarter past 2.

30

**COURT ADJOURNS: 1.07 PM**

**COURT RESUMES: 2.15 PM****THE COURT:**

Q. We are now going to hear from Beef and Lamb. Ms Phillips. Hello. So have you got an opening submission?

5 A. Yes, Your Honour I have and Mr Maw has kindly agreed to assist me with swearing in the witnesses.

Q. Oh yes, that is fine.

A. Thank you so much.

Q. And have you printed that off, yes you have, got it.

10 A. Yes.

Q. We are in your hands.

**MS PHILLIPS READS OPENING SUBMISSIONS**

So may it please the Court, thank you for the opportunity to be heard in  
 15 relation to Beef and Lamb New Zealand and Deer Industry New Zealand or  
 DINZ submission is on the proposed Plan Change 7 to the regional plan water  
 for Otago, or the plan. My name is Lauren Phillips, I am the Environment Policy  
 Manager for Beef and Lamb New Zealand. Beef and Lamb is an industry good  
 body funded under the Commodities Levy Act through levy paid through the  
 20 producers on all cattle and sheep slaughtered in New Zealand. It's mission is  
 to deliver innovative tools and services to support informed decision making  
 and continuous improvement in market access, product positioning and farming  
 systems. DINZ is a levy funded industry good body, established by the Deer  
 Industry New Zealand Regulations 2004 under the Primary Products Marketing  
 25 Act 1953. It's vision statements is to promote and assist the development of  
 the New Zealand deer industry. A strong, stable, profitable industry for all  
 participants. DINZ levy payers are producers and processers of venison and  
 velvet. As already detailed in our submissions on PC7 4 May 2020, deer  
 farming has a number affinities with the sheep and beef sector and in fact about  
 30 80% of deer farmers also farm other livestock species. Both organisations are  
 engaged in environmental issues that affect the pastoral production section and  
 in building farm specific capability and capacity in these areas to ensure that  
 the industry supports an ethos of environmental stewardship together with a

vibrant, resilient and profitable sector. Maintaining and where degraded, enhancing the health of fresh water, aquatic habitats, biodiversity across the region is important to the people of the Otago region. It is important to our economy and it is important to farmers. The sheep and beef sector alone  
5 employs approximately 92,000 people in fulltime equivalent roles nationally. Dry stock farms or farms where livestock are raised for meat are an integral component of the Otago primary sector and they contribute significantly to the region's economy, communities, landscape and culture. PC7 has a potential to affect the dry stock sector, particularly extensive farm systems,  
10 disproportionately to the sectors environmental impact and would have the effect of regulation for regulations sake rather than for environmental benefit. Beef and Lamb and DINZ have submitted that there are numerous issues with the proposed plan which affect dry stock farmers for which stated relief is sought within the original submission. This statement builds on the substantive issues  
15 raised there and introduces a background for Beef and Lamb and DINZ expert witnesses. I am speaking to the submissions made by Beef and Lamb and DINZ to PC7 submitted 4 May 2020. Beef and Lamb and DINZ submitted mostly in opposition to PC7 and this statement will focus on the three main issues where Beef and Lamb and DINZ have opposed provisions in plan.  
20 These issues include the purpose and approach of the plan change and provisions which grandparent water use and therefore nutrients and solutions to the issues within the plan change. The effects of the proposed provisions in PC7 may be intergenerational, potentially devastating to many dry stock systems, disproportionate or blind to the actual risk an activity poses to the  
25 environment and therefore without will benefit to the environment. The purpose of PC7 was to address to address the Otago Regional Councils or the Councils looming problem of 1080 water permits or more than 50% of the regions water permits expiring before a full plan review can be completed. It is envisaged that a full plan review would reconsider water allocation across the regions and  
30 water use in some areas might need to be reduce once the appropriate modelling has been done. PC7 was supposed to provide an interim regulatory framework a solution for water users to continue operating legally without rendering any future water allocation changes impotent. Beef and Lamb and DINZ support that intent to ensure that the Council is not faced with having to



replace more than half of its region's water permits on long duration permits before it can determine how much water and where and for use by whom is sustainable on a sub-catchment level.

5 1420

In light of that intent, it is not appropriate to use this plan change as an opportunity to claw back water allocation, grandparent land use, undermine land value and establish a nutrient allocation framework outside of the proper  
 10 process and with the scientific, economic, social and consultation guidance to do so through the full plan review. Provisions like policy 10A.2.1, reinforced by rules 10A3.1.1 and 10A3.2.1 purport to do exactly that, however. Furthermore, Otago's startlingly diverse in its landscapes, conditions and climates even at a sub-catchment level. The Council's s 32 evaluation report for Plan Change 7  
 15 acknowledges this when it mentions that some areas of the region are over-allocated for water use and some are not. Reducing water allocation for permit holders who may be using that water has permanent, not interim effects on the permit holder. They are extremely unlikely to ever regain lost water. The broad brush approach of this plan change will result in permit holders losing water  
 20 allocation, even in freshwater management users where water is not over-allocated.

On the second topic, grandparenting provisions, PC7 should allow for water use, land use and development which have been legitimately undertaken within  
 25 the bounds of a valid permit. Provisions like policy 10A.2.1, reinforced by rule 10A.3.1.1 and 10A.2.1 do the exact opposite. Those provisions have had the effect of grandparenting land and water use and therefore nutrients. Grandparenting sometimes needs little clarification, and the approach and its affects can be understood through an analysis of Farmer A and Farmer B and  
 30 their land use or nutrient loses as modelled through Overseer.

So for example, in 2019 Farmer A's nitrogen number was 68 kg's of nitrogen per hectare per year. Farmer B's N number was 12 kg's of nitrogen per hectare per year. Both farmers are grandparented to those 2019 N numbers and may

not increase over them. That is grandparenting. They are also then required to make 10% reductions in their nitrogen losses, as modelled in Overseer. At 68 kg's of N per hectare per year, Farmer A's system is a high impact, high risk intensive system and would generally have high inputs. There are a number of inefficiencies which can be addressed in a farm with such high N number. And even when Farmer A has tweaked these inefficiencies to achieve a 10% reduction, the system still leeches 61 kilograms of nitrogen per hectare per year. It is still a high impact, high risk intensive system with a high N number.

At 12 kg's of N per hectare per year, Farmer B's system is a low impact, low risk and reasonably extensive system with low inputs. While system changes and cycles may occasionally slightly increase the N number, there are few inefficiencies in that system and the farmer will likely already be farming to the natural limitations of the land. Failure to observe those limitations would already have resulted in environmental collapse, usually seen in soils and/or stock would have starved or the business would have failed. This means that there is little that Farmer B can do to further reduce from 12 kg's of N per hectare per year to achieve the 1% reduction. Farmer B – sorry, the 1 kilogram reduction. Farmer B is also less able to respond to market demands, changes in technology, drought or make any changes in the farm system because Farmer B's N number is too low to allow for any flexibility within the system without the risk of increasing nitrogen losses for at least a couple of kilograms of nitrogen per hectare per year. Off that farm, relative land prices are affected because the potential that Farmer B's land had in terms of land value is diminished, because Farmer B can never intensify, even if Farmer B never intended to anyway. This reduces the equity Farmer B holds in the land and reduces the farm's resilience because there is less equity to borrow against to replace infrastructure, buy feed in a drought, upgrade water reticulation in response to stock exclusion regulations or tide the farm over in a year where prices are low. Farmer A's land is not affected in the same way, in the higher the N number the more flexibility the land has, and therefore the more value the land has. This is how grandparenting has affected Canterbury in reality, with the effects most keenly experienced in areas like North Canterbury with a divide between extensive, often (inaudible 14:25:11) and dry land and intensive, often

flat and irrigated is pronounced. The dry stock sector is overwhelmingly Farmer B. As Dr Chrystal has shown us in her evidence, the sheep and beef sector is a lower risk, low impact system and this is the case even with the most intensive or irrigated sheep and beef systems. They are disproportionately adversely affected by the grandparents nutury and allocation system. Grandparenting nutrients is inherently inequitable. It rewards land users who have had the greatest impacts on the environment while penalising land users who have had the smallest impact on the environment and have been farming within the natural limits of their land. A grandparenting framework effectively allows high impact systems to continue having a significant impact on the environment. In RMA terms, the concept of grandparenting is normally about recognising, specifically recognising or providing for activities that already exist to continue producing their existing levels of effects either permanently or for a defined period, but imposing immediate obligations on new entrants. It is understandably favoured by existing operators who rationalise it by reference to their prior investment. For these reasons, Beef and Lamb and DINZ oppose grandparenting frameworks. The submitters support a controlled activities status for permits to replace deemed and water permits due to expire before 2025. Beef and Lamb and DINZ do not support conditions in matters of control which have the effect of grandparenting water use, land use and, therefore, nutrients. In particular, Beef and Lamb and DINZ oppose 10A3.1.1 3” –

1425

**THE COURT: JUDGE BORTHWICK**

25 Q. Can you just pause there whilst I dial that up?

**THE COURT: COMMISSIONER BUNTING**

Q. Can we ask which version of the –

A. Yes actually if you look at the joint – I’m going to work from the joint witness statement version just for ease of use.

30

**THE COURT: JUDGE BORTHWICK**

Q. So that's the 8<sup>th</sup> of April 2011?

A. Yes, yes.

5 Q. And so you oppose the controlled activity rule, "Manner of Control", roman numeral iii, which is, "The application demonstrates total area, does not exceed the maximum area irrigated."

A. Yes we actually also oppose 10A2(1)(B) which is the equivalent in the policy. Because it says pretty much the same thing.

Q. Mmm.

10 A. So that provision grandparents land – the area of land under irrigation.

**MS PHILLIPS CONTINUES OPENING SUBMISSIONS FOR BEEF AND LAMB NEW ZEALAND AND DEER INDUSTRY NZ**

15 "As already submitted, the purpose of this plan change is not to determine land use or nutrient allocation. The purpose as stated on page 5 of the section 32 evaluation report for this plan change is to provide an interim regulatory framework to provide for the assessment of applications to take an use water, specifically water permits that are due to expire before 2025. Rule 3A3.1.1 3

20 also fails to provide for development which may have been within the bounds of the existing permits since the grandparenting date which might have increased land area and irrigation, for example, from a less efficient irrigation type to a more efficient irrigation method, for example, to pivot irrigation. This robs the permit holder of any development investment post notification. PC7

25 should allow for water use, land use and development which have been legitimately undertaken within the bounds of a valid permit. The use of a non-complying activity status for those who cannot meet grandparenting provisions in rule 10A3.1.1 is unduly harsh. It will be nearly impossible to obtain a resource consent, especially in light of policy 10.A.2.1 which requires the Council to avoid granting resource consents where there has been an increase in area under

30 irrigation. Ms Marrs' evidence proposed a restricted discretionary rule to address the issue of irrigators who cannot meet the grandparenting provisions of rule 10A.3.1. Beef and Lamb New Zealand and DINZ note that a restricted discretionary activity rule 10A3.1A and (inaudible 14:29:35) 3.1 has been accepted following various negotiations, discussions through the hearing

process to date. Rule 10A.3.1A does not address the injustices mentioned in this statement however. Elsewhere in New Zealand, impending regulation change notably where nutrients are likely to fall under a grandparent's allocation framework as in Canterbury, has resulted in an accelerated intensification of land use in order to pre-empt restrictive regulation or to secure flexibility in the land use and value in the land. Beef and Lamb and DINZ do not support this gold rush approach and do not consider it to be conducive to achieving the environmental benefits that regulation appears to be intended for. As stated previously, however, PC7 should allow for water use, land use and development which have been legitimately undertaken within the bounds of a valid permit. Irrigators who would like to transition to more efficient irrigation systems which as Dr Chrystal's evidence details, result in an increased area of irrigation without necessarily increasing contaminant losses to the environment or increased water use should be encouraged to do so. Otago has a high number of borderdyke or flood irrigation still in use and between the cost of changing to a more efficient system and the prospect of applying for a non-complying activity resource consent, there is no incentive for farmers to change to systems with a lower environmental impact. Furthermore, a pathway should be provided for those land users who had embarked on the journey to change the irrigation system in some way or form, but had not completed it by the date that PC7 was notified. More efficient irrigation systems are expensive and require a great deal of planning, financing and even changes to the farm system. Beyond the primary infrastructure itself, a farm may need to re-fence, re-train staff, adjust fertiliser plans and change stock distribution and grazing rotations. The process of changing, for example, from Borderdyke irrigation to spray irrigation can take several years. Farms which are undergoing succession changes where grown children are buying the properties from their parents to take over the farm, are unable to mobilise funds with any speed or even to start the process to upgrade infrastructure. Ultimately, Beef and Lamb New Zealand and DINZ consider that eliminating those parts of all provisions which have the effect of grandparenting water use, land use and, therefore, nutrients, would resolve the fundamental problems with the Plan Change 7 discussed above. Dry stock farmers are key to the fabric of the Otago region. They are there for the long haul and families' primary reason behind on farm

decisions. Dry stock farming systems are predominantly low risk activities and regulation that applies to these systems should reflect the level of risk. To remain a resilient, vibrant and diverse sector, dry stock farmers require flexible land use and the ability to optimise their farming business within the environmental limits of their property. Beef and Lamb and DINZ seek broadly that PC7 is amended to ensure that land use and ancillary objectives, policies and methods including rules recognise and provide for the dry stock sector farming operations including (1) diversity of systems, soil, geology and climate, (2) Provide flexibility for land and resource users to adopt land use and farming operations. To adapt to and meet markets, technology and the environmental constraints such as climate. (3) Provide for adaptation and changes in farm systems and management approaches to respond to technology, climate change and markets. (4) Remove any reference to requiring or grandparenting farming operations to be held at historic land use, nutrient discharge levels or stocking rates implied by the provisions already discussed and (5) ensure that requirement for specific mitigation is able to be tailored to a farm level and can provide for the future aspirations of the business and is tailored to specifically meeting the environmental risks of concerns specific to the property and sub-catchment.” Thank you so much.

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1433

#### **THE COURT: JUDGE BORTHWICK TO MS PHILLIPS**

Q. I have some questions.

A. Yes your Honour.

25 Q. Well firstly did or has your witness Ms Marr proposed relief which give effect to your paragraph 44 of your submission?

A. Paragraph 44, Ms Marr as I understand was asking for a restricted discretionary activity rule to be included insofar as the details of that rule. There was some negotiation which took place with the regional council and they had, they were reaching some sort of agreement when the situation changed and your Honour the council was directed to take a step back and provide supplementary evidence on the plan change itself.

30

Q. So the Court hasn't and cannot direct what regional council –

A. Yes.

Q. – the direction, the relief sought or any amendments proposed by the regional council in the context of this hearing but the Court asks is it a process orientated or process plus environment orientated plan and reflecting on that, the council has come back in the draft that you seen from Mr de Pelsemaker dated the 14<sup>th</sup> of March so the Court didn't direct that. That was the council's initiative so my question to you is does Ms Marr deliver on the relief that you are seeking or is she in accordance with her – well is she going a slightly different direction to what you set out at paragraph 44 so that's the first question because sometimes people, witnesses do and that's fine, you know you've got the advocate, you've got the witness and you know then you've got two things in play and it's just part of the complexity.

A. In my opinion she does but not in as much detail as what I have gone into in my statement.

Q. Right, that's all I need to know. Second question Ms Phillips, now being from Canterbury or living in Canterbury I do understand what the concern is of drystock farmers in Canterbury under the Environment Canterbury plan and the perception, probably reality that drystock farmers are held to a nutrient budget because of various regional plans so I understand that. I also have, understand a good working knowledge of overseas so I understand what you say there. With that in mind I also appreciate that it's an important part of your relief that, that where there is a change in irrigation system at least which will result in increased area of irrigation that, that be accommodated somehow within plan change 7 so I understand that part of the relief and we've had all sorts of conflicting evidence from the farming sector about that and that's fine. Again it's just something that you know we'll have to deal with. I didn't understand and this is perhaps I don't yet understand the adverse reaction to grandparenting and so grandparenting, by grandparenting the objection here is that sheep and beef while they're drystock but also presumably takers and users of water, be held to historic use and that's the fundamental objection. There's a link there which I'm missing so you need to help me out.

A. It's – yes, yes I understand and I hope that I'm answering your question articulately and intelligently. They are users of water. They tend to not be quite as wholesale users of water. For example if you like at a dairy platform on the plains you'll see that the vast majority of it is irrigated whereas the sheep and beef sector and also the deer sector tends to irrigate much smaller proportions of their properties, usually for a crop or for the highest yielding paddocks. That's not to say all of them do, you will have intensive finishing operations which will. In terms of being held to the historic usage, it's not so much held to the historic usage of water quantity on its own. It's the inability to develop their irrigation at all so if you are in a situation where you have used maybe 70% of your deemed permit, ordinarily you would still, if your consent was being reviewed you'd probably be held to 70% and that's not so much the concern, the concern is where you've seen provisions which change for example your rate of take, not necessarily the volume or which affects your area under irrigation and grandparenting those is where we have the issue because it completely cuts off the farmer's ability to change their assistance or to adapt or to go from for example border dyke irrigation to pivot because your area of irrigation will change. Your rate might also take change because frankly the take for a border dyke is vastly different to what you might need for other things, especially when I'm thinking of farmers who have described to me their systems where they have got wild flood for example so these kinds of things which would hinder change. You know we would like to see farmers moving to more efficient water use, more, practices which allow them to farm within environmental limits.

Q. But that's not the issue though?

A. No.

1440

Q. Well, the issue for you is not that, that the plan change enables farmers to use historically up to their maximum because that's what it's meant to do and I think that we're moving in the right direction in terms of where the schedule has got to, so that's not the issue. It's not even the issue that you could change irrigation systems. The issue is that there is not to be an increase in irrigable area, that's your issue isn't it?



A. That is our main issue, yes.

Q. Yes. Because if there's an increase in irrigable area there may be a change in nutrients, correct? And that, so it's the dual increased area change in nutrients and, therefore, held to whatever your 2020 or 2021 environment is, that's your issue isn't it?

5

A. To some extent, yes. Our issue is, yes, the change not being able to change the area under irrigation -

Q. Mmm.

A. – as Dr Chrystal will discuss for her evidence, a change in irrigation which results in greater area under irrigation –

10

Q. That's right.

A. - doesn't necessarily result in more nutrients lost.

Q. But it might?

A. It might, but, for example –

15

Q. And that's a rejection to the nutrient?

A. Yes.

Q. That's why you bring into play the experience in Canterbury of dry, dry stock farmers there?

A. Not automatically necessary, that was an example where nutrients are a factor, but in Canterbury, generally, we're speaking to – we're speaking to the experiences of dry land farmers and farmers with only a small proportion of their farm in nutrients. So the farm, A Farmer, B examples, those were actually from my own consulting days where I was modelling nutrients and Farmer A was actually 220 kg's of nitrogen per hectare per year on a water irrigated dairy operation and I'm not saying that this is only dairy, you will find sheep and beef farmers who are not farming within their environmental limits and that obviously, this is not something we want to see as the norm, but the Farmer B was actually a 15 kg of nitrogen per hectare and he had a partially irrigated sheep, beef, dairy grazing and cropping operation which is a huge difference and in terms of not allowing to –

25

30

Q. Yes, now I need you to – I understand that -

A. Yes.

Q. - okay, because I under, yes, I just do.

A. Yes.

Q. I don't understand and I am going to and I need to get to the bottom of it pretty quickly –

A. Sorry.

5 Q. – what is driving this, so driving the interest? Is it because your submission is there cannot be a change in irrigation systems or is it that no farmer will change and make and move to a more efficient irrigation system unless they can also then apply the same water to an increased area of land?

10 A. It's a mixture of both. They're not going to have any incentive to move to a better irrigation system if it's going to be so hard.

Q. Yes. And so they're not going to move to a more efficient system and what does it mean if it's going to be so hard?

15 A. If it's going to be more hard, it's going to be difficult to get financing and it's a cultural and emotional barrier to actually applying, and then there's the cost of the non-complying activity versus consent which is they will require experts, it may be notified.

Q. Yes, but okay, that's nothing like an influence?

A. Yes, yes.

20 Q. So the thing is some farmers may want to, may want to move to a more efficient system. If they move to a more efficient system, they are within the area of the historical bounds potentially got now surplus water which they can use to irrigate but irrigate what. The same land under the new system or new land, it's actually the new land which is driving your concern isn't it?

25

A. Yes, it is.

Q. What access to new land?

A. Yes.

30 Q. And what access to new land and then with that then nutrient input into new land, that's why you're mentioning nutrients?

A. More nutrient losses from new lands than nutrient inputs.

Q. Yes, and nutrient losses from new land and so your concern with this is that it precludes that flexibility of being able to irrigate under efficient

irrigation systems additional land and I guess increase your nutrient losses?

5 A. No, not necess- no, we don't - we're not automatically saying increase nutrient losses, we're saying irrigate the land only rather than increase your nutrient losses. There might be some differences but that's a separate matter. Unfortunately, water use and nutrient loss is linked, but as Chrystal, Dr Chrystal has explained, they don't necessarily go hand in hand if your system is reasonably efficient.

10 Q. But there's no mechanism under the operative regional plan to manage that is there?

A. No.

Q. In terms of increased area resulting in no additional increased loss?

A. No.

15 Q. And have you proposed that as a mechanism to meet your change here? If there's an increase in area, have you proposed also that there is no increase or no change in nutrient output?

20 A. Ms Marr has made some recommendations which she can likely speak to when she comes up to give her, to speak about her evidence, but it's – we're very weary of proposing that kind of solution because what we've seen in Canterbury is that when people have gone for a water consent, they have been locked into their nutrients at that level which automatically provides for a grandparented nutrient allocation system because once you've already got people locked in through their irrigation consent to 220 kg per in of in per hectare, it's very difficult to get that back from 50 resource consent sprinkled across the district. So we're very reluctant to allow nutrient modelling to factor into this kind of thing while we do appreciate the council's concerns about managing nutrients, we think that this is more appropriate to be dealt with through the plan review especially since we are looking at short term resource consents for these deemed permit replacements.

25

30

Q. So you don't oppose in principle short term six year consents?

A. No, we're not going to be opposing that any further.

Q. Right.

A. Yes.

Q. So then your RDA, what's the purpose of that?

A. The purpose of that is to allow for those farmers who would like to develop their irrigation.

Q. Is the RDA also for a period of six years?

5 A. Yes. Yes.

**QUESTIONS FROM THE COURT: COMMISSIONER EDMONDS**

10 Q. I did, I was just a little troubled by the fact that Ms Marr in her most recent statement has a very – an extremely confined RD just talks about: “The increase in irrigation was planned in reasonable steps to implement that increase had taken prior to 30 June 2020.” So -

A. Yes.

Q. – that seems to be accepting of the maximum area *idea* with this one exception, that the plan in reasonable steps to implement that increase -

A. Yes.

15 Q. – prior to that date, so I was having trouble aligning that with some of your opening submission and I just wanted to be clear what the beef and lamb position was?

20 A. Yes. So Ms Marr's main concern is with those farmers who have already begun the process which I think I referred to in paragraph 40 and beef and lamb's general concern is for those farmers who would like to move to more efficient irrigation infrastructure as well as those farmers who have already embarked on the journey, but have not completed it.

Q. Okay, so that's going further than what Ms Marr has in her supplementary?

25 A. Yes, what we would –

Q. I just needed to be very clear about that.

A. Yes.

Q. Right. Thank you.

**QUESTIONS FROM THE COURT: COMMISSIONER BUNTING**

30 Q. Six years is still okay?

A. Yes, I think that that's – that's probably been well worked through in the hearings to proceeding today.

Q. So I thought there was a concern if your making investment that were liability concerns from (inaudible 14:49:09) and so on?

5 A. We are still concerned about that, but when we asked for a longer duration it was before the Fresh Water package was released and we had serious concerns about the council's ability to complete a plan review within six years, however, the Fresh Water package has very much put a deadline on this and the concern is somewhat alleviated.

Q. Okay, you can follow that up as well.

**MR MAW CALLS****JANE MARIE CHRYSTAL (SWORN)**

1450

Q. Do you confirm that your full name is Jane Marie Chrystal?

5 A. Yes.

Q. And you've prepared a brief of evidence-in-chief dated 5 February 2021?

A. Yes.

Q. And you've recorded your qualifications and experience in that brief of evidence?

10 A. I have.

Q. Any corrections that you wish to make to that statement of evidence?

A. No.

Q. Confirm that that statement of evidence is true and correct to the best of your knowledge and belief?

15 A. Yes.

Q. Now, my understanding is that you haven't participated in any of the joint witness conferencing, so you haven't signed any joint witness conferencing statements.

A. That's correct.

20 Q. And you haven't provided any supplementary evidence, but have you prepared a summary of your evidence that you wish to read out, or do you have a summary that you wish to give of your evidence before I then ask you some questions.

A. Yes, I do have a summary.

25 Q. If you can perhaps read that summary now.

A. Thank you. Tēnā koutou katoa, ko Jane Chrystal taku ingoa. Good afternoon, your Honour, commissioners, my name is Jane Chrystal, and I'm an expert in farm systems and the impact of these systems on the environment. I just will begin by reading my executive summary, followed by paras 25 and 26, related to the irrigation types in Otago, the two key points I make in my evidence, and finally, I'll speak to table 4. So I'll now read my executive summary. There is an extricable link between agricultural land uses and freshwater quality. In particular, losses of nitrogen, phosphorus, sediment, and pathogens as indicated by E. coli

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from farming systems and practices to surface and groundwater can ultimately impact on the health of freshwater ecosystems. The scale and magnitude of the impacts from agriculture on freshwater depend on a range of factors, including the type of agricultural land use, scale and intensity of use, farming systems and practices, along with environmental conditions such as climate and the catchment and farm geology and topography. Some farming activities pose a higher risk of contaminant losses to water than other. These include irrigation, effluent in terms of storage, land application, and management, some cropping, high stocking rates and densities, fertiliser use, including type, timing and load. However, these risks can be managed. Mitigation approaches that are tailored to the farm, including having a farm environment plan and the utilisation of farmer support tools such as soil moisture monitoring, irrigation scheduling, and nutrient budgeting, are likely to result in improved outcomes and reductions in the risk of losses of contaminants to water. Taking a tailored farm and catchment approach to the management of farming systems and practices is likely to deliver greater environmental outcomes while providing for the ongoing viability of agricultural land uses, more so than the prescriptive one size fits all standard or rule. Due to improved irrigation and management systems, it is entirely possible, for example, when moving from a less efficient irrigation system, such as border dyke, to a more efficient irrigation system, such as centre pivot, that irrigation area can increase without an increase in nutrient losses to water from the entire farm. So I'd like to take you to paras 25 and 26. The most common types of irrigation in Otago are pivot, totalling 27% of the irrigated area, and K-line or long lateral, another 27%. Flood irrigation types contribute a further 23% of the total irrigated area. According to a 2017 report on irrigated land areas in New Zealand, Otago and Canterbury are the only regions in New Zealand that have any border dyke or wild flood irrigation. So I'd like to highlight two key points I make on page 10, following para 31, and on page 11, following para 33. The first key point is that irrigation can increase the risk of contaminant losses to water, but that this risk can be successfully managed. The second key point is that the availability of

contaminants for loss to water can be managed by on-farm assessment and tailored management mitigations. If you would please turn to table 4 on page 13, and I will talk you through this modelling work that Wheeler and Bright undertook. I'd like to reiterate two things to keep in mind when we go through this table. The first is that Otago has a significant area of flood irrigation, so that's border dyke and wild flood, and my key point that contaminant losses from irrigation systems can be managed. So this table shows modelled outputs from the same farming system under the same climate with the same fertiliser, same stock, et cetera, and it's modelled using different irrigation types and managements, and then they modelled that on two contrasting soils. So across the top of the table, we have the modelled outputs for the two contrasting soils, a light soil on the left and a heavy soil on the right. The modelled outputs are irrigation depth in millimetres per year, drainage depth, millimetres per year, and nitrogen leaching from the root zone of kilograms of nitrogen per hectare per year. Down the left column, we have the model inputs of irrigation system and irrigation management options, so these are border dyke, then FF, which is a fixed depth of water applied and a fixed return period, and the scenario is run with a centre pivot or travelling irrigator. FV is the irrigation event is triggered by a soil water deficit reaching a certain trigger point. That then sets off the irrigation event, and then a fixed depth was applied. The scenario run in this situation was centre pivot. VF is when the irrigation event is on a fixed return period, so say every 10 days, but the depth of the water applied is varied to achieve a certain soil moisture target, and they ran this for a centre pivot, and then VV is when the irrigation event is triggered by a selected soil moisture deficit, and then the depth of water applied is set to achieve a certain target soil moisture, and again, that was run for centre pivot. So the results in this table illustrate several key points. The first is that different management options, so an irrigation type or irrigation scheduling management, give a large range in annual irrigation depths, and for this scenario, for example, for light soils, the range in irrigation depth was 350 to 1,465 millimetres per year, resulting in a range of drainage of 197 to 1,288 millimetres per year, and a nitrogen leaching range of 40 to 140 kilograms of nitrogen per



hectare per year. The second point is that high irrigation inputs lead to high drainage and hence high nitrogen leaching. The third is that irrigation systems and management practices can be changed to reduce the effect on drainage and nitrogen leaching. Point four is that the examples in this table indicate that lower irrigation depth, drainage, and nitrogen leaching occur when applications are controlled by soil moisture monitoring, so those were FV VF, and VV options. For similar irrigation depths, the lighter soil has a higher drainage, and therefore, higher nitrogen leaching, and in these scenarios, border dyke irrigation leaches considerably more nitrogen than the other systems modelled. These points support my position that risks and mitigations are farm specific and that the risks of irrigation resulting in high contaminant losses to water can be managed at a farm level. Thank you.

**CROSS-EXAMINATION: MR MAW**

15 Q. I want to take you back to your executive summary and para 18, but before I do that, I would be assisted if you could explain to me wild flood irrigation.

A. Yeah, so wild flood is where, often it occurs during the contours at the bottom of a hill, and there's a ditch, and the farmer will come along and put a barrier in that ditch, and then that flood just goes down over the paddock. There are no borders, and so you might have areas that are quite wet, areas that are missed completely, it's quite random.

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25 Q. Thank you. I had in my mind some interesting images as to what this might be, but that does make sense. Right, paragraph 18 of your executive summary you have outlined the – a set of activities that pose high risk of contaminant losses to water than others and you've stepped through a list. Is it fair to say that in addition to irrigation which you've mentioned in 18.1, each of those other activities that you've mentioned may occur in reliance on irrigation?

30

A. Irrigation, well they can occur separate to irrigation but irrigation, yes, it will increase the opportunity of the farmer to have higher stocking rates,

change systems so therefore you have effluent fertiliser use and yes, and cropping. Yeah.

5 Q. And so when you're thinking about these types of activities and the common denominator in terms of risk, as you add irrigation to these types of activities the risk profile in terms of additional nutrient leaching increases?

A. It can increase. So again, it comes down to the underlying natural resource, so the soil type that that's on, the climate and then the management of those, of those systems.

10 Q. And so when you then move through into your paragraph 19, you do start to talk about how you might mitigate some of those risks?

A. Mhm.

Q. Do you accept that you can't eliminate those risks?

15 A. Can you eliminate the risks? I don't think you ever eliminate a risk unless you take, unless you completely take away that. So you can eliminate the risk of high stocking rates and stocking densities by having no stock.

Q. And you could eliminate the risk of additional nutrient leaching associated with extra irrigation areas by not having extra irrigation areas?

20 A. If it's associated with extra irrigation areas, then yes, extra irrigation. But you could also have – you could change what you're feeding your animals, so you could bring in supplement and therefore you would have a higher, you could have higher stocking densities or you could change your feed type so that it's not pasture-based so that you've got a higher level of feed and that would increase the risk as well. So it's not purely  
25 irrigation that increases that risk.

Q. When you look at your list of activities as set out in your paragraph 18, irrigation would feature in terms of the risk profile for those activities?

30 A. Irrigation is one that would feature for those, but there are other ways that you could actually – you could increase your stocking rates without having irrigation.

Q. I understand that. The risk associated with irrigation is a risk of (inaudible 15:03:02) contaminants beyond the root zone in the soil profile?

A. If there are extra contaminants on that land, if you irrigate and you're using that land to say grow baleage so that you can feed that out to other

dry areas of your farm and you're not actually grazing stock, then no I don't think irrigation would necessarily cause an increase.

Q. And what if you're applying fertiliser to that land?

5 A. Well, only if you're applying fertiliser that exceeded what the plant requirements were or if you weren't soil moisture testing and so you actually created that drainage effect.

Q. And in your experience in the Otago region – well, do you have experience in the Otago region modelling farms?

10 A. No, not, not individual farms. I've done some modelling for the Strath Taieri when I worked with AgResearch and that was my appendix 2.

Q. So when you did that modelling, did you look at any actual farm systems or were those all hypotheticals?

A. They were all hypotheticals.

15 Q. Now, I want to move on to the part of your evidence where you address irrigation use on sheep and beef farms, do you have any knowledge of the percentage of sheep and beef farms where there is irrigation taking place?

A. No, I don't.

20 Q. So at your paragraph 22 you've set out typical uses of irrigation on sheep and beef farms in Otago. What do you base that paragraph on?

A. So that is based on my experiences working with the regional team and then discussions with farmers but I don't understand, have a knowledge of the percentages of farms that they relate to.

25 1505

Q. Have you spent any time on the farm in terms of sheep and beef farms and in the Otago region?

A. Yes.

30 Q. And when you think about that experience have you observed the types of irrigation use you've set out in your paragraph 22?

A. Not the – I haven't observed them on lucerne crops.

Q. So looking at that list and starting at 22.1, irrigating winter crop paddocks during the growing season to boost crop growth rates and crop yield, does that occur and as far as you understand for on farm wintering?

A. Yes.

Q. Does it also occur for the wintering off, so taking stock from another farm so a dairy platform?

5 A. I'm trying, sorry, the grazing would occur where they're grown so you're not, you're not talking about cut and carry?

Q. No.

A. Yeah, yes, yep.

Q. And in your experience what sort of sizes of winter grazing paddocks have you experienced?

10 A. An individual paddock?

Q. Well just in terms of your experience on sheep and beef farms, what sort of areas have you observed?

A. I'm confused as to whether you mean the size of an individual paddock or whether you're talking about the proportion of the farm.

15 Q. No the area.

A. Five hectare paddock.

Q. And when you think about those intensively grazed crops and you think about the potential for contaminant losses do you consider that activity high risk activity?

20 A. Winter grazing of crops is a high-risk activity, yes so yes I would consider it a high-risk activity.

Q. And you do oversee a modelling, that's something you are familiar with?

A. Yes, I do, very.

25 Q. Have you modelled the loss rates associated with intensive winter grazing?

A. Yes, but not for Otago that I can bring to mind.

Q. And what sort of numbers might you see elsewhere in the country?

30 A. It can be, it can be anywhere up to 200 kilograms of nitrogen per hectare per year thinking in, but I would say that I haven't done it in the recent version but it can be considerable.

Q. Correct my understanding if have it wrong but the most recent version of Overseer is each preceding version appears to have done, is showing higher and higher rates?

A. As we learn more, yes.

Q. Yes and just for the record what areas of New Zealand, which regions have you undertaken your modelling?

A. Waikato, Canterbury, Southland and then and as discussed these ones in Otago but they were, those weren't actual farms.

5 Q. That's the appendix 2 assessment?

A. Yes, mhm.

Q. For Strath Taieri?

A. Yes.

10 Q. I take you to your paragraph 29 now and in that paragraph you're referring to the potential for nutrient losses to increase nutrients in the system associated with irrigating previously non-irrigated dryland areas?

A. Sorry which paragraph are you on?

Q. 29. And there you step through some of the farming practices that might give rise to increased nutrient losses associated with that irrigated land?

15 A. Yes.

Q. So increased stocking rates?

A. Yes.

Q. And why are increased stocking rates giving rise to a potential risk?

20 A. So when you increase stocking rates you're increasing the amount of feed that's required. Feed converts into urinary N which is excreted and that is available for loss during leaching.

Q. High rates of fertiliser application, why does that increase the risk?

25 A. So that increases the risk (a) via if there's, say depending on so you could lose some direct to waterways depending where it's applied. You could lose, if it's not the rates in terms of pasture growth so it's available for any drainage and if you're and then if you, applying irrigation and that's not successfully monitored then that can take some of that contaminant or that nutrient through drainage as well or in surface runoff in the case of border dyke.

30 Q. Higher crop yields?

A. The same thing. It's the same – it's more food, feed in the, well there's two ways actually so there's more feed so you can have higher rates so you have more urinary nitrogen. The other one is that a higher crop yield if you're grazing it in situ you could have more animals on that crop at one

time. They're there or they're there for longer, more urinary nitrogen being deposited on that bare soil available for any potential nitrogen drainage and leaching.

5 Q. And the final matter you note there is the ability to grow different crop types so what's the connection there?

A. So you can I guess it's the ability to grow crops that may have been, that may require more water and then so because you now have those crops, they may have higher fertiliser rates, whether they may or may not be fed to stock. If they are fed to stock again the yields you know as I said  
10 before.

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

Q. Sorry can you just run me through that again but just take the pace a little bit slower because I'm writing notes so the ability to grow crops that may require more water?

15 A. Yes.

Q. And then –

A. So your changes, you're changing to a crop that before you couldn't grow.

Q. Yes.

A. So now it's because you were say water limited and then those crops  
20 either depending on management might require greater fertiliser inputs or if they, again if they are being fed to stock you've got the same issue with the whole stocking density and stock being on, you know extra stock on that land with urinary nitrogen.

Q. Understood.

### **25 CROSS-EXAMINATION CONTINUES: MR MAW**

Q. So you then go on in your evidence to note in your paragraph 30 that there are some management practices that can reduce the risk of water and thus nutrient loss from farming systems?

A. Yes.

30 Q. And you then go onto explain that the type of irrigation system can also have an impact on those losses?

A. Yes.

Q. So when you think about managing the potential risks associated with increased stocking rates, what's the management practice that you have in mind to manage that risk?

5 A. So management practice for increased stocking rates so there are multiple management mitigation strategies. It comes down to the  
contaminant of concern so nitrogen we think of in terms of losses primarily  
10 through leaching. Phosphorus sediment, *E. coli* through overland flow pathways. You can, so if it's an overland flow pathway you can do things like have a sediment trap or riparian planting, fencing out of waterways, not grazing or cultivating critical source areas which are the areas in the paddocks, like a gully where a lot of nutrients can congregate and then there's a conduit down to a water body. For nitrogen leaching you might change your stocking type so for example a dairy cow, your own patch from a dairy cow there's up to 1,000 kilograms of nitrogen per hectare in  
15 that patch whereas a sheep or deer that might be 500 kilograms of nitrogen per hectare and so when you, you have multiple urine patches and that's like nitrogen is available for leaching, there's actually less in each patch if you've got a lower load so you can reduce the risk of nitrogen leaching by changing the stock type. In terms of sediment again  
20 stock type, you can avoid certain areas of the farm for different times of risk so for example you may not graze cattle on slopes that are at risk of erosion so then that's your phosphorous sediment, potentially *E. coli*'s you might not graze the hillsides during winter. We know that urine that's deposited in autumn is quite high risk, so you might say okay my — I've got some light soil, some stony soils, I'm not going to graze, winter graze  
25 those soils or I'm not going to graze those soils during autumn because I know that slope of nitrogen sits there and there's less distance for that to travel when we get a rainfall of en — before it hits water. So, therefore I'm not going to put that slug of nitrogen in there. I might put it on a heavier  
30 soil where I know it's gonna be trapped in that soil profile until the pasture or the crop comes along after our winter and has the ability to take up the nitrogen so it's used in plant growth rather than leaching, and so all this comes down to understanding the underlying soils and geology and then

the farming system and tailoring that individually to the individual farm situation.

1515

5 Q. So the mitigation steps that you have outlined might reduce the risk, but they won't necessarily eliminate those risks?

A. That's correct.

Q. You then go on to discuss how the type of irrigation system can also assist with, you say, reduction or elimination of surface run off?

A. Yes.

10 Q. And reduction in leaching volumes, referring again to the moisture monitoring type tools.

A. Yes.

Q. In your experience how wide spread is moisture monitoring in the Otago region?

15 A. I cou — I, I don't know.

Q. You go on in your paragraph 33 to provide some further mitigation in terms of these risks including matching fertiliser input to plant and crop demand?

A. Yes.

20 Q. And then you pick up at 33.2 the matching of stocking rates to the natural capital of the land?

A. Mhm

Q. And strategic grazing of winter crops.

A. Yes.

25 Q. So, all quite bespoke and nuanced mitigations required in order to manage the effects of irrigation of land.

A. Yes.

30 Q. Now I want to move on now to the part of your evidence where you discussed potential nutrient leaching implications associated with a change of dry — from dry land to irrigated farm land.

A. Yep.

Q. And there are two components to this. The first is the study that you've attached at Appendix b to your evidence.

A. Yes.



Q. And then there's the Bright and Wheeler information that you referred to in your summary. So let's start with your Appendix B and having considered that document and read your evidence, do you accept the proposition that the increase in, sorry the change from irrigated to. I'll start that again, the change from dry land to irrigated farm systems has resulted in your modelling in an increase in nutrients in relation to a number of the scenarios that you have examined?

5

A. Yes. Changing from dry land to irrigated has resulted in my modelling in an increase.

10 **THE COURT: JUDGE BORTHWICK**

Q. Has resulted in a what increase?

A. In my modelling, in the modelling I undertook, it has resulted in an increase in nutrient losses to water.

**CROSS-EXAMINATION CONTINUES: MR MAW**

15 Q. And people like me who like pictures, the graphs that are in your Appendix B start to give an indication of what those changes look like so if we turn to your Appendix B in page 10 of that document.

A. Mhm.

Q. And your figure 4 there is the modelled loss rate for different blocks in a future, sorry, possible future sheep and beef irrigated scenario?

20

A. Yes.

Q. Across the range of soil types in the Strath Taeiri and when you analyse that graph there's an increase associated with each of the irrigated options compared to the non-irrigated?

25 **THE COURT: JUDGE BORTHWICK**

Q. Just pause for a second. So this is figure 4, I wasn't actually sure how to read figure 4. It is like oh, did you get that out of figure 4, I did not. So perhaps you could step us through say the Komako clay, gley, glaze.

A. Okay so, within the Overseer modelling.

30

Q. Yes.

A. We get nutrient losses per block so I had the different systems in there and then what I've done here is given the block losses.

Q. Yes.

5 A. And also in the green the average whole farm loss. What I did when I had that, that, each farm with it's different blocks, I then changed the soil types to those, to those, the predominant soils in that region so that all those blocks are under that at gley, Komako gley and so what this graph is showing us is that, that irrigated sheep kale regardless of soil type has quite high losses.

10 Q. I see, okay so. I can see where my problem might come, I'm not differentiating between your two blues.

A. Yes, right.

Q. I think my dryland sheep lucerne —

A. Got you.

15 Q. Looks pretty much like the same colour as the irrigated sheep kale.

A. Okay.

Q. So I am going, oh it's all —

A. It's all the same.

Q. It's all so spikey.

20 A. Okay, so then in each soil type the first blue, is your dryland sheep lucerne.

Q. I'm with you.

A. And that second one which is considerably higher in each soil type.

Q. Yes.

25 A. Is irrigated sheep kale.

Q. That's really helpful. Now I can understand why Mr Maw asked you the question.

### **CROSS-EXAMINATION CONTINUES: MR MAW**

30 Q. So, the pattern which becomes apparent when the colours are reconciled in the graph, which is — I must confess I had to look carefully at those two blues, the pattern that becomes apparent is that the irrigated use results in a higher nitrogen leaching estimate than the non-irrigated scenario.

- A. Yes, except that you should actually be comparing dryland sheep lucerne with irrigated sheep lucerne and not a lucerne with a kale.

**THE COURT: JUDGE BORTHWICK**

- 5 Q. And you can't grow kale without water? You have to irrigate that crop don't you, or not?
- A. Possibly, not necessarily.
- Q. Not necessary.
- A. Well you do, yeah, to get, probably to get the yields and as I say I don't have specific knowledge of it growing in Otago so I'm not sure.
- 10 Q. So you are meant to compare dryland lucerne with irrigated lucerne.
- Q. Yes.
- Q. And dryland pasture with irrigated pasture.
- A. Yes.
- Q. And irrigated sheep kale kind of standing out there as an exception in it's own right. Yes.
- 15 A. Mhm and then I guess the main point, looking at that whole — is to look at the whole farm so well you can say that yes that irrigated, that kale is quite high loss.
- Q. Yes.
- 20 A. But it depends entirely on the proportion of the farm that is under that management system because when you then look at the whole farm losses and quite often in extensive sheep and beef farms where they do have a component of a winter crop, you can apply quite a lot of effort into reducing those emissions from that block but it actually doesn't reduce your overall farm losses because it's such a small percentage of the farm.
- 25 Q. And so for each of the colours on the bag graph.
- A. Yes.
- Q. That is a block of dryland lucerne, a block of irrigated lucerne, a block of pasture which is dryland and pasture another block irrigated pasture and another block for irrigated kale. Is that how it works?
- 30 A. Yes but —
- Q. So you have got five blocks
- A. Yes.

Q. And then you have got the overall farm.

A. And the total — with the understanding the entire — what is in that whole farm bar.

Q. Yes, also includes those —

5 1525

A. It is included – everything else, nothing else. So this is the entire, this is everything that's in the green bar is broken down into those other ones, there isn't anything missing from this graph.

Q. Yes.

10 **CROSS-EXAMINATION CONTINUES: MR MAW**

Q. What do we compare the green bar to, is there an unirrigated –

A. Yes.

Q. Versus irrigated whole farm on that graph? Or is it?

A. If you go back to page 8, the green bar is the orange bar.

15 **THE COURT: JUDGE BORTHWICK**

Q. Page eight?

A. Sorry page 8, figure 2.

Q. And so now the green bar is?

A. The orange bar, I'm sorry. So that, so this green bar, so this graph here was this future sheep and beef scenario where we had the increased irrigation area and that becomes this orange bar.

20

Q. You mean under –

A. And so when we compare in figure 2.

Q. Figure 2, yes okay. So now that's whole farm.

25

A. And then – so this is whole farm, yes and then so the original dry land, what we call dry land but they did have a small component of irrigation is the blue and then we looked at what would happen when we increased the area of irrigation, and that changes it to the orange. And then I looked at a dairy farm for comparison of you know, taking it the whole way to intensify – you know, a more intensive system and what this shows us is that at that time there was the 30 kilograms of nitrogen limit, and the

30

soil type has a huge impact on whether, on those overall losses. So these are exactly the same systems but different soil types.

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. No you've lost me, I'm afraid. So looking at figure 3?

5 A. Figure 2.

Q. Right, that's possibly why. So that's got – I see, it's the blue compared to the?

A. Orange.

Q. Orange.

10 A. So that, so the blue is your original dry land although there was a small component of irrigation in that. And that orange is what we were looking at as green in figure 4.

Q. I see, so this might usefully be seen as a summary graph of –

A. Yes.

15 Q. That's helpful. So I can put – and I was going to look at the dairy graph as well in your figure 5 which shows a similar pattern, but we can cut to the chase in your figure 2.

A. Yes, we can cut to the chase in figure 2, yes.

Q. So each of the scenarios modelled shows an increase in nitrogen loss compared to the dryland farming system?

20

A. Yes.

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

Q. Whilst we're thinking about it – oh no, you can finish your questions, and I was going to have – I just had one.

25 A. Was it on those in that part of the appendix you had a question, or?

**THE COURT: JUDGE BORTHWICK**

Q. Well, I was – so this is Overseer modelling?

A. Yes.

Q. Applying the standard farm management practices, I've forgotten what they call them, mitigation practices which are part of Overseer?

30

A. So Overseer assumes good management practice, yes.

Q. Yes, so that's been applied to get these figures?

A. Yes.

Q. But none of the other management techniques that you talk about in your evidence are necessarily brought to bear on this?

5 A. That's correct.

Q. Okay.

**CROSS-EXAMINATION CONTINUES: MR MAW**

10 Q. Now, let me test that answer. So for example, the fertiliser application, my understanding of the way Overseer works is that it assumes the correct application of fertiliser rate?

A. No.

Q. So actual fertiliser?

A. So the user has to input fertiliser application.

15 Q. So for the purposes of your examples that you have tracked through and put in the summary graph, you are assuming good management practices?

20 A. In – good management practices in terms of the application of the fertiliser? So Overseer automatically assumes that you're, you are applying your fertiliser evenly, it's not being applied over a waterway et cetera.

Q. Right, so the mitigation options that you were discussing in terms of reducing the risks of fertiliser are assumed then in the Overseer modelling?

25 A. The ones for where it's, where it's applied, not the one where you're tailoring the level of Overseer of – sorry, of fertiliser to the plant growth that then you would be inputting the fert – the amount of fertiliser that was applied.

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

30 Q. So on the Wilkins example, remember the Wilkins appeal and we controlled the amount of fertiliser input? And that was because Overseer wasn't doing it. And so we said I think it was 50 kg or whatever it was per annum –

A. Yes.

Q. Based on advice from the relevant fertiliser sector. So those inputs aren't there, I don't think.

**THE COURT: JUDGE BORTHWICK**

5 Q. There's very – not a terrible amount in terms of what is recommended by way of good management practice and what is inputted or assumed by good management practice in Overseer is there? I mean, your evidence goes well beyond that good management practice -

1530

10 A. Yes.

Q. - it does, doesn't it? Yes.

A. And particularly for losses via over land flow, so overseer isn't spatially explicit, so a lot of the things that we do is, you know, is to protect those critical source areas. An overseer just doesn't do that.

15 Q. No.

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. It's modelling that which goes down –

A. Pr-

Q. – not that which goes across as –

20 A. Yes, it gives a bit of a guess as to for phosphorus.

**THE COURT: JUDGE BORTHWICK**

Q. Which is again and why in Wilkins we didn't go with a P output for overseer, so Wilkins is an appeal, Southland Regional Council and Wilkins, you might - I don't know whether you want to look, at it or not, but  
25 a lot of these issues were tested through there.

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

Q. Now was that the –

A. That was it, yes, just exactly what good management practices were in  
30 and that's, yes, I understand that.

**CROSS-EXAMINATION CONTINUES: MR MAW**

- 5 Q. Right, the next proposition that I wish to explore with you, so to wrap up the part of your evidence we've just been discussing, your Otago region specific modelling shows an increase in nitrogen loss associated with a change to either an irrigated sheep and beef or an irrigated dairy compared to dry land?
- A. In this scenario yes.
- 10 Q. And now you have then referred to some work by Wheeler and Bright from 2015 and you took the Court through Table 4 in relation to the Wheeler and Bright 2015 report?
- A. Yes.
- 15 Q. Can you tell me what the farm system that was modelled comprised of in that situation?
- A. I'll have to check. I'm not sure if, I don't recollect if they outlined it in the paper or have the paper here, I'm just having a look. So I have the – it was a block receiving 600 millimetres rainfall, irrigated between October and March and then for the light soil, that's a plant available water of 49 millimetres to 600 millimetres or the heavy soil was a plant available water of 103 millimetres but there is no information as to what the stocking rate or what stocking type or anything like that.
- 20 Q. So having looked at the paper there's no explanation as to the farming system that has been used in that example?
- A. No, so the absolute losses you can't, as with overseer, you can't use an absolute loss for anything anyway, but the relativity because the farming system and the managements were identical, the relativity between the scenarios is relevant.
- 25 Q. What was the purpose of that paper?
- A. The purpose of that paper was to explain the new irrigation component of overseer.
- 30 Q. So it wasn't a paper about looking at the comparative differences between systems, the differences that were produced in that paper were simply for illustrative purposes of the new irrigation module within overseer?
- A. Yes so it was designed to – the paper was purpose was to explain the way the model interprets the losses from those systems.



Q. And the paper itself notes that the situations to be is simply for illustrative purposes?

A. Yes.

5 Q. And so great care needs to be taken in seeking to use that information for a different purpose?

A. Yes.

Q. And the paper goes onto note that the effects of management rules will depend on climate and soil characteristics?

A. Yes.

10 Q. And the annual rainfall number of 600 millimetres that was used in this example, have you compared that to the annual rainfall that occurs in the Otago region?

1535

15 A. No, because I was commenting predominantly on the comparison between the irrigation types because short of modelling all farming systems in the region.

Q. Do you accept that the outcomes from the modelling may change significantly if the rainfall parameter is changed in the modelling?

20 A. If the rainfall parameter is changed then and the soil plant available water remains the same, then yes, there would be – the irrigation would be less because the model says: “Well, what is required to take that soil back up to fuel capacity.” The only one that might not change is actually border dyke.

25 Q. And what happens if it goes the other way, there’s more rainfall say in the shoulder seasons than field capacity?

A. If there’s more rainfall and it’s still, it has irrigated and it hasn’t dropped below fuel capacity, then you’re going to have surface run-off or drainage.

Q. And that’s where the risk of extra nutrient leaching arises?

30 A. Yes, which is why you would do an assessment in why you have moisture monitoring.

Q. In your experience, even without irrigation in the shoulder seasons can field moisture levels be exceeded?

A. I couldn’t comment for Otago.

Q. The paper also notes that soil characteristics are important?

A. Absolutely.

Q. And that only a small subset of possible options is shown in what, this table 3, which you've brought through into your evidence as table 4?

A. Yes. Yes.

5 Q. I wonder whether I might have you produce this document to add to the  
–

**THE COURT: JUDGE BORTHWICK**

As part of the common bundle or is this part of the, would you say, the exhibit?

10 **MR MAW:**

Probably as an exhibit.

**THE COURT: JUDGE BORTHWICK**

Q. Probably as an exhibit, okay. So we will just have the witness check the document, confirm that she's with the document, like you, but just make  
15 sure that this is the document that you had in mind.

A. Yes.

Q. It is. Okay. And is there any objection to the production of this document as an exhibit to all witnesses referring to it? No, okay, so just produce that document as exhibit Beef and Lamb 1 Paper entitled Irrigation in  
20 overseer, authors Wheeler and Bright.

**EXHIBIT BEEF AND LAMB 1 PAPER PRODUCED – IRRIGATION IN OVERSEER AUTHORS WHEELER AND BRIGHT**

**EXAMINATION CONTINUES: MR MAW**

Q. And just so that the court understands the part of the document that we've  
25 been discussing, you would turn to page 5. You will see a heading Example Outputs and at the end of the first paragraph under that heading you will see "It is also important to note that these examples have been set for illustrative purposes only and that the effects of management rules will depend on climate soil characteristics and only a small subset of  
30 possible options is shown in table 3"?

**THE COURT: JUDGE BORTHWICK**

Q. Right and you can see that written there?

A. Yes.

**EXAMINATION CONTINUES: MR MAW**

5 Q. In your experience, modelling farming systems have you been engaged to prepare comparative overseer analyses to demonstrate the potential effects of increased areas of irrigation?

A. Only in for this document here.

Q. Right, so that was?

10 A. So this is appendix 2 for the Strath Taieri.

Q. So that was your essentially, your modelled hypothetical examples which show the increases?

A. Yes.

15 Q. I just take you to your paragraph 47 which because you're concluding the paragraph and there you say "That irrigation can be conducted without significant negative impacts on nitrogen leaching and it's important that systems are considered on a case by case basis"?

A. Yes.

20 Q. Now is that because of the bespoke mitigations that will need to be applied in relation to each farming system, will need to be very carefully matched to each farm system to ensure that the reductions that might occur, occur?

25 A. Yes, so the mitigations need to be tailored to the farm and an understanding of that farming system, the proportion of the farm that is under irrigation be impacts on farming system and change to farming practises that that irrigation will result in, all these need to be assessed in my belief.

30 Q. When you think about the effects of nutrient run-off and also nitrogen leaching in a whole of farm system, do you accept it's not just as simple as seeking to balance the overseer books in terms of the mass load of nutrients, but rather the location from which nutrients might be discharged is also important?

A. Yes, so I guess I spoke before about looking at your vulnerable soils, but then I guess I'm thinking that you're talking about attenuation and the fact that overseer and we're looking at what comes out the bottom of the roots, and then there is a difference there in terms of what leaves the root zone and then what you see in a water body, and there's different levels of attenuation, and that's an area of understanding or that I don't have in terms of that attenuation factors.

5

Q. An overseer doesn't take into account the sensitivity of receiving water bodies?

10

A. No, it doesn't.

Q. And so the link between location and a sensitive water body is simply not something considered when comparative overseer modelling is undertaken?

15

A. No, and again that comes back with your farm plan, so you need to actually understand the receiving water bodies and what is the contaminant of concern. An overseer, the other thing with overseer is that it's only looking at nitrogen and phosphorus, it's not looking at sediment or E.coli, so those sorts of things need to be done at a farm level.

20 **MS PHILLIPS:**

With your permission, I've two questions. Thank you.

**THE COURT: JUDGE BORTHWICK**

Q. So you have to follow on from Mr Maw's questions, so that's your compass.

25

A. Yes.

Q. And then the court will ask it's own questions, but now is the time to ask.

A. Thank you so much.

**RE-EXAMINATION: MS PHILLIPS**

Q. Dr Chrystal, earlier you were taking the court and Mr Maw through some figures in your appendix 2, namely figures 2, 3, 4 and 5 which were

30

comparing dry land sheep pasture, kale, lucerne and so forth with irrigated land uses?

A. Yes.

5 Q. And you were remarking on the differences. So I would just like clarification please. What is the difference between dry land and irrigated?

A. You're talking about a figure in particular or not?

Q. Figures 2, 3, 4 and 5 your HWhat do you mean in terms of what is the difference?

10 Q. What is, if one is talking about dry land or we're talking about irrigated land, just for example, in your figures, what is dry land and what is irrigated?

A. Right, so for this, this what we're calling dry land, this was a farming system that had a proportion of irrigated land in it and then the irrigated, the irrigated situation – let me read through. So I'm going to section 3.2.1, that current system, that was an 860 hectare farm, it had 709 hectares of dry land and 137 hectares of irrigated pasture. Then with that future sheep and beef farm that was the dry land pasture reduced to 483 hectares and irrigated pasture was increased to 349 so I guess most commonly we're not, sheep and beef properties don't, most commonly irrigate 100% of their property sorry and I should say when I'm saying sheep and beef I am also including deer just in all my comments here.

1545

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

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

#### **QUESTIONS FROM THE COURT: JUDGE BORTHWICK**

30 Q. And so your evidence has made, you in some detail explained the measures which can be taken to reduce the likelihood of loss of NMP as a consequence of irrigation and there are a large number of mechanisms which you describe in your evidence and also in response to Mr Maw's line of questioning and I don't see any of that being proposed

by sheep and beef – beef and lamb and I'm just wondering can you comment on that, whether there should be an increase elsewhere in the country? What's a sensible outcome here if there is to be an increase in, of the area of land under irrigation should there also be a drive to ensure that farmers employ those tools which are available to them to reduce the losses of contaminants which as you say is not just NMP and it's not also just E. coli and sediments. There's a range of losses.

- 5
- A. Yes, so I think farmers really need to understand the, their land and the underlying capital and the risk, the inherent risks and also opportunities of their particular farm and their, and the land that they're on, the climate that they're under and then have a farm, an environmental plan that looks at the, was in the catchment so understanding of the receiving bodies but also looks at the risks of and of that land and then the farming system and looking at those areas that they can, where they can mitigate the risks and I think, I also believe that it needs to be a, not a tick box so it needs to be farm specific and the farmer needs to be involved and has to buy into the whole system and the whole process because my experience I facilitated a group of deer farmers for over three years, an environmentally focussed group and I found that when farmers understand the risks and understand the lost pathways and what causes those risks, they actually come up with mitigations that those of us that might sit behind a desk don't think of and I'm very nervous when it comes to having a checklist of these other mitigations. I think that as a whole the sector benefits when farmers understand those loss pathways and understand what the risk factors are and then innovation occurs and they and farmers often come up with mitigations and we see them a lot so for example there's some farmers in the Pomahaka and they understood the mechanisms of losses of sediment and phosphorus from crop and they had some screens up to capture that sediment before it reached a water body and then they were reapplying it and they were getting benefits, they understood that that sediment is high in nutrient and that's a natural fertiliser. You don't want to lose your top soil so it's actually engaging with farmers making it about their farm and understanding the pathways and then farmers themselves come up with some solutions.
- 10
- 15
- 20
- 25
- 30

- Q. No I tend to agree with you and including also that it should not just be the regional council that says do this, like you know fence three metres off a waterway and so farmers to that at a huge cost and then still wonder why they've got a problem and the problem is they're not actually
- 5 engaging with the whole of the system so those simple solutions can engender a great deal of community resentment with the results aren't seen within the environment but okay so you're not, anyway you're not advocating or supporting an increase in irrigable area with a potential increase in nutrient or contaminant losses without also having a look at
- 10 who the range of measures which can be brought to bear to lessen the likelihood of that.
- A. Yes.
- Q. Yes okay all right thank you very much for your evidence, it was a very interesting read so thank you very much.

15 **QUESTIONS ARISING – NIL**

**WITNESS EXCUSED**

**COURT ADJOURNS: 3.50 PM**

**COURT RESUMES: 4.07 PM**

**MR MAW CALLS**

**ANDREW NEIL BURTT (SWORN)**

5 Q. You confirm that your full name is Andrew Neil Burtt?

A. Yes.

Q. And you're employed by Beef + Lamb New Zealand Limited as chief economist?

A. Yes.

10 Q. You've prepared a brief of evidence dated 5 February 2021?

A. Yes.

Q. And you've set out your qualifications and experience within that document?

A. Yes.

15 Q. Are there any corrections that you would like to make to your brief of evidence?

A. No.

Q. Do you confirm that the contents of your brief of evidence are true and correct to the best of your knowledge and belief?

20 A. Yes.

Q. Have you prepared a – before I do that, you haven't participated in any of the joint witness conferencing?

A. No.

25 Q. Have you prepared a summary of your evidence or do you wish to read from your executive summary or some other passages of your evidence?

A. Yes, I've got a few comments here that are summarising what I've said in evidence.

Q. If you could just proceed to do that now?

30 **MR BURTT:**

Your Honour and Commissioners, I'm just going to make a few brief comments based on the information in my evidence, repeating some of the points I made. Agriculture makes a significant contribution to Ota –



**THE COURT: COMMISSIONER BUNTING**

Q. Sorry, are you reading from it now?

A. Not, not specific, not solely.

Q. So if you do –

5 **THE COURT:**

Ad-libbing.

**THE COURT: COMMISSIONER BUNTING**

Q. If you do, can you just refer it?

A. Sure, yeah okay.

10 Q. Okay.

**MR BURTT:**

So yeah, agriculture makes a significant contribution to Otago's regional economy. GDP per person, gross domestic product which is a key indicator of economic activity per person was \$56,700 in 2019, which was 93% of the average of the whole, the New Zealand country. This reflects what is known intuitively about Otago's economy, it's reliance on agriculture and clearly demonstrates the importance of agriculture per se, but also the businesses that service it and benefit from it. Livestock production and red meat processing are major activities in Otago and the sheep and beef livestock production sector, the farming sector is significant and a major employer in the region. I outline that in paragraphs 29 to 40.

So, in summary saying that sheep and beef livestock production sector, so the farming sector is really colloquially refer to it, supports around 7% of the workforce in Otago/Southland. We had to combine Otago and Southland so that we could get from commercial companies some commercially confidential information which we, Beef + Lamb New Zealand haven't had access to directly either. And that's including the flow-on benefits to other sectors, such as the support services, finance and insurance services and things like healthcare. Livestock production also contributed about 7% of the industry added value in the combined region, Otago/Southland again, and about 5% of the household

income. So that's a bit lower because generally, wages in the sector are lower than they are on average across the rest of the industry. Red meat processing employs about 10% of the workforce in Otago/Southland, and as I said earlier, that's because Otago/Southland, that's because of the commercial  
5 confidentiality and providing some information to our analysts. And about 30% of that employment is direct, so in the processing industry and 70% is indirect, servicing the processing industry.

10 Sheep and beef farming in Otago is conducted in diverse and complex ways and in diverse and complex environments. The diversity is not just about the physical environment, but it's as diverse about the individuals who live and work on those farms and that's often overlooked when we talk about "farm", because "farm" really oversimplifies the term and understates the heterogeneity, the variability of farms, farm businesses and overstates how similar they are.

15

One of the things that strikes me about that diversity is that we estimate that around – there are 110 high country farms, 108 hill country farms, 495 finishing breeding farms, 120 specifically finishing farms, making up about  
20 910 commercial sheep and beef farms where their major livelihood is derived from farming. The absolute numbers, those numbers that I just read out and the proportions are shown in figure 11 in the evidence I submitted. And on average, high country farms are significantly larger than the finishing farms. So the high country farms at the top of that list are significantly larger than the finishing farms. And that, the reason is that reflects the natural capital of each  
25 one and what they can, what they can produce.

The number of commercial sheep and beef farms has declined over the last few years as farms have amalgamated, and particularly as dairy conversions have occurred. This is most noticeable in the finishing breeding farms,  
30 farm class 6 which is the most populous in the region, and that's in figure 9. Conventional measure of production intensity is stock unit, stocking rate, stock units per hectare. Those high country farms I was talking about have 1.5 stock units per grazing hectare on average, the hill country farm's a little under six stock units per hectare, finishing breeding farms eight stock units and

then the finishing farms as high as 12 stock units per hectare on average, which is about equivalent to one and a half dairy cows per hectare. But that costs, the region, the weighted average of that is 4 stock units per hectare, so it's really a, really emphasising that diversity. And this is shown in figures 14 to 18  
5 of the evidence, pages 19 and 20.

1615

Overall, there's been little change in stocking rates in the last 30 years. So  
10 there's been some substitution. Otago's commercial sheep and beef farms generate revenue from multiple enterprises, and we talked a bit about that, that was talked about earlier. Sorry, not "we" but that was talked about earlier, including for example deer and the dryland farming. Some of the more widely known and discussed non-traditional revenue streams on commercial sheep  
15 and beef farms are rearing male calves for dairy beef, traditionally often called bull beef, grazing young dairy heifers, and crazing dairy cows in winter. However, on average, a sheep and beef farm survey showed that 95% of the gross farm revenue on commercial sheep and beef farms came from sheep and beef cattle, and dairy grazing revenue on those commercial sheep and beef  
20 farms was close to zero, so we had 95% from sheep and beef, close to 0 from dairy grazing on average across the region. Sheep and beef farming is complex and heterogenous, and these are commercial connections right through the value chain, from some particular farms that specialise in breeding stock, sell them as store stock to other farms and finish them and then processing. To  
25 provide some indication of the use of irrigation, I used irrigation charges as a proxy for the number of farms that use paid irrigation. It is likely, as we've heard from others, that other farms are irrigating through other arrangements, that is, are not part of a paid irrigation scheme. Finally, just wanted to summarise some points I was making, livestock production and meat processing are major  
30 economic activities in the region, and the sheep and beef sector is inextricably linked to the overall viability of the region. Farming systems in Otago have responded well over many years to changing circumstances, and farmers have been very responsive while managing many risks, some of which are fully in their control and some of which can be managed but are not fully controlled by

farmers. The sheep and beef livestock production sector, therefore, is adaptable and resilient. It is continually making efficiency gains in response to the signals that it is getting from “the market” and regulation, therefore. Through continued innovation and adoption of technology – and technology should not be understood as just digital technologies – sheep and beef farmers have increased production while decreasing the number of animals they have been managing, and they have also collectively lost their most productive land to other land uses. Thank you.

**CROSS-EXAMINATION: MR MAW**

10 Q. I was interested when I read your evidence in relation to the proportion of farm revenue associated with the non-traditional revenue streams, and you have discussed those both in your summary today, but they are also referred to in your para 14, and here, the commercial sheep and beef farming supporting the dairy sector by raising male calves for dairy beef and grazing of young dairy heifers as they mature and the grazing of dairy cows in winter, so those types of activities, and you go on to note in your paragraph 16 that in 2018 and 2019, the percentage of total gross farm revenue from those activities was close to zero.

A. On average, Mr Maw, I'd just emphasise that.

20 Q. Well, yes. In terms of the variability, so just so I understand this, is there a correlation between the percentage of the non-traditional revenue streams and the dairy farmgate price?

A. Anecdotally, there would seem to be, but I haven't done any specific work that identifies that.

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

Q. Now, I am pretty ignorant, what does that sentence mean? You guys understand it, but I do not.

A. All right, we'll step through it. So understanding non-traditional revenue streams on a commercial sheep and beef farm, so if we think about the traditional revenue streams on a sheep and beef farm, how would you describe those?

- Q. I understood that part, it was the correlation with the price at the farm gate. I did not sort of get that step, what you meant. So you have got the non-traditional revenue schemes, and I understand that part, and so it is the variable, the correlation with the farmgate price, I did not understand that, farmgate price, or what the correlation is.
- 5
- A. Right, so the source of the animals in relation to those non-traditional revenue streams are typically from another farm.
- Q. Okay.

**CROSS-EXAMINATION CONTINUES: MR MAW**

- 10 Q. Is that correct?
- A. The source of the animals for?
- Q. For the non-traditional revenue streams that you've identified, so essentially dairy support.
- A. Well, when it comes to dairy support, yes, but there are other revenue streams, such as tourism, beekeeping, a range of other things.
- 15 Q. Well, let's focus on the ones in your para 14. They struck me as relating to the dairy sector, and correct me if my understanding is incorrect, but typically, the sheep and beef farmers might winter over some stock from a dairy farm, and they're paid for that wintering over?
- 20 A. Typically might be doing what I'm at pains here to talk about, not do is talk about, you know, assume that they're all similar. There's a great diversity, and a lot are not doing that sort of activity. Some are.
- Q. Some are and some aren't. What I'm trying to understand is the variability around these revenue streams, and you noted in your evidence that the on-farm dairy price may have been an explanation to why that revenue stream had reduced in that 2018 season, and I'll see if I can find the reference to that. Para 56, so you can just refresh your memory there.
- 25 A. Yes.
- Q. And here, you say that the aggregate dairy grazing revenue received by sheep and beef businesses in Otago increased steadily in response to the increase in farmgate milk price and thus demand from dairy farmers, so it struck me that you had drawn a correlation in your evidence between the farmgate milk price and those other non-traditional revenue sources.
- 30

A. Yes, qualitatively, yeah, yeah.

Q. Well, do we – yes. You note there that the revenue stream peaked at 36 million in 2014/2015. The piece of the puzzle that I couldn't readily put my finger was, as a percentage of the total gross farm revenue, how does that 36 million compare?

5

A. I can't recall off the top of my head, but the total gross revenue for sheep and beef and wool would be orders of magnitude more significant than that.

Q. So I can't find that. I did look in the evidence, and I guess I'm just checking I haven't missed the part where that information would be found.

10

A. I can't see it myself either, but I did have a figure in mind, but I need to do the maths like you, Mr Maw.

Q. Yes, I understand.

#### **THE COURT: JUDGE BORTHWICK TO MR BURTT**

15 Q. So I take it it is not the billion in para 55.

A. It is, your Honour.

Q. It is the billion? So that billion, is that inclusive of the – what are we calling it – the non-traditional sheep/beef enterprises, or is exclusive of those enterprises?

20

A. It'd be inclusive.

Q. Inclusive of those, yeah, okay.

A. So in short, the maths would be the number of farms times the gross revenue for those farms, of which, so of that 1 billion, 36 million is from dairy.

25

Q. Dairy support.

A. Dairy support.

Q. And in fact, you say about 36 million is dairy support in the next paragraph.

A. 36 million out of 1000 million.

30

Q. Yeah, yeah.

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. Just trying to do the maths in my head, 3.6%, not 0.36%, so that gives an understanding in terms of the demand for use of land for those purposes, and you'd accept that it would appear that the demand goes up and down  
5 in response to the farm gate price for milk changes?

1625

A. It would seem to be related to it yes and the two things are correlated and I suppose the question becomes one of causation of whether it's causation or just correlation.

10 Q. I put a proposition to you that the more cash in the pocket associated with the farm gate dairy price might make it more attractive to winter off in relation to –

A. Yes agree, yes.

15 Q. Yes. Now if I can take you to page 12 of your evidence-in-chief. I had some trouble with your colours on the map and I'd just like to make sure I've got the black and the blue line correctly identified so you'll see your figure 3 on page 12?

A. The one headed livestock stock units.

20 Q. That's the one. There's a squiggly line that's black or blue in my document. Can you tell me whether it's the black or the blue or the total stock units or the dairy stock units at the top one is?

**THE COURT: JUDGE BORTHWICK**

Q. You mean the top line?

25 A. The top line is the black line is total stock units and the purple line is dairy stock units.

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. And likewise the graph that then follows the top line is that the dairy stock unit?

A. Yes.

30 **THE COURT: COMMISSIONER BUNTING**

So is that the total or?

**MR MAW:**

Total.

**THE COURT: JUDGE BORTHWICK**

5 Q. No, top line is the dairy stock unit. It's actually a purple so it could be reads as a black.

A. It depends on the one's printer by the sound of it.

Q. The top line though to be sure in figure 4 is dairy stock units. Is that right?

A. Is the percentage change in dairy stock units just to be even more specific  
10 about it.

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. Thank you that, I just I needed to understand that. I don't know whether it was these were photocopied or how they were printed but they look the same on my document.

15 A. Good point. Perhaps we should make one of them a dotted line or some other.

Q. It doesn't matter what you do, there's always often a challenge with so many of the lines. All right, final matter I just wanted to pick your brain on was the irrigation charges and you may have heard that I put a question  
20 to the previous witness about the percentage of beef and sheep farms that have some irrigation on them and she was unable to assist me and the reason I put that question to her was because I read your evidence and had picked up that you had or the information you had to hand was  
25 a subset of irrigable properties within the sheep and beef part of the Otago region.

A. Mhm.

Q. Do you have any further knowledge or understanding of the percentage of sheep and beef farms that would be irrigated across the region?

30 A. No, I don't, I don't readily.

**RE-EXAMINATION: MS PHILLIPS – NIL**



**QUESTIONS FROM THE COURT: COMMISSIONER BUNTING – NIL****QUESTIONS FROM THE COURT: COMMISSIONER EDMONDS – NIL****QUESTIONS FROM THE COURT: JUDGE BORTHWICK**

- 5 Q. Okay well just it's clarification how to read, well two matters of how to read the graph is the first matter and viable farming is the second matter so looking at page 14, figure 7 which is – figure 7 deals with the change in livestock numbers between 2009 and 2019 and that's per what it is, 100,000 head or something?
- A. Yes.
- 10 Q. Okay and so I just wanted to make sure I was reading this right so the first bullet point you've got listed in paragraph 10 is a percentage decrease in the number of sheep in Otago was the smaller, so that's the percentage decrease of the number of sheep in Otago was the smallest in New Zealand?
- 15 A. And that relates to the chart over the page?
- Q. That relates to the entire chart, the entire country?
- A. Well in figure 8 over the page your Honour.
- Q. Oh no, no. Oh I see.
- 1630
- 20 A. I mean it's a percentage, it's one of the big challenges, it's absolute changes and percentage change.
- Q. Yes and I think that's what I was challenged in, in terms of actually understanding the importance of what you were saying, so okay that, right paragraph 15 relates to –
- 25 A. Figure 8.
- Q. – figure 8 and so the percentage decrease in Otago for sheep was the smallest –
- A. So looking at that first panel in that chart?
- Q. Yes on the left-hand side and that's showing that we've virtually got no, no that's Nelson. Nelson's got a – is that Nelson? Got a huge increase
- 30 in sheep?
- A. Yes it has.

- Q. Why's that?
- A. Nelson city as a unitary authority has a very small geographic region –
- Q. Yes.
- A. – and has very few sheep.
- 5 Q. Oh.
- A. So any, you know, if it went from one to two sheep it would be 100% increase.
- Q. I see what you mean. So what's the unit here? Is this – yes, is it the, yes, what is the unit? It's per regional council per ...?
- 10 A. Yes, per regional council that –
- Q. It's per regional council, okay, all right.
- A. It's one of those challenging things with some of the numbers for us.
- Q. Yes, because some of our regions are vast and some of them are not.
- A. Mmm.
- 15 Q. Yes. Okay and so that has, is a percentage of the total –
- A. So the percentage change if we looked at that first graph there –
- Q. Yes.
- A. – and the second to last row?
- Q. Yes, yes. I can see it there.
- 20 A. The percentage change, you can see the small –
- Q. It's just a very small change.
- A. – change.
- Q. And then you've got a percentage increase in the number of beef and Otago's similar to other areas?
- 25 A. Mhm.
- Q. With the exception of Nelson also do really well there. So similar. Now, similar to the gains made by others and obviously there's a few losses in other regions that are losing beef?
- A. Mhm.
- 30 Q. Yes so similar to the increases made by others and a percentage increase in the number of dairy, cattle and Otago is high, south of Auckland city where –
- A. And that sort of makes the point about –
- Q. Yes.

- A. – the challenge of the absolute numbers, the increase in the absolute numbers in Auckland is probably not very much.
- Q. It's probably one cow to two cows?
- A. Yes and they're only 2% of the total -
- 5 Q. Yes it's the same as the Nelson example. Yes.
- A. So –
- Q. And so do these percentage changes tell us much at all or should we be looking is more an absolute change a better indication of increasing diversity?
- 10 A. Well I think you should look at both of them.
- Q. Yes, why's that? How would I use it?
- A. Well I think you would go back –
- Q. Yes.
- A. – making the observations we just have about Nelson and Auckland, for
- 15 example, well that's a huge percentage change, but go back and look at the absolute change and find in Figure 7?
- Q. In Figure 7? Yes.
- A. And find, for example, let's look at Auckland the second row or the second –
- 20 Q. For sheep?
- A. Well any of them, right across there, and they're very small changes -
- Q. Very, very small absolute numbers?
- A. – and absolute numbers.
- Q. Yes.
- 25 A. But percentage wise is where I used a –
- Q. Is fast, yes.
- A. – rough example of Nelson making something up, yes.
- Q. And in terms of absolute number, livestock numbers, Figure 7 is –
- A. And at Figure 7 is the change in livestock numbers.
- 30 Q. Yes I was –
- A. 1,000 head.
- Q. Yes, now I was wondering what to make of this. So, for example, in Figure 7 you've got the increase in absolute numbers dairy cattle in Otago is second highest in New Zealand –

A. Mmm.

Q. And I thought really? So what is that – that's only the increase, it's not actually the total number of dairy cow out here?

A. The total number of dairy cows in a particular region do you mean?

5 Q. Yes, so when, so looking at the total dairy chart under Figure 7 which is the chart on the right, we can see that that has indeed the second largest increase in absolute numbers of dairy –

A. Mhm.

10 Q. - cattle in the country, it's only second only to Canterbury that (inaudible 16:34:26) a significantly higher increase but that's not saying anything in terms of the absolute number of dairy cows in either region as a total.

A. Correct.

15 Q. This is just the increase in it, yes. And so to get a sense of, I guess the relative contribution of – in terms of absolute total figures for sheep or beef or dairy or bees, where would you - is that addressed in your evidence or not?

A. Are you wanting –

Q. Like –

A. It's addressed in, as –

20 Q. No I'm not asking you to address you, I just want to make sure if it's there that I'm looking at it specifically?

A. It's identified earlier in that chart we were just looking at –

Q. Yes, okay.

A. – a bit earlier that Mr Maw asked about in relation to Otago –

25 Q. Yes.

A. – but not in relation to Otago relative to other regions.

1635

30 Q. Yes, no I was just trying to get a sense of the significance and it probably is related to what Mr Maw was asking, the significance of the dairy sector to the rural economy in Otago compared to other economies with which I am more familiar which is Southland and Canterbury.

A. Mhm.

Q. And so I was trying to get a sense of that.

A. Mhm.

Q. But you —

A. Well we can readily provide numbers that would...

5 Q. It is all right because you do not want the Court to be left with the impression that dairy is indeed in terms of the amount of land used for dairy support in particular, that it is outside, you know.

A. Relative to other regions do you mean?

10 Q. Relative to other farming sectors or relative to other regions and so that is really what I was wanting you to comment on, because in knowing that then I can correlate that back with the risks to the environment for an increase, an unregulated increase in irrigable area where it is for dairy support together with other activities that are happening in the area, but if you have not addressed it, don't. I think maybe the best I can get is, it contributes very little to the rural economy, despite the increase in its growth. It is still contributing little in terms of the total sheep and beef economy.

15

A. If you, yes, if you are talking about the dairy support, we'll call it initially dairy support, yes. Dairy farming itself is a different question and outside our —

Q. Yes.

20

A. Area of responsibility.

Q. What your evidence points to, as you say is the heterogeneity, it's of farming operations within Otago. Even if you describe yourself as Sheep and Beef it does not mean you are not in fact more diversified than that but with a mixed range of uses across —

25

A. Yeah, and I think the difference is heterogeneity of people.

Q. Yes.

A. Feeds into that too, and what their objectives are as families or absolutely feeds into all of that.

30

Q. I wanted to tax you because you're an economist (**inaudible** 16:37:44) on something that you have not addressed in your evidence but you might be able to assist and just see if I can find what I need. So, not necessarily limited sheep and beef and the planning witness may have a view about this, I do not know but certainly many in the farming sector and also Territorial Authorities and hydro will say that they would be able — would

like to be able to increase the use of water and expand their existing operations and if there is a problem with that under a future land and water plan, we will just review the consent, and the council has the ability to review consents and it would be a huge task because are many  
5 thousand of consents to be reviewed and but in reviewing the resource consents, the consent authority is required to have regard to matters in section 104 of the Resource Management Act and that is to do with the matters which are applicable when considering an application resource consent, but also whether the activity allowed by the consent will continue  
10 to be viable after the change and that is really what I wanted to ask you about. Activities that will continue to be viable after the change. So what happens, what may happen is that the land and water plan comes in and certain water bodies are determined to be over-allocated. Too much water is being extracted and too many nutrients and being inputted and there may be other stressors on the land and on the water body.  
15

A. Mhm.

Q. Which the council needs to bring down over time I suspect, rather than the one go, but that is for the councils that need to bring it down. So, farmers who are committed and carry through with expenditure on an  
20 irrigation system, increasing the area of land as well as investing capital in terms of the purchase of the irrigation system itself and also crops and also incurring I guess debt capital in terms of doing all of the earth work associated with the same. I imagine that they only enter into that enterprise if they know they can pay back debt, whether it is from a bank  
25 or whether it is to some other entity, pay back debt within a requisite period of time. So, viability is contingent on the level of debt and the debt repayment scheme over a period of time. Does that sound — and if that changes because there is say, less water, or greater restrictions on how land may be irrigated and over the inputs into farming such as nutrients  
30 that that could impact on farming viability in terms of the assumptions made about the area of land irrigated and the quantum of water available, just trying to get a feel for what viability means and how, and the leveraging I guess and how sensitive leveraging is to change in the future, from the council.

A. What farmers.

Q. Yes.

5 A. Or any business people would be doing would be thinking about their future. It's their future expectations, and the more uncertainty there is about that the more difficult it is to make a decision as to investing in those sorts of — whatever that sort of enterprise is. Yeah, I am far from an expert and not an expert at all in the RMA. Should – and there's sorts of issues.

10 Q. No, no and for this question I do not think need to be, I think you need to be an economist, and viability.

A. So it would be about their future expectations and certainty and uncertainty that they face and I suppose one of the things that's happened in New Zealand and I've seen overseas is that farmers business people prefer the uncertainty that comes from the market than the uncertainty  
15 that comes from political processes.

Q. Yes.

A. And that then has an influence on how responsive they are, or how reticent they are to make investment decisions.

20 Q. So Sheep and Beef would have the Court approve an increase in irrigable area and with it, and without any attenuation a potential increase in discharge of contaminants within the next five to six years the decision in terms of the quantum of water available and decisions around whether water bodies, of which there are many, are degraded or degrading will be made and the Council will then make a decision about setting some limits  
25 and there are many tools around those limits in terms of minimum flows, but also in terms of bringing down nutrient load and other contaminants, but there will be wide, in fact a whole host of things which might be bought to bear, to ensure first and foremost that we have healthy water systems. That seems to me to be a whole load of uncertainty that this process is  
30 not, that this case is not about, that there is a whole load of uncertainty out there.

A. Mhm.

Q. I wonder about why a farmer would invest in debt capital or expend capital to improve irrigation systems given that uncertainty.

A. I do too.

Q. Oh, okay.

A. In general, you know, in general terms that uncertainty. Certainly that's what I've seen elsewhere that, within New Zealand and outside  
5 New Zealand that the level of uncertainty that comes from political process we'll call them.

Q. Yes.

A. You know election cycles or regulatory cycles are much more difficult to manage for than the cycles that come from commodity cycles or markets  
10 which then does have some bearing on the risk that they would accept or face.

1645

Q. And I think that was your point about risk, well, your point about expectation, so risk is correlated to expectation isn't it?

15 A. Mmm, mmm.

Q. And so we have seen many – several examples in the evidence of farmers investing within the last two years at least in making decisions around capital about improving irrigation systems within the last two years knowing that permits are about to expire and to myself, I mean I think  
20 what is essential to your operation that must be your primary asset rather than the land is actually available out of water for many of these operations, such a risky thing to do, but not if your expectation was that nothing would change an entire go and you'd continue to get water on the same terms and conditions as you previously had if not for the last  
25 100 years in the case of deemed permits so that's the risk and expectation correlation.

A. I think, yes, and I think the other side of it though is the those who in the new – going into a new environment are significantly constrained by either the risk or the certainty that might come from a piece of, you know,  
30 regulation or direction that limits what they can do.

Q. When you say "the new environment" people coming into the new environment, what do you mean by that?

A. Well, the – I was just thinking visually in my mind about those charts of the irrigation charges and they are little, there is in the way of paid



irrigation for a sheep and beef farm, dry stock farming, for example and them being constrained of we society accepting that that's the constraints that we're putting on individuals as well as ourselves as society for other benefits.

5 Q. For other benefits, yes.

A. For other benefits, certainly –

Q. Yes.

A. – but what's the relatively of those and that's the challenge for you folks.

10 Q. Yes, I know and I think the same can be said about our landscapes, who pays for the splendid, you know, vista of glory, there's plenty of landscapes, but who actually pays for all of that? Is it the landowner for the benefit of all New Zealanders or should -

A. Or do we collectively benefit?

15 Q. – or else collectively pay for it? So I think the same issue arises but in different contexts. So when decisions are made about whether to invest or not invest in irrigation in improvement of irrigation, infrastructure and decisions around increasing irrigable land areas, to what – what is meant by this issue of viability then, you know, that the Act speaks to? Alms have to remain, consent holders have to remain viable. You can't change, you can't change things within a – if you go to review the consent, you know, you must consider the viability of the farming operation. So how geared, you know, how sensitive are these decisions to subsequent regulatory or political decisions around access to water and management of farm systems?

25 A. That's down to an individual.

Q. Right.

A. But it's also hard to, yes, it's very hard to generalise about that. Is your viability of the last ex-years, whatever, viability and quotas that which should be extended or is your opportunity advanced or constrained? Now that's the –

30

Q. So you're dealing with opportunity costs?

A. Mmm.

Q. You may be viable, but your ability to be able to pay down that debt is reduced which is fine, you can still pay the debt down, but you're foregoing other opportunities?

5 A. Mmm, which might be, you know, your kids' education or something like that.

Q. Yes, that's right, an overseas holiday or your retirement, yes. So is that where –

1650

A. In very br- broad terms –

10 Q. Broad terms -

A. - that's what viability will be about, and I think it will be, viability is going to be, in that broad definition, sort of unique, as everything else is, to individuals, and therefore, certainly in our sheep and beef farm survey, there's people that a lot of other people in the survey would say are not viable, but, you know, they've survived and been viable on the basis.

15

Q. Yeah, yeah, yeah. So the question of viability is not readily amenable to regulatory or political decision, it is actually person.

A. It ends up being about personal values and circumstances, age and stage of life, all those sorts of things that are about individuals and their objectives.

20

Q. And their objectives, yeah.

25

A. And certainly, I have had farmers who don't want to be involved in dairy farming because they just don't want to get up or be responsible for getting up and milking cows every day. Others, my colleagues here have probably heard me say, who am I to make a decision that he's not viable by continuing to have that objective for himself or for his family, them for their family?

Q. Yes, I understand that. No, that is really helpful.

**MS IRVING:**

30 Just one minor point, we can provide you were having a discussion with Andrew about the actual numbers of sheep and beef and dairy cows in Otago, and that discussion was leading on to understanding dairy support in Otago, and we can hopefully provide some of that information in terms of what the actual how

numbers are, however, a lot of the dairy cows that are wintered over in Otago actually come from Southland.

**THE COURT: JUDGE BORTHWICK**

Q. Oh, we know where they come from, don't we, Mr Maw?

5

**MS IRVING TO MR BURTT:**

Q. Okay, okay, so I'm not sure how easily it will translate and be able to make that relationship.

A. And I think that ties into that sort of integration and inextricable links to other regions and other economies and other businesses.

10

**THE COURT: JUDGE BORTHWICK**

No, probably, I do not think we need, not unless you want it, Mr Maw, in particular, but I think I have probably got enough to get a good sense of it, I do not want to imagine or overstate its important. It is important, but not to overstate it in terms of relevant importance to sheep and beef, you know, the traditional economies.

15

**MS IRVING:**

Thank you, let us know if you change your mind.

20 **WITNESS EXCUSED**

**THE COURT: JUDGE BORTHWICK TO MS PHILLIPS**

Q. This may be something or nothing, but thus far, everybody has produced their changes by simply tracking a version of the entire document, and often, most people have actually track-changed a version of  
 5 Mr de Pelsemaeker's document, dated the 14<sup>th</sup> of March, because he has had lots of edits in there which, by and large, people have been happy with, and then they move on to, you know, put in the insertions that they want, and that has been helpful for us, you know, we do not have to sort of go backwards and forwards and say: "Does Ms Marr like this bit and  
 10 that bit and that bit?" So it would be good to actually have her relief produced in the context of the plan change setting, and my suggestion is – I know you have got a pretty confined case – did you have an interest in that schedule? You have not, have you?

A. We opposed it, but no, we don't, we haven't.

15 Q. Well, you have got an interest in it, but you did not call any evidence on it.

A. No, we didn't, we opposed it because we opposed so much of the rest of the plan, not because we opposed the details of the schedule itself. Water quantity is not an area where we normally participate, unless it's  
 20 stock water.

Q. All right, so in terms of actually tracking through beef and lamb, should that be to a JWS version if the planner is happy with that, or should it be to a notified plan version? Otherwise, we will just simply be going backwards and forwards. You did not cite the controlled activity. Are you  
 25 happy with the controlled activity? Which version of the controlled activity are you happy with?

A. We would really like to work from the JWS version, if that is possible, just because that appears to be what the various planners have agreed to, unless Mr Maw has any objection.

30

**MR MAW:**

No, that's okay on the proviso that counsel's witness doesn't agree with all of the JWS version of the document, and I'll keep saying that so everyone's alive to that, and I appreciate the Court is.

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

- Q. I know, so it would still be good to have it on – if the witness does not agree with, say, the controlled activity rule, then she should set out her relief for the controlled activity rule, unless, of course, it is not being pursued.
- 5 A. Yes, I would have thought – now, Ms Perkins did the same exercise before she gave her evidence, and my recollection is that she tracked in her changes to the joint witness statement version, or I might be wrong about that.

**10 THE COURT: COMMISSIONER EDMONDS TO MR MAW**

- Q. Mr Hodgson, who's yet to come, has worked off the JWS version.
- A. Oh, he's worked off the JWS?
- Q. But I think he's just agreeing with it, so I don't think there's anything that stands or falls on that.
- 15 A. I'll just see if I can find Ms Perkins' updated supplementary.

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

- Q. Perkins is for Landpro?
- A. Yes. (inaudible 16:58:04). I think what Ms Perkins did was track into the de Pelsemaeker version the joint witness changes and then added her changes into that document, because they were –
- 20 Q. That is fine, because I think she was just adding in, slotting in a discretionary activity policy and rule.
- A. Oh, she tinkered a little with policy from memory.
- Q. Yeah, tinkered a bit, yeah.
- 25 A. But it was all in the single document, which made life a whole lot easier.
- Q. It is a whole lot easier, yeah, and so that is what I am suggesting.
- A. That would be very helpful.
- Q. If Ms Marr, using – if this is appropriate – using the JWS as a template, if she just adds in the parts that she wants to add in, because there is a whole new RDA rule and policy, I think, there, and then if there are other bits she does not agree with, you know, perhaps she can just highlight those yellow, but if she does not say anything about them, we will just
- 30

have a confirm that she is happy with everything on the basis of this new RDA policy, new RDA rule. That would be easiest for us, so that we are trying to constantly bring through, as we go, into two-month hearing, this same sort of baseline document.

5

**MS PHILLIPS:**

Thank you, your Honour, and when would you like this?

**THE COURT: JUDGE BORTHWICK TO MS PHILLIPS**

Q. Tomorrow.

10 A. Tomorrow, thank you.

Q. Yeah, but, I mean, saying that is quite easy, it is easy inasmuch as there is a word template knocking around that Mr Maw can get to you.

A. Ms Marr might have a copy of the word? She does not have a copy of the word document.

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

Q. No, You have got one, though, haven't you?

A. My learned junior can provide that. Yeah, I can email one through, and the sooner that lands back, the better, because I will mark my cross up on that version, so if it can be done tonight and then circulated once it is done tonight and just emailed around, that will be really helpful. I can work with Ms Phillips in relation to that.

20

Q. Okay, okay, all right. So try and get that done tonight so that we can work in cross-examination tomorrow. So that was the first thing, thank you very much, and then second question, question for you, is just something that we are a little unsure of, wanted your clarification, you have got an RPS to come, a proposed regional policy statement to come, I think, in June. Is this just a replacement water chapter, or is this a whole new plan, a whole new policy statement?

25

A. Fortunately, there was a discussion, briefly, about that at lunchtime, and I understand the answer is it's a new RPS.

30

Q. That is what I thought.

**THE COURT: COMMISSIONER EDMONDS TO MR MAW**

Q. An entire new RPS?

A. Yeah, an entire new RPS.

**THE COURT: JUDGE BORTHWICK TO MR DE PELSEMAEKER**

5 Q. Is that right, Mr de Pelsemaeker?

A. Yes, I mean, your Honour, it will be a significant change from the partially operative RPS.

Q. So are you going to be drawing down bits of it but rewriting substantially all of it? Is that the sort of idea?

10 A. Especially on the freshwater, it will be a rewrite.

Q. Yeah, yeah, yeah.

**THE COURT: COMMISSIONER EDMONDS TO MR MAW**

Q. So in terms of process, does that mean the water commissioners deal with the whole of this new document? Because I guess that hadn't been  
15 my understanding, I thought the water commissioners were dealing with all the things that came out of the NPS (inaudible 17:01:21), not out of everything. I'm just wanting to be clear about it.

A. We had a discussion about that at lunchtime too, because I'm curious to the answer to that question. My read of the legislation is that it goes to  
20 two different places.

Q. Well, that would be my understanding.

A. Which is potentially problematic and a little bit untidy, potentially, and that debate is yet properly to be had because one has not popped up yet, but that will probably be the first.

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

Q. Okay, well, anyway, that confirms my understanding, it is actually the whole thing, that we will have a new proposed policy statement before it.

A. Yes.

Q. Okay, good, very good. So can we make it a 9.30 start tomorrow, and  
30 that would be good.

**COURT ADJOURNS: 5.02 PM**



**COURT RESUMES ON THURSDAY 15 APRIL 2021 AT 9.36 AM****THE COURT: JUDGE BORTHWICK**

Good morning. Have a seat. I need to clean my workplace, sorry.

**5 MS BAKER-GALLOWAY:**

My additional colleague today, Ma'am, Ms McGlaghan.

**THE COURT: JUDGE BORTHWICK**

Good morning. Anything arising overnight?

**10 MR MAW:**

No, your Honour.

**THE COURT: JUDGE BORTHWICK**

I am just thinking out loud and I have not had a chance to talk to my colleagues about this and thinking about the relationship between the two NPSs and thinking that you got, you know, complete new proposed RPS to be lodged or notified in sort of in June and just wondering to what extent that RPS responds to the issues raised by the territorial authorities in terms of their capacity plans because if they're thinking is so well advanced, and by that I mean whatever the NPS says is advanced, and I am not sufficiently familiar to be using its terms but then has that, is that echoed or reflected in the RPS, and that would be interesting to know, not that actually I'm entitled to any information about a proposed RPS but yes, I mean one of the issues for us is to what extent are those desire to obtain water permits to reflect growth in urban or rural areas advanced within the short, medium or long-term planning.

25

**MR MAW:**

Yes. Now, in terms of the content of the new RPS, I'm simply not across the detail of that so I can't actually answer that question but if you look at the NPSUD, it has the mechanism built in with it for the FDS or the future development strategy.

30

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

Q. Yes. Yes.

A. And that's still to come. There's quite a lot of planning that occurs in terms of preparation for that instrument and that will be after the RPS is notified.

5 Q. It's notified. And that strategy, that FDS, who prepares that? Is it each territorial authority or is it the region?

A. It's a joint exercise.

Q. It's a joint exercise.

A. Yes.

10 Q. Together.

A. And that seems to be the mechanism by which the integrated approach to the spatial planning is to occur. It may well be that once that exercise is complete, the RPS then needs to be adjusted to reflect the outcome of that exercise.

15 Q. And that's actually also in the NPS Urban Development. That's quite clear.

A. And it does envisage that –

Q. Yeah, a step.

20 A. - being a step, so insofar as the new RPS goes there, I would have thought it probably doesn't just yet, given that a lot of that work is also still to be done.

25 Q. Okay. That's helpful because we have to come back to, I don't know whether we were meant to be giving territorial authorities direction about whatever it is they've sought an adjournment for but if we are, perhaps that's the area that we need to press into in terms of the combined NPS processes.

A. Yes. Yeah, that's all I can say at this stage.

Q. No, I appreciate that. Okay. All right. Very good. So we've got your final witness.

30 0940

**MS PHILLIPS:**

Yes. Good morning, your Honour, Commissioners, and this morning we will be calling Helen Marr. If Mr Maw would assist with swearing in, I'd be very grateful.

**MR MAW:**

I wonder perhaps before I do that, there was a further document circulated by this party last night. It was an updated or a supplementary statement of evidence from Dr Chrystal. I wonder whether you might address that before  
5 you call the witness.

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

Q. I didn't even look at it. I just put it to one side. It's like why has this been filed. So you want me to look at it and say something about that or?

A. Well, it's been –

10 Q. There's no leave to file.

A. No.

Q. Have you got any view on it?

A. I've read it. I'd consent to it being filed. It's a witness taking her obligations seriously in terms of reflecting on an answer she gave but I wouldn't seek to have her re-called to further examine her on the issue.  
15

Q. So in other words, what's the term that I need when filed by consent or admitted by consent.

A. By consent.

Q. Yeah. All right. Well, we'll have a bit of a look at that and okay, we'll just think about what the process is around that. No leave to file sought and nevertheless a supplementary brief. Is that to a correct a statement made?  
20

A. I wonder whether you might –

Q. I'm not sure actually.  
25

**MS PHILLIPS:**

Yes, your Honour, it is to correct a statement made during cross-examination.

**THE COURT: JUDGE BORTHWICK TO MS PHILLIPS**

Q. Of course, Dr Chrystal is your witness?

30 A. Yes, she is.

Q. So you don't link in a brief.

A. Yes.

Q. You actually have to seek leave of the Court –

A. I see.

Q. – before filing that brief of evidence and then the Court has to consider whether we need the witness back or whether we admit it by consent, which is really what the region is saying. It has no objection to that process and then the Court decides whether that is what will be done with the brief of evidence and it doesn't reflect anything other than other – it doesn't reflect anything. The Court then reads it and puts whatever weight on it as they assess so there's a bit of a process. Anyway, so you're seeking leave?

A. Yes, your Honour. Yes, please.

Q. Okay. It's all right.

A. Thank you.

**THE COURT: JUDGE BORTHWICK**

15 All right. Well, Commissioner, have you got any – well, we'll have a look at it at morning tea.

**THE COURT: COMMISSIONER EDMONDS**

I thought it was fine. I've read it.

**THE COURT: JUDGE BORTHWICK**

20 I haven't. So, yeah, but it's more than likely we'll just admit that by consent and notify other parties. Okay. Yeah. All righty. The only other matter that arises is in relation to the document filed last night, which is the edits now incorporated. Ms Marr's recommendations now incorporated into the 8<sup>th</sup> of April JWS. There seem to be some comment boxes added. I didn't see anything in them but it's  
25 not – it's reflecting the fact that it's not the version in front of the Court. Is there anything arising from that?

**MR MAW:**

These are the comment boxes on the method.

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

Q. Yeah, there is a couple.

A. Yes. Yeah, I would have thought those ought to be struck out. Those seem to be communications as between the experts.

5 Q. As between parties, yes. So in that respect, I mean they are communications as between experts. In saying that, that's as I understand the state of play, so I wasn't terribly anxious about it but the only thing I was anxious about was that this is not the JWS copy filed in court. This is some other version of it and so therefore I don't know  
10 whether or not the wording is exactly the same or changed.

A. And I can't assist with that either.

Q. Who provided that copy?

**MS PHILLIPS:**

15 I believe we were provided that by Otago Regional Council yesterday after our hearing concluded, with the understanding that we would be working from a Word document version of the joint witness statement.

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

Q. Who in the ORC provided the document? Can you just take  
20 Mr De Pelsemaeker's, just have an update, take his instructions, if that's the right word, or just seek clarification just to check that this document is indeed the same copy as the document filed in the JWS and the only difference is the comment notes.

A. Sure. Mr De Pelsemaeker's confirmed that the text of the document is  
25 the text from the joint witness planning statement but the only additions are the words in the comment boxes which can be put to one side. For the purposes of this exercise, those boxes are just flagging where some additional work needed to be done as between the planners and experts on the method.

30 Q. Yeah. Okay. Very good. Okay. So that's helpful. Thank you very much and we now need to call your witness.

**MR MAW CALLS****HELEN MARIE MARR (AFFIRMED)**

Q. Do you confirm that your full name is Helen Marie Marr?

A. Yes.

5 Q. And you're a senior planner at Perception Planning Limited?

A. Yes.

Q. Of which are also a director?

A. Yes.

10 Q. And you've prepared a statement of evidence-in-chief dated  
5 February 2021?

A. Yes.

Q. And in that statement of evidence, you've set out your qualifications and  
experience?

A. I have.

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

A. No.

Q. You have also prepared a supplementary statement of evidence dated  
26 March 2021?

A. Yes.

20 Q. Are there any corrections you wish to make that document?

A. No.

Q. And you have participated in joint witness conferencing?

A. Yes.

25 Q. And you're a signatory to the joint witness statement planners,  
Schedule 10A4 dated 7 and 8, the document's dated the 8<sup>th</sup>, I think. No,  
that document dated the 8<sup>th</sup> of April 2021?

A. Yes.

30 Q. Do you confirm that the evidence you've given in each of those  
statements and the position you have recorded in the joint witness  
statement is true and correct to the best of your knowledge and belief?

A. Yes.

Q. And have you prepared a summary of your evidence?

A. No, I haven't.

Q. Do you wish to make or to give an executive summary of the evidence that you have given prior to questioning?

A. No, I think my evidence can be taken as read. It's quite short.

5 Q. Okay. Well, we shall proceed on with some questions and those questions will now come from me. If you give me a moment.

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

Q. Has the witness been sworn in?

A. Yes.

0950

10 **EXAMINATION CONTINUES: MR MAW**

Q. I want to start just to make sure that I've understood where your thinking has now reached. So there seems to have been an evolution between the evidence-in-chief and then some reflection on the process to date, which has culminated in a revised planning position that you've put  
15 forward, which was also informed through the joint witness conferencing and when you look at the version of the plan change that you are now recommending, there are, to my eye, two key differences as between your version of the document and the position of the Regional Council's planner, Mr De Pelsemaeker. The first difference relates to the way the  
20 restricted discretionary activity works and in the context of that activity, you are recommending that in relation to the expansion of irrigation area there should be an opportunity for an expanded area in particular circumstances.

A. That's right.

25 Q. And the second difference relates to the date range in terms of the data that might be used to calculate historical use. Mr De Pelsemaeker remains of the view that data up until June 2020 should be used but not data beyond, whereas the version of the Plan Change 7 that you recommend has removed that date restriction.

30 A. In Schedule 10A4?

Q. Yes.

A. Yes, that's right.

Q. It's not in the schedule. It's in the controlled activity rule and the restricted discretionary activity rule. So are those the two areas of difference as between you and Mr De Pelsemaeker?

A. As I understand it, yes.

5 Q. So I'd like to start with the first of those topics and that relates to the expansion of irrigation area for which you provide some recommendations in terms of the restricted discretionary activity rule. Now, you've set out in your supplementary statement of evidence your opinion in relation to the reasons why you say that that's inappropriate  
10 rule or rule framework to have and in relation to the expanded irrigation area, you've set out the reasons, and this is on that paragraph 17 of your supplementary statement. You'll see there that Mr De Pelsemaeker has recorded four reasons why he does not recommend or why perhaps he initially had recommended the expansion and you then comment on each  
15 of those reasons and I want to explore each of those with you.

A. Okay.

Q. So in relation to the potential for increased adverse environmental effects, you've expressed an opinion both earlier in your supplementary evidence and at paragraph 19, that there is both a low risk of increased  
20 environmental effects from expanded irrigation and sufficient controls elsewhere in the Plan and in the NESFW for Council to control the effects through other avenues if they, being the Council, wish?

A. Yes.

Q. So in terms of your opinion that there's a low risk of increased  
25 environmental effects from expanded irrigation, what evidence are you relying on for that opinion?

A. I'm relying on the evidence of Dr Chrystal and her analysis of the change from lesser efficient irrigation system to a more efficient irrigation system is, can be managed to actually reduce the adverse effects. I'm also  
30 relying on evidence, for example from Ms Dicey, that the risk of somebody actually putting a great deal of investment into intensification is actually quite low because of the short duration of the consent.

Q. So those are perhaps two different categories of risk. The first is the technical environmental risk associated with increased with increase



nutrients and I understand you to be saying you rely on Dr Chrystal's evidence in that regard?

A. Yes.

5 Q. And then second, you are relying on an evaluative, so evidence from an evaluative witness, a planner, Ms Dicey, in relation to the risk of it actually occurring.

10 A. Yes, and I've also considered the likely scenarios under which intensification or sorry, increased environmental effects might occur, what kinds of land use changes might lead to that increase in environmental effect and I've considered the regulatory environment around those changes in land use.

Q. We'll come back to those topics.

A. Yeah.

15 Q. I do want to understand those a little further. So in relation to Dr Chrystal's evidence, you were here yesterday when she gave her evidence?

A. Yeah, I was.

20 Q. And you will recall that there were two parts of her evidence where she explored the risks of increased irrigation. In the first part she referred to a study that she had conducted to calculate the potential increases in nutrient or nutrient or contaminant loading associated with a shift to irrigation and this was appendix B in her evidence. And when you consider appendix B, it showed an increase in, in that instance, nitrogen in relation to each of the scenarios that she tested.

25 A. Yes.

Q. So insofar as you are relying on Dr Chrystal's evidence, are you saying to me that it's not that part that you're relying on? You're relying on the second part?

30 A. I'm relying on both her evidence and my understanding of the regulatory framework. So I've carefully considered the kinds of things that might occur on a farm that would lead to an increase in contaminant loss and then looked to see does the wider regulatory framework give an avenue to manage those effects or not. So it's both of those things together.

Q. Right. Well, let's just press pause on the second part of that. We will come back to that. So the part of Dr Chrystal's evidence where she examined the effects of an increase of irrigation in the Otago region, you accept showed an increase in nitrogen leaching associated with a change to irrigation from dry land farming?

5

A. Based on the overseer modelling, assuming that only good management practice is implemented, yes, it is, there is a, that can occur, yeah.

Q. And then there was a second part of Dr Chrystal's evidence where she had referred to a paper, *Wheeler and Bright*, from 2015, and you will have heard the questions that I put to the witness in relation to that paper and the purpose of that paper and the recognition within that paper itself that the example used was only for illustrative purposes?

10

A. Yes.

Q. And so great care, you would accept, needs to be taken with placing any reliance on the paper for a different purpose?

15

A. Yes.

Q. Now, Dr Chrystal also outlined the types of activities for which she foresaw a risk of increased contaminant or nutrient runoff occurring and she provided that list at paragraph 11 of her evidence-in-chief.

20

**WITNESS REFERRED TO EVIDENCE-IN-CHIEF OF DR CHRYSTAL – PARAGRAPH 11**

Q. Sorry, it was paragraph 18.

**WITNESS REFERRED TO PARAGRAPH 18**

Q. And she referred to activities that pose a higher risk of contaminant losses to water from others. Now, do you have a copy of that evidence to hand?

25

A. Yes, paragraph 18.

Q. Yes, and you'll see it's in the executive summary, five particular situations where she foresaw a risk of contaminant losses to water.

A. Yes.

30

Q. Now, I want to look at these potential activities and I want to understand from you where you say the protection exists in other documents or other policy documents to appropriately manage or mitigate the risk associated with these activities. So when you look at irrigation itself, so matter

number 1, where do you say that that, the risk of the adverse effects associated with irrigation, where are those effects managed?

A. So irrigation, as I understand the evidence, can lead to an increased risk of nutrient leaching if it is managed in a way that allows more water to drain through the system. So that's the risk is, the risk is poorly-managed irrigation.

5

1000

Q. The risks, would you accept the risk's a little more complicated than that in that the risk also relates to the input of contaminants to the land surface that might then leach through the soil profile? So the activity that's taking place on the land is also relevant?

10

A. The activity that's taking place on the land is relevant. Whether it is irrigated or not irrigated and there are many controls in the NES for fresh water and in the Regional Plan that address both land use risks, for example intensive grazing or changes in dairying area or dairy support area for example, and there are controls in the Regional Plan around, that has set thresholds for nitrogen leaching on different types of land and different risk categories and allows the Council to manage that risk from all activities.

15

Q. Right. We're going to have work through that list a little more carefully. So the first document you referred to was the National Environment Standard, the NESFW.

20

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

Q. Can we get that in front of us?

25

A. Might be helpful.

Q. Yeah, thank you. Do we know what volume of the common bundle it's in or?

A. It's apparently not in the common bundle.

Q. It's not? Okay. I can dial that up. I'm really interested in this subject.

30

A. So the full title of the document is *Resource Management*, then in brackets (*National Environmental Standards for Fresh Water Regulations 2020*). It's not in the common bundle.

Q. That's my own personal copy. You take my personal copy and I'll get it. I'm just going to throw that up onto the screen if we can. So just pause a second. Commissioner Bunting, I don't know if you have it do you?

**THE COURT: COMMISSIONER EDMONDS**

5 Well, I could get it on my –

**THE COURT: JUDGE BORTHWICK**

You can get it. Okay. Right. So we've got one hard copy and I've got it on the computer. Okay. Right. Good. Now it's everywhere.

**EXAMINATION CONTINUES: MR MAW**

10 Q. I'll check the witness has got –

A. I do have a copy.

Q. Very good. All right. So the first part of your answer explained that this document somehow controlled the effects of potential increases in nutrient contamination or loading associated with irrigation. I wonder  
15 whether you can help me understand precisely how this document achieves that outcome?

A. My answer is a little more nuanced than that, yes.

Q. Yes. You'll have to step through it and I appreciate it will be more nuanced.

20 A. It is, yes. It is quite complicated. So irrigation can have an adverse effect if it is driving more nutrients through the soil because of an increased amount of water. So that is an effect that can be managed by controlling the amount of irrigation and managing that well. The other way that it can drive an increase is it grows more feed for the animals, which, and  
25 Dr Chrystal explained this yesterday, producing more feed allows either to feed the same number of animals more food, which puts more throughput which puts more nitrogen in urine patches or it can increase the stocking rate. So the first of those, the driving more drainage, can be managed through the irrigation, management of the irrigation and through  
30 irrigation consent. The others are discharges –

**THE COURT: JUDGE BORTHWICK**

Q. Just take it slowly.

A. More – sorry.

5 Q. Yeah. Yeah, so I'm with you until you got to the first one of those, driving more irrigation and then I didn't catch what you actually said, the last part of your sentence.

A. So the irrigation can drive more drainage, which can drive the existing nutrients that would have been there before to move through the, further through the soil profile and result in leaching. The other impact the irrigation has is the growing more feed. More animals, more urine patches, more available urine or nitrogen for leaching. That can occur with or without irrigation. So a stocking rate could be increased by buying in more feed, buying in grain for example, or by growing more feed on the property. So, or a change in land use type. So moving from sheep to dairy, for example, or moving to dairy support, which is moving from sheep to cattle with more outputs or –

10

15

Q. Sorry, what was the last category?

A. Moving from sheep to dairy support.

Q. Sheep to dairy support. So a change of stock type?

20 A. Yes.

Q. Sheep to dairy.

A. Yeah.

Q. Is the example?

A. Yeah.

25 Q. But it could be other stock, couldn't it? Sheep to deer would do it?

A. I actually am not sure about the relative impact of sheep to deer.

Q. Yeah, all right. Anyway, so a change of stocking type and then what was the last category, third category?

A. So change in land use. So, which is similar to stocking type. So you could go from dry stock to dairy or you could within dry stock go from sheep to cattle or sheep to dairy support.

30

Q. Yeah.

A. So those changes can occur with irrigation or they can occur without irrigation. You could change your stocking policy on your farm. You could

buy in more feed or you could be growing a crop that's different and has a different impact on leaching profile. So I've carefully considered each of those scenarios and what is the regulatory environment, what is the ability of the Council to control those things when they occur? And that's where I get to first the National Environmental Standard for Fresh Water Regulations. It does contain in Part 2 a number of standards for farming activities and that includes regulations that control agricultural intensification.

**EXAMINATION CONTINUES: MR MAW**

10 Q. Now, you might, just as we step through this, provide some direct reference to the provisions in the NES.

A. Yes, certainly can. So the first, so this is at page 15 in those regulations. So the first one is conversion of forest to pasture, which is not particularly relevant to what we're discussing but Regulation 18 controls the conversion of land to dairy farming, so from a dry stock to a dairy farming scenario or expansion of an existing dairy farm onto new land and that is permitted up to an area of 10 hectares but beyond that requires a discretionary activity consent. So the risk of increased irrigation area leading to a dairy conversion is, in my opinion, quite small –

20 **THE COURT: JUDGE BORTHWICK**

Q. Just pause there for a second.

A. – because of that.

Q. So we're looking at section 19 are we? Discretionary activity.

A. Yes, 18.

25 Q. Conversion of land to farm, land on a farm to a dairy farm.

A. Yes.

Q. Right. Just let me read it. And dairy farm, I'm assuming is a defined term and if it's defined does includes dairy support or is it –

A. Dairy support is a separate category, which is dealt with in a different regulation.

30

Q. Okay. And you said the risk of conversion in Otago, the whole of Otago, from dry land farming to dairy farming as defined is small because of what?

5 A. It is controlled by the regulations, so if a person had a proposal to convert to a dairy farm, they would require a resource consent, where that land use could be considered and the associated discharges.

1010

Q. Under what plan?

A. Under the regulations.

10 Q. Under this, under the NES Regulations themselves?

A. Yes.

Q. Okay.

15 A. And those, Regulation 24 states under what circumstances that discretionary activity consent could be granted and it specifically requires the water quality effects to remain unchanged.

Q. Well, it doesn't. It says you shouldn't increase your contaminant load in the catchment and concentration of contaminants in fresh water or other receiving environments that shouldn't result in, there should be no increase of that.

20 A. Yes.

Q. Not the nefarious effects, are there, because –

A. Well, you're correct. It is focused on contaminants, both load and concentration, so that goes to cumulative adverse effects in the catchment and in the, any particular streams on the property as well.

25 **EXAMINATION CONTINUES: MR MAW**

Q. So when you think about the conversion of land from farm to dairy farm land, do you foresee the NES essentially precluding a wholesale conversion of a dry land farm to a dairy farm?

30 A. I do. I, well, it requires a discretionary activity resource consent and it gives direction as to what types of water quality effects are acceptable in the regulation. So the Council has control and discretion of whether to grant that consent or not and what kind of conditions it might be granted

under. So that's a large amount of control the Council has using this mechanism.

5 Q. So the risk that exists in the permitted activity framework within this document is a risk of incremental expansion of 10 hectares per farm for this type of use?

A. Yes.

Q. And have you assessed the potential cumulative impact of that scale or level of effect?

A. Of a 10-hectare increase, no?

10 Q. And you were here yesterday when I asked Dr Chrystal what the leaching rates might be associated with intensive winter grazing facilitated by increased irrigation?

A. Yep, I was.

Q. And do you recall her answer?

15 A. Not in detail. Intensive winter grazing is regulated separately within the environmental standards and that essentially grandparents area, so the area of intensive winter grazing cannot increase on the farm.

Q. And have those provisions been suspended recently?

20 A. The environmental, as I understand it, the, if the effect's base, the conditions around pugging, replanting, have been suspended but the requirement around area remains, as I understand it.

Q. And that area, and we'll come to those provisions shortly, but there's a reference period?

25 A. Yes, there is, yes, which is defined in the regulations. The area cannot increase beyond the reference period, which is 2014 to 2019.

Q. But there are no controls in relation to the reference period as to whether the land was irrigated or not?

A. Are you speaking in relation to intensive –

Q. Intensive winter grazing.

30 A. – winter grazing? The control is on the area under intensive winter grazing, not on –



**THE COURT: JUDGE BORTHWICK**

Q. Can you take me to the relevant provision so I can see what you are both are thinking about.

A. Apologies. It is Regulation 26, 27, 28 and 29.

**5 EXAMINATION CONTINUES: MR MAW**

Q. So if we look at Clause 26, so this is the permitted activity for intensive winter grazing.

A. Yes.

Q. And that sets out some conditions in relation to the permitted standards?

10 A. Yes.

Q. And what areas are referred to?

A. I'm not sure what you mean by areas.

Q. Okay. So let's look at the condition. So you'll see there condition 3, which refers to the activity being undertaken in accordance with the farm's certified fresh water farm plan.

15

A. Yes, if they have a farm, fresh water farm plan, yes.

Q. And if they don't have one, we move to condition 4.

A. Yes.

Q. And subparagraph (a) provides a restriction in terms of the area?

20

A. Yes, it provides a restriction in terms of the absolute maximum –

Q. And what is –

A. – that's permissible.

Q. – that area?

25

A. So 50 hectares or 10% of the farm and there is a further restriction on area in Regulation 29. It is difficult to read this, these regulations, but Regulation 29 puts a further restriction on area and that it has to be the same area that was used during the reference period. So there is no provision for expansion of intensive winter grazing into new areas or new farms or even larger areas on the same farms. Any of that would require a resource consent.

30

Q. And then in terms of those consents, have you analysed the pathway through? So what would be required to be shown?

- 5 A. So it would – so if it was a greater area, it would be discretionary activity under Regulation 30 and the same restrictions apply as we discussed earlier in relation to converting land, which is a restriction on the granting of a consent unless it is, the Council is satisfied that that activity won't increase contaminant loads or concentrations of contaminants, but again it's a full discretionary activity so the Council has full discretion to consider other factors as well as that.
- 10 Q. So you're satisfied, based on those regulations, that the risk of increased land being used for intensive winter grazing is sufficiently controlled by these regulations?
- A. Yes.
- 15 Q. So the risk that does exist in relation to these regulations is an increase of 10 hectares of land for use on a dairy platform in terms of the permitted activity?
- A. Yes, but that can't be as a result of irrigation. So there is an absolute restriction on dairy farm irrigated area in Regulation 20. Apologies, that does also have the 10 hectares. So yes, the risk is a 10-hectare increase.
- 20 Q. Do you accept that there could be some cumulative effects associated with that level of increase over a catchment across the region?
- A. Yes, there is. I also noted that the Operative Land and Water Plan has got a framework to address. Leaching, absolute leaching from individual farms.
- 25 Q. Now, let's explore that a little. So you're aware that the limit – no, well, explain to me what's the limit you're referring to here?
- 1020
- A. So I'm referring to the rules in chapter 12 which sets out a framework which includes nitrogen leaching limits based on the sensitivity to leaching in the receiving environment, provides permitted activity thresholds that come into force in the future as I understand it, and that beyond those levels a resource consent is required.
- 30 Q. Now, there's been a change to that regional plan by virtue of those thresholds having been suspended. Now I'm not sure whether you are alive to that change that's been made recently?

A. I'm not on top of the provisions and their workings, I would – no, I'm not. I looked at the plan and I saw that there was a framework for managing leaching from farms that had been in place, and that consents are required beyond thresholds and presumably the thresholds are set at a level of acceptable environmental effect, but I have not enquired deeper into that.

Q. So the threshold that you may have had in mind, was that the 30 kilograms of nitrogen per hectare threshold for a permitted activity?

A. As I understand it there are three thresholds, 15, 20 and 30 – 25 and 30.

10 **THE COURT: MS BORTHWICK TO MR MAW**

I mean, this is quite important so it would be good just to put you know, an updated copy of the regional plan for the witness because the witnesses' understanding is that the regional plan does control for contaminants in this particular area, but it's not my understanding.

15 **CROSS-EXAMINATION CONTINUES: MR MAW**

Q. If you would explore the planning document, it's in the common bundle at tab number 1 in volume 1? Have you got the common bundle with you?

**WITNESS REFERRED TO BUNDLE OF DOCUMENTS 1**

A. Yes.

20 Q. Perhaps I could take you to page CB124 and Policy 7D

A. CB124, what was the policy again sorry?

Q. 7D?

A. Yes.

Q. And I'll have you then turn over the page there to 7D(2) and there's reference to schedule 16 discharge thresholds applied of permitted activities?

A. Yes.

Q. And you'll see there the date from 1 April 2026?

A. Yes.

30 Q. Now, it may well have been when you considered this plan when you were preparing your evidence that Plan Change 6AA had not yet been

made operative, the effect of Plan Change 6AA was to shift that date out to 2026.

A. Right.

5 Q. So when you mention that there are thresholds in the plan that control the - or provide thresholds in terms of discharges from these types of farming activities. Was it these thresholds that you had in mind or something else?

1025

10 A. No, it was those thresholds. If the council has considered the issue of nitrogen leaching from farming activities and put in place a framework to manage those, and they have seen fit to make the time for dealing with those as 2026, then I assume there's a good reason for that.

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

Q. We were told it was political.

15 A. Sure.

Q. You know, you have to be careful about your assumptions.

A. Okay, okay. The planning framework kicks in with the thresholds at 2026 for all activities, so if we were to apply a different test to some of those activities, there would have to be – I'm not sure why we would treat one  
20 small group of activities differently than all the rest of the activities.

Q. What do you mean by that? Which small group did you have in mind?

A. People who are changing their irrigation systems to a more efficient irrigation system that happens to cover a greater area. Why those would have more controls over them than people who were intensifying their  
25 land use through other mechanisms.

Q. Isn't this the perennial problem faced by every council around the country, which is there are measures to be brought down on a regional plan which can control for the volume and concentration of contaminations, but in addition to that, is it not often the case that land use activities may be  
30 unregulated, which can also have increased the volume and concentration of contaminants in the environment and also lead to effects, and so you can do what you like in a regional plan, but the chances are, there's unregulated activity happening on land which can take up all of

the benefit that you are having through your farm management measures which have been brought to play in a regional plan.

A. On other places, yes.

Q. So there is a dual issue there. Is that a fair summary of it?

5 A. Yes, it is extremely difficult. Managing the nutrient leaching from farms is an extremely difficult thing to regulate, and it's quite hard for regional plans to keep up with that change, absolutely, and it needs to be regulated if we're to improve water quality. I'm not for a moment suggesting that we do not regulate it. What I'm looking at is what is the regulation we currently have, what are the risks, and what's the regulation we currently have, and does it address those risks?

10

Q. And I think this is where counsel was asking you questions, what is in place to address those risks?

A. Yes, so what is in play is the NES right now.

15 Q. That's one thing, but is there anything relevant in the regional plan is where we're at.

A. Yeah.

Q. Yeah.

**CROSS-EXAMINATION CONTINUES: MR MAW**

20 Q. Well, I was going to cut right to that question. In the absence of those thresholds, which you were relying on as providing the mechanism in the regional plan to control those effects, is there anything else in the regional plan that you are relying on as controlling those effects?

A. Not that I'm aware of, no, and it may be that there is a gap to address intensification beyond what the national environmental standard controls, which is land use, change, and intensive winter grazing.

25

Q. And coming back to Dr Chrystal's list in her evidence, para 18, for example, cropping, the NES doesn't control cropping.

A. It does not control changes to cropping, no it doesn't.

30 Q. Effluent storage, land application and management?

A. The NES doesn't control those, but the regional plan does.

Q. And are there limits in the regional plan in relation to discharges from those activities.

A. Not familiar enough with the detail of the plan on that, but I did note that there were new rules and policies around managing effluent systems.

Q. How about fertiliser use, including type, timing, and load?

A. Nothing in the NES. Sorry, there is something in the NES, there is an absolutely limit on the application of fertiliser, it cannot go beyond 190 kilograms of nitrogen (inaudible 10:30:22), so that controls the load.

**THE COURT: JUDGE BORTHWICK**

Q. How much is that, 196?

A. 190 kilograms.

**10 CROSS-EXAMINATION CONTINUES: MR MAW**

Q. Of synthetic nitrogen fertiliser.

A. That's right.

Q. From memory.

A. Yes.

15 Q. Yeah, it might be helpful just to pull that out.

**THE COURT: JUDGE BORTHWICK**

Q. That is an interesting provision. You'd probably kill everything on the land if you put that on in a single day, but anyway.

A. If you put it on in a single day, yes.

20 Q. Yes, so where are we at?

A. But as I understand it, there are quite a few farms that use more nitrogen fertiliser than that. Let's find it, subpart 4, page 22.

Q. So it's part 4, page 22?

A. Yes.

25 Q. No, that's not going to help me.

A. Starting at regulation 32.

Q. Oh, regulation 32.

A. Yes.

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. So when you look at that control, you accept it's a fairly blunt control in terms of fertiliser, a maximum cap on fertiliser?

A. Yes, it is.

5 Q. It's not related to climate conditions?

A. No.

Q. Or irrigation rates?

A. No, it doesn't address any of the best practices for fertiliser application that Dr Chrystal spoke through, for example.

10 Q. And the regional plan contains no controls in relation to those risks either?

A. Just looking at that, it does have a permitted activity for fertiliser discharge. It's fairly brief. Reasonable measures are taken to minimise any discharge to water.

**THE COURT: JUDGE BORTHWICK**

15 Q. Sorry, which provision are we now in?

A. Rule 12.B.1.5.

Q. Is it 12 capital B, is it?

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. Yes.

20 A. So, no, that rule doesn't include any of the best practice measures that Dr Chrystal explained, and that, to be fair, are common in other plans, so there seems to be, overall, whether the land is irrigated or not, a gap in the plan for dealing with those things.

**THE COURT: JUDGE BORTHWICK**

25 Q. Okay, so let's tease that out a bit further in terms of what you now know or understand the position to be in terms of this regional plan. What are the gaps?

A. So the gap would be there isn't a framework in the plan to deal with best practice management. Well, there are no rules that require that for  
30 fertiliser or for managing grazing, and there is no framework in the plan that controls right now the discharges from farming activities, that

addresses cumulative impacts of those farming activities, so there's a potential future framework, but there is nothing in there right now that's controlling the intensification within farm, whether they're irrigated or not irrigated.

5 1035

Q. Is there even a requirement to have a farm management plan?

A. Not that I'm aware of.

Q. And the matters that Dr Chrystal raised in her evidence as to matters of which go beyond the good management practice assumed in the  
10 Overseer.

A. Mmm.

Q. And the matters that you've just mentioned now, these are matters which have been covered in other regional plans to a greater or lesser extent around the country?

15 A. They are, there are a number of plan frameworks that require farm management planning as Dr Chrystal explained, and have regulatory requirements for those. And the Government is, has set up a framework for having a national regulation for farm management planning. That isn't in place yet but I think – I know that they are working on it at the moment,  
20 what that national framework might look like, yes.

Q. But they're also measured in addition to farm management plans which are reflected in the rules and regulations of other regional plans, but just not this one?

A. That's correct, yes.

25 Q. Okay.

A. Other regional plans do have nutrient management controls.

Q. Yes.

A. Canterbury which you're very familiar with, I know has a sort of – has grandparenting regimes. Waikato has got a proposed plan at the moment  
30 which essentially has a grandparenting regime again. The Tukituki catchment in the Hawke's Bay has a natural capital allocation which is similar to the one in the Manawatu Horizons Plan, Bay of Plenty has a framework such as that. And I think that's – yeah, that's all that I'm aware of. Yeah.



**CROSS-EXAMINATION CONTINUES: MR MAW**

- 5 Q. And so in light of the gap or gaps that you've just identified, you then go on in your evidence to note that there is also policy support in the RPS and the NPS FM to enable a consideration of effects on irrigation, in that paragraph 20 of your supplementary statement of evidence?
- A. Yes.
- Q. Now, before we perhaps look at those documents you've recommended a restricted discretionary activity rule framework?
- A. Mhm.
- 10 Q. And when it comes to considering matters of policy in the context of a restricted discretionary activity framework, it's only policies that are relevant to the matters to which the discretion has been restricted that can be considered?
- A. That's right.
- 15 Q. So with that in mind, how can the effects of increased irrigation, so environmental effects associated with increased irrigation be considered through the lens of your recommended restricted discretionary activity role and the matters of discretion contained therein?
- A. Yeah. So there is no matter of discretion relating to water quality effects.
- 20 In fact, there's not really any matters of discretion relating to any kind of effects in the restricted discretionary or the controlled activity rule. They are focused on volumes and rates, that being my understanding of the purpose of the plan change. So if we would like to consider environmental effects of irrigation then that would need to be added as a matter of control
- 25 or discretion.
- Q. And listening – all right, well let's just press pause there. So as matters presently stand and you'd accept you can't go up to the RPS or the NPS FM to consider environmental effects associated with increased irrigation area?
- 30 A. Sorry, I'm not clear about what you're asking?
- Q. So there is – right, well I'm asking you about your paragraph 20 where you refer to the RPS and the NPS to enable a consideration of effects of irrigation?
- A. Yes.

Q. Now, without the matter of control –

A. Right.

Q. You can't go there can you?

A. No, you can't.

5 1040

Q. And you note at the end of that paragraph you say, "PC7 does not stand alone". What is it that you mean or what did you mean by that phrase in terms of the context within which you are recommending a restricted discretionary activity rule?

10 A. What I mean is that PC7 doesn't need to be all things to all people. It needs to do its job very well which is a is understand it to provide for the replacement of consents under similar terms, as they currently exist. If there is a problem that needs addressing in relation to adverse effects of irrigation, then that should be dealt with. PC7 doesn't really provide that  
15 framework. Other plan changes do, Plan Change 8 is beginning to address some of those issues and there are, there is, if water quality effects need to be considered, other mechanisms and policies available for that. So PC7 scope doesn't need to be, well it can't really be, it has to stay focussed on the taking of water and the process for doing that. It  
20 doesn't have to be the complete answer to every problem.

Q. So, when we're thinking about risk or risks to the environment associated with Plan Change 7, you'd accept that Plan Change 7 shouldn't increase the risk of increased discharges of contaminants to the environment between now and when the new water plan is notified?

25 A. If there is a risk of increased contaminants to the environment before the new land and water plan is notified, then that ought to be addressed by the council. Whether PC7 is the right place to do that or not, I am not 100% sure.

Q. Well, isn't one of those very risks the increase in irrigable land?

30 A. One of those risks is, yes. Yes. It's not the only risk.

Q. Now in your evidence you then go on to consider the question of how many irrigators might be in the position of having commenced irrigation development or expansion.

A. Mmm.

Q. So you have no understanding or knowledge of how many irrigators might look to take up your restricted discretionary activity pathway?

A. No, I don't. It's not something that's possible to really get statistics about.

5 Q. So how do you assess the efficiency and effectiveness of that provision and the potential environmental risks without actually knowing how many irrigators might be in this situation?

10 A. I can, I can't put absolute figures on any of those things. I can think of, or what I have done in my evidence is think about what's the cost to the people who have already invested that won't be able to realise that. And there, so there will be a cost associated with that, it's impossible to qualify.

15 Q. So let's press pause at that moment. So you may have some people who have invested in irrigation infrastructure and they have made that investment in circumstances where they have currently a resource consent, but there is not guarantee you will get a replacement permit, is there?

A. No there's never a guarantee unless it's a controlled activity, yes.

20 Q. So when you think about the risk of that investment having been made, that's a risk that in this context the irrigator is taking, they are taking the risk that they will be able to re-consent the volume of water they need for an expanded area.

A. Yes, and they would have taken that risk based on the permit they currently have which allows them a certain volume of water.

25 Q. So in, so let's press pause there, so insofar as the current term of the permit is in play, then that risk is or the understanding of access to resource is known.

A. Yes.

Q. But the risk arises on replacement consent, doesn't it?

A. Yes.

30 Q. And then when you think about the risk of expansion, the risk is either the irrigator's risk in terms of not getting the water or it's the environment's risk in terms of having further water extracted on replacement?

A. Well, I'm not suggesting that we allow further water to be taken, so my scenario that I am trying to provide for her is where somebody is using the exact same amount of water that has been taken in the past and that

they was within the terms of their permit, so water that they were authorised to take and use, but they want to use it slightly differently than they did prior to June of 2020, their permits have not yet expired, so they could have quite reasonably assumed that they would be able to use that authorised amount of water in a different way.

**THE COURT: JUDGE BORTHWICK TO MS MARR**

Q. So, say that again, why, why... permits are to expire 2020.

A. Yes.

Q. And they would have quite reasonably assumed they could used the water but in a different way?

A. Their permits have, so prior, prior to June 2020.

Q. Yes.

A. Their permits have not expired, they don't expire for another six months or so from today, they don't want to take any more water than they have in the past or any more water than they are authorised to take, but they may have reasonably made plans to use that water quite, slightly differently, so for example to move from borderdyke irrigation to spray irrigation, using the same amount of water, but using it more efficiently, and made plans to do so, but the cut-off date for having implemented those plans is June 2020 under the most recent version of the plan, so if they had made the invest- they had made the decision to go to a more efficient irrigation system, made some investment in doing so, but now will not be able to get a water permit, or their application for a water permit to use the same amount of water more efficiently is a non-complying activity under the current plan framework.

Q. When you say they have reasonably made plans, I am just wondering, one of the, something that your witness yesterday, Mr Burt, said, is that risk is correlated with expectation.

A. Mhm.

Q. And so when you say reasonably have made plans, is that they are prepared to take on the risk of investing in new and more efficient systems in the expectation that they would get a replacement permit on terms

which enabled the continued operation of those systems, that's effectively what you are saying or something else? Or is that only part of it?

A. No, that's what I'm saying so.

Q. That is what you are saying, the expectation?

5 A. The expectation was that the permits would be essentially rolled over for another five years, that, that was the signal sent in the, in Plan Change 7, this is a process, we're going to roll it over; they are not planning on using any more water than they were in the past.

10 Q. So the expectation, you are saying, that you are saying, and I'd love to know how you know this, but anyway you're saying that the expectation of farmers is that they would have their permit rolled over for five years, or six years really, whatever the terms in the...

A. Yeah.

Q. And on that basis, therefore, invest it?

15 A. They may have done that or they may be – I don't know what their expectation was, I'm not the farmer –

Q. No.

A. - but if they were using the same amount of water there were no restrictions on their permit about how they used that water and they may have made a decision to go to a more efficient irrigation system that under the terms of their current permit they were entitled to do and they may have started on that path, but not finished. They when then plan changed seven was notified that sort of cut them off halfway between their plans.

1050

25 **THE COURT: JUDGE BORTHWICK**

I understand that your scenario is that you're presenting to us, I'm just –

**THE COURT: COMMISSIONER EDMONDS**

I'm not quite sure -

**MS MARR:**

30 I do actually.

**THE COURT: COMMISSIONER EDMONDS**

When you are talking about the volume of water and then you talk about historical use –

**MS MARR:**

5 Yes.

**THE COURT: COMMISSIONER EDMONDS**

- and then you talk about historical use. So what are you benchmarking that – well, first of all, are you even referring to historical use when you are making that comment and when would you benchmark that historical use to if you are referring to a historical mess?

10

**THE COURT: JUDGE BORTHWICK**

Commissioner, I think you should actually pursue that after cross-examination because that is a major and important topic for this witness, but I was only really interested in risk taking behaviour by far.

**15 THE COURT: COMMISSIONER EDMONDS**

Okay, no, we will go back to you. I am just very unclear what it is, what this witness is telling me.

**THE COURT: JUDGE BORTHWICK**

It is a major topic, and we will come back to it because it is the thing that needs to go into the directions for conferencing. Anyway, sorry, we cut across you.

20

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. Yes, I was – so I am exploring this question of understanding the risk profile and I am interested to understand how, in your example, an expectation on the part of a farmer or irrigator who is expanding that they may get a consent rolled over for another five years how that expectation would have arisen before the 30<sup>th</sup> of June 2020 when plan change 7 was notified because wasn't the expectation before that point informed by the existing regional plan for water?

25

A. Yes, sorry, I may have added confusion by using the word “expectation” here.

Q. Well –

5 A. People - people have applied for replacement consents and been granted them, and some people have applied but haven’t been granted them, we are sort of in the middle of this transition at the moment. In the middle of that transition people are continuing to run their farming businesses and make decisions, and continue to may be develop their land or they’ve just bought it and they want to develop it, so things are going on, people haven’t pressed *pause* on their farming operations. People who have already had their consent granted have carried on. People who haven’t are in the transition phase. Their permits haven’t expired yet, so they continue to exercise them. If they have already started down that pathway of changing their infrastructure or their farming system, and their consent hasn’t expired yet, it’s all been done lawfully.

10

Q. Do you accept it’s been done lawfully, but that it’s for a finite period, being the period of time covered by the existing permit?

A. Yes.

20

Q. And so there are perhaps two ways in which you could look at the risks associated with this. There is a risk on the part of the irrigator that they might not be reallocated the same volume of water and then there’s an environmental risk associated with the allocation of water, so if there’s insufficient water, they were in a situation of over allocation which you accept vast parts of the water resource in the Otago region are likely to be over allocated?

25

A. I understand there are many areas that are over allocated and there are many areas that are not, so as I understand it, it is a mixed and complex situation across the region.

30

Q. And the new land and water the plan will hopefully enlighten us all in relation to these state of affairs that when you think about the risks at play here and I want you to think about these risk through the lens of the paradigm shift established in the new national policy statement to a water centric approach.

**THE COURT: JUDGE BORTHWICK**

Q. Is that a yes, you agree that there's a paradigm shift –

A. Yes, I do agree.

5 Q. – in the MPS Fresh Water Management 2020 to a water centric approach?

A. I do agree.

Q. Okay.

**CROSS-EXAMINATION CONTINUES: MR MAW**

10 Q. So when you think about that change of approach and then you think about who should bear the risk around allocation of water and whether it should be the irrigator or the environment, isn't it the irrigator that should bear that risk not the environment?

A. Yes.

15 Q. I am going to move on now to the wording that you have recommended for the restrictive discretionary activity. If that would be a convenient place to take a break if you are minded to stop around 11. If not, I'm happy to keep going.

**THE COURT: JUDGE BORTHWICK**

20 No, stopping sounds for a cup of tea sounds pretty good. What date was that was PC7 notified?

**MR MAW:**

18 March 2020.

**COURT ADJOURNS: 10.56 AM**

25



**COURT RESUMES: 11.15 AM****CROSS-EXAMINATION CONTINUES: MR MAW**

- 5 Q. I have in front of me now the marked up version of the plan change that you provided last evening, and I want to take you to page – it doesn't have a page – oh, it does, page 2. So I'm looking at the policies, and in particular, policy 10.A.2, and here I can see some grey shading, which I understand indicates the changes that you recommend to be made to the document beyond the changes recommended in the joint witness statement.
- 10 A. That's right.
- Q. And so the first change that we come across is the change, at a policy level, to enable and increase in irrigation area, and my understanding is that this policy is informing your restrictive discretionary activity rule.
- A. It is, yes.
- 15 Q. So when we look at that policy, there are two components, or two requirements, in relation to the expansion of irrigation area, the first of which is that it has to be demonstrated that the increase in irrigation was planned, and reasonable steps to implement that increase were taken prior to 30 June 2020.
- 20 A. Yes.
- Q. So why have you chosen the date 30 June 2020?
- A. To align with the other dates that are in the plan. When it sets a cut-off date, it's generally 30 June 2020, and the reason that 30<sup>th</sup> of June has been used is because that's the end of what's considered the water year.
- 25 It's also often the end of the financial year, so it's a useful cut-off point.
- Q. But there is a gap between the date of notification of the plan, when the parties would have been on notice as to what was planned, and 30<sup>th</sup> of June, but that's why you've chosen 30 June?
- A. Yes.
- 30 Q. Now, in terms of understanding how the council might process consent under your RDA, you've also provided a note as to what the council will accept as demonstration of planned and reasonable steps, and you've set out that note at the bottom of the page.

A. Yes.

Q. And you've set out three categories of evidence. My first question to you is are those categories conjunctive or disjunctive? So it is any one of those would tick the box, or is it all three, or what did you have in mind?

5 A. I had in mind it would be one of those, it wouldn't have to be all of them.

Q. So when we look at the first of those, just from a drafting perspective, might that be clarified by adding the word "or" between each of those?

A. It would, yes, I accept that.

Q. So when we look at finance to fund changes in irrigation infrastructure were sought or in place, have you any experience for or any understanding of what that might actually look like?

A. About what the evidence might look like?

Q. Yes.

A. Yes, well, I imagine it would be correspondence with the financier, so the bank, for example, where a conversation had been had or a loan instrument had been put in place for that.

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

Q. So a conversation would suffice?

A. Well, no, a conversation, you can't provide evidence of that.

20 Q. No.

A. But, for example, in order to ask the bank for finance, you would have to prepare budgets showing that you were planning, what its cost was, and how that was going to be incorporated into your farm system. You would have had to fill in forms with the bank, seeking that finance and discussing the reasons. There would be a paper trail of your conversations with the bank, not verbal conversations, but your correspondence, would be a better way of phrasing that.

#### **CROSS-EXAMINATION CONTINUES: MR MAW**

Q. Could be as broad as a note from a would be irrigator to the bank, simply asking about a funding line. There's no specificity as to precisely what would be required.

- A. No. I've left it reasonably broad because I was just trying to give examples of what was in my mind when I was thinking about reasonable steps. I hadn't drafted it with a mind to this is a legal test, it was simply an explanation to try and explain.

**5 THE COURT: JUDGE BORTHWICK**

- Q. Well, we need legal tests. If this is going to be pursued, we need legal tests, and they have to be concrete and repeatable, with minimal or no discretion by the regional council as to what is acceptable or not acceptable, so conversation wouldn't suffice, correspondence wouldn't suffice. Maybe a loan instrument might suffice, I don't know. You're at the hard end of the hearing now. We're interested, but you need to land it in terms of what would suffice.

- A. Sure.

**CROSS-EXAMINATION CONTINUES: MR MAW**

- Q. So, as I read these words, they are capable of – I'll put it to you – do you accept that they're very broadly framed? And I'm just focusing on the first of these explanations first, so the finance component, and finance to fund changes in infrastructure was sought, so there's no explanation as to what the evidence of how that was sought would be provided to the council, so you could simply have an applicant writing in an application, as you note, a conversation with the bank manager, "I talked to the bank manager," and that would tick the box based on this wording?

- A. Yes, that wording would need to be tightened up if it wants to meet the tests of being completely certain and repeatable in every instance. I accept that wording would need to be tightened up to meet that test.

- Q. When you're thinking about investment in irrigation infrastructure, not all landowners will require financing for that, they may have saved up their money to invest in the infrastructure.

- A. They may have, yes.

- Q. And so they wouldn't then be able to rely on – well, maybe they would, did you intend that they would be able to rely on this part of the note?

- A. Around finance? No.

Q. So when you say here in your note that finance was in place, you don't mean that the farmer had funds in space to –

A. No, that's not what I meant, no.

5 Q. Right, so you're, in a sense, excluding a farmer that's saved up the money to do the investment?

10 A. From that particular test, yes. What I'm trying to achieve with this wording is to not open the gate to everybody who wants to expand their irrigation area, because that would be going too far. I was attempting to open a gateway for people who had actually started this process and would be financially worse off if they were required to stop it partway through the process. I was trying to deal with that, to address a cost which I didn't think had been anticipated in the original drafting, where people had already made investments in certain things, that they wouldn't lose the value of that investment because of the administrative cut-off date, so I was trying to frame the wording in that very narrow way. I accept that the wording needs work to be clearer, but I was not trying to open a floodgate, merely to deal with that cost to a small group of individuals.

15 Q. So you're trying to provide a pathway to respond to the risk that abstractors have taken on, have chosen to adopt, that they might not get a replacement permit on the same or similar terms to their current permit?

20 A. Same or similar terms, I think, is captured in the controlled activity, in terms of the amount, rate, and volume of water. The irrigated area is what might capture some people that had already committed funds on those terms of same rate, volume, and water, and rate of water take, to allow a pathway for consideration of those circumstances. As the plan was notified, and up to the 14 March version, there was no pathway for consideration of those circumstances. The gateway was effectively shut to them, which I thought may impose a significant financial cost on some individuals, and that if we made some changes to the policy, as I was proposed there, there would be an avenue for that to be considered.

25 30 1125

Q. But you have got no evidence of who might be affected, it's at best a theoretical risk as far as you are concerned?

- 5 A. Yes, I don't have any evidence, only anecdotal. I know that other farmers have presented evidence on their specific circumstances. Hearing that and knowing that there was a potentially an unanticipated or even unintended cost to individuals there, I was trying to provide the pathway where that could be considered.
- Q. Let's move on to your second matter under the known, so infrastructure for irrigation on the increased area under irrigation was purchased or on order with deposits being paid. Do you accept that that's framed in reasonably broad terms?
- 10 A. I am not sure what you mean.
- Q. Well –
- A. If someone has paid a deposit on irrigation infrastructure they might have, they will have a receipt or an invoice that shows that that has occurred.
- Q. How do you know that that's related to the land on which the increase might be taking place? I mean, what's enough? Is it all the infrastructure necessary for the land, is it one piece of infrastructure?
- 15 A. I don't know.
- Q. And then when we look at the third one, crops that are partially or wholly dependent on irrigation for survival have been planned or purchased, wouldn't that cover all crops?
- 20 A. All, not all crops are dependent on irrigation. What I had in mind there was somebody for example having purchased tree crops which require irrigation for their establishment. That would use in reality far less water than irrigating pasture but is over a larger area, and if those trees are in the ground or on their way and been paid for, without the irrigation to support them, that investment will be lost.
- 25 Q. So does pasture fit within this category, grass seed?
- A. I didn't intend for it to.
- Q. But it wouldn't, wouldn't it, based on this wording?
- 30 A. Well, I'm not sure that grass is dependent on irrigation.
- Q. Well, there could be an argument about that, could there not?
- A. Possibly there could, yes.
- Q. Lots of irrigated pasture in Otago.
- A. Yes.

Q. And so again, what you have in mind or perhaps what you had in mind in terms of the reasoning sitting behind these explanations, has not necessarily come through in the drafting here with the level of precision that would provide the level of certainty in a regulatory framework, would it?

5

A. No, and I didn't intend it to. It's a note to the policy, if you like, an explanation, about the kinds of things I intended to do, an explanation so that people would understand what, what demonstrating might look like. But as you have outlined, there are a large number of individual circumstances that might apply that I couldn't possibly hope to anticipate them all, and that's why I think it is important that it is a, that the council has discretion to look at those things, and that's why I proposed it as a restricted discretionary activity rather than a controlled activity, so that there was an opportunity for that enquiry to occur.

10

15 **INAUDIBLE DISCUSSION IN THE COURT – 11:30:00**

**THE COURT: JUDGE BORTHWICK TO MS MARR**

Q. Just as an FYI, do you a similar provision in any other regional plan in the country, and if so can we have access to its drafting?

A. Around reasonable steps?

20

Q. Well, no, around this just broad issue, because reasonable steps I don't like in terms of how risk-adverse a farmer might be, but a broad outline of whether elsewhere in the country there are controlled activities or RDAs acknowledging commitment in some sense to increased area of irrigation and the matters of control and matters of discretion, are you aware of that being adopted anywhere else in the country. If so, can we have a look at the provisions?

25

A. Sure, I am not aware of any, any rule that limits the amount of area under irrigation as a matter of control.

Q. As a matter of control.

30

A. In the way that this controlled activity does.

Q. But this plan is different insofar as it is a transitional plan from what we are told and I think you have acknowledged also is a plan that does not

have effective control over nutrient and contaminant management, correct. Do you agree with that?

A. Yes.

5 Q. Yes. To, so it's a transitional plan between the current operative plan to a fully compliant land and water plan.

A. Mmm.

Q. Prepared under the MPS for fresh water management, correct?

A. Yes.

Q. Yes, so that's what makes this different.

10 A. Well, yes. It is in regards to water quantity. It doesn't fill that gap for all of the matters that might be considered in a fully MPS-compliant plan.

Q. Mmm. And therein lies the problem doesn't it?

A. Mmm.

15 Q. Because your, yeah, therein lies the problem, the scope of the plan change itself.

A. Yes.

20 Q. Together with the enabling provision under the RDA Rule acknowledging that this regional plan doesn't accommodate or manage in, manage the effects of contaminants and nutrients as may be a consequence of irrigation or land, or land use, regardless of irrigation?

A. No, this plan change –

Q. The plan - the Operative Regional Plan: Water, doesn't either. So.

A. Well no. No. It doesn't deal with cumulative or individual leaching at this time at all.

25 Q. At least not, it's not an end problem only though.

A. Yep.

Q. There's a range of contaminants, correct?

A. Correct. Well.

Q. Which this regional plan wouldn't have addressed?

30 A. No, not that I'm aware of. Only from an inputs control basis. You know, it's got effluent controls and erosion.

Q. So we yeah, we've got that dynamic and then we've got a request to increase the irrigable area. I understand what the issue is, it's an issue for many farmers. I want, I'm just really trying to get some clarity over

where you'd like to take this, I don't understand where you would like to take this from the three bulletpoints that you've given.

A. Right.

Q. Mmm.

5 A. Yes. What, my thinking was to use the similar wording, so the controlled activity has got an entry condition 3, the application demonstrates that the total land area under irrigation does not exceed the maximum, so I was trying to use that same language, you know, the application has to demonstrate that a thing has happened. And in the controlled activity rule  
10 that's that land was irrigated, so you, the council will have to make an assessment when that application comes in that they are satisfied that it's been demonstrated that it was irrigated in the past. And that's a discretion that the council when that application comes in the door to decide whether it meets that entry criteria or not. And that's pretty broad, so and I didn't  
15 want to just leave it as broad as that when I was saying the applications demonstrated that they had actually begun that journey of increasing their irrigated area before the cut-off date. So I was trying to give some examples of what would demonstration look like, to try and add some clarity. I accept that I haven't achieved what I set out to do there.

20 Q. The demonstration being to, to allow an increase in irrigable area?

1135

A. Well no demonstration is that to demonstrate that, they didn't just dream up this expansion of irrigation area yesterday, it actually started down that pathway and made a commitment to it prior to the plan coming into force  
25 to the – which is important because you don't want to open the door to everybody expanding the irrigation area, that would be difficult for the Council to manage and not an acceptable outcome, but, so what I was trying to do was very narrowly focus in on that small group of individuals who might have been disadvantaged or lost a financial investments because of the cut-off date that was included in the plan, so the doors  
30 very narrowly opened to that small group of individuals if they can demonstrate that they genuinely had already invested in that change but the door – the intention is not to open the door to anybody who decided that they just wanted to increase their irrigation area. If the purpose of



that control on irrigation area, if the purpose of that is to address water quality effects, I don't think it's very effective at that –

Q. No.

5 A. – because it's not really targeting water quality effects even of irrigated land because there's no control in the plan on irrigation, people who have already maximised their irrigatable area, have no controls on them about adverse effects if they stay within the same land uses. People who have – are under developed for their irrigation area will have that cap placed on them and is that an appropriate – that's essentially grandparenting.  
10 People who haven't already done the expansion and not grandparenting people who have already done the expansion, so I don't think that's a very good tool for the job and the – I think unintended consequence of using that very blunt tool is that people who have already made a financial investment into something will lose that investment.

15 Q. You see to land this, don't you have to know something more about the lead in time to implementing a change in or an expansion in the irrigable area and the steps which may be taking by farmers to, their lead in time by farmers and business associates to –

A. Mmm.

20 Q. – for that expansion. You may need to know something about banking response, you've noted finance but banks are not the only source of finance.

A. That's right.

25 Q. You would have to know, we're talking about irrigation systems and I'm not quite sure whether your driver is an improvement in the efficiency of irrigation systems, but I thought that the cost of earthworks can be many, many more times that of the irrigation infrastructure itself, so you'd need to know also what are the components of the investment that is to be made or has been made. You know, how much do you know about all of that to know that these measures are going to be sufficient?  
30

A. Which measures, the ...?

Q. Your three bullet points?

A. How much do you need to know? Well –

Q. How much do you need to know?

A. Yes.

5 Q. What inquiry have you undertaken in terms of the lead in and planning framework undertaken by farmers before implementation together with the other stakeholders who are interested in that farm, one of which might be a bank?

A. Mmm, well –

Q. But not necessarily?

10 A. Yes so what I inquired into is what were the steps that a farmer would have to take before their land was being irrigated, so what happens before the land being irrigated is actually irrigated, so that lead in time might be a year or more, irrigation only happens during certain seasons, you have to get the infrastructure in place before that happens and before you get the infrastructure in place, you have to have finance to buy it and you need to have ordered it and those things do take time and the lead in  
15 times might be a year or more. If it's a crop, like a tree crop, like someone planting cherries, going from pasture to cherries, they will have had to have order those trees in, so there is a long lead in time before you could meet the test of the land was irrigated prior to June 2020.

20 Q. I don't know and then the cynic in me said, thanks, well okay, so you had a finance facility established by a bank which has been drawn down for, well which is yet to be drawn down, is that sufficient? Will the bank stand behind that facility given now the what is now considerable uncertainty –

A. Mhm.

25 Q. – not because of this plan, but because of the plan to come, the land and water plan. Will the bank honour that facility? Will the bank want to change the debt repayment period from period say, typically as I understand it, 20 years to something which is shorter?

A. Mmm.

30 Q. Will the farmer want to take on that risk, that rather depends on what the farmer's expectations are in terms of other outgoings –

A. Yep.

Q. – and also personal needs and expectations in terms of what else could the money be used for –

A. Yes.

Q. – other than investing in an increase in the irrigation, so there's a – to me there's this question of uncertainty anyway –

A. Yes.

Q. – it's not this plan, it's the plan to come, would you agree with that?

5 A. Yes.

Q. Yes. And then if you go through this process and say, oh yes you could, this is a block of land which has an area that could be irrigated, and is to be determined on that basis, then it's simply as your advocate has said, the benefit to the farmer is the value increase in land, value increase because it's not, it's a greater area of irrigation which has been recognised by the Regional Council and also an increase in contaminant load because we asked about that, what was being offered here in terms of holding the load, the concentration and volume, answer, nothing. So it could also be used for other purposes other than, it could be used for holding increase in contaminant, the potential for farming activity to increase contaminant load and concentration and to also hold the value, relative value of the farm, to maximise that in the short period, is that not so? It's not just to enable farmers to irrigate, it can be used for other purposes?

10

15

20

A. Sure and I hadn't considered that, somebody –

Q. Yes, but your advocate did, that's how she's opened.

A. Right.

Q. As I said, we're thinking about it, but it's not for us to land, I mean like we know that one farm is coming up, I think it's McArthur, we've already got infrastructure in the ground?

25

A. Yeah.

Q. Well, that's a bit more clear cut?

A. Yes, yeah. Yes. And –

Q. They've done the earthworks, they've got the infrastructure in the ground?

30

A. Yes that's right and the plan as notified leaves no, no pathway for consideration of that which I think is – makes the planning framework probably a bit less sufficient than it could be.

Q. And which is Mr Maw's question and the thing troubling the Court, is where does this go? Where is your section 32 analysis? You don't even know how many people could be in this group?

A. No I don't know and I can't know that, no.

5 Q. Which troubles us because of other questions that we've got that you might not know or you might not know personally, but I can spec- it could be they are knowable. All right, sorry, I've cut across again.

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

Q. This is hard.

10 A. Yes, I don't underestimate –

Q. This question is hard.

A. It's important too.

Q. It's important –

15 **MS MARR:**

Yes.

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

Q. – and it's hard, yes.

A. It is hard because it is interwoven with, as you have rightly pointed out,  
 20 it's interwoven with the effects more broadly of farming and irrigated farming in particular, and within the confines of a relatively narrow plan change, so it is very complicated. It is very difficult to address and I have grappled with it a lot. How do we hold the line to the extent that we can within PC7, but how do we make that a reasonable regulatory framework  
 25 that can address individual circumstances with the people that have already done the earth works, et cetera, and I accept that there may be better ways to frame it. I haven't had the benefit of being able to caucus with my colleagues on this particular issue.

1145

30 Q. Nothing stops you phoning. Honestly, you don't have to wait from a direction from us.

A. Well, that is true, that is true.

Q. You are well-experienced in this field, so you should know that.

A. Yes, and I thought we did almost get there at one point.

Q. Yeah, and I don't think necessarily, maybe counsel has backed off this completely, but I rather thought that the change in Mr de Pelsemaecker's position was simply that you had to make the case out for Mr de Pelsemaecker to consider it further.

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. I shall continue. So this question of risk and the point in time at which the risk crystallises to those who have invested, so let's say you have a situation where you have a permit expiring, and let's say it's a deemed permit, it's expiring 1 October this year. Your situation is seeking to reward those that have taken the risk leading up to that point that they will get a replacement permit that enables them to continue their expanded area. So in a sense, the irrigators' taking that risk based on a current short-term permit, aren't they?

A. If it's a deemed permit, yes. There are other permits in place that expire further out, 2024.

Q. Yeah, let's pick 2024, the furthest date away. So plan change 7 doesn't do anything to preclude or prevent a consent holder exercising that consent to its fullest extent during that period.

A. That's right, yes.

Q. So when a consent-holder is asking himself, herself, itself as a company whether or not or invest in further – let's say cherry trees, for example – what do they know? They know they've got a permit in that context that will expire in 2024, when the date is. So doesn't that inform the investment decision and the level of risk that might be being taken?

A. Yes.

Q. And again, there can be no expectation that, in the current climate, in terms of the paradigm shift you've spoken about, that permits will be renewed on their current terms.

A. No, nobody ever has that certainty, because permits do expire, yes.

Q. We'll move on from the first of your policy considerations in terms of the demonstration. Actually, no, we won't, I had one more question about

that. You noted that the council would have discretion to consider whether the material put forward adequately demonstrated the matters that you've outlined. When I look at the list of matters to which you have restricted the council's discretion, I don't see a matter of discretion responding to that.

5

A. No, because it's an entry condition.

Q. Yes, which potentially makes the task a little more difficult for the council, doesn't it, because there ends up being an argument as to whether the activity is a restricted discretionary activity, or potentially a non-complying activity.

10

A. Yes, and the same happens with the controlled activity, because it has a similar test, that the application needs to demonstrate the area of land that's been irrigated.

Q. Do you accept that demonstrating an area of land that has been irrigated over that – it's now a three year period – is a relevantly straightforward step to undertake compared to demonstrating the matters that we've been discussing over the last hour or so?

15

A. I don't know that it would be any easier, in fact. If the person is irrigating with a movable irrigator system, K-lines or something like that, what would to council have to do? There has to be some kind of the applicant demonstrating a thing, whether that's "here's my irrigation plan" or "here's an aerial photograph" or "here's my farm budget for that year" or there is a lot. All of these farms are different and have different circumstances and all have different methodologies for demonstrating all of those things. I don't think that the one that I've proposed is materially different from the one that's already in the plan.

20

25

Q. Well, I put it to you that they are materially different things that need to be demonstrated. When we're thinking about the area of land irrigated, my understanding in my experience working with the farming community is that farmers are pretty switched-on, and they can tell you precisely where they've irrigated in preceding years. You give them a plan of the property, they'll be able to shade on that map with a very high level of precision areas that have been irrigated, so you would accept that it's not an insurmountable hurdle to demonstrate the area irrigated?

30

A. I do not, no, I do not, but I think it comes down to whether or not the council accepts that demonstration as the entry condition.

5 Q. Well, then we consider, for the reasons we've just been traversing, the real challenges associated with how you demonstrate an existing investment to develop. That is a much more difficult and tricky thing to do, is it not?

A. Well, in my mind, I didn't think that it was more difficult.

Q. Well, in light of the discussion we've had this morning about the three matters recorded in your note, do you change your view? Sorry?

10 A. Do I change my view about whether it's different?

Q. Yes, more difficult to do than showing on a map the area previously irrigated.

15 A. Well, no, because a farmer could show you on a map "this is the area I plan to irrigate." I mean, I see where you're coming from, and I can see that there is an unhappiness with the level of certainty. I can't fix what I've written down, that's what's on the page. I'm trying to address a specific set of circumstances so that there is a pathway for people to have their applications considered rather than there being a closed door. If I have done that in a way that is – I've done the best job that I could do,  
20 and if it could be done better, then I accept that, but I don't know that it's very helpful for me to try and do that on the fly right at this minute. I want to be helpful, but I don't know how helpful I can be on that particular issue, any more than I have already tried to be.

25 Q. I was simply testing the explanation you'd given that the council had restricted its discretion and would have discretion to consider these matters and had highlighted that the drafting didn't achieve that.

A. Yes, no, they don't have discretion, but that is an entry condition which the council will assess when the application comes in.

30 Q. Right, we'll move on the second limb of the policy. Now, just so I've understood this, so I'm back at policy 10.A.2.1, and your grey shading, sub-para B, and we've been talking about (i), and in addition to (i) and its conjunctive is the requirement set out at (ii) that the existing irrigation infrastructure is being replaced with more technically efficient irrigation infrastructure.

A. Yes.

Q. Now, when I read that, I read that as all encompassing, so all existing irrigation infrastructure is being replaced.

A. Yes.

5 Q. And more technically efficient irrigation infrastructure is to be used.

A. Yes.

Q. So I want to test that through the lens of some of the examples that we've been talking about today, and I want to start with the cherry tree example. So my understanding is that, in relation to cherry farms and the way in which cherry trees are irrigated – well, in fact, do you know how cherry trees are typically irrigated?

10

A. I understand it to be a kind of a drip irrigation.

Q. Right, so let's stay on the drip irrigation. My understanding, having read the evidence of a number of economists, the drip irrigation is particularly efficient, in fact, one of the most efficient types of irrigation. So let's say our would-be expanding irrigation setup is to add another 10 hectares of cherry trees, and those cherry trees are to be irrigated by a dripper

15

1155

A. Mhm.

20 Q. As I read your policy, I read that as requiring all of the existing drip irrigation to be removed from the existing cherry farm and replaced with something more efficient than the existing drip irrigation, and I'm not sure what that is, as a requirement to then expand the cherry farm.

A. Right. Well what the first condition is that the amount of water being used has to be within the historical use of the water. So, you couldn't go from 10 hectares of cherry trees to 20 hectares of cherry trees with the same amount of water, that's not technically possible, so this, this would only be where you were going from, for example, an area of border dyke pasture irrigation to a larger area of cherry trees, it's only that circumstance that would fit through that gateway.

25

30

Q. And you're not aware of any actual circumstances where you have a current border dyker seeking to plant a cherry orchard where that situation might arise?



A. Not a specific circumstance at all, I don't have a specific circumstance in mind, no.

Q. Well, let's think about the evidence put forward by McArthur Vineyard, are you familiar with that?

5 A. No.

Q. All right, well hold in your mind the thought that you've got an existing vineyard looking to expand.

A. Mhm.

10 Q. Same situation arises in terms of existing drip irrigation on the existing vineyard.

A. Mhm.

Q. Looking to expand, this rule doesn't provide any relief as currently drafted?

A. No.

15 Q. And are you saying it wasn't your intention to cover that situation?

A. My intention was not to cover any circumstances where more water would be taken.

20 Q. So in reality, we're likely to be looking at - well, we don't know how many we're looking at here, but you are thinking wholesale change of irrigation system across an entire farm to a more efficient irrigation infrastructure?

A. Yes.

Q. So -

A. So I'm only trying to pick up the things that are actually of benefit, that are actually improving,

25 Q. In your experience, have you seen any level of - well, do you accept it would be an extreme level of risk to take to convert from border dyke irrigation when the underlying permit expires within a one to five year period?

A. It would be a, sorry what was the question? an underlying risk?

30 Q. An extreme underlying risk.

A. An extremely underlying risk. Well, as Mr Burt pointed out, that's a matter of perception, that risk, that might, weighed up with other factors on that farm that might be an acceptable level of risk for those individuals. It's really, that's an individual decision to take. I was trying to craft a pathway

where that individual decision could be considered in the planning framework on its merits, whereas the original drafting the door was shut completely to those circumstances.

Q. Which has the effect of rewarding those that have taken that risk.

5 A. Well it doesn't necessarily reward them but it does, it does provide a pathway for that to be considered, yes.

Q. Just staying on this (Roman2) "ii" in the policy, more technically efficient irrigation infrastructure.

A. Mjm.

10 Q. Just a little bit more efficient? How do we measure, what's the change required?

A. The change required is an improvement from the current situation in terms of technical efficiency, so the water would be being used more efficiently, there would be less wastage, less of the kinds of circumstances that Dr Chrystal was explaining where there would be more water put on that was required, so it would have to be a better outcome that would be being achieved.

Q. The police as drafted doesn't really provide any further information about those matters though, does it?

20 A. About technical efficiency? No.

Q. I want to move forward to your restricted discretionary activity rule that you have recommended. And we've touched on this before morning tea. There are no matters of discretion relating to environmental effects.

A. No there's no matters of discretion anywhere in Plan Change 7 as it currently is around environmental effects except irrigated area, that's the only, that's the only thing that relates to environmental effects, everything else represents a rolling over of existing conditions.

25 Q. Well, the methodology in schedule 10 might also be seen as having some, providing some restriction in terms of holding people to actual historic as opposed to currently consented?

30 A. Well, yes, that goes to the amount of water abstracted, yes.

Q. Which can have an environmental impact.

A. Yep, it can. Yep. But it doesn't deal with whether that amount of water is appropriate or whether the minimum flow conditions are appropriate. It reflects just a rolling over of the status quo.

5 Q. So when we think about all of the bespoke mitigation options which Dr Chrystal spoke about yesterday.

A. Yes.

Q. There's no platform within this drafting of the restricted discretionary activity rule to pick up those matters?

10 A. No, not fr- there isn't, that is not deal with by Plan Change 7 at all, so, there's no requirement for any irrigator to have a farm management plan.

Q. Right. I flagged to you at the beginning of the examination that there were two topics that I wanted to discuss. And I want to transition now to that second topic, and that relates to the water years in terms of data that is to be used when considering the replacement permits, and I'm looking –

15 A. Yes.

Q. - in the first instance in the controlled activity rule, matter of control 5. And here the previous restrictions on water years there in the notified version and the version recommended to be changed, has been changed again, such that any water data can be used.

20 A. Is this a matter of...

Q. Four.

A. Condition 4.

Q. Of controlled activity.

A. Oh yes, at entry condition, yep. I see now.

25 Q. No it's not an entry condition, it's the matter of control.

A. No. I think it's an entry condition.

30 **THE COURT: COMMISSIONER EDMONDS ADDRESSES MR MAW (12:03:14) – CONDITIONS 4 AND 6, WITH DATES STRUCK OUT. THEY ARE ENTRY CONDITIONS – DISCUSSION**

**THE COURT: BORTHWICK TO MR MAW**

Q. That's okay. And your own witness supports this or doesn't support, I can't remember how this goes now.

A. Doesn't support the extension being 30 June 2020.

Q. Beyond 30 June. Yep, okay.

**CROSS-EXAMINATION CONTINUES: MR MAW**

5 Q. Whereas my understanding is that you do support the extension beyond that date?

A. Yes, I think my position in the joint witness statement, so the advice from the technical witnesses was you should also use the most recent data that's available, and the more data you've got the better. The more data you've got the better understanding of historical use you are going to have. So that's where the, where we landed, in the joint – in the conferencing was to take that advice and include it so that all the data that was available could be considered in here. and I understand Mr de Pelsemaecker's concern that for consents that expire, permits that expire in 2024, in that intervening period people might change their behaviour, they might ramp up their water use so that they get higher recorded meter readings, and that, that would be potentially create some sort of gold rush around that, so as I understand it, the water that goes through a meter is connected to the irrigation system, so the water that gets taken goes through an irrigation system gets used and so the planning witnesses got to the point where the risk of somebody pumping water unnecessarily is actually pretty low but I accept there is a risk there and I did state in the joint witness statement that is that risk was round to be considerable, then you could deal with that by putting them down the restricted discretionary pathway. I haven't reflected that in changes because I'm not sure what the actual factual situation of that might be, but I think there is a pathway where you could sort of draft them down the restricted discretion ends, then if peoples' behaviour, if it did come to pass that people had ramped up in an unjustified way you could consider it through that pathway.

30 1205

Q. Right, so the risk, you accept the risk does accept?

A. I accept at a theoretical level it could, but I'm not, I'm not sure in reality how big that risk is.

Q. So when you think about that risk and who should bear the risk, should the abstractor or the environment bear that risk?

A. The risk of people ramping up, yes, well, I guess the abstractor does, yes.

Q. No, my question is who should bear that risk?

5 A. Not the environment.

Q. So insofar as there is a risk of ramping up –

A. Yes.

Q. – and that risk can be addressed in favour of the environment by capping the date at 30 June 2020 –

10 A. Yes.

Q. – shouldn't the plan change to that?

A. Yes. If there is that risk, yes, then 2020 would be the appropriate cut off on the controlled activity and you could provide for that longer record of data for the consent it don't expire to 2024 through the controlled activity pathway.

15

#### **THE COURT: COMMISSIONER EDMONDS**

Q. Say it again, what was your answer?

A. Sorry, the restricted discretionary activity pathway.

Q. So just repeat the whole thing again, your answer again.

20 A. Okay. So if there is a risk of that kind of goldrush behaviour, that risk can be addressed by including only data up to 2020 in the controlled activity rule, so that keeps that nice and tightly controlled and the consideration of data between 2020 and the expiry of the permit if people would like to have that considered, that can be considered through the restricted discretionary activity pathway because there might be legitimate reasons why water use change between May 2020 and May 2024. For example, climate infrastructure, all those things, yes.

25

#### **CROSS-EXAMINATION CONTINUES: MR MAW**

30 Q. Mmm. So in the context of a steady state farming system, so no expansion of irrigation area, there might be a legitimate reason for say climate to dry, yes, there's water available, water was available within the terms of the consent as part of the exercising of a permit within its terms?

A. Correct.

Q. And that situation you say, well, the restricted discretionary activity might usefully be available in that situation?

A. Yes.

5 Q. Now, an important part of that proposition was that the farm was in a steady state in terms of irrigation area. I want to test with you the consequences or implications for enabling an expansion of irrigation area and let's stick with the permit expiring 2024, so your RDA is seeking to make or to provide a pathway for expansion. So on consenting of that activity, it will be the water use right up till 2024 that would be used to then reflect the historic use wouldn't it?

A. All that data could be considered.

15 Q. And noting that we're now dealing with maximums, in all likelihood if there's been an expansion of the irrigation area, the maximums are likely to have increased over that period?

A. Yes.

Q. And so again, that risk of an increase irrigation area coupled with the extension of the date range gives rise to a risk of further allocation of water being consented beyond 2024 in that context?

20 A. Sorry, it gives rise to a risk of what do you mean by "further water being allocated" like the rules don't allow for more than what was previous consented to be consented.

Q. Yes, so there would need to have been head room within an existing permit?

25 A. Yes.

Q. And my understanding is that there is an often significant head room that hasn't currently been utilised which is why some investment is being made based on head room within existing permits?

30 A. I understand that to be the case with deemed permits there might be significant head room, but I'm not sure that's true of more recently issued permits, but it could be.

Q. So again there could be a risk associated with shifting that data period in circumstances where the irrigation area has been expanded?

A. The risk is that more water would be taken in 2024 than was taken in 2020.

Q. Yes.

A. Yes.

5 Q. And then as your RDA works that would be historical use at that point because the data up to that point can be used.

A. Yes.

Q. And is that what you were intending when you were drafting that rule or when you considered that that data period should be appropriate?

10 A. Yes.

Q. And so the environment bears the risk then of further water abstraction or allocation beyond 2024?

A. No, well – it's not further water, it's water that had already been permitted and already been used.

15 Q. Well, no, it hadn't already been used up to -

A. At 2020.

Q. It hadn't been used at 2020?

A. Yeah.

20 Q. And so if you think about plan change 7 in some of the outcomes of seeking to achieve, Mr de Pelsemaeker says that: "One of the signals that it intends to send is to make it clear that future investment in infrastructure and activities that might require water, those investment decisions need to be made very carefully given the precarious state of over allocation across parts of the region."

25 A. Yes, that is Mr de Pelsemaeker's evidence. I just want to go back to the previous question around the risk to the environment.

Q. Mhm.

30 A. The council in the restricted discretionary activity rule has discretion about the rates of take in the volumes. Their discretion is limited to – it can't be more than the historical use, but there isn't anything that prevents them making it less than the historical use, so it is a matter of discretion.

Q. Well, the policy say "allocate historic use" don't they?

A. They say: "Avoid granting except where these matters occur." There are and that's one of the policies that is taken into consideration, yes.

Q. So the council has no policy hook to say “Well, we’re going to restrict you 2020 volumes of water” that is not what the policy framework’s driving at?

**THE COURT: JUDGE BORTHWICK**

This is where historical can mean any data and any period right up until the  
5 evaluation and dissent –

**MS MARR:**

- consent expires, yes.

**THE COURT: JUDGE BORTHWICK**

10 - oh, yes. I kind of thought about that.

**MR MAW:**

Oh, yes, please.

**THE COURT: JUDGE BORTHWICK TO MS MARR**

15 Q. Just a thought. So I recall the plan is JW, I think the plan is JWS or  
perhaps it was technical bods, JWS said: “ That for a controlled activity  
rule, the aqua link guidelines are not appropriate.” And so controlled  
activity, your recommendation is keep that really tight and its historical up  
till June 2020. If all good, if all data is good data if we accept that, so  
20 that’s one of the things we have to think about and you can go beyond  
the 2020 date, then the – is that on an RDA which is what you’ve  
recommended, is that where the aqua link comes in behind to test the  
proposition that this is the factors not reasonable nor efficient. What it is,  
is ramping behaviour which is to be discouraged, so is that the way to  
25 overcome that?

A. Yes.

Q. Yes. Is that worthy of a second thought?

1215



**CROSS-EXAMINATION CONTINUES: MR MAW**

5 Q. Yeah, I just want to tease it out a little. So let's say you apply the reasonable use calculation in the Aqualinc guidelines to an activity where there's been expansion over the 2020 to 2024 period. The additional water used over that period, in accordance with your framework, needs to have shifted to an efficient system, and Aqualinc guidelines would reflect that system, and so, on consenting, if those guidelines are applied, in all likelihood, the higher rate of water or volumes of water used on the expanded area would come through.

10 A. Well, they would meet a test of being both historical and efficient, but the council still has discretion within the restricted discretionary activity, it has discretion about how much water within that envelope can be allocated.

Q. Yes. From a planning perspective, though, that discretion needs to be exercised in a principled manner and in accordance with the policies.

15 A. Well, yes, that discretion is within the bounds of what the act prescribes you can consider, yes.

20 Q. So let's say the council consents officer came along and said: "No, you're going back to your 2020 rate of use because we've got the discretion to do that," I foresee some challenges being brought by would-be applicants and a significant appeal risk when viewed through the lens of the policies as to the appropriateness of winding somebody back like that. Would be a pretty unlikely outcome, wouldn't it?

A. An unlikely outcome?

25 Q. An unlikely outcome that the council would restrict abstractors back to their 2020 rates and volumes through this policy framework?

A. Well, I think that the council has the job to do to consider all of the factors, including environmental effects, and if they felt on an environmental effects basis that –

**THE COURT: JUDGE BORTHWICK TO MS MARR**

30 But we're not into environmental effects.

**THE COURT: COMMISSIONER EDMONDS TO MS MARR**

Q. No, you said earlier in response to a question that you didn't see any reference in the controlled or the restricted discretionary to the consideration of effects, so I'm just a little confused by your answer.

5 A. Sorry, the consideration is around volume and rate of take.

Q. But on what basis?

**THE COURT: JUDGE BORTHWICK TO MS MARR**

Q. It would be perverse, completely perverse for a council if a farmer can put up a historical use up to 2020 and then can demonstrate future historical  
10 use, and I have suggested would the Aqualinc guideline come into play there to demonstrate no ramping behaviour. It would be completely perverse for a council to then say: "Nah, forget about that, you can go get your 2020." I would find that really odd.

A. It would be. If there was no ramping behaviour, that would be  
15 unreasonable.

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

Q. Really objectionable outcome by a council, I would have thought. Also, I suggested this, not actually, you know, both with and without an increase in irrigation area in mind, actually. Does that give the council some  
20 assurance, you know, as to the future historical data can be tested or benched against an Aqualinc guideline on an RDA rule, just putting it out there? You don't actually have to increase your irrigation area anyway.

A. Yeah, in that context, it's worthy of further thought in terms of that one-off ramping behaviour to demonstrate or to get further water over that period,  
25 need some technical advice, but I understand where you're coming from there. I was exploring that in this expanded irrigation.

Q. Yeah, and then there's the irrigation area, and so when exploring it in the increase of the irrigation area, so this is a future use of water, a future historical use of water, and again, the same potential for ramping  
30 behaviour. Could that also, or not, be tested against Aqualinc to counsel to satisfy itself?

A. Mmm, and there are a few questions in that, including the appropriateness of reconsenting the expanded area and the volume associated with that.

Q. Reconsenting, meaning?

5 A. Well, the six-year rollover under the restricted discretionary would allow that increased area and increased volume, efficiently used, to be rolled over for another six years.

Q. Well, it would allow an increased area, so that's new, that's a new component.

10 A. Yes.

Q. The idea is not necessarily that volume increases, but because there's a whole of farm change, and it's like, wow, do you really think your beef and sheep people are proposing this? But anyway, whole of farm change from one system to another system and applying – I thought the idea was to apply the same amount of water as in the inefficient system, now efficiently over the same area. How do you test that proposition that's not just more water, and together with also ramping behaviour?

15

A. Because on this drafting, it's not the pre-expansion volume of water that is being considered. It would be the future historical volume that rolls over, and that is where there could be an issue with the RDA framework.

20

#### **MS MARR:**

Okay, I hadn't considered that scenario. I'd have to give it some more thought.

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

25 Q. Do you want to give it some thought over lunch, maybe, because – yes.

A. So the scenario is a consent that expires in 2024, okay.

#### **CROSS-EXAMINATION CONTINUES: MR MAW**

Q. Yeah, and let's shift from inefficient – keep it simple – border dyke to spray, so that's the efficient system, an expansion of irrigation area based on investment in infrastructure or something, so assuming it can get through your policy and your rule, what happens on reconsenting under the RDA framework? Is it the volume of water that was used in, say,

30

2023, was the year with the maximum water use, or was it the pre-conversion to spray volume, or was it something else?

A. Okay.

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

5 Q. And is your thinking, well, if you're just using the same historical volume as of 1 June 2020, but you're using it differently and more efficiently, why aren't you just grabbing the 1 June 2020 date, because why not?

A. It reduces the risk.

Q. Because it reduces the risk.

10

**MS MARR:**

The 1 June 2020 volume of water.

**MR MAW:**

And rate of take.

15 **THE COURT: JUDGE BORTHWICK**

So part of the problem that the Court has, and parties may have also, is that we've got these JWSs, and they're not fully worked out in terms of reasons for anything, and this is one place where we're kind of flying in the blind as to what the different thinking is.

20 **THE COURT: COMMISSIONER EDMONDS**

Q. Sorry, could I just ask one more question of clarification? Are you accepting of the 2015 date at the other end, or in terms of the – I know, but I do think that it has a bit of relationship to the four corners of the proposition. So I just want to understand, if I'm able to understand, in a quick answer, what you gave us has all of the date range crossed out?

25

A. Yes.

Q. And are you – I mean, we're talking about the future stuff, post-2020, but I want to know whether you're accepting of 2015 at the other end or whether you want all the dates out.

- A. I think that the advice from the technical experts was that the longer the record of data, the more accurate it could be, so based on that, I would say you wouldn't want the 2015 date in there, because you would want the longest period of record possible, so you would have an open-ended beginning to the data, possibly, and then, I think, what I'm considered now is do you want the data period to close at 2020 and the last data that you take into account?

1225

**THE COURT: COMMISSIONER EDMONDS**

- 10 Q. Okay, so you don't think that there's any issue about having all the data going back a long time even though some of that data relates to very inefficient methods like border dyke and wild flooding, given that we're now dealing with maximums?

- A. Yes. That's not a scenario that we actually considered in conferencing.  
15 The scenario that we were considering was the more data that you have available, the more variation climatic influences is going to be included within that data record, the most you would have more information about different systems within that, so that the more data would be useful to understanding use, but we didn't –

- 20 Q. Change - the use can change significantly –

A. It can change, yes.

Q. – overall that time can't it?

- A. Yes, and don't – that wasn't actually considered as far as I'm aware in the technical or the planning conferencing as if someone in 2016 changed  
25 from border dyke spray and started using a lot less water.

**THE COURT: JUDGE BORTHWICK**

Q. So we're flagging that as a major issue?

A. Yes, that's another, well, that's a mission.

- Q. A change in irrigation systems regardless of any increase in land use, you know, you're boundless date period in picking up maximum use under a highly and efficient system and saying: "Yes, that's it, for the permit"?  
30

**THE COURT: COMMISSIONER EDMONDS**

Q. Yes, that's for historical use. So you might need a future focus if you're basing on that.

5 A. And that's where the Aqualinc guidelines would be useful in consideration.

**THE COURT: JUDGE BORTHWICK**

Q. Yes, for those, for a move to an efficient system, yes, but I think we have been told they don't help for your inefficient system?

A. No.

10 Q. So yes, that again, the Aqualinc might come in there as well in terms of ground turving, what is actually – what actually represents historical use -

A. Mmm.

Q. - for an efficient system?

15 A. Yes. The discussion that we did have was around the historic use and the existing permit conditions create the boundaries of the envelope of water that could be used or applied for, and then the council – that's a matter of control within but it's limited by that boundary.

Q. But it's blind, that is blind to the irrigation system -

A. Of the efficiency question, yes.

20 Q. – which is being employed. So that's your blind spot, that's another blind spot which we're going to be asking questions about, yes.

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. No, it's highlighted -

A. Yeah.

25 Q. - the shift to maxima has highlighted that very issue to the systems change.

A. Yes.

**THE COURT: JUDGE BORTHWICK**

But again it's not insurmountable –

30

**MR MAW:**

Oh, no, it just needs to have been considered.

**THE COURT: JUDGE BORTHWICK**

Q. It's just you don't have any blind spots?

A. Yeah, yeah.

**5 LEGAL DISCUSSION - BREAK (12:28:07)**

**COURT ADJOURNS: 12.28 PM**

**COURT RESUMES: 1.30 PM****CROSS-EXAMINATION CONTINUES: MR MAW**

- 5 Q. Good Afternoon, before the lunch break you were tasked with some over the lunch break homework to test a scenario in terms of how your restricted discretionary activity rule would work, have you had an opportunity to test that scenario?
- A. Mmm, I have, well I have done a lot of thinking, I'm not sure I've landed it, but yes I have considered it.
- 10 Q. Right, so I'd be interested to understand how the scenario plays through the framework that you've put forward and it may well be that as a result of having done that test, you may have some changes or you've had some thoughts as to what might need to change, it would be useful to understand the current provisions through the lens of that scenario first before we jump to that step?
- 15 A. Okay.
- Q. So if we can step through that way, and it will be helpful perhaps if you can just repeat the assumptions or the underlying scenario that you've been using?
- A. Okay. so the scenario, as I understand it, is a water permit that expires 20 in 2024 and sometime between 2020 and 2024 they convert from borderdyke irrigation to spray irrigation which uses less water, that's the scenario you've asking me to consider?
- Q. That uses less water at the time that a transition is made? So at 2020 say or 2021 as we now are?
- 25 A. When they change from borderdyke to spray irrigation.
- Q. Yes?
- A. Yes and as I understand it, the potential problem is that the – using – the use of maximums in the historic use record would provide a maximum that is required for borderdyke irrigation and that is much more water than 30 is required for a spray irrigation system.
- Q. Well that might be the case or might the situation depend a little on, let's go back a step, at the point in time that the change takes place, no permits are required?



A. Mhm.

Q. In terms of the change?

A. Yes.

5 Q. So it's only on re-consenting under the RDA that an analysis would be conducted, so when assessing the rates and volumes of water to be taken on re-consenting in 2024, what analysis under your rule frame would – rule frame it would take place, so you'd be looking at the water record right through to 2024?

A. Yes, ah, are we talking about the restricted discretionary rule?

10 Q. Yes?

A. 2024, yes.

15 Q. So is it that the Council ought to be looking at the volumes of water taken prior to the conversion or the volumes of water after the conversion or how does the Council go about assessing whether the increased irrigation area is resulting in a more efficient use of water? Because that will have already happened?

A. Yes. So are you meaning the entry condition? I'm sorry I am a bit confused about what part of the scenario you would like to test?

20 Q. I guess I'm trying to understand what happens on re-consenting in that situation?

A. Yes.

Q. If the full data record is able to be used up till the date of re-consenting?

A. The data record for water take?

Q. Yes?

25 A. Yes. Well, the version that we've got in front of us after the JWS allows the use of the full record of data which would include the highest amount that was taken in that record which would be the borderdyke irrigation say, and that would form one part of – that would form the envelope of the amount of water that the council can consider to be taken. And that  
30 discretion, matter of discretion A, limits the Council's discretion to the amount of water within that envelope.

1335

Q. So –

A. That scenario can occur potentially under a controlled activity as well.

Q. But the expansion of the irrigation area can't occur?

A. Correct.

Q. And I guess –

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

5 Q. Sorry, the expansion of the area, irrigation area, can't do what, sorry?

A. Can't expand under the controlled activity.

Q. Yeah, yeah.

**CROSS-EXAMINATION CONTINUES: MR MAW**

10 Q. So I guess what I am trying to get an understanding of is the potential for, or how much expansion could potentially happen reliant on the previous maxima in terms of rate of taking volumes.

A. That would depend on the individual circumstances.

Q. But it could be significant if you are thinking about the volumes used for flood irrigation and the transition to spray.

15 A. The amount of area that, the area of land that could be irrigated potentially.

Q. Yes.

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

20 Q. Sorry, I've lost the thread. What could be significant? We've got under the proposed RDA now we have an increase in the irrigable area, so what could be significant?

A. The area of land which could be –

Q. Oh yes, the area of land could be. Yeah.

A. Yes.

25 Q. That could be.

**THE COURT: JUDGE BORTHWICK**

Q. And so then what was your response to that?

A. The area of land could be bigger.

30 Q. Okay, so the area of land could be significant, because there is no control in the area of land under your –

A. - as an entry condition, no.

Q. No, okay. All right, got it.

**CROSS-EXAMINATION CONTINUES: MR MAW**

5 Q. And then when it – so let's stay at 2024 on reconsenting, the full data record is reviewed and it might well be that the new expanded irrigation operation is now occurring efficiently but that entire area could be then reconsented under the RDA?

A. It could be, yes.

Q. In fact that's the outcome of the RDA as currently framed?

10 A. Well there is, there is no discretion, there is no matter of discretion around the area of land, that's correct. And likewise in the controlled activity, that's an entry condition not a matter of discretion.

Q. Right, so is there, let's stay with the RDA.

A. Okay.

15 Q. Entry condition to the RDA, no restriction on irrigable area in this situation?

A. Correct, as long as that increase was already in play at 2020.

20 Q. Yes. So if we - the applicants step through the criteria, taking into account our discussion on that, essentially the reconsenting in 2024 would be for the expanded irrigable area and the historic water use record would be right up 'til 2024?

A. Yes. And that would form the envelope of discretion.

25 Q. Right. Let's look at an example where you're shifting, say, not from border dyking to spray but from let's say you're shifting from spray irrigation to dripper, so it's slightly more efficient but not much.

A. I'm not sure of the difference in technical efficiency between those two. That would be –

Q. Well, there's a range –

A. They're both quite efficient systems.

30 Q. Yes.

A. They're close.

Q. Well for the purposes of the example, let's say one, the one that's shifted to is slightly more efficient but not much. Water, additional water could

be taken between 2020 and 2024 provided it was within the terms of the consent?

A. Yes.

5 Q. And then on reconsenting, the maximum amount of volumes, rates, et cetera, are used between 20 and 24 would pick up on the maxima over that period?

A. Yes, that maxima would form the envelope of discretion, yes.

10 Q. Yes. So the increase in irrigation area even though the efficiency of the system is improving, on reconsenting it's not held to the volumes and rates used in 2020?

A. It's not held to that, no. But the council has discretion over rates and volumes within that envelope.

Q. But there's no policy guidance in relation to those that discretion should be exercised?

15 A. Not in PC7, no. No.

Q. Now you mentioned you'd done some thinking in addition, so before I sit down I wonder whether you might just explain where your thinking was at, in case I have another question about that.

20 A. I'm a bit nervous to do that now. I was considering the scenario that I understood Commissioner Edmonds to raise, where the envelope of water available is much higher than is actually needed for the new infrastructure and was there sufficient discretion in the rule to allow the council to consider that and size the take to the need, if you will. I understood that to be my homework.

25 Q. Mhm.

30 A. So, I considered that and there is, there is not an explicit matter of discretion in either the controlled activity or the RDA, because that scenario could occur in a controlled activity circumstance as well as it could in an RDA, and if that, if we wanted to have discretion over that, so to think okay, this new, this irrigation of structure that an individual has now requires less water than the one they had in 2019, is there a matter of discretion that would allow the council to size the take to the new infrastructure? There isn't an explicit one and if the, if we wanted the council the explicit ability to do that there would need to be a matter of

discretion and control added around the efficiency of the existing infrastructure sizing it to that.

Q. And would there also need to be an adjustment made to the policy framework?

5 A. Yes, there would because there isn't any discussion of efficiency, and I noted that there did used to be a matter of control around efficiency when the plan was notified, and that's since been taken out to make the rule more streamlined and simpler to navigate, so that would be the regulatory cost of adding in an efficiency consideration is that it would make the rule more complicated and time-consuming to navigate.

10

Q. Yes and in fact that, that was tested during the early weeks of the hearing, in fact during week 1, and it did create some other challenges in terms of the simplicity of the framework.

A. It does yes, yes.

15

Q. So, okay. Thank you. I have no further questions.

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

Q. Just before we move off to re-examination, you are not suggesting or are you suggesting that the efficiency, if you wanted to tie current irrigation use to an efficient, a new and efficient system, but the period of record includes inefficient, an inefficient system, this question of efficiency is not tied to driving improvements and systems; it's tied to having what is in fact the, you know, the water, the quantum of water which is needed for the current system, isn't it?

20

A. Yes.

25

Q. And so in that sense it may be easier than the former proposition.

A. Yeah.

Q. Which was tested in the first few weeks?

A. Yeah, could be. It wouldn't - because it wouldn't be driving people to upgrade their infrastructure.

30

Q. No, no. No.

A. But it would still require an assessment of the crop in the ground, the efficiency of the susteym, which is all possibly but slightly more complicated than the controlled activity rule as it stands at the moment.

Q. And that's only needed where there is a shift in, a change in the efficiency of the irrigation system?

A. Mmm, mmm, yes, if the irrigation system has been upgraded at any time in the past the record will potentially, by the use of maximums, outsize the water available to the requirements, yeah.

5

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

Q. You wanted to ask a follow up question?

A. Yes.

Q. I just want to nail this, I'm not quite sure where we –

10 1345

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. And that might depend though if the previous water availability under the inefficient system was used as a platform to expand the irrigable area which stays the same volumes and rates might be being used over a larger footprint, but with a more efficient system?

15

A. That wasn't what I was addressing, yes, I was addressing a historic change that had already occurred could lead to a water record analysis leading to the envelope being bigger than what the infrastructure actually needs.

20

Q. Yes, but it will depend on a case by case as to whether the head room created by the shift to a more efficient system is used to expand the irrigable area or not?

A. Yes, well, in that scenario it would not be a controlled activity anymore.

Q. Well, if the expansion that occurred pre-2020 would be?

25

A. Yes, it would, yes, if it had already occurred, yes. Yes. Every single scenario is going to be individual because some people don't have more land to irrigate.

Q. Sure.

A. Yes. Sometimes it's just a sizing the irrigation to the new crop that they have or a change, it's not always an expansion.

30

Q. I think I will leave it there. Thank you.

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

Q. I actually just wanted to round off some questions in terms of the national environment standards.

A. Yes.

5 Q. Because I think it is important that we do understand completely the effectiveness of those provisions in Otago.

A. Yes.

Q. So really it was just clauses 24 and 30 have a same set of words in them, so if just look at clause 24 -

10 A. Mhm.

Q. – which is in respect of sub-part 2, the different types of agriculture intensification that are regulated by the NES and 24/1 says that “If you were in the discretionary category consent may only be granted or may be granted only if the consent authority is satisfied that granting the consent will not result in an increase in the two sets of, the two references to contaminants. So looking at the words “That a discretionary consent may be granted only if x or y”. If an applicant or, actually I’m just going to ask it openly, do you look at that as an entry condition to being a discretionary consent or is that actually a default prohibited rule? I mean, 15 you know, how would you apply that particular clause if you came across it in practise?

20

A. I think it is – I wouldn’t treat it as an entry condition.

Q. You would not?

A. No, but you would be foolish to apply for the consent if you couldn’t meet those requirements, but you could apply, but the council can only grant that consent if it is satisfied that those two conditions will be met. So it’s a regulation that restricts the council’s discretion to only grant in certain circumstances. 25

Q. So in that sense would you treat it as a default prohibition?

30 A. Mhm.

Q. Or is it if you fall out of that category you just fall into a anonymit category?

A. Mmm, good question, there’s a few of those in this NES that it’s not entirely clear where they go.

Q. Because what – I mean it’s helpful for us to understand where exactly how effective the NES is controlling intensification?

5 A. Yeah, mmm. I had assumed that the application has been made, the councillors considering it, and if they’re not satisfied those criteria meant they would decline the consent. So in that way it almost operates as a de facto prohibition without saying those - without using that activity classification.

Q. Yes, okay and the same set of words is used in the context of sub-part 3 in respect of intensive winter grazing as well?

10 A. Yes, it is.

Q. Yes, okay. All right, thank you. Right, so now I’ve just got some questions in respect of your evidence and Mr Farrell’s supplementary drafting. So first if I just start with your supplementary. At your paragraph 5 under the subheading “Process or Environmental” your observation is that there’s a general congruence of opinion amongst different planners that PC7 ought to be focused on matters of process and that you consider that to be pragmatic. So I just want to test how much you have that opinion to the exclusion of there being an environmental element to the objective of Plan Change 7. Back in your evidence-in-chief at your paragraph 12, that’s where you talk about “Whilst it doesn’t give full effect to the MPS 2020, it should do so to the extent practicable -

15 A. Yes.

Q. And you use the good catchphrase of “It should hold the line on aspects of the MPS 2020, it will be implemented in the future” and then in your 19 in your evidence-in-chief, again you acknowledge Te Mana o te Wai and its relevance and that it should be “top of mind” that’s your phrase?

25 A. Mmm.

Q. And again at 24, again the term “hold the line” and also in the third last line “That it should provide for the right direction of travel for resource management decisions and not frustrate the MPSFM as soon as practicable”?

30 A. Yes.



Q. So taking into account those aspects, isn't it correct that there are important aspects of Plan Change 7 that are not purely about process and they do have an environmental objective?

A. Do you mean in Plan Change 7 as it was notified?

5 Q. No –

A. No.

Q. - as it should be or as we're working towards it being expressed in final form.

A. Mmm.

10 Q. So, for example, particularly when you're talking about "holding the line" and "correcting the direction of travel" –

A. Yes.

Q. – that – both of those phrases are in terms of further environment degradation, so it's holding the line –

15 A. Mmm.

Q. – stopping further degradation associated with water take?

A. Yes.

Q. And correcting the direction of travel in terms of environmental effects associated with water take?

20 A. Yes.

Q. So if we look at Mr Farrell's supplementary evidence and his re-drafting of the objective, have you got – managed to get that?

A. I did and now I can't find it. Is it in one of the evidence?

Q. It is in one of the bundles, thank you.

25 A. Bundles.

Q. Yes.

A. Anne Farrell's Supplements. Thank you.

Q. So if you turn to his appendix and then find Objective 10(a).1.1.

A. Yes.

30 Q. So Mr Farrell's additions in blue refer to or add "The environmental element of protecting the health and wellbeing of waterbodies from further adverse effects from water abstraction activities." What's your view on the appropriateness of that as an expression of the environmental element of the Plan Change 7's objective?

A. I think some of the idea in here is good to reflect a hold the line approach. Perhaps some of the language I would frame differently, but as a matter of principle, I think that's a sensible thing to reflect.

1355

**5 RE-EXAMINATION: MS PHILLIPS**

Q. Thank you, just a few questions for you. So over the past couple of days, we've talked a lot about Dr Chrystal's evidence, particularly paragraph 18, and today, yourself and Mr Maw had a discussion on paragraph 18 of Dr Chrystal's evidence, which is essentially practices which could increase nutrient losses or contaminant losses to the environment within farming systems.

A. Yes.

Q. And those were A) irrigation, B) effluent, basically, the storage, managements, and application, C) cropping, D) high stocking rates, E) fertiliser use. So there was the comment made, or sort of the acceptance yesterday, that irrigation can actually facilitate B through E or go hand in hand, for example, fertiliser use that goes with irrigation.

A. Yes.

Q. So Dr Chrystal addressed ways to manage risk to the environment for irrigation in her evidence-in-chief and in her evidence yesterday, and we won't go through various practices today, because, obviously you're not a farming systems expert. So if we go on to the second one, B, which is effluent, I was wondering, from your understanding, where does one normally find effluent systems in a farm system?

A. Normally associated with a dairy farm, collecting the effluent from the milking shed platform, or of a system that has a feed pad or wintering barn arrangement where the animals are confined and the effluent is collected.

Q. So can I just direct you to some provisions of the national environmental standards for freshwater, provisions 9 to 14, can you tell me what those provisions are intended to regulate? Sorry to do this to you.

A. 9 to 14, got them. So those regulations cover feed lots in stock holding areas, so areas where cattle are held more than temporarily, so for a period of time.

5 Q. Could that include loading pads, feed pads, standoff pads? You might need to go the definition section.

A. Yes, I think I probably will.

Q. Otherwise, it might be one of those funny ones where they've got the actual definition within the actual provision?

**THE COURT: JUDGE BORTHWICK TO MS PHILLIPS**

10 Q. I thought the evidence of your economist yesterday said that the contribution of dairy support to the total earnings made by the primary sector was some 36 million, that is, 36 out of a billion so the contribution of dairy support is very small. I don't think you're going to have any difficulty with the Court accepting that there are some NES standards  
15 which might apply to dairy support.

A. Sorry, your Honour, no, that's not where I'm going with this. We do have systems within the dry stock sector which do use feed pads, for example, standoff pads to save their soils.

Q. You mean you've got sheep and beef, not dairy support that are utilised?

20 A. Correct. It's dry stock.

Q. Did anyone actually ask a question about this, and is this your right witness to be drawing that evidence out?

A. Yes, your Honour, because we are dealing with the questions that Mr Maw asked earlier about the risks.

25 Q. Now, hold on a second, I don't think Mr Maw has examined or tested this witness on her knowledge on use of feed pads and others.

A. Sorry, this is of the NES, and of the various –

Q. No, no, no, no, no, no, no, no.

A. – regulation that is –

30 Q. You are trying to establish a factual basis, that is that sheep and beef farmers use feed pads for sheep and beef, in addition to dairy support. Is this the correct witness to establish that fact? Because otherwise it's a frolic and we can't go anywhere with it.

A. May I rephrase the question?

**THE COURT: JUDGE BORTHWICK**

Q. I'll ask the question. Ms Marr, do you have any knowledge of the farm management practices in relation to sheep and beef, and I suppose  
5 sheep including lambs, and beef in Otago, and the use of farm lots? Do you have any detailed knowledge about that?

A. I don't.

**THE COURT: JUDGE BORTHWICK TO MS PHILLIPS**

Q. So, no, you may not ask the question.

10 A. Forgive me, your Honour, I was trying to establish whether or not there was already restrictions in the NES to manage effluent.

Q. Well, I know there is.

A. Yes, yes, your Honour. The question came up on whether or not the risk factors, the risky practices, were an issue in terms of the restricted  
15 discretionary activity, or in terms of increasing of your irrigation areas, so I would like to run through to –

Q. No, you may not.

A. Okay.

Q. You need an evidential foundation that sheep and beef farmers do indeed  
20 use feedlots and standoff pads as a standard part of their farm management systems, and you haven't put that in evidence.

A. Thank you.

**RE-EXAMINATION CONTINUES: MS PHILLIPS**

Q. So I'd like to understand, you were asked earlier what is cropping, could  
25 that include pasture, and your response was you believe it could include pasture.

A. I don't remember that statement.

**THE COURT: JUDGE BORTHWICK TO MS PHILLIPS**

I think you're on dangerous ground here. You can't tell the witness what her  
30 response – you can ask the question again if there's any doubt as to what her

answer is, but don't give her answer for her, and I don't particularly recall the answer anyway.

**RE-EXAMINATION CONTINUES: MS PHILLIPS**

My question was, with regards to cropping, I'd like to understand what cropping  
5 is to you, especially when you go back to the NES definition of annual forage crop.

**MR MAW:**

Your Honour, I was exploring with the witness one of the notes to the  
10 reasonable demonstration of expansion of irrigable area when I asked the question about pasture. It wasn't in the context of cropping, in terms of that part of the...

**THE COURT: JUDGE BORTHWICK TO MS PHILLIPS**

Q. What's the provision that you want to – don't give me the question, just  
15 give me the provision you want to refer this witness to. It's a definition?

A. It's a definition of annual forage cropping.

Q. So is your question whether pasture is an annual forage crop, or is it something different? Because, I mean, it would be a funny question, given the definition.

20 A. My question was whether pasture was actually a crop. An annual forage crop is generally –

Q. No, no, don't give the evidence.

A. Yes.

Q. You shouldn't be doing that. So your question is: "Is pasture a crop?" and  
25 the second question is: "Is pasture an annual forage crop?" seems you've mentioned that, correct?

A. Correct.

**THE COURT: JUDGE BORTHWICK**

Q. Right, so first question, is pasture a crop?

30 A. Yes.

Q. And is pasture an annual forage crop?

A. No.

**MS PHILLIPS:**

One of the issues that came up, as I've mentioned, was that irrigation and fertiliser use tend to go hand in hand.

**5 THE COURT: JUDGE BORTHWICK TO MS PHILLIPS**

Q. I don't know that that's true. Why is that necessarily true?

A. One can't just water one's plants, one also has to feed them if one wants the right amount of growth, generally speaking.

10 Q. Again, you've got a vast farming sector. Did you have a part of the industry in mind for making that statement?

A. No, your Honour, that's just general gardening practices.

Q. Well, then you're giving evidence.

A. Okay.

**THE COURT: JUDGE BORTHWICK**

15 Q. So your question is do you accept as a universal principal that nutrients are applied when a farmer wishes to irrigate? That in order to irrigate, there must also be a prior application of nutrients, as a universal practice across all farming types?

20 A. No, and I wouldn't have the expertise to answer that particular question, sorry.

**RE-EXAMINATION CONTINUES: MS PHILLIPS**

25 Q. The other item which might increase risk of contaminant loss to the environment, and does sometimes go with irrigation use, as Dr Chrystal said, was high stocking rates. If you increase your feed, you can increase your stocking rates. So where you were speaking with Mr Maw earlier, you were exploring provisions 9 through 14, 22, 26 to 29, and 34 and 35 of the National Environmental Standards. Outside of that, would you like me to list which ones those pertain to?

**THE COURT: JUDGE BORTHWICK TO MS PHILLIPS**

Q. I don't know where you're going with your question.

**RE-EXAMINATION CONTINUES: MS PHILLIPS**

5 Q. I would like to know whether there were any restrictions, outside of these restrictions, whether she would be aware of how else there might be a way to increase stocking rates.

A. So beyond changing land use?

Q. Changing land use, more dairy support, more fertiliser.

**THE COURT: JUDGE BORTHWICK TO MS PHILLIPS**

10 Q. Beef fattening? I don't know. Again, the witness may not have expertise in farming systems, and so the witness may not be qualified to answer beyond dairy support, what other farming systems might also see an increase in stocking rate? I would have thought that would be something, and of course, here, your economist has given evidence about something  
15 to do with the soil and topography and the capability, the natural capability of the land to support a stocking rate.

A. Yeah.

20 Q. Yeah, so beyond the general statements that we already have, and I had do difficulty with them, from the economists, and particularly how he was addressing them, does this witness have any expert knowledge on stocking rates?

**RE-EXAMINATION CONTINUES: MS PHILLIPS**

Q. Ms Marr, do you have any expertise or knowledge on sheep and beef farming?

25 A. It's not within my professional area of expertise. I've got a working knowledge, having worked in the space for a while.

Q. Thank you.

A. But I'm not an expert in farm systems.

30 Q. Thank you. One more question, which will hopefully be less annoying, you don't know how many farmers might or might not be affected by the plan with regards to those farmers who might have already started the

process but not completed it which you've been speaking about today, so there may be many or there may be none. What do you see as the potential risks in having the amendments you sought if there are none?

- 5 A. I addressed that in my supplementary evidence, that if there are no farmers in the situation where they need to access the gateway, then it will never be used and does not create an additional risk or cost if it will never be used. That was my supplementary evidence.

**THE COURT: JUDGE BORTHWICK TO MS PHILLIPS**

- 10 Q. That is an amazing question, given the evidence before the Court as to the investment and planning for investment, either before this notification of this plan and post the notification of the plan, including the Manuherikia Irrigation Company. Is sheep and beef farmers shareholders to that company? Just a question for you, you might know off the top of your head.

- 15 A. I believe so, your Honour.

Q. Right, okay. They'd all be in that category of planning for irrigation improvement and expansion, wouldn't they?

A. I imagine they might be.

Q. So why did you ask the question if you knew that to be the case?

- 20 A. Your Honour, there's been a lot of discussion today, and actually yesterday, about the prospect of farmers potentially halting their plans for expansion as a result of this plan change because the risk is quite high.

- Q. Yes. Why did you ask the question? Given what you know about the people who you represent and their shareholding in the Manuherikia Irrigation Company and their interests of that company in these proceedings, why did you ask the question, when it's unlikely to be zero?

1410

- A. Yes, your Honour. I asked the question because we do not have these farmers appearing to confirm that they are indeed invested. Obviously you are aware of this?

Q. I'm not.

A. Of the Manuherikia Farmers.

Q. I am not.



A. Oh, you are not.

Q. Because we are going to be having representatives from that entity before the Court.

A. Yes.

5 Q. And many, many other farmers as well.

A. Yes. So, your Honour, I was hoping that it might open an avenue to think about if the, if Farmers are given a pathway but choose not to take it, there is no risk involved for the environment or for the council in putting in the provision. Conversely, there is a risk for the farmers or at least  
10 difficulty for the farmers if there is none, if there is no pathway put in for them.

#### **QUESTIONS FROM THE COURT: JUDGE BORTHWICK TO MS MARR**

Q. Right. Questions from the Court. So I actually do have an interest in how those, how this RDA rule applies to companies such as the Manuherikia,  
15 irrigation company Cardrona and Arrow, and I was looking at, as well as any other, well, there's a whole myriad of permits which are out there about which the Court has no, it's not visible to the Court yes, so you have got your RDA rule and you have provision A(a), so the activity meets the entry conditions which are listed, and it is demonstrated that the increase  
20 in irrigation was planned in reasonable steps to implement that increase. I think there might be something wrong with the wording here, the demonstrated that the increase in irrigation, do you mean the increase in irrigation area?

A. I do mean the increase in irrigation area, yes.

25 Q. Yep, thought so. The increase in irrigation area was planned and reasonable steps to implement that increase were taken prior to 30 June 2020. Would that describe the steps taken by Manuherikia in preparing to replace their consents before the deemed permits expire in October this year?

30 A. I wouldn't imagine that it would include preparing consent applications.

Q. But it, no, yes, the amount of work which we are told is substantial, we've no reason to not accept that, substantial work, has gone into preparing an application with technically more efficient irrigation infrastructure.

A. Mmm.

Q. As I understand the basic proposition, and secondly may or may not involve an increase in irrigation area. Do you have any knowledge about that?

5 A. Not of that particular circumstance, no.

Q. Is this provision intended to apply where a whole of catchment proposal is made, and they are indeed substantial work has been undertaken to put into place improved technically efficient irrigation systems, and those steps are able to be demonstrated prior to, as of occurring prior to June  
10 2020.

A. Mmm.

Q. Or did you have some other farmer that you were thinking about?

A. Mmm, I wasn't, when I crafted this in my mind was not big irrigation schemes.

15 Q. Okay.

A. So, I didn't, I didn't draft it with those schemes in mind. I drafted it with, although it could apply to some of the schemes.

Q. Yes.

A. Where those people are working together to increase their efficiency and  
20 have made an investment in that so they may have undertaken significant investigations into what kind of infrastructure is needed and how the water is going to be used in technical... so in that circumstance where they have done a substantial amount of work, I think it is reasonable the council would see that that is a demonstration that they had planned on doing  
25 that.

Q. Yes.

A. Yes.

Q. And so for this RDA rule to work they don't have to have implemented it  
30 by the time their permit comes up for replacement, they simply have to demonstrate that the work was done to move now to a more technically efficient irrigation system?

A. Mmm.

Q. And that that also involves an increase in irrigation area, correct?

- 5 A. Correct. Because of the timing of these things I don't think – if people did have that plan prior to the plan being notified they would have put it on hold until they are sure of the outcome of this, so for example, you might have got to a certain point, saw the plan, said no more irrigation, and gone, okay, I'll, I won't proceed down that path until I've got more certainty about whether it will be approved.
- Q. Mmm. And I'm not sure about your answer to that, because many farmers say, well, many partners and also submitters say, well just effect this plan.
- A. Mmm.
- 10 Q. And in that scenario a rational response would be to continue planning for a replacement consent, but under the operative plan would it not be?
- A. Well that wouldn't be my advice to farmers.
- Q. Right, anyway.
- A. But I can see why the uncertainty about the planning framework might cause people to push pause.
- 15 Q. So for some people might push pause.
- A. Mmm.
- Q. For other people they may just because of the enormity and magnitude of the undertaking, particularly where you are looking at large scale replacement consents in those scheme areas.
- 20 A. Mmm.
- Q. Which are described as Arrow, Cardrona and Manuherikia, they may continue to work because of the degree of investment to date.
- A. They may well have, yes.
- 25 Q. May well have.
- A. Yes. Yeah.
- Q. So again, because none of this is visible to the Court, the Court doesn't understand how those catchments are made up and what applications might come forward, what permits exist even out there and how they are structured, I think you've answered yes, if you've got, if I'm a farmer, if I'm just a single farmer with a shareholding interest in an irrigation company, and that irrigation company together with many other shareholders have been, can demonstrate a significant investment in time and resources to improve to replace existing infrastructure with a technically more efficient
- 30

irrigation system, and secondly that will result in an increase in irrigation area, that, that could be caught by your entry RDA condition

A. Yes.

5 Q. Yes. It doesn't require me to have implemented it, so this is work to come, it would come on in the replacement consent, is that right?

A. Yes.

Q. Yes. And under that scenario, with no control over effects, this is just simply a, this would be a restricted discretionary activity with absolutely no consideration of effects.

10 A. No consideration of effects of the land use that follows.

Q. Or even the water, no consideration of effects on the land use and no consideration of associated effects on water quality because the two go hand in hand, correct?

A. Mhm.

15 Q. And no consideration of water quantity other than the, what the entry conditions as you have proposed them, allow?

A. Mmm.

Q. Mmm.

A. Yes, so –

20 Q. - wow, is that what you intended?

A. Well, this plan change deals with water takes, take and use.

Q. Mmm.

A. And none of the conditions deal with the subsequent land use effects of that take and use. This plan doesn't have that framework.

25 Q. No.

A. So that framework is in place in Canterbury for example with irrigation schemes, the take and use of water consents control the land use on the big irrigation schemes. This plan doesn't operate in that way, it has the effects of land use are dealt with as land use and discharge consents rather than water take and use consents, so, so none of the conditions in  
30 the controlled activity rule or in the restricted discretionary activity rule put controls on the land use that results.

Q. No, but under what you propose here, could quite substantial entities have a water permit granted - propose a water permit as an RDA, as a standalone activity.

A. As a water permit? Yes.

5 Q. Is that the outcome that you were thinking of, or were you thinking of a different scale of farming?

1420

A. To be fair I was thinking of a different scale of farming –

Q. Yes.

10 A. I was thinking about individuals rather than schemes.

Q. Like (inaudible 14:20:23)?

A. Yes.

Q. Well no it's not because they could be quite substantial indeed?

A. They can also.

15 Q. And they could be shareholders in these irrigation schemes. Yes. So what sort of – were you thinking of a scale of farming where there is – where the farmer also is a shareholder in irrigation scheme or is not a shareholder in the irrigation scheme, in other words the applicant has their own gallery or their own bore, their own point of take off a river and that's  
20 the, yes, but – what were you thinking of in terms of scale? I was going to say well that could be quite large too?

A. Potentially.

Q. Yes.

25 A. Although I do note that the number of sheep and beef schemes on sheep and beef farms on irrigation schemes is quite small according to Mr Burt's –

Q. How do you know that? How many sheep and beef we've – the applicant has just confirmed that there are sheep and beef shareholders on the Mankuherikia Scheme?

30 A. Mmm, that –

Q. But how do you know that they're relatively small?

A. Oh that came from Mr Burt's evidence of how many sheep and beef farmers are paying, paying for irrigation to a scheme which he said was quite small, so the rest of them, the rest of the irrigated sheep and beef

farms that have irrigation as part of their system, are not paying fees to an irrigation company, so they are presumably individual takes rather than scheme takes. Sorry, I've actually, in saying that, forgotten the question. What did I have in mind?

5 Q. Mmm?

A. Was those individual farmers that have already taken a step towards improving their irrigation system, made an investment in it, that that would be to the benefit of – there would be an efficiency benefit in terms of the amount of water taken to (inaudible 14:22:46) - finishing that task, putting  
10 in the more efficient irrigation system rather than the plan as notified which was a very firm no to consideration of those types of circumstances.

Q. But in, I understand that's what you had in mind –

A. Mmm.

Q. – but as drafted, the provision isn't limited to sheep and beef and the  
15 minor proportion of land which might on average be given over to irrigation, it's drafted to encapture – potentially capturing anybody with an interest in irrigation – who, any existing permit holder?

A. Yes.

Q. Yes.

20 A. Yes it could do that.

Q. And it's broad enough to capture any shareholder in the irrigation company?

A. Who was expanding, yes.

Q. Yes who was expending money with a view to improving technical  
25 efficiency and increasing land under irrigation. Okay.

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

Q. I just wanted to ask you what it was that you intended by two when you talk about the existing irrigation infrastructures being replaced with more technically efficient irrigation and infrastructure and people have talked  
30 about drippers and the means of delivery when you actually get the water to the point of delivery to the particular crop, for example, I think a cropping example, vineyards and cherries got mentioned –

A. Vin- trees, yes. They do.

Q. – so my question to you is the – were you thinking of this in terms of a property scale thing where it was the whole shooting match was contained on the property or were you thinking more broadly than that question 1?

5 A. In terms of the irrigation infrastructure being the –

Q. Yes existing irrigation infrastructure –

A. Being -

Q. - I'm going to ask you about situations that I'm fully aware of which mean that the water's conveyed –

10 A. Yes.

Q. – onto the property –

A. Yes it's a different thing.

Q. – and ultimately often in leaky races and that kind of thing?

**THE COURT: JUDGE BORTHWICK**

15 Q. And what is (inaudible 14:24:57) –

**QUESTIONS FROM THE COURT CONTINUES: COMMISSIONER EDMONDS**

20 Q. But I want to just understand what you meant were the existing irrigation infrastructure, was that everything on the property that related to irrigation, not just the drippers, but the delivery of the water? The take and the delivery of water?

A. Sure. What I had in mind there, technical efficiency of the irrigation infrastructure was the part that is doing the irrigating, not the conveyance system, to get it –

25 Q. Not the take and the conveyance?

A. No.

Q. No.

30 A. The reason I put that in there is so that the expanded irrigation area can't just be more borderdyke, it has to be a genuine efficiency gain, so it can – it's using the same amount of water in a more efficient way, than the existing system does, technically efficient way.

Q. So you're not factoring in what may be happening with the take and the conveyance in terms of efficiency? If you've got a lot of evaporation leakage and basically inefficient use of the resource?

A. Yes it would be, I agree. And I hadn't –

5 Q. Whether, I suppose that's whether that's on the property of the individual concerned or whether it's from outside of the property –

A. Yes.

Q. – could be being conveyed over several properties?

10 A. It could be, yes and I understand there are a lot – a number of water races and canals that are delivering water –

Q. (Inaudible 14:26:40) -

A. - in a quite complicated system. Yes. No I was talking about the irrigation infrastructure itself for irrigating, not delivering water to irrigate.

15 **THE COURT: COMMISSIONER EDMONDS TO THE COURT: JUDGE BORTHWICK**

Q. Sorry, I was just following on from your questions.

A. Yes I know, no, yes, no that's –

Q. Just to try and get a little bit of clarification on that.

20 **QUESTIONS FROM THE COURT CONTINUES: COMMISSIONER EDMONDS**

Q. So in fact proportionately, who knows? There may be major inefficiencies as a result of having this irrigation in the first place, even if it's being efficiently delivered on the property?

25 A. Yes there might be inefficiencies in the conveyancing system that could absolutely be true, yes.

Q. Yes, yes. So we're only looking at part of the picture really, potentially here?

A. Yes it would be, yes.



**THE COURT: JUDGE BORTHWICK**

Q. And is this only and in fact limited to where the irrigation systems improvement is a change from borderdyking and wild flooding or is it more than that? That's actually all I can think of, so there goes my imagination.

5 A. Yes. Yes.

Q. (Inaudible 14:28:05). Because it can't be like K-line, it's not changing from K-line to some other – to a lateral because K-line is an irrigation system delivering water, inefficiently, but delivering water.

A. Mmm.

10 Q. Or is that what you had in mind?

A. So any up – so the irrigation systems range in efficiency from flood irrigation, borderdyke all the way through up to very efficient dripper or spray irrigations. So the biggest change is going to be between wild flood and very efficient dripper. There will also - there could also be efficiency gains moving from K-line to spray or dripper irrigation but there's probably not much more that, within that system.

15

Q. Okay.

A. Yes, so I think the evidence was 30% of the irrigation is borderdyke or wild flood, so there is a lot of efficiencies we can gain that could be gained within that, by upgrading that infrastructure.

20

Q. So you are thinking then, you know, if I shift from the K-line through to a lateral that I could be – that's what I've been planning on that that would be qualifying change in the irrigation system?

A. If it's with the same amount of water, assuming you're not using any more water than you were before.

25

Q. And you don't know how much more land – you really don't have any knowledge in terms of how many people stand to take advantage of that if it came through in some shape or form?

A. No.

30

Q. No?

A. Absolutely don't have any knowledge of the scale.

Q. Mmm. Okay.

**QUESTIONS FROM THE COURT CONTINUES: COMMISSIONER EDMONDS**

1430

5 Q. So I just wanted to explore a little bit but more I guess drawing on your extensive experience. I wonder perhaps if we could just look at the Controlled Activity, the first matter that controls Reserved 2.

A. Yes.

10 Q. And I just wanted to understand what you thought this might allow the council to actually do in terms of decision it might make in terms of any conditions what the basis of that might be?

A. So we're looking at Controlled Activity –

Q. A.

A. Matter of Control A?

Q. A, yes.

15 A. So the council reserves control over the volume and rate of water taken dam discharged or diverted within the limits of historical use and existing permit conditions, yes.

Q. Yes.

A. So it makes more sense to me when I turn it round the other way.

20 Q. Sure, no, well, I understand that. I know Mr Moore did ask you some questions about that in relation to what you might be able to consider in terms of the MPSFM, but if we could just step back from that because I will take you back to that.

A. Sure.

25 Q. But could you just – you might even have a scenario where you could probably experience that might, you think might fall them that or not fall within that?

30 A. Okay, I will try to be helpful there. So there are entry conditions which mean that you can't apply for more water than the maximum rates and volumes that are calculated through the schedule -

Q. Sure.

A. – which uses historic data to calculate what's been used and the way that we – that I've categorised in my thinking that we did in the conferencing was that that historic use calculated through that schedule forms the

*envelope* of the maximum amount of water that can be applied for and then the council's got control, so they can impose conditions on the consent relating to the volume and rate of take within that envelope, so they can't go more than that. Could they go less than that? Potentially, that matter of control doesn't limit them to a minimum amount that would be granted, but because a person's applied for a consent for that certain amount of water and the council has to grant the consents, they would have to exercise that control in a very narrow way otherwise they would be frustrating the application which they wouldn't be allowed to do.

5

10 Q. So that narrow way, what would that allow consideration of effects and what kind of effects? The effects on abstractors, in-stream value, the other values?

15

A. I know that the intention has been that the council wouldn't consider that wider range of effects, for example, in-stream effects of the abstraction because that would require assessments that take more time in are more complicated in the goal of the controlled activity rule was to be a streamlined pathway to replace consents that were expiring?

Q. Other abstractors?

20

A. That would potentially come in under B. As I understand it there's sometimes conditions are already on the consents about who can exercise a consent based on the effect that it has on somebody else's consent. That's already a condition on the deemed permit, for example, and that could be rolled over under B.

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

25 So do you want to get into deemed permits now?

#### **THE COURT: COMMISSIONER EDMONDS**

No. I'm just trying to understand the utility of that A and what it actually does in the end and what the council could do with it.

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

30 Q. I guess the proposition is it's only utility to the extent that it has any utility is if you don't put any bounds in time around the record that you can look

at for data. So if there's no – so if all data is good data then you'd need that, you'd need that condition to examine if there's been a change in efficiency in your irrigation system, has there been a decrease I guess, in the volume rate of take, such that, an old maxima pertaining to an old system just ceases to be relevant and if you like the farmers will cringe, but there's a lowering in terms of – a further lowering in terms of the capped for a deemed permit especially but also –

5 A. Yes.

Q. - any other replacement consent, is that its utility?

## 10 THE COURT: COMMISSIONER EDMONDS

Or might that be subject to argument?

## THE COURT: JUDGE BORTHWICK

Q. Might that be subject to argument, yes.

A. I think possibly it would be because if you've applied for 100 litres a second to what extent can the matter of control change that essentially, change the nature of the application and only provide for 50 litres a second is that getting in the way of the requirement to actually grant the application does that make it a different application if the rate of take is much more than what was applied for and I think that's probably quite a technical legal question actually.

20 Q. It's a planning question, though, how would you normally tackle that? So is there something deficient in either the controlled activity rule or alternatively even the RDA rule, your version or the council's version, it doesn't really matter, is there a deficiency there where people are actually applying for maxima that are unrelated to the current irrigation systems, that has to be actually recognised somewhere and so that the application's tied to the system which is –

25 A. Yes.

Q. - on the ground, yes and then –

30 A. Yes.

Q. – yes, okay. So that means –

**THE COURT: COMMISSIONER EDMONDS**

A doesn't do that?

**THE COURT: JUDGE BORTHWICK**

No, A doesn't do talk to that, but no.

5 **QUESTIONS FROM THE COURT CONTINUES: COMMISSIONER EDMONDS**

Q. No. Does it?

A. It doesn't. If you wanted, I think if you wanted to specifically address that issue –

10 Q. Yes.

A. – you would have to add a matter of controlling there about the efficiency and the need for the water based on that current infrastructure.

Q. Current infrastructure, so that's what's missing?

A. Yes. And that might be a change that arises out of the change from using  
15 average maximums to maximums?

**THE COURT: JUDGE BORTHWICK**

Yes, okay, all right. Okay.

**QUESTIONS FROM THE COURT CONTINUES: COMMISSIONER EDMONDS**

20 Q. Thank you, that's quite helpful. So just in terms of the similar issues whether a restricted discretionary, but just thinking about try to go up a tree to consider the MPS again.

A. Yes.

Q. Did I understand you to answer Mr Maw, to the effect that you didn't see  
25 that as being possible in the way that the restricted discretionary activity matters with structure, is that what I understood you to say?

A. Yes.

Q. We will start with the restricted discretionary?

A. So, if the – so for example, there was an issue with a particular indigenous  
30 fish value, for example, being potentially impacted, does that matter of

discretion allow you to consider that when you are deciding on the rates and volumes and to go back to the MPS for that? I think it is deciding on the rates and volumes and to go back to the MPS for that. I think it is potentially easier to consider that in an RDA because the council does have a little bit more – they have the discretion to decline the consent if they need – if it’s considered necessary. So to what extent is there a discretion extend within the limits of historical use? It can’t go beyond that, but can it reduce the rate and volume within the limits of historical use and again if you wanted to make that crystal clear, you would need to add further matters of discretion relating to, again, efficiency of the system. Efficiency of the current system, so you’re not applying for more water than you can actually use and that isn’t explicitly stated in there and if it was an adverse effect that is definitely not explicitly stated within there.

1440

15 Q. Or what type of adverse effect -

A. No. And that –

Q. - you might be considering.

A. Yes.

Q. – whether it’s on instream fish or other extractors or whatever.

20 A. That’s right, and then it goes back to what extent is the plan change and at fixing problems, and to what extent is it aimed at not making more problems within that.

Q. So, the MPSFM has a lot of process things in it, doesn’t it?

A. It does. It does.

25 Q. So even if you were to go back up the tree, how helpful do you think that might be in dealing with some of these issues?

A. In a consent application scenario?

Q. Yes, perhaps in terms of the you could think about the RDA one.

30 A. Yes. In assessing a resource consent, having regard to the MPS, I think is largely about the objectives and policies of the MPS rather than the implementation part, particularly the NOTH and the setting environmental flows; those are directions to the Regional Council to do things and change their plans rather than directions to consent decision-makers. The direction to consent decision-makers is largely the objectives and policies

in the MPS. Most of the other pages are about telling the council what they need to do in their regional plan.

Q. So, how helpful are those other objectives them, the ones that aren't connected into the follow-up actions the council is to take?

5 A. Well, they are very helpful because they set priority, that the in particular the health and wellbeing of the water body needs to be taken care of, and they identify particular matters with directive policy around protecting, for example, wetlands. Some of the policies are proce- are process, for example tangata whenua being actively involved that's more about the  
10 process rather than the outcome, but the other policies are pointing towards outcomes that the MPS is trying to achieve and they are relevant considerations in resource consents to the extents that the matters of control and discretion allow that consideration.

Q. Right, so we're coming back to what are these matters of discretion or  
15 control saying?

A. Yes.

Q. And so, just thinking about the policy element then in this plan change, so is there anything in there that is going to assist in terms of effects?

A. No.

20 Q. No.

A. Not in PC7, no.

Q. Not in PC7, okay.

A. No. There are some other policies in the rest of the freshwater plan change – ah, freshwater plan, land and water plan, that go to maintaining  
25 and taking care of particular values, but in PC7 it's very process oriented.

Q. Okay.

A. Yeah.

#### **QUESTIONS FROM THE COURT: JUDGE BORTHWICK**

Q. So let's get into permits. Did you get, did your advocate send you a copy  
30 of the minute that I released about deemed permits on the 7<sup>th</sup> of April?

A. I don't believe so. 7<sup>th</sup> of April. No, I haven't seen anything from the 7<sup>th</sup> of April.

Q. Did you send a copy of that, as directed? [Question directed to courtroom, inaudible answer 14:44:30). All right, do we have a copy on file that we can hand over? Thanks. So I just, so again this is another, it's a minute released about deemed permits, it's regrettable that you haven't seen it, it's the Court's looking for other blind spots, if you like.

5

**WITNESS REFERRED TO JUDGE'S MINUTE DATED 7TH OF APRIL**

**RE: DEEMED PERMITS**

A. Okay.

Q. Within the PC7 which are not addressed, need to be addressed, and it is in the interest of all farmers that it is addressed. So deemed permits.

10

A. Okay.

**DISCUSSION – UNMARKED COPY TO BE READ BY WITNESS OVER AFTERNOON TEA BREAK – QUESTIONS TO FOLLOW**

**COURT ADJOURNS: 2:45 PM**

15



**COURT RESUMES: 3.02 PM****QUESTIONS FROM THE COURT: JUDGE BORTHWICK**

Q. Firstly, do you have any knowledge through your client or through general practice about deemed permits?

5 A. Very little.

Q. Very little, okay. And so one of the – we've got legal questions and then we've got some planning questions around deemed permits, putting the legal issues aside, you know, there's a question, well subject to the legal issue, or outcome, there's a question of, do we need to be doing something in this space, can we do something in this space, what should we do in this space? And because my broad understanding is come 10 1 October, then deemed permits simply cease to exist, they're a creature of statute?

A. Mmm.

15 Q. And what had been imagined by Government 30 years ago when it enacted the RMA is that there would be a fit for purpose water plan which would replace the deemed permits but there's not and so is there kind of a policy gap in this plan change or is there not, because Council has also had a policy of late of encouraging farmers to enter into more collective 20 arrangements and those collective arrangements particularly through flow sharing agreements but there may be other mechanisms, have already taken or have taken over or, yes, have taken over or had the capacity to take over those deemed permits, so I was trying to get a feel for any of that and do you have a feel for anything to do with that, is there a gap, 25 not a gap?

A. To do with flow sharing arrangements –

Q. Yes.

A. – and whether there's a gap?

30 Q. Well whether there's a policy gap because we've heard evidence and it's not helpful, we've not heard from farmers, that would be helpful, but we've heard evidence, oh it's going to be chaos and it's like, the basis of that we don't know. It may be, it may not be?

A. Mmm. My experience with water user groups and flow sharing arrangements is predicated around those arrangements being farmers working together to achieve a particular outcome, so to keep flows above a minimum level for example and the minimum level is a condition of the – of all of their resource consents and the flow sharing arrangement sits outside of that as a co-operative way of making sure the flow never hits that threshold. I don't have any experience with it where it relates to keeping water available for another user –

Q. Yes.

10 A. – that's much more complicated. It's –

Q. Yes and that's really what we're talking about actually –

A. Yes, yes.

15 Q. – so the flow sharing arrangements not tied to a minimum flow in a permit, even a existing permit or a place permit, but is tied to the collective interests of a catchment or sub-catchment to ensure that water is available for all users and that restrictions start to come down in a way which is equitable and fair across all users and so that would be what I was thinking of and you've no experience of that?

A. No.

20 Q. No.

A. Not with having implemented something like that, no.

Q. Okay. All right.

25 A. I can see that you could craft plan versions or resource consent conditions which set out who must cease taking at certain times in order to keep the water available for a dam stream user, that I think would require a consideration of all the consents in the catchment at the same time. It would be a quasi-regional plan and seeing as we don't have one, that might not be very helpful.

30 Q. And so others have said, "Oh well, you just have to refer to the word 'priorities' and it just kind of all happens and that might be so inasmuch as the priorities which have been in place for over 100 years or so, if they had been exercised and again we have no evidence about whether they are exercised to the extent of their exercise, of the circumstances when they're exercised and that can change I imagine every year?

A. Mmm.

Q. And every season. We have no evidence about that. But the evidence we had from two parties at least, was just say the word “priorities” and it would all happen?

5 A. Mmm.

Q. In this plan change, if you say the word “priorities” it would all happen. Now that might be, I don’t know whether that is so, we’d all, something might happen if it had some legal benefit to the permit holder or maybe nothing would happen if it had no benefit, no existing right or, I don’t know?

10

A. Mmm.

Q. Have you got any thoughts on that? Say the word and...

A. No.

Q. Well firstly, first opposition is to include priorities as a matter which is a matter of control, does that assume in fact that there is a continuing right in priority which can be recognised after 1 October?

15

A. I think it would.

Q. Yes.

A. Yes, my understanding is that the rights of priority are deemed consent conditions.

20

Q. Yes, yes. On a deemed permit?

A. On a deemed permit and this is a new slate in a way getting a water permit.

Q. Yes.

25

A. Except of the extent that the plan change already says if there are conditions on the permit already, they should be rolled over?

Q. Yes well that’s the technical legal issue, is a deemed condition on a deemed permit –

A. An actual condition –

30

Q. – a creature of statute which ceases to exist after the 1<sup>st</sup> of October regardless of what anybody else might think, or is that not quite right? It can somehow survive, and so that’s the vexing thing, or vexed legal question, and I thought, well yes there’s that and we’ll get an answer out

of that, but is there some other planning response, that if you like mimics what's going on with priorities and yes?

A. Well that would be defining the flows at which those priorities apply.

Q. Yes. Okay, so the very thing that's not being done?

5 A. Yes needs to be done.

Q. Yes, okay.

A. Yes.

Q. Any other mechanisms that can be brought down to encourage collective organisations, sounds like a union now, but collective arrangements other than, well including also the policies which were in the operative plan?

10

A. I noted in the minute a question about carrying over some matters of discretion.

Q. Yes well they were just my –

A. Yes.

15 Q. – they're the matters of discretion in the operative plan and so that was me brainstorming again and looking for solutions if we have a problem looking for solutions, yes?

A. Yes and you could carry those over into the controlled and restricted discretionary rule but in order to utilise those matters of discretion, the consent conditions would have to define flows and times. Again, we're back to the same problem, we don't have that information, so then I think you are left with the non-regulatory approach that seems to be operating at the moment in the region. When people get along, that works quite well, but it doesn't translate to a condition of consent very well, I wouldn't expect.

25

1510

Q. No, and those non-regulatory methods, because that is how I describe priorities in particular and flow-sharing agreements too, at least what we've learnt about them, they can be signalled and encouraged through policy in this plan change in the same way or much the same way as the operative plan has, but what it's doing is just signalling?

30

A. Yes. The only other way I've seen it is a group of irrigators or water-takers applying as a group for a certain amount of water and certain flow regimes or minimum flows, and then exercising that global consent by

agreement amongst them, in which case they manage the achievement of the conditions by managing their takes by agreement, and then the council doesn't need to be involved in what that agreement looks like, and I have seen that work.

5 Q. And I think it's possibly already in the region and in some replaced permits, but again, that comes down through a large permit with minimum flows, (inaudible 15:12:08) and all the rest, and then the flow-sharing itself is as per what irrigators want to do, but sitting outside the oversight of the regional council, but again, it depends on somebody putting up a  
10 comprehensive application with minimum flows, and that's not this process, this processing isn't intending to impose.

A. No, this process doesn't impose that, it would have to be by agreements.

Q. Could this process – and I haven't thought this next comment out at all, so don't take anything out of it – if that is what is proposed, if it is, in fact,  
15 a gap and there is risk within catchment, sub-catchments, and risk to existing relationships with abstractors, is that something that could be proposed without any other change? So, in other words, a voluntarily minimum show and recession? If it is suggested, that could be, as a way for tiding people over, that could be proposed, and that doesn't have to  
20 come with a merits-based assessment for large-scale increase in irrigation area or anything else.

A. Yes, I can't see any barrier to –

Q. Any barriers to a voluntarily proposal.

A. – a voluntarily approach, no.

25 Q. Well, that is one method, and it could be quite an effective method.

A. It could be.

Q. As between relationships. Okay, all right. So do you know – and you may not – anything about schedule 2A? All my questions from about paragraph 12 onwards. Do you know anything about that? Hold on, no,  
30 double check, sorry. Yeah, no, my questions from 12, 13 and 14, knowledge about catchments inside and outside schedule 2A. Do you know anything about those catchments and permit consenting?

A. About the consenting? No.

Q. No, okay, so I won't ask you that.

**QUESTIONS ARISING: MR MAW**

Q. Commissioner Edmonds asked you some questions in relation to the utility of the first matter to which the council reserves its control, so matter of control A.

5 A. Yes.

Q. And I wonder whether, perhaps, the purpose of matter of control A was as simple as providing a platform to the council to impose conditions in relation to those matters, reflecting the entry conditions on the rule, simply so that there was simply a hook for council to put conditions on these things.

10

A. I imagine, originally, that was its intended purpose, yes.

**WITNESS EXCUSED**

**BEEF AND LAMB NZ AND DEER INDUSTRY NZ CASE CONCLUDES**

**THE COURT: JUDGE BORTHWICK TO MS FORD**

Q. Okay, so who are we moving to next?

A. Good afternoon, your Honour and commits, counsel's name is Ms Ford for Horticulture New Zealand. Just before we get going with my legal submissions, I'd like to introduce the team very briefly. We've got three  
5 of our experts with us today, we've got Michelle Sands, who is the manager of natural resources for Horticulture New Zealand, Vance Hodgson, who is our planner, and he attended the expert planning conferencing as well, and Stuart Ford, who's our economist, and you  
10 heard from Ian McIndoe as part of the OWRUG presentation back in March, so we had joint evidence with him. We've also got two growers with us today.

A. Two who? Growers.

Q. Growers.

15 A. Oh right, yes.

Q. And we have got Mr Earnscy Weaver who is a director of Leaning Rock Cherries in Cromwell and Simon Webb as well whose Webb's Fruit who you will see on the main highway.

A. Just out of town, yes, okay.

20 Q. With some timing constraints and some circumstances for Mr Weaver, he has a funeral to go to tomorrow, so what and some timing constraints with flights and travel, and stuff, what I propose is to have me present the legal submissions moved to Mr Weaver's evidence in his statement and then Mr Ford for economics, and then move into Ms Sands and Mr Hodgson  
25 following up with Mr Webb to round up our case.

Q. Okay, very good . Now you heard me ask a lot of questions from the last witness about my minute and my minute concerning deemed permits, do we have a problem if we do with the nature of the problem, how do we plug that one? It's my expectation and direction was that all of your  
30 witness have seen that, have a copy of that minute, have they had it?

A. Apologies, your Honour, it is something that slipped my radar. They haven't now -

Q. Oh, good because -

A. – and we would like to have more of a discussion about it tonight, that our initial view is that it's something that if we were going to address it, it would have to be across all of our experts.

5 Q. Well, I also really interested in the farmers, you see, experts might have something to say, but what –

A. Yes.

10 Q. – we are actually missing in this hearing is good evidence from farmers and on that issue, yes, they don't have to answer all the technical stuff that are put out there, but I just – I want to know something about deemed permits.

A. Both of our growers are –

Q. Yes.

A. – really keen to just have a conversation with you –

Q. Okay, good.

15 A. – so that they can tell you, like answer these questions for you. Mr Earnscy, is part of the Manuherikia Cadet Scheme and so that – he might have some rally good insights threatened, but I would suggest just talk to him.

20 Q. Very good. And thinking about that because it is a conversation that we will probably swear your witnesses just so that they can be no criticism at a later stage that they weren't on their oath, et cetera.

A. Okay.

Q. So it's still no different in terms if the look and feel, it's still a conversation.

A. Yes.

25 Q. Yes, except, you know, obviously, prompting the truth in the conversation.

A. Yes, of course, your Honour.

Q. Okay, all right. Very good, all right. So we are in your hands for your opening.

A. So you should have copies of my opening in front of you?

30 Q. Mhm.

1520

### **MS FORD MAKES OPENING SUBMISSIONS TO THE COURT:**

And I would just like to, as I tabled it today, I would like to run you through it as we go. So Horticulture New Zealand supports the transitional and interim intent



of Plan Change 7, and notes that it is intended to provide an interim regulatory framework for the replacement of other expiring deemed permits and other exporting water permits while the new land and water plan is developed and until that becomes operative. For HortNZ it is vital that the horticultural growers in the region have enough certainty of water supply for their businesses to continue to be viable. We support other primary production and water user groups such as OWRUG and the other primary sector groups here to the extent that the plan change as it was notified, I'd just like to make this clear that with how the plan change has developed through the course of this hearing, there was the general opposition to the plan change initially and how this has developed while - and I've been informed today that OWRUG are taking stock of where they're at now, as an example, but we, we don't oppose the withdrawal of the plan change but it is not something that we're seeking. We are now in the position, as you would have seen with Mr Hodgson's evidence that was provided on Tuesday, we're quite comfortable with where the plan change provisions have landed as a result of the expert conferencing and that's the line that we'll be taking going forward.

So paragraph 4 there just sets out that position how that's developed through the expert conferencing and the hearing and we consider that the changes made to Plan Change 7 in the 8 April version, which I refer to and is appended to Mr Hodgson's evidence resolve the issues raised in our original submission. I'd just like to note that the Court has already heard lengthy submissions traversing all the relevant legal matters and Hort does not wish to repeat what has already been said, and these submissions will focus on an overview of the relevant contextual matters to our submission and our updated position following the various iterations and changes that have been made to Plan Change 7 up to and including the planning conferencing. As an overview of Horticultural New Zealand, HortNZ is an industry good body representing the interests of commercial fruit and vegetable growers. Its mission is to provide a unifying vision for the horticulture sector which increases collaboration between product sector, regional and district groups and enhances the sector's ability to respond to and influence decisions that affect it; and to develop and encourage industry-wide projects which benefit all growers.

HortNZ participates in regulatory and legal proceedings on behalf of growers nation-wide to ensure the best outcome is secured not only for growers but for the continued food security of all New Zealanders. Over the years, HortNZ has refined its submissions in these regulatory proceedings having been guided by what is occurring at the national level. In addition, HortNZ has been assisted by a dedicated expert team who have provided the detailed technical work that underpins the organisation's position.

Our submission on Plan Change 7 and further position, sought an efficient, effective and fair regulatory framework that provides for greater security for the Otago region and for horticulture. We sought a controlled activity status for the renewal of deemed permits and water permits; amendments to the definitions, policies, rules and Schedule 10A.4; and a viable consenting pathway for deemed permits and water permit renewals that do not meet the controlled conditions.

As I have already noted, PC7 has been and continues to be a contentious issue within the Otago Region, and it is the view of HortNZ that a good middle ground between the primary sector parties, environmental groups, and council, seems to have been found through the course of the hearing and the expert conferencing – as shown through the 14 March version in Mr de Pelsemaeker's supplementary evidence, and the 8 April version that came out of the expert planning conferencing.

Horticulture in Otago is quite a unique situation as it has a unique production capability and plays a critical role in the national food production system. The Otago region supports a variety of both fruit and vegetable crops. Vegetables are mainly grown in the Waitaki District and the Central Otago District is the key area for growing summer fruit. It is the combination of the soil and climate which makes Central Otago especially suited for growing high quality crops, and it is well known for its stonefruit, such as cherries, apricots, peaches, nectarines and pip fruits. There is also a wide variety of vegetables grown in the region, which include but is not limited to, yams, carrots, courgettes, leeks, cabbage, pumpkin and potatoes. Due to the variety of fruit and vegetables produced, a range of water requirements are needed in the region. A one size fits all consenting approach is not appropriate. A cascade of consent options needs to be available for growers so that consent applications can be tailored to a

grower's particular activity. For example, vegetable crops can be more versatile in the location they are grown, as the crops are replanted each year and so shorter term consents may be appropriate. In contrast, an orchard requires significant infrastructure, time and planting costs before a return on investment is seen or the first commercial crop can be harvested, and so a longer term consent is required. For these reasons, HortNZ supports a consenting pathway which provides for the variety of circumstances and water requirements which arise in the Otago region.

The next section there, your Honour, is just outlining our experts' and who is presenting as part of Hort's team which I have run through already. So we've got Ian who you have heard from, Michelle, Stuart, Mr Hodgson, Mr Weaver and Mr Webb. As part of Mr Hodgson's evidence, in appendix A he attached the provisions of the plan change as it was written at the expert planning conference. And I would just like to make a note there that the comment boxes that are recorded in that PDF indicate that there is more work to be done to carry through that maxima.

#### **THE COURT: JUDGE BORTHWICK TO MS FORD**

Q. Yeah, no, I'm very aware of that. I think you are in the same position as the last party which is that in all other respects that is in fact the JWS which was signed as of 8 April. It is a different document to the one that has come into court insofar as the comment boxes weren't there, but we, yeah, they're not particularly relevant to the court although the court already is aware of their contents and understands what's been signalled as in the comment box.

A. Yes, I just wanted to bring your attention that those are changes that were to be followed through.

Q. Yes, no, I know that.

A. Just to make that clear.

Q. Yes.

#### **SUBMISSION CONTINUES: MS FORD**

Fantastic. So we are moving into Plan Change 7 at paragraph 15, your Honour. As you know, it is obviously a Ministerial call-in, and as a call-in the appeals

can only be made on points of law. This makes the outcome of this hearing incredibly important to all parties. The plan change itself was intended to provide an interim planning framework to enable the transition of deemed permits and other expiring water permits to be updated to resource consents prior to the Land and Water Regional Plan being developed and notified. We have talked quite a lot about the National Policy Statement for Freshwater Management 2020 and that came into force in September 2020 which replaced the 2017 National Policy Statement. The Regional Council must give effect to the NPS 2020 as soon as reasonably practical and it has committed to do so by having a new NPSFM 2020 compliant framework in place by 31 December 2023 so that Plan Change 7 can remain process-based and transitional.

This will be achieved, the implementation of the NPS 2020 will be achieved through the New Regional Policy Statement due to be notified in June 2021; and then the new Land and Water Regional Plan to be notified in 31 December 2023.

The effect of the NPSFM on HortNZ's position 19 is that the provision of fruit and vegetables plays a crucial role in providing for the health of all New Zealanders, and therefore must be enabled through the planning hierarchy. Inclusion of select environmental outcomes, which are to be set through the National Objectives Framework of the NPSFM 2020, should not be included in PC7 as this selection could lead to a judgement of outcomes that are important, despite Council not having undertaken the consultation or the values setting process. This goes back to our case that this is purely an interim plan change. The NPSFM 2020 must be given effect to in the new Land and Water Regional Plan. The timeframe suggested by Council for that plan to be developed enable values setting consultation to occur, and we note that consistency issues may arise between the yet to be notified RPS and Plan Change 7. However, as suggested in the legal submissions of the Regional Council on the matter, parties should be given the opportunity to submit on the effect of the RPS on this plan change if it is notified prior to the Court making a decision on Plan Change 7, and we would support that process.

HortNZ consider that the interim nature of Plan Change 7 and the development of the new Land and Water Regional Plan in the timeframes it suggests is an appropriate pathway towards giving effect to the NPSFM 2020.

So, as you know, your Honour, at paragraph 22 there have been substantial changes to the provisions of Plan Change 7 through this hearing process, culminating in the 8 April version.

5 HortNZ considered the changes that were recommended in the 14 March version and decided that supplementary planning evidence was not required at that stage, as the planning conferencing had already been scheduled for 8 and 9 April. However, the Court requested an updated brief of evidence from Mr Hodgson and this was lodged on Tuesday 13 April. In Mr Hodgson's updated evidence, he records his support of the cascade of activity rules as  
10 drafted in the 8 April version and while that version also includes changes regarding community water supply and hydro-electricity generation, which he does not comment on, HortNZ's position before the Court today is that the version of PC7, as recorded at the planning conferencing, resolves HortNZ's concerns.

15 **THE COURT: JUDGE BORTHWICK TO MS FORD**

Q. Now you will have heard us quiz the last planning witness about some of the content of that document and I imagine Mr Maw might also have questions as well. So while you may be happy, there is I suspect some finessing, well the regional council certainly say there is some finessing  
20 that needs to be done.

A. Yes.

Q. Yes, and so we will probably take the same approach with your witness.

A. Yes, of course, your Honour. I guess the cascade of the activity rules there is what is important to HortNZ. It is as I have already noted, it is  
25 really important for our growers to have a pathway to go through if they do not fit the controlled or the restricted discretionary activity, so that non-complying door does need to be open even if it is a very tight door to get through.

Q. Yes, and you actually might have had the transcript talk about the narrow  
30 or wide door, or gate, so actually that non-complying rule is something that is very much in play.

A. Yes.

Q. I don't know. The fact that it is included in this JWS, I don't know, means that every, you know, all the planners signed up to it. In fact, I rather think they had, it was beyond the scope of the conference, they were editing back changes if you like as a consequence of the schedule, so as the  
5 schedule meant had to do some edits in some of the policies and rules but I don't think that necessarily follows they all loved the non-complying activity pathway because I don't think that, that would not be the tenor of cross-examination. So, just saying that.

A. No. Yes, yes your Honour.

10 Q. But you might love it, and if you love it you can say it's a narrow door and you're really happy with that narrow door.

A. I wouldn't necessarily say that we were really happy with it.

Q. Yes.

A. I will leave those detail questions to Mr Hodgson.

15 Q. Yes, okay. All right.

A. But as long as that pathway is open, Hort can work within the timeframe because this is purely just that transitional interim planning framework.

Q. Yes. No one's asking any longer that I'm aware, and, you know, we've obviously got quite a few parties to come, but I don't, I'm not aware of  
20 anyone still continuing to ask for a prohibited activity status.

A. Which is great.

Q. Good.

A. Okay.

## 25 **SUBMISSIONS CONTINUE: MS FORD**

I would just like to talk through the pathways that were provided in that 8 April version, and as Mr Hodgson's updated evidence talked through in a bit more detail. So we support the cascade of activity rules of a controlled activity, the RDA and a non-complying activity. The 8 April version retains the stripped  
30 back, interim consenting regime that was recommended in the 14 March version, but provides a clear pathway for applicants to demonstrate that the effects of their non-complying activity will be no more than minor, as per the first limb of the 104 gateway test.

Just as a side note there, your Honour, Mr Webb tomorrow will be able to speak to this, as we think that his orchard has, and you will see it in the site visits as well, provides quite a good example of where that non-complying activity might be appropriate.

**5 THE COURT: JUDGE BORTHWICK TO MS FORD**

Q. Oh that will be great. Yep, okay.

A. So just to flag that with you.

Q. Mmm. Because I think part of the difficulty with a non-complying pathway is that nobody has a, nobody can imagine what you, what that looks like.

10 A. Yes.

Q. Yes, it's trying to conjure up applications out of thin air, so the fact that Mr Webb's got something in mind I think is really helpful.

A. Yes, for Horticulture, is it particularly relevant because of the planning that goes into that expansion, and the Mr Webb, like he will, you will be able to question him and have the conversation with him in a lot more detail, but as I understand it, orchardists need to put a deposit on trees two or three years to them being planted, and so the development that is happening at his orchard at the moment was planned and in place two years ago, prior to the notification of this, and he had trees go in in September last year I think, which is past the cut-off date of March 2020 for that what's in the plan at the moment, but he didn't really have an option because those were paid for two years ago, and so it's that expansion there that we think might fit within that non-complying activity rule and so yeah, something to traverse with Mr Webb and Mr Hodgson as well.

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20

25

Q. Thank you.

**SUBMISSIONS CONTINUE: MS FORD**

So the controlled activity at paragraph 26, now uses the period 1 September 2017 to 18 March 2020 as the baseline of total land area under irrigation under the controlled activity conditions. This has addressed HortNZ's concerns that the growers who had improved or expanded their irrigation system and/or other infrastructure since 2017 (as per the date in the notified version) would not be

30

faced with the financial cost of re consenting and all that sort of thing, your Honour. The restricted discretionary activity is an extension of the controlled activity and provides a pathway for growers where a calculation in accordance with Schedule 10A.4 might not be possible. The restricted discretionary activity enables growers to prove historical use of water, and the Council is able to consider that information in terms of its accuracy and validity. In essence, it is only the method of calculation that is varied between the controlled and restricted discretionary activities, the effect of which is that the controlled activity will still likely be encouraged in the preferred consent pathway that growers apply for. 28.

**THE COURT:**

Just pause there a second. I just want to reread that. Okay, mhm.

**SUBMISSIONS CONTINUE: MS FORD**

15 The non-complying activity enables an applicant to advance a case for a longer term consent or irrigation expansion if the effects of the activity are no more than minor, as per the first limb of the s104 gateway test. The 'avoid' policy recommended by Mr de Pelsemaecker in the 14 March version closes the door to a policy argument under s104D. This is appropriate in the context of the interim nature of the Plan Change, as it provides options to growers, where it is appropriate, but does not encourage the use of the Noncomplying activity. This cascade of activities is recommended in the 8 April version, which HortNZ supports.

**THE COURT: JUDGE BORTHWICK TO MS FORD**

25 Q. So, there may be a merits-based assessment as a non-complying activity, which activity – and again you'd have to get the four corners right, but the example that – I'm not sure whether your four corners are exactly what Mr Webb's circumstances are, that irrigation is inground or, you know, earthworks together with irrigation systems have already been rolled out, and in that particular case plants purchased and planted, but there is a merits-based assessment, and that assessment would look to presumably the increase in volume, if there is an increase in volume, of



water based on historical use together with questions over any effect, well maybe questions over any effect on the environment as a consequence of the expansion of the area, the obvious example being nutrients, but you know maybe, I don't know whether that's obvious or not, because I don't know what other chemicals are brought to bear on a you know within horticulture and how, and the regulation of those in any change in scale, intensity, whether, you know, the volume and concentration of those.

5

A. Yes, your Honour –

Q. But that's the gateway that you want, it's got the –

10

A. Yes.

Q. – those two potential effects increase?

A. Yes, I think I understand your question.

Q. So that you through their non-complying gateway you could potentially increase the volume of water –

15

A. Yes.

Q. – so we're no longer using an historical volume, and you could potentially increase or change the concentration or load or contaminants, that they would be the two main changes.

A. Potentially, yes.

20

Q. Potentially, so then how does the Plan Change speak to that would be the, would be what the Court would want to know particularly in the context of the policy and the objective?

A. Mr Hodgson might be able to answer that a little bit more fully.

Q. Okay. Mmm.

25

A. But my understanding is that through that non-complying door pathway, the police door is shut so because it's not, there's the avoid policy in there, but if an applicant can show that the effects of their activity that they have applied for is no more than minor, then they might be able to continue with that activity for potentially an increased area of irrigation or a change in the volume of water that is used, which could potentially go the other way as well as irrigation systems are improved and efficiency is improved as well, so I guess it's being able to have that pathway open to show that merits-based no more than minor effects are there.

30

Q. Okay.

A. Yeah.

Q. So that is going to be the challenge for your...

A. Yes.

Q. Yep, okay. Good.

5 A. We do accept that that is quite a tight door.

Q. Seems to be very narrow indeed, mmm.

A. Yes. And so if it was opened I think it, yeah, there is still a wee bit of work to do there.

Q. Mhm, okay.

10

### **SUBMISSIONS CONTINUE: MS FORD**

So just to conclude your Honour, when HortNZ made a submission and further submission on Plan Change 7 which sought a viable and efficient consenting pathway for horticultural growers in the region, HortNZ considers that the 8 April  
15 version of the Plan Change resolves its issues it raised in submissions and this version effectively and efficiently provides an interim plan change which enables a just transition period for water users in the Otago Region, obviously still with that work that is to be canvassed.

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

20 **QUESTIONS FROM THE COURT – COMMISSIONER BUNTING – NIL**

### **MR MAW:**

I've probably exhausted my supply of questions. One matter I've been contemplating seeking leave from the Court relates to whether I might question  
25 some of the lay farming submitters on the question of whether they can describe the irrigable area that they had in play between 2017 and 2020, given that issue was made live by Ms Dicey.

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

Q. Mmm, mhm.

30 A. And I've been extremely reluctant to not be cross-examining lay witnesses, and if the Court is going to be exploring that question amongst

its questions for those witnesses, I will not need to do so but it does appear to be a live issue.

- 5 Q. I don't in principle because of the importance of the issue and also because actually farmers are the best people placed to talk about this stuff, not anybody else, I don't have any problems in principle with you asking questions about it. Do you? It's good we –

**MS FORD:**

- 10 I can't speak for the witnesses themselves, but in principle, no we agree that the growers are the best people to talk to this issue, because they know the land, they know what they are doing on it.

**THE COURT: JUDGE BORTHWICK TO MS FORD**

- Q. They know the farming system.
- A. Yes, and they are experts in their own rights.
- 15 Q. Yeah and you would have, everybody would have sat and listened to the highly theoretical debate happening with experts.
- A. Yes.
- Q. But actually farmers are the people who are expert, and farming systems.
- A. Yes.
- 20 Q. And I think it would be of benefit to the Court and I think of benefit to the regional council that we can, you know, just test is there really a problem here or is there no problem here, and so if you are happy.
- A. Yes, I think that we'd be happy with that.
- Q. I'll grant that leave, yeah.
- 25 A. Yes, your Honour, and just reiterate that our growers just really do just want to have a conversation, so that their message is clear and gets across.
- Q. Okay, all right. Thank you.

30

**MS FORD CALLS****EARNSCY WEAVER (SWORN)**

1544

5 Q. Mr Weaver, just so you know this is very much the same similar sort of process as what Ms Marr went through this morning and this afternoon, hopefully a little bit not as long, but this is your opportunity to present your evidence and to tell the court, present to the court what you're here to present for. So I've got a couple of questions just to start off with. Can you confirm that your full name is Earnscy Weaver?

10 A. Correct.

Q. And you're a director of Leaning Rock Cherries Limited.

A. Yes, I am.

Q. And you made a statement of evidence dated 5<sup>th</sup> of February 2021?

A. Correct.

15 Q. And you've got a – do you have a one-page summary?

A. Yes, I have a one-page summary.

Q. Do you have any corrections to make to your statements?

A. Yes, in paragraph 10, there's a typo where it says "lead" rather than "leaf" and I think it could misconstrue something if we didn't deal to that.

20 **THE COURT: JUDGE BORTHWICK**

Q. This is paragraph 10 to your original submission, is that right?

A. Yes.

Q. Yes, okay.

**EXAMINATION CONTINUES: MS FORD**

25 Q. So that should read: "This includes tensiometer readings, soil moisture readings, soil and leaf testing and using data from weather stations?"

A. Correct.

**THE COURT: COMMISSIONER EDMONDS**

I can see why you would want to change that.

30

**MR WEAVER:**

Beg your pardon?

**THE COURT: COMMISSIONER EDMONDS**

I can see why you would want to change that.

5

**MR WEAVER:**

Yes, it makes a difference.

**EXAMINATION CONTINUES: MS FORD**

10 Q. And you have got the experience and knowledge of the industry as set out in your original statement in paragraphs 3 to 5?

A. Yes, correct.

Q. Great. This is as I said before, your chance. So if you would like to start with your one-page summary. I will have no further questions and then we will lead it up to the court.

15 A. Okay. "My name is Earncy Weaver. I am a director of Leaning Rock Cherries Limited. We made a submission on proposed plan change 7 and support the submission of Horticulture New Zealand. I'm also speaking on behalf of Peter Morrison who is a neighbouring orchardist. Leaning Rock Cherries Limited grows a variety of stone fruit also know as summer fruit and pip fruit in the Manuherikia Catchment. We produce approximately 18 to 20 tonnes of cherries per hectare, 57 tonnes each of peaches and nectarines, 30 tonnes of apricots and 70 tonne of apples per hectare. The operation is a total of 64 hectares most of which is irrigated. For the past 35 years we've been operating Leaning Rock Cherries supported by a water supply agreement signed originally with the crown then with the Manuherikia Irrigation Co-operative Society Limited. Our association with the irrigation scheme and access to a defined water quota has been the norm for us. For the last 35 years we've operated with a take allocation of 5.8 millimetres per hectare per day. We've improved our operating systems in that time and grow all our fruit in accordance with best practise. We are continually learning and developing our management practise to improve our sustainability as

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much as we can. This includes tensiometre readings, soil moisture readings, soil and leaf testing and using data from weather stations to form our irrigation decisions. We also conduct fruit diameter testing and only irrigate what we have to. And if I could just add under there, it's not just about the triggers for irrigation, it's also about the management of the irrigation system, in that we irrigate within the evening with all our micro-sprinklers and any overhead that we may do, our dripline irrigation or not so much dripline, but some of our micro-sprinkler irrigation, we pulse to make sure that we don't over-irrigate with it and pulsing I mean that we may run for to put two ml on and then three or four hours later another two ml and then another two ml later on after that and it's about getting the best use out of that water. In order for our growing operation to continue, we need certainty that the water supply we rely on will be available to us. We need PC7 to enable us to keep using this water allocation." And in Appendix 1, attached to my statement of evidence describes a negative impact of tree water deprivation, and in there I talk about the consequence if the tree short of water and I must say that some of those consequences have also come about a tree as over-irrigated and in particularly in soft fruit. So the negative impact of under-watering is equally can be an over-watering. So we've got to be on the right on the knocker as much as what we can to make sure our fruit quality is right, and if it's not, there's no real second base particularly if we're doing a expert – cherry export apricot that there is no second base for that fruit, that if it fails, if the fruit doesn't size, if it's too soft, there's just – there's no ability to make a profit at that point, so we need to have it right. We also need PC7 to provide flexibility for different types of growing systems and now allow us to use water for irrigation and frost fighting. If we cannot, then we will not be able to maintain export or New Zealand grade quality crops and this will result in significant loss of profits and ultimately job losses. We would be forced to cease operation and sell up. I am concerned that PC7 will not enable us to take the amount of water that we need when we need it to be able to sustainably operate our horticultural business. This would be hugely detrimental to the trees,

plants, environment and the people that make up the fruit growing business.

1550

**5 THE COURT: JUDGE BORTHWICK**

Q. Now can I just ask you again, because I didn't quite catch it, the paragraph that you needed to amend from "lead" to "leaf"?

A. Yes.

Q. Which number was that?

10 A. Paragraph 10.

Q. Paragraph 10. And is this in your brief of evidence or is this in the original submission because I couldn't –

A. In the original.

Q. Right. No I can't find it.

15 A. I think it's paragraph 10.

Q. Perhaps – I'll get you to indicate which document and what paragraph because I can't spot it?

A. So that's in the statement of evidence.

Q. Yes, got that.

20 A. And page 3?

Q. Page 3?

A. Ten.

Q. And my paragraph 10 starts, "By way of background"? Oh –

A. Where?

25 Q. – sorry, looking at the wrong witness, no wonder, sorry. I'm with you. Paragraph 10. I've got it right.

A. Yes, soil and leaf.

30 Q. I just have to get that – my record right for the Court's record, so it's important that I locate it. Very good. All right. So Mr Maw has some questions for you, yes and we're all, he's endeavouring to draw out your years of experience as an irrigator, just so that we have a firmer factual basis upon which to make decisions, because we're not there yet, but largely because we actually haven't heard from individual farmers yet I

suspect, so Mr Maw has some questions for you and the Court may do as well.

**CROSS-EXAMINATION: MR MAW**

5 Q. Thank you and Good Afternoon. I'm very keen to understand the irrigation system that you use on your property and I wonder whether you can help me with my understanding, so do you recall when the irrigation system was first put in?

10 A. I've become a director of the company about 10 years ago, so no. I do know, because I was involved with – I knew the family well that was putting it in, so what initially went in was a under tree micro-sprinkler system and the original plantings.

Q. And roughly when might that have been?

A. That would've been early 90s I think from memory.

Q. And then your more recent involvement has been over the past 10 years?

15 A. I think it's 10 years, maybe a few more, yes.

Q. And over that period of time, there's been some development of the orchard as you've set out in your evidence?

A. Yes.

20 Q. And in terms of that irrigation system, the development of the systems occurred as the orchard has expanded?

A. Yes.

25 Q. And when you've expanded at each stage and as I read your evidence there have been sort of five hectare increments in terms of expansion, when – and I want you to think about the irrigation system itself, does, has the system itself changed in relation to the existing parts of the orchard as you roll out into the new five hectares?

A. Generally not, the existing orchard's been left in the way it was and the new blocks have been introduced with different irrigation systems, yes. Application systems.

30 Q. And as each step by way of development occurs, you'd be looking at finding the most efficient types of irrigation systems to use the water that's available?



- A. Yes correct and sometimes as a sort of a, you've got to balance that with frost protection as well and in cases we may leave in micro-sprinklers rather than dripline or it's a consideration to leave in micro-sprinklers that will be able to help with some frost protection as opposed to drip line where it has no gain for frost.
- 5 Q. So in the context of drip line, if you are looking to add frost protection you'd have to put some overhead sprinkler type system in?
- A. No we've gone for frost fans wind machines.
- Q. Right.
- 10 A. And then the micro-sprinkler supplies a little bit of heat underneath so you get about a one degree lift.
- Q. Right, no that's helpful. So when you think about the development of the orchard and you understand where your orchard is, is it fair to say that you'd have a clear understanding of the parts of your orchard that are under irrigation from time to time?
- 15 A. How – in what way, just, rephrase that for me please?
- Q. You'll know precisely the location of your irrigation system in an orchard?
- A. Yes, yes.
- Q. It's pretty obvious?
- 20 A. Yes.
- Q. In the sense that the irrigation system will follow where the trees are?
- A. Yes, yes, a line directly.
- Q. And if I ask you to cast your mind back to 2017, you can tell me precisely where you had trees and irrigation in place at the time?
- 25 A. Yes pretty much, yes.
- Q. And the same would apply 2018 and 2019?
- A. Yes I guess.
- Q. And if I asked you to draw on a map for me, the maximum area irrigated between 1 September 2017 to 18 March 2020, if I gave you a map of your property, you'd be able to shade for me the areas under irrigation, the maximum area during that period of time?
- 30 A. Yes pretty much, but if I couldn't do it, the orchard manager sure as hell could, yes.

**THE COURT: COMMISSIONER BUNTING**

Q. Sorry, say again?

**THE COURT: JUDGE BORTHWICK**

“The orchard manager sure as hell could.”

**5 THE COURT: COMMISSIONER BUNTING**

Oh, okay, thank you, that’s all right.

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. Yes, so in the context of an orchard operation, that would not be an onerous task?

10 A. No.

Q. And in your evidence at your paragraph 17, you had explained to me or explained in your evidence for the Court’s benefit, the challenges that your orchard was facing with having had a fixed date in the notified version of Plan Change 7 which was the maximum amount of irrigable area in the 2017, 2018 period of time because you’d done some expansion after that date. The Council plan has recommended that a change be made to extend that period of time through to the 18<sup>th</sup> of March 2020 and would that extension through to that date capture the increases that you have undertaken?

15  
20 A. I would suggest the bulk of it. Yes because the last plantings were only two years old, yes.

Q. Very good. Those are my questions, thank you.

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

25 Q. How do you rate the way you manage your operation?

A. How do I rate it?

Q. Compared with others? Is yours the sort of – a model to follow or...?

A. Well I also, I work as a horticultural consultant out there, so I think the monitoring and the work that goes on there to make sure that the water

is right and the applications are right, is right up there at the top of the class. The – it's a difficult site with some of the soils with the permeability of the soils and the ability to get the water moving into the soil, but one of the key things that the manager's implemented, he has tensiometers sitting at 600 mil below the root zone, making sure that that doesn't get flooded and that's sort of – so that's the catch haul at the finish if you, if we've got some of the calcs wrong on the – so we work off the evapotranspiration rates and the coefficients that go, that change as you go through the season with the growth curve and, but if we were to over irrigate we'd pick that up with the technology that's sitting there. So it's pretty good.

1600

Q. And is that a reasonably common approach with other –

A. There's others doing that, yes. The thing is that with fruit, if we don't get that right and we over-irrigate, we've got a poor piece of fruit, and we over-irrigate, we get excess growth, we get soft fruit, we get problems. Soft fruit leads to more aphids, soft growth, there's aphids, and there's all sorts of downsides if we over-irrigate. Under irrigate's got exactly the same, you know, small fruit, soft fruit, poor stems on cherries, so we're looking for that sweet spot all the time.

Q. So it's imperative for the success of the business to do it right?

A. Yeah, to manage the water well, amongst everything else that's going on, of course, but that's just one of those challenges that we have.

Q. Okay, well, thank you.

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

Q. So I picked up that you're a shareholder with the Manuherikia Irrigation Company, and it's from them that you get your water.

A. Yes.

Q. And so you're not permit holder yourself, a water permit holder?

30 A. No, our water is via the irrigation company?

Q. Okay. In terms of the people that you consult to, are any of them holding deemed permits?

A. Individually?

Q. Individually, yeah.

A. No, don't think so.

Q. Okay.

A. No.

5 Q. Now, forgive my ignorance, but in your orchard, are you using fertilisers or other agrichemicals within the orchard itself.

A. Yes, for sure, yeah.

Q. And with the agrichemicals, is the quantum that you apply fixed by an regulation in this country?

10 A. I think all orchards are working under NZGAP or EuroGAP, so Good Agricultural Practice, which means every input has to be justified and measured, so, you know, if we think about the pest and disease programme, it's about targeting the pest and disease and finding the softest option to do that, so you understand the life cycle, you understand  
15 where it is best to intervene in that life cycle to take care of the pest.

Q. And in the justification of the use of agrichemicals and their measurement, is that to a regulator, or is the requirement there that you keep your own record?

20 A. You keep your own records, but at the same time, with a fruit, your spray programme goes in front of the, in this case, (inaudible 16:03:26) quality to assess if you've met the requirement withholding periods and put up samples for residue testing, so you've got fruit meeting those requirements of those chemicals that have been used. So that gap requirement is audited as well, externally audited.

25 Q. And it may or may not be an issue for the regional council, I don't know. In terms of people that are in your category, so people who have inground irrigation systems, so you've expanded your irrigation area and you've put into place the irrigation system itself, whether the discharge of agrichemicals is of concern to them. Can you comment about any work  
30 the regional council's done in this area, or no work in terms of monitoring the effects of use of those sprays on waterways?

A. I'm not aware of any work that's been at that.

Q. Not aware of any, okay.

A. No.

**QUESTIONS ARISING – NIL**

**WITNESS EXCUSED**

**MS FORD CALLS****STUART JOHN FORD (AFFIRMED)**

Q. Good afternoon, Mr Ford. Can you please confirm that your full name is Stuart John Ford?

5 A. That's correct.

Q. And you prepared a statement of evidence-in-chief dated 5<sup>th</sup> of February 2021?

A. That's correct.

Q. Do you have any corrections to make to that statement?

10 A. No, I don't.

Q. Can you confirm that your statement is true and correct?

A. Yes, I can.

Q. And do you have the experience and qualifications set out at para 6 of your statement?

15 A. Yes, I do.

Q. And have you prepared a summary of your statement to read?

A. I haven't prepared a summary, but I'd like to speak to a brief summary, if that's okay.

20 Q. Yes, of course. Can you read that now and then we'll move into questions?

A. Okay.

Q. Thank you.

25 A. My evidence-in-chief that was prepared before you was initially as a result of reading the s 32 report on the plan change 7, and it's my opinion that the matters of economic interest in it, which includes choosing the appropriate method, cost, and benefits of the method, the effectiveness and efficiency of valuations, and particularly the two elements of considering its impact on future growth and its impact on employment, were pretty scarce in terms of their justification or explaining their reasons for coming to the conclusions. When you look at my evidence in terms of

30 the vegetable sector, it's pretty static, and it's not expanding at all, and it's got very efficient irrigation systems, so I don't see any problems with the vegetable sector in terms of that, but when you look at my evidence in terms of the fruit sector, both the summer fruit industry is expanding at

a tremendous rate, and the pip fruit industry is also expanding at about 10%. So in terms of considering its impact on future growth or employment, I felt that PC7 was quite inadequate. So then, if you look at rule 10.A.3.1.1.1, as I say in my evidence, it's a very blunt instrument to achieve the aims of what it was trying to do, and that's from the perspective of allowing for future growth and allowing for future employment, and the pathway I would describe is a roadblock. There wasn't a pathway for horticulture to move through that satisfactorily, so I am very pleased that the planning process has achieved a pathway, and admittedly, and I guess my major concerns are in terms of the ability to expand the area, and I've said in my evidence that there may be situations where areas can be expanded with no negative impacts and I think it's a satisfactory resolution of that. Admittedly, the pathway at the top is very narrow, but at least it gives us the opportunity to expand the area or expand the take of water. So from the efficiency perspective, I am very pleased with where this process has got to and that negates a lot of what was in my evidence-in-chief.

1610

20 **THE COURT: JUDGE BORTHWICK**

Understood, mhm. So we will just see if Mr Maw has got any questions.

**CROSS-EXAMINATION: MR MAW**

Q. Mr Maw does have some questions. Thank you. Now I appreciate things have moved as they do with lengthy hearings like this and it's some time ago that you put pen to paper in terms of your evidence-in-chief. So where your thinking has evolved past that which is recorded here, please feel free to share your refreshed opinion as we work through the opinions expressed in your evidence.

A. Okay.

30 Q. The first topic that I do want to explore with you is the topic around and to give you a reference, paragraph 15 in your evidence-in-chief and this

relates to the reliability of supply of water to justify substantial or significant levels of investment.

A. Yes.

5 Q. Now, when you think about the horticultural sector and you think about the opinion you have expressed in your paragraph 15, what length of time do you have in mind as being the length of time where there needs to be sufficient quantity of water and reliability of supply of water to justify the substantial investments you refer to in that paragraph?

10 A. It's very hard for me to be exact on it, but you know, you learnt from Mr Weaver that, you know, the investments are long term in terms of the development of with fruit, particularly and so the payback is quite a long period. So I would think, you know, at least 15 years would be the minimum in terms of ensuring security of the consent.

Q. So when you think about -

15 A. And sorry, and this maybe not only that term, but it's the ability for it to roll over which is important.

Q. Now you do provide some evidence about the ability to roll over later in your evidence so hold that thought and we will get there in the fullness of time, but you are broadly speaking saying "A 15 year window is the window that you have in mind when you're thinking about this type of a period"?

20

A. A minimum period, yeah.

Q. So when you think about the current state of play in October, you have an understanding that the deemed permits are all due to expire on the 1<sup>st</sup> of October this year?

25

A. Yes, I am.

Q. So when you cast your mind back and look at investment decisions that are made and have been made say in the last five year period, those decisions will have been made knowing that the duration on the existing permits only had a five year period of time to run?

30

A. That's correct.

Q. And so when you think about the risks associated with that, would you accept that the in that context, the irrigator is taking a risk in terms of whether the permit might be renewed in the future?



A. I'm not sure whether there would be any doubt that it would be renewed, it would just be in terms of what terms it would be renewed on.

Q. Well, in your experience, is there an expectation that permits will be renewed?

5 A. I think you would have to ask the growers that more specifically, but I would expect so.

Q. So from – when you're thinking about things from an economic perspective, how do you price in the risks associated with consent renewal?

10 A. Again, it depends on the risk profile of the individual and I think it depends on the where the investment is coming from. If it's coming from the individual grower, they may be more risk averse, but if a lot of it's been funded by banks and things like that, the risk assessment is usually done by the financier.

15 1615

Q. Now do you have an understanding in relation to Plan Change 7 that short term rollover consents are proposed?

A. Yes.

20 Q. And the time period for those consents you understand is a six year period?

A. Yes, that's correct.

25 Q. And when you think about that six year period and you contrast that to the 15 year period of investment certainty required in relation to reliability of supply of water, et cetera, you wouldn't get that certainty over the six year period?

A. That's correct.

Q. And so if one of the purposes of Plan Change 7 is to discourage investment in irrigation expansion and one of its tools is a six year consent period, it would in fact achieve that outcome wouldn't it?

30 A. It would, but I question why that was the aim of this legislation.

Q. Now when you – now tell me if we're straying beyond your area of expertise, do you have an understanding of the current status of allocation of resources in the October region?

A. No, I do not and that's outside my expertise.

- Q. If you were to assume then for the time being that the water resources in the Otago region may be significantly over-allocated and that the council over the next six year period is preparing a new land and water plan to address the effects of that over-allocation, it may well be that there is insufficient water for existing activities at that point in time?
- 5 A. That's correct.
- Q. And so if that is indeed the case, then isn't it better to send a signal now that investment in further irrigation requiring additional infrastructure and additional water should be held off?
- 10 A. I'm not convinced that it's the council's role to make that signal and that's why I like the non-compliant activity rule in this one because then the applicant can prove that all of those things are less and minor, and can proceed.
- Q. Well, we seem to be straying at that point perhaps in the planning realm, so I want you to stay in the realm of dealing with the risk of investment decisions.
- 15 A. Okay.
- Q. So is it better to know now that there might not be water for new and expensive irrigation infrastructure or is it better to know in six years' time after the investment has been made that there might not be water?
- 20 A. I think an individual farmer's decision would be based on his knowledge of the amount of water available in his catchment or his area.
- Q. Well, if we look at the current state of affairs, there has been, it would appear, investment in irrigation expansion in circumstances where permits had only say one or two years to roll?
- 25 A. That may well be correct.
- Q. And so here the council is trying to send a signal that great care needs to be taken in terms of investment and assets which might require a security of supply of water into the medium term when that water supply might not be available in the short term?
- 30 A. That may be correct.
- Q. I want to move through to your paragraph 36.
- A. Yes.

Q. And in that paragraph, you set out an opinion in relation to what you consider to be “an unfair economic burden on an irrigator associated with six year consent durations”?

A. That's correct.

5 Q. When you're thinking about this from an economic perspective, do you view water as a commodity in this context?

A. Yes, I do.

10 Q. And when you're expressing your economic opinion, you have not addressed the environmental burden that is associated with the allocation of water?

A. Yes, it's part of the resource consideration.

Q. So where in your evidence have you assessed the environmental impact of longer term consents?

15 A. I state in several cases that I think depending on the environmental and economic performance they should be granted. Yes, paragraph 39, in my opinion, a 15 year consent that has rights to a new given the requirement to meet the flow and quality requirements of the water source first would be needed at a minimum to provide a (inaudible 16:21:48) security of this sector.

20 Q. So prior to granting a 15 year consent, it would be important to understand the necessary flow and quality requirements that are necessary to sustain environmental values?

A. That's what I'm saying, yes.

25 Q. So until that's known great care should be taken before issuing longer term consents, say 15 years?

A. Yes, that's correct.

Q. I want to take you to your paragraph 49 now and this paragraph is in that part of your evidence when you are referring to the restriction on “expansion of irrigation area”?

30 A. Yes.

Q. And you will have heard from my questions perhaps this morning that the Plan Change has moved on to increase the window within which the maximum irrigable area is to be calculated, so it's now covering a period of time from September 2017 to March 2020?

A. That's correct.

Q. But notwithstanding that change, do you still express an opinion that there is potential for a quite large negative economic impact associated with restricting irrigation expansion?

5 A. Say that again?

Q. Do you maintain your opinion that there is still in your words "quite large negative economic impacts from restricting irrigation expansion"?

A. Yes, I do.

10 Q. Might there also be significant negative economic impacts associated with stranded irrigation infrastructure if in six years' time there is insufficient water available to reliably operate that infrastructure?

A. Yes, there would be and that's why I'm encouraging of the non-compliant regime to handle applications which wish to increase the area or the amount of water taken.

15 Q. Now I am going to pick up the non-compliant as you say "pathway" with your planner because -

A. Okay.

Q. – unless you are wanting to get into the planning realm?

A. No, I do not.

20 Q. No, I didn't think so.

1625

## **RE-EXAMINATION: MS FORD – NIL**

### **THE COURT: COMMISSIONER EDMONDS**

25 Q. I only had the one question, and it's arisen out of Mr Maw asking you a question, so I realise that I didn't fully understand your evidence, para 44. So you start out by talking about a 15-year consent, and then you say that has rights to renew, so I want to understand what you mean by that. Do you have a time period in mind for rights to renew?

A. So where's this, in paragraph?

30 Q. In your para 44.

A. Yes.

Q. Looking at the first line, you talk about 15-year consent that has rights to renew. Now, I might go on and ask you a bit more about the second sentence, but in relation to the first sentence –

A. So can you read out –

5 Q. – what do you mean by “rights to renew”?

A. Can you read out the beginning of the paragraph?

Q. Sorry, have you got a different version?

A. I hope not.

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

10 Q. 44 starts with me at para 37 and 38. Is that the same as you, Mr Ford?

A. Yes.

Q. Yes, then what does your paragraph start?

#### **THE COURT: COMMISSIONER EDMONDS**

15 Q. It starts: “In my opinion, a 15-year consent that has rights to renew,” which is what I’ve written down, and Mr Maw has 44, as I do.

A. No, that’s para 39.

Q. Oh, okay. Oh, I see. I don’t quite understand that. Mine certainly, out of my folder, is 44, but it seems like it might say the same thing as 39, so nothing hinges on that, if I can continue with my question.

20 A. As long as we’re all looking at the same paragraph, I’m happy.

Q. Perhaps I could just read out the sentence, and you can tell me if that’s what you’re looking at under some other paragraph number: “In my opinion, a 15-year consent that has rights to renew, given the requirement to meet the flow in quality requirements of the water source first, would  
25 be needed at a minimum to provide appropriate security to this sector.”

A. Okay, so what I’m talking about, that is consent having almost automatic rights of renewal when it comes to an end, so that would be a 15-year consent that has almost automatic rights of renewal at the end.

Q. What, another 15 years, and 15 years beyond, and 15 years beyond?

30 A. Yeah, yeah, subject to the planning regime that it was in at the time.

Q. Yes, but the planning regime might have to remain static if you are going to have the same thing approved every 15 years, because the flow and

quality requirements may, in fact, require a lowering, for example, of the take, so when you wrote this, did you mean that the 15-year consent needed to basically have the same ability to take and apply the water in terms of the volumes?

5 A. Yeah, it was more to do with my comment in 36(a): “First of all, the consents should be granted for a much longer term, with the appropriate condition that if anything changes as a result of changes to the (inaudible 16:28:57) regime, the consent is subject to those changes.” So it’s not a constant thing, it’s renewed according to the planning regime at the time.

10 Q. Oh, I see, so I’m going up to what I have as paragraph 41.

A. Oh, okay, sorry.

Q. “A renewal of a consent should be automatic, subject to the applicant proving that they continue to meet all the requirements of the consent.”

A. Yeah, so I think in that concept, what I’m talking about in my 39 is 36(a),  
15 which is your 40.

Q. 41, so the first part of that is a longer term with a condition saying it’s as a change to the water-planning regime, meaning a consent should be subject to that.

A. Yes.

20 Q. So it’s not – yeah, okay. So looking at 44, I thought you just meant that you had to keep -

A. No –

Q. No.

A. - no, no.

25 Q. But you’re saying things could change.

A. Most consents now have conditions in them that if the water-planning regime changes, the consent conditions change.

Q. Right, so you’re accepting of a review?

A. Yes, yes, very much so.

30 Q. But in that regard, though, you would still be thinking that there would be water there?

A. Yes.

1630

Q. Yes. Not that you might turn the tap off completely?

A. Yes.

Q. Is that the point?

A. Yes.

5 Q. Okay thank you. Sorry about all that confusion. I don't know why mine's  
got different numbers.

**THE COURT: JUDGE BORTHWICK**

That's all right. Frida will give you, what I think is the correct copy.

**QUESTIONS FROM THE COURT – COMMISSIONER BUNTING – NIL**

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

10 **QUESTIONS ARISING – NIL**

**WITNESS EXCUSED**

**MS FORD CALLS****MICHELLE KATHLEEN SANDS (SWORN)**

Q. Can you confirm your full name is Michelle Kathleen Sands?

A. Yes that's right.

5 Q. And you've prepared a statement of evidence-in-chief dated 5 February 2021?

A. Yes.

Q. Do you have any corrections to make?

10 A. Yes I have one. In paragraph 29, the number in the first sentence, the number "297 hectares" should read "267".

Q. Other than that correction, can you confirm that your statement is true and correct?

A. Yes.

15 Q. In light of things having moved on since you wrote this in February, I've just got a couple of questions and then we can move into a summary?

A. Okay.

Q. Is that all right?

A. Mmm.

20 Q. Firstly, can you just explain where Hort started in this proceedings and where we've gotten to now as the industry person?

A. Sure. So I think there's probably four main elements that we have been considering, so the first is around the duration of the renewal consent and initially in our submission we were opposed to the short duration, but on reflection and in evidence we accepted that and the reason for that was in light of the MPSFM and in light of the over allocated nature of the some of the catchments in Otago and so what his plan change can't do, is speak to the fresh water values that are to come and also in the context of over allocated catchments, we think, you know, the relative values and benefits of activities on land and so for horticulture, some of the things that we're particularly value, is the value of domestic food supply which Otago is important for and we consider to be a second priority under the Te Mana o te Wai frame work and that can't be provided for in this plan and another matter that can't be provided for in this plan, but in the next, can be, is the climate change commission's budget and so Horticulture

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has a lesser greenhouse gas emissions and other activities that would use the same amount of water, so I suppose where I'm heading to is that we're aware that if water was to be locked up by other users and there was to be claw back into the future, it may not be able to provide for values that are important to growers as well as important to the environment, so that's the reason why we've shifted on that point. The next point is really around that date, oh no, so the next point I'm going to talk about, the point that we shifted oh, is the calculation method, so this is probably our primary concern in our evidence was around that if we are going to get a renewal, it's really important that, and it's a short renewal, it's just really important that the amount of water is the right amount of water for them to carry on doing their activity, and so we were concerned about the calculation method in the notified version that it, that it would not or may not provide the right, the necessary amount of water for the existing activity. Now, our expert, Ms McIndoe, was satisfied through that conferencing that that controlled method, calculation method, now is much better and then also we think it's really important that the RDA provides a pathway for those people that can't meet that calculation method, so we are now satisfied that that addresses that issue, although I would say, our, in our submission we spoke about reasonable, you know, reasonable use tests, and we still maintain that that's really important, that ultimately and in the coming plan, that when the amount of water that is to be allocated to people that it passes a test of reasonable use rather than just historic use, but we accept in the context of this plan the approach proposed now is acceptable. The other matter is around the date, so the date for the expanded irrigation area, and so, as has been said by Mr Ford, you know, and others, there is a long lead-in time for purchasing or you know, planning ahead for purchase tree crops and so there definitely are people who have expanded since that 2017 date, there are still some that have expanded past the 2020 date as well that we are aware of, and in fact you can speak to our witness Mr Webb, about that, but we think, you know, if you need, you kind of do need a date I think in the plan, and it's hard to think of a better date than the notified date, I think. And so then that leaves us with that non-complying pathway

5 which we, we sought originally and we still maintain is very important that it is a real pathway for people who can demonstrate that their effects are less than minor, which we think is possible for horticultural expansion in some catchments due to its limited water quality effects, efficient water use, and in some catchments which aren't over-allocated that minor effects could be demonstrated.

1635

**MS FORD ADDRESSES THE COURT (16:37:55)**

**10 EXAMINATION CONTINUES: MS FORD**

Q. (Apologies your Honour, I should have confirmed Ms Sands' experience prior to that original question.) So I just want to confirm that you are the manager of natural resources at Horticulture New Zealand.

A. Yes, I am.

15 Q. And you are providing industry experience.

A. Yes.

Q. Evidence.

A. Yes.

20 Q. As part of that evidence, can you just expand a little bit on the auditing process in NZGAP that Mr Weaver touched on as well?

25 A. Yes, so within the horticulture sector, all fruit and vegetables that are exported to sold to a New Zealand supermarket needs to be certified, and it is certified by the GAP programmes, and that, those standards include standards which require growers to record fertiliser use and demonstrate good management practices around its use, and to agrichemicals also meet what's called a sort of growsafe which is a standard around the use of agrichemicals, which enables them to meet the requirements of the Food Act, and also to meet the requirements of the chemicals themselves which are approved by the EPA to be used again- you know, to meet  
30 certain standards and so the GAP programme outlines those standards and then growers are independently audited, and if they fail the standard they are not certified and they cannot sell their products. If they pass the

standard then they can be certified and sell their product, so it is a private standard but it is also recognised in many regional plans but not this one, so in many regional plans, for example, the growsafe requirements which are mandated within the GAP programme are also reflected in regional plans to, as a means of managing agrichemicals, so I suppose while we see in other regional plans regulatory requirements for farm planning or agrichemical management, and they may not be as clearly provided for in this region, the GAP standards are national and they are required to be met by all growers regardless of what the regional plan requires.

10 Q. Thank you.

**CROSS-EXAMINATION: MR MAW**

Q. Thank you. That was your summary, was it?

A. Yes it was, sorry yeah.

15 Q. Yes. Very good. I'd like to take you to your paragraph 15 of your evidence in chief. I just want to make sure I've understood the basis on which you have provided evidence and are giving evidence to this Court. You have recorded in your paragraph 15 that your role in this hearing is as HortNZ's representative and advocate. And when I turn over the page to paragraph 17, I see there that you have recorded that you agree to abide by the expert witness code of conduct, and I am left a little confused as to whether you are appearing as a representative and advocate or as an independent expert witness to assist the Court. Can you assist me with that?

A. Yes, I'm as an advocate, not as an expert.

25 Q. So, that may well be that paragraph 17 had found its way into your evidence.

A. Yes I believe that is the case.

**THE COURT: JUDGE BORTHWICK**

Q. So, should I, for the record should I just delete paragraph 17?

30 A. Yes. Yes please.

**CROSS-EXAMINATION CONTINUES: MR MAW**

Q. I want to take you to your paragraph 38. And this is the part of your evidence where you are dealing with six year consent durations for renewals of water permits and you expressed a position in that paragraph as to why a six year expiry date is particularly problematic, and that refers, and the reason given there is in relation to the ability to secure capital.

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A. Mhm.

Q. You'd accept that the current planning framework in the Otago region is in a state of flux at present, and that significant changes are likely to come in the new Land and Water plan which will seek to give effect to the new National Policy Statement for Freshwater Management?

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A. Yes.

Q. And when you think about the signal that Plan Change 7 is or one of the signals Plan Change 7 is seeking to send, it's one of sending the message of 'Be really careful about investing in capital that might require a longer period of time to pay back given that state of uncertainty'?

15

A. Yes.

Q. And having reflected on all of that, is that perhaps one of the reasons why the position of HortNZ has moved on in terms of the concerns that were initially expressed around the short duration for consents?

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A. Yes, that's right, because we, this plan, we know that the NPSFM is coming and that there will have to be difficult allocation decisions made in some of these catchments and that growers need to be aware of that, and if they are, feel confident, or they can seek technical advice that provides them enough evidence that they can pass the non-complying pathway they can do that in this plan, but I think that it isn't the right time to allow activities which could result in effects that are more than minor to occur in this period of time before those decisions around what the values are and what the limits need to be to achieve those values has been, that has been done.

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Q. So in a sense that reason for the six year consent duration and there are a number of reasons but one of the reasons Mr de Pelsemaeker refers to is one of sending a signal not to invest in the interim, that message is coming through now clearly?

A. Yes.

Q. No further questions.

**RE-EXAMINATION: MS FORD – NIL**

5 1645

**QUESTIONS FROM THE COURT: COMMISSIONER EDMONDS**

10 Q. I just have the one question that I'm not clear about having had a look at your planning witnesses' evidence where basically, he's adopted the joint witness statement from the planning people and these two issues arise out of provisions that don't have any bubbles on the side saying "More work to be done on them", but I'm aware that not everybody necessarily agrees with the approach that's in this, and I'm not totally sure where your witness is sitting with it because I'm going to have to question them tomorrow, but you're the representative I note in terms of some discussion you've just had with Mr Maw, so I do need some clarification on this. So I don't know whether you have the – your joint witness statement evidence or the statement or in fact, the better place to go might be the attachment to your planners evidence at the back there, do you have that? Attachment 1 of the planning JW?

20 A. Yes.

25 Q. So perhaps if we could just go to the controlled activity and, of course, it was very much interfaces with the calculation methodology that's been worked on in the schedule, but what you have in 1V which is a rate of take and V1 adopts the same approach in terms of the volumes, the daily, monthly and annual volume limits. You originally had these - this reference window, the period 1 July 2015 to 30 June 2020 and that's been struck out and now there's just water years, any water years and the other thing that's happened is we're not talking about averages or whatever, we're just talking about maximums. So potentially, you could have situations where if you go back a long way, there might've been a lot of very inefficient border dyke and pile flooding takes and so that would mean that the historical use would be a very high, at a very high level,

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and I'm just wondering where Hort New Zealand sits on that in relation to the things that you've said about the need to be looking ahead and thinking about what should happen in terms of the new plan, and no, not having a potentially, a very high maximum calculator that people could then operate within in terms of this controlled activity and also the restricted discretionary activity?

5  
A. Yes, I think, yes, that's right. So one of the things about a long record from a hydrological perspective is to try and get that climatic variation, but of course, you raise a really good point about the actual change in the system. I think one of the considerations is around the records that are acceptable for undertaking this calculation and whether or not one's are going back very far would meet the data standards in terms of, you know, a reliable record of take, you know, it maybe that only data in more recent years has been collected at a standard that would enable the calculations as a consideration, but I do think that going back – you know, I do think it's relevant, you know, those kind of reasonable use tests are a consideration, but I think that this plan is supposed to be about his ruling over historic rather than, you know, planning for that reasonable use test which is what we originally sought, but now see that it has to come into a new plan, but in that respect I think it wouldn't be unreasonable to have a start date.

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Q. Did find start and finish date, so did you have a view then on the 1st of July 2015 to the 30th of June 2020 because you made quite a clear statement in terms of the irrigation area and the date?

25 1650  
A. Yes and to be honest I think it's less- like the 202- when it comes to the expansion of the irrigation area, if that (inaudible 16:50:22) if that is into the non-complying activity then I think that it matters less about that – the end of date. You know I think you could have it not ending at 2020 because you know if there's a drought year in the next couple of years then that would be useful, reliable information to provide a understanding of what is a reasonable use on the other hand if the date was shut out at 2020 and there was a big drought perhaps that could be a reason to go in to the RDA. You know that would be a very clear thing that you could

demonstrate to a consents officer, that for, you know if the dates were 2015 to 2020 you could clearly say: “Yes except that this weather was not representative of the long-term and now we can demonstrate that because the last couple of years has been quite different”. So I think that it would be possible to put dates on it and the controlled pathway and then have the RDA open to make a case about those dates for whatever reason not being truly representative of your actual use and the tests that you would have to pass within the RDA or that discretion being around what you’re actually doing and your irrigation scheme.

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10 Q. Now?

A. Yes.

Q. Now?

A. Yes.

Q. Not right back then?

15 A. Not right – yes, that’s right.

Q. Or into the future?

A. Mmm.

### **THE COURT: JUDGE BORTHWICK TO MS SANDS**

20 Q. Thinking about that, if the proposal is to increase the maximum use, that’s not an RDA pathway but your maximum use based on historical records, you know so if you’ve got a future (inaudible 16:52:25) any proposal to take water which is in excess of your hither to historical maximum would automatically put you in a non-complying route wouldn’t it?

25 A. Yes but the thing about droughts is that they’re quite rare. So that’s why usually in hydrology you want the longest record possible because it might be rarely that you have to look back to the 1970s to find the drought that we’re going to get next summer and so...

Q. The supply’s not being leveraged out – to ensure a liability of supply in a drought event though, is it?

30 A. Sorry what was that?

Q. You’re not proposing that there’s a 100% reliability of supply?

A. No but –

Q. No.

A. – when you do – if you go to the way that, quite frequently provisions are written in plans in terms of the amount of water that will be allocated to an individual person it will be around say like a reasonable use with a nine in 10 year reliability, something like that. Now a five-year duration period (inaudible 16:53:32) likely to represent a nine in 10 year reliability, just, I mean I don't know what that – I don't know if the period of 2020 to 2015 was representative of the average climate in the past or in the next five years but usually you need a longer period to get it about right. You know to get the maximum right for your dry year. So, I think that is probably the logic that the hydrologists were adopting when they took the dates out, because that would be the normal way of thinking about you know trying to get that climatic variation.

**THE COURT: COMMISSIONER EDMONDS TO MS SANDS**

15 Q. So they were thinking about the hydrology not about the system?

A. I – I'm, I mean I wasn't there. But I'm –

Q. You were a hydrologist weren't you?

A. I'm imagining because that's what I thought too but you do raise a point about the system itself changing and I suppose becoming more efficient over time and how to address that, if you were of a mind to put a date on it like 2015, then I think that perhaps you could do that but then the RDA pathway, I think you would need to leave that open for people to say that those five years aren't representative or maybe you'd need to check whether they were particularly wet or dry before you decided.

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**THE COURT: JUDGE BORTHWICK**

Q. Or if system change was your concern, then it's linking the rate and take and volume to existing systems, not historic system, and they would need some change, presumably in the entry points, perhaps, to the RDA and controlled activity rule, or perhaps even a note and policy, but it's not to say that people ought to go, it's not driving efficient systems, it's just trying

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back historical use to current systems as opposed to systems which have been removed.

5 A. I suppose the issue there, from our perspective, is that, you know, part of accepting this six-year duration is about a controlled activity pathway that is very simple, that is straightforward, and from a horticulture perspective, and Mr Weaver explained this, if you weren't expanding your area, which you're not allowed to do if that's noncomplying, then there is no particular advantage in using more water, in fact, it's a disadvantage. You use the water efficiently in any case. So I'm not saying that's the case in every  
10 conceivable scenario, but that is where I think the horticulture sector would be sitting. They may be given a maximum, but if you couldn't expand beyond that...

15 Q. It may well be that the horticulture system's not particularly inefficient in its use, but that can't be said for all farming systems, all farming sectors. Don't know. Okay, all right.

A. Yes, and I suppose the question also becomes, in terms of assessing the effect of the activity, if you were going into the noncomplying pathway, at that point, you're assessing the effect quite independently.

20 Q. My understanding of the noncomplying pathway is that it's a merits-based assessment, but there's a very firm policy still saying no more than six years. Is that your understanding?

25 A. No. So I thought, and Mr Hodgson is probably the person to ask on this, but my expectation was that the noncomplying pathway could be used for those that sought a consent duration longer than six years or consent area larger.

Q. I don't think – that's not the policy signal.

A. My understanding is that that means that you couldn't use that policy part, pillar, but you could use the other one, lesser, minor.

30 Q. My understanding – maybe I don't understand much, who knows, because the thing is changing all the time – there is a very strong policy signal, no more than six years, even in a noncomplying activity pathway, but if we are going noncomplying, maybe it's an extra bit of area, maybe it's an extra bit of water. It's still a six-year single, and that might actually suit Leaning Rock Cherries quite nicely because they've got through most

of their development, it's mostly in the ground up until 1 June 2020, and then a wee bit's gone in afterwards, and so for that wee bit, that actually might be a neat solution for them, but still only six years. The wee bit is a wee bit more land, perhaps a wee bit more water, but still only six years.

5 That's the pathway.

A. Yeah, so that's not –

Q. Your understanding?

A. Yeah, that's not, and so I suppose my evidence and opinion is based on my understanding of that not being the case.

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

Q. Well, let's just double-check my humble understanding. Mr Maw, have I understood it right or wrong?

A. Right, and that's had a significant bearing on my cross-examination.

**THE COURT: JUDGE BORTHWICK**

15 Q. I was wondering why everybody was so happy with this, but it could be because what it is doing is catering for the Leaning Rock Cherries of the world, of which, not the only example, there are other people who have made the expenditure, incurred the debt, and the irrigation systems, everything else, are in place, and so that's a potential pathway for them,  
20 but only six years, that's how the policy reads. Unless, of course, there's another interpretation, which Mr Hodgson will get to tomorrow, and I'll go "oh."

A. Yes, that's right, because I suppose if that was the case, that is different to what we had understood. I had understood that a longer consent  
25 duration could be sought in this period of time if you could show the effects were less than minor.

Q. No, that's not my understanding.

**MR MAW:**

No, it's six years. I mean, the door's not slammed entirely because it's not  
30 prohibited beyond six, but dip back in and it's pretty hard within a void policy.

**THE COURT: JUDGE BORTHWICK**

Q. Yeah, so then you're not then just contending with the no more than minor effect standard or test, you're also contending with the word of void granting, and that's a pretty strong direction. So the door has been left open, but it is a very narrow door, it's not a door, necessarily, to a long consent, it doesn't prohibit it, you could give it a go, but what do you think a decision-maker is going to say when faced with an application for a 15-year consent when you've got a void granting?

A. Well, I mean, I think Mr Hodgson probably needs to answer this, but my understanding was that that was the point of the noncomplying pathway, was that the six years was for the controlled activity in the RDA, and that if you could not meet that, if you sought, in fact, my understanding is if you were seeking new water, you wouldn't be so much in the noncomplying as in the old plan, but if you were seeking the renewal that didn't meet the controlled or RDA, you would be in the noncomplying pathway.

Q. Do you know, if the policy applied the way you said, then we would have everybody maintaining their noncomplying track, I think. Well, I don't know.

A. Well, they'd have to demonstrate –

Q. They are not more than minor.

A. – no more than minor.

Q. Okay, so maybe it's not a matter for you, but it's a matter for your planner, but I think there's an interpretation issue, and maybe all that can be said is that the policy's not clear, although it seems to me to be clear enough to me, but maybe that's just not so. In that case, we might have to look at the wording of the policy, either to go in your direction or to go in Mr de Pelsemaeker's direction.

A. Yes, I think perhaps, if that was the case –

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

Q. Which then brings us to the question, do you have any questions? Because you've cross-examined on a different basis.

A. Possibly. I mean, to be fair, when I read the evidence last night, it was on the basis of having seen the planning evidence come through with the noncomplying activity pathway as recommended by the planner. I do know this witness had put through various statements in relation to the previous regime, but when I think about that, given that this witness is really appearing as a representative, as an advocate, I wonder if I can cover the territory with the planner tomorrow?

Q. Probably, yeah. Anyway, I understand where you'd like to go or where you thought you could go, and we're going to cover it off with your witness tomorrow, but yeah, okay, I've probably said enough. Anyway, it's very important that we accept understand what you thought was happening.

**THE COURT: COMMISSIONER BUNTING**

Q. (Inaudible 17:03:29) question on the same topic really, 34(a) you said we strongly support the controlled activity status. Did you understand that was a six-year term?

A. Yes, so that's right, so we accept the controlled and six-year term for those that meet the controlled activity standard to get a six-year term, and that was on the understanding that if you couldn't meet that, say, for example, you had a small area that you wanted to be larger, or, for example, you were investing in something more significant, and you had could have done an effects assessment and showed that the effects were minor, you could use the noncomplying pathway. So definitely, the six-year duration, I saw as a rollover for most people, who would need to wait for the value-setting and the allocation in the next plan in order to use the policies in that to justify a longer duration consent, but yeah, so it was on the understanding that the noncomplying pathway was open.

**THE COURT: COMMISSIONER EDMONDS**

Q. And the discretionary?

A. Oh and the restricted discretionary for people who – is six years as well, but for people who can't meet the calculation method.

Q. Yes, the non-comply.

A. Mhm.

**THE COURT: JUDGE BORTHWICK TO MS FORD**

Q. And so reading Ms Ford's opening submissions I see Ms Ford you thought that an applicant could advance a case for a longer term consent.

5 Yes, I don't think that's the case or if it is, it's not automatically, it's going to be interpreted that way, yes.

A. Yes your Honour I suggest that we talk amongst ourselves as a team to –

Q. Yes.

A. – confirm our understanding, going back to that section 104D –

10 Q. Yes.

A. – wording because my understanding is that there's the two limbs to that gateway test (inaudible 17:05:38) either going back to that policy perspective –

Q. Yes.

15 A. – or going under a no more than minor effects –

Q. Yes and, yes.

A. – assessment and that's where again Mr Hodgson will be able to expand on this a bit more -

Q. Yes.

20 A. - where we thought we could get a longer term consent through there.

Q. Yes. As matters stand I think it's going to be difficult, would that be fair? Avoid –

**THE COURT: COMMISSIONER EDMONDS TO THE COURT: JUDGE BORTHWICK**

25 Yes we should get through the gate but you still have to consider the policy.

**THE COURT: JUDGE BORTHWICK TO THE COURT: COMMISSIONER EDMONDS AND MS FORD**

Q. Yes you've got one gate and that's the effects.

A. And that takes you to the like a discretionary activity where you have to consider the planning documents and what they say -

1705

Q. Yes.

A. So I think that it

Q. One gate and one gate only; you don't actually – the two gates aren't open.

5 A. Just because you get through the gate doesn't mean that in the terms of the matters that have to be considered over 104(1) the weight that you would give to the policy and the way that it's worded.

Q. Mmm.

**THE COURT: JUDGE BORTHWICK TO MS FORD**

10 Q. So you need to talk about that as a team, in saying that, you know the Court is grappling with the difficult issue of people who have made an investment where they're able to show, like Leaning Rocks might be one, McArthur Vineyard might be another, the infrastructure is actually in the ground, and so what's required is a bit more water, maybe, or a bit more land, I'm yeah, or a bit more water anyway, or it's in the ground but it went  
15 in the ground after 2020 so a bit more land, so the Court is you know that's one scenario where we can see potential prejudice, although the cynic might say, well jeepers you took that risk on knowing jolly well that the permit would expire, you know, for deemed permits, permanent – you know would expire October 2021, and for other permits 2025, and it could  
20 be, you know you could take an approach that that was a cynical step to take given those risks. Yeah.

A. Yes, I think one of the issues that has been canvassed is that lack of information round the allocation and where those limits are, and overallocation of catchments because that's different, so there might be  
25 a catchment that is overallocated where that risk would be quite high, that they knew that their permit was going to expire, and they went ahead and did it anyway or not, and, but then -

Q. But that in itself could be seen as future proofing activity, you know, so there's -

30 A. Yeah but then you've got the other side of the coin where it could be quite reasonable even if with water being, overallocation not being an issue in that catchment, that it could be quite reasonable to expect prior to the notification of this plan and when our growers were putting in orders for

trees and planning for the future that in an underallocated, or not overallocated catchment, that it could be reasonable at that point to expect that they would have a consent to be able, application to be able to go through for a longer term than six years, and so I think that's where there could be inequalities in this plan.

5

Q. Well, I think as one expert said yesterday, for Lamb and Beef, Beef and Lamb, risk might be tied to expectation, and an expectation, whether that expectation in terms of replacement consent is reasonably held is the open question at the moment; there is uncertainty throughout the country.

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A. Yes.

Q. And the question for the regional council is trying to grapple with is how do you manage that uncertainty without opening up pathways for large, you know, large scale increasing the land area or irrigation infrastructure which can become stranded when the plan to come comes into being, and it's that plan not this plan which is the most uncertain element. So that's what we're, you know, what we're dealing with is the, is there anybody that we can pull forward and I thought you had actually provided a solution on the basis of still only a six year, but maybe not. You know, we've got all sorts of options being presented to us: wholesale increases, 35 year permits, permitted activities, rejection of the plans, but in amongst that there are people who have made that investment.

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A. Yes, and that's where the HortNZ seems to sit is that comfortable, well as far as possible, okay with that six year consent for the controlled and restricted discretionary bit on the expectation that it was longer.

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Q. If it is the advice that you should not be investing in anything less than a 15 year consent then there is considerable risk.

A. Yes.

Q. For considerable risk, I would have thought, in terms of what the Land and Water Plan might say.

30

### **MS SANDS**

I mean I just I feel that if you could demonstrate that effects were less than minor, it seems to me that that would be a test that could stand the test of time.

**THE COURT: JUDGE BORTHWICK TO MS SANDS**

Q. Except, how do you test that?

A. Well that is the – no, I don't think it's an easy test in a non-complying activity.

5 Q. No.

A. I think you would have to do the cumulative effects assessment.

Q. I know but you see people have been arguing less than minor effects since oh I think about 30 years, and we've got to the water environment that we have on the back, that we have through that assessment.

10 A. But I –

Q. And that's where the MPS is changing your thinking; it's no longer about that predictive exercise but actually about what does this water body need?

A. Right, but I think you would have to turn your mind to that in the non-complying consent application.

15

Q. Yeah, I know but I'm saying gee that's fraught. Non-comp- how can you, I mean, and I have said this in my decisions, so look it up, but I've said, I said how in an effects-based assessment can you say with your hand over your heart, yes I am confident to make a prediction as to effects which effects on water quality might vary in time and space, which on a consent by consent, applicant by applicant basis, is exceptionally hard to establish, which is why farmers are rightly aggrieved because they have been able, they are being told they are having minor effects but it's not, that's not necessarily how it's panned out in the environment, so that is the framework that you are looking at this in, and I thought you'd made it a relatively easy way forward with the types of applications like learning what, just finishing off or its development, a cut-off of finishing off what it's got, but still on the basis of six years, so maybe you're not making it that easy.

20

25

30 A. I mean that is certainly part of it, but I suppose we also thought of a case, perhaps, a collection, a collective of growers who were able to undertake the sort of science at the scale that the regional council would be having to do, you know, catchment scale.



Q. We've heard that, we have heard that for the last four weeks, "But we'll show you the science".

A. Well, I mean they'd have to do it in a non-complying activity.

Q. Yeah, yeah.

5 A. That's, that's – and yeah.

Q. Well actually, every applicant that is looking for a 35 year consent which I understood is most of them under this plan change are all saying the same thing, we can show you the science, and it's not about, it has been about science-led outcomes. The thinking's changed. What are the  
10 needs of water as a body in its right, before we start treating it as a commodity and chopping it up. it's actually quite a different, it's a mental shift. Yeah.

A. No, I mean look, I totally understand that and that's why I think that that test has to be very tough, and that's why I don't think there should be  
15 cumulative effects allowed without that non-complying test.

Q. Well, you know, in theory they should never have been allowed anyway, so quite why we thought we could ignore them, who knows, but don't make it, don't, you know, do not create a rod for people's back by opening up the duration, it's – given the risk, that is what I'm suggesting, but um  
20 yeah. I'm sure your, but I think your sector could be different unless we've not heard enough from your sector to think about whether it's just the same as any other farming sector.

1715

A. Well I suppose our perception was that horticulture would have a chance  
25 of getting through that because of its lesser environmental impacts than some other activities. And so, but I totally, I think they would have to do a cumulative, a catchment scale cumulative assessment, not, not the sort of effects assessment that we all did in the past. You know, where you just look at -

30 Q. Yeah, but did that effects assessment –

A. – your little bit on top of and say it's no different.

Q. Yeah, I know.

A. I'm not saying that would be –

- Q. - but everybody did that effects assessment, notwithstanding the definition of effects included the cumulative effects, like wow, you didn't look at that? But anyway, that's not for me, I've just got a transitional plan, think about it what you can or cannot reasonably secure out of this process and we can come back to that tomorrow.

**QUESTIONS ARISING: MS FORD – NIL**

**THE COURT: JUDGE BORTHWICK**

All of this is hard.

**QUESTIONS ARISING: MR MAW – NIL**

10

**MR MAW:**

(Inaudible 17:16:05) questions arising, but I'm not going to pursue any of them.

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

- Q. That is not to indicate anything, because you know anything it's a bit like throwing ideas out there, ooh I wonder if you can make a voluntary, are there voluntary mechanisms that you can suggest in terms of bridging the gap and priorities? Well I'm sure there's ten things you can say that would prove that to be a not very worthwhile idea, but yeah.

- A. Oh, the thinking is certainly evolving and the factual understanding is certainly increasing, which helps with that.

- Q. It's still a bit slow, that factual understanding, I think.

- A. Yeah. Well, I'm hopeful perhaps like the bench that we might get it when we hear from the actual abstractors in the next couple of weeks, but this uncertainty in relation to what the non-complying activity pathway might or might not provide for is the key issue and rather than taking that up with this witness, I think I'll leave that for tomorrow.

- Q. And as I said, the fact that this is in your planning witness' brief, I didn't think people had particularly tucked into that policy in the JWS because they weren't mean to be looking at those policies, and I understand they've gone and as I said, done some editing to reflect the schedule but

I didn't think it was on a wider look at the policies at all, so that's something to think about as well.

**MS FORD:**

5 Just on that note with Mr Hodgson being tomorrow and the extensive questions that Ms Marr faced this morning, would there be any desire from the Court to maybe start a little bit early just being aware of the early cut-off?

**THE COURT: JUDGE BORTHWICK**

No I was going to start late, I've got so much other work I have to get to on his  
10 hearing, I, well that's really over to you and your accurate as to (inaudible 17:18:12) of an uninterrupted go on your cross-examination.

**MR MAW:**

I've got no credibility left when it comes to estimating time frames I'm told by  
15 Mr Cooper and Ms Jackson. When I was thinking about, it's a fair point because we've got a hard cut-off at 2 o'clock tomorrow, when I'm thinking about the cross for Mr Hodgson, my cross prep it was limited to two fairly narrow points, the date range and the breadth of the restricted discretionary activity rule, that was where I was focused and bear in mind, that there's a slight difference as  
20 between Mr de Pelsemaker and the other planners in relation to the restricted discretionary activity rule and the joint witness statement, this – HortNZ was not pursuing the type of restricted discretionary activity rule that Beef and Lamb were pursuing and the vast majority of the questions this morning for Ms Marr were in relation to that pathway, I didn't have any questions about the non-  
25 complying pathway because the Council's content with that and Mr Hodgson said he agrees with it or has said he agrees with it -

**UNIDENTIFIED FEMALE SPEAKER:**

Need to (inaudible 17:19:22) -

30

**MR MAW:**

Now if that situation changes, then I may require a little longer than my half an hour estimate.

**THE COURT: JUDGE BORTHWICK**

Q. Very good, yes.

**MR MAW:**

5 So one hour oh no that's reassuring.

**THE COURT: JUDGE BORTHWICK**

Q. You've got an hour. Yes, okay.

**MR MAW:**

10 Forty-five.

**THE COURT: JUDGE BORTHWICK**

We'll be in and out before morning tea, yes, no, yes.

**THE COURT: COMMISSIONER EDMONDS TO THE COURT: JUDGE BORTHWICK**

15 Q. So how many more witnesses does he have?

A. There's only two.

Q. Just the two?

A. Yes.

20 **MS FORD:**

Mr Hodgson and then Mr Webb as our second grower.

**THE COURT: JUDGE BORTHWICK**

I'm sure – we should be okay.

25 **MS BAKER-GALLOWAY:**

I confirm my questions is as short as they were today for Mr Hodgson. Yes.

And I just want to make a point about the joint witness statement of planners.

Mr Farrell was specifically not there because it was about the schedule and that will be why they quite responsibly didn't stray into the non-schedule related

30 consequential changes that they might've really wanted to do.

**THE COURT: JUDGE BORTHWICK**

Q. Yes, yes, so I was a little bit surprised that you did some editing but I do understand why they did the editing, it makes perfect sense and probably you can't stop him, when you get (inaudible 17:20:29) in the room and they're wanting to do that anyway. I did understand that, but as long as you understand that you know those policies do not by any means... not all planners signed up to them. In fact, some had very strong opinions against some of them, but they were back-editing some necessary changes, that was all.

5  
10**MS FORD:**

We will discuss amongst ourselves tonight and come back tomorrow morning.

**THE COURT: JUDGE BORTHWICK**

Q. Good, all right, so what 9.30 or a 10 o'clock start?

15

**MR MAW:**

10 would be great (inaudible 17:21:01).

**THE COURT: JUDGE BORTHWICK**

No, I mean I'm really happy to go at 10 because I don't think any of us, we haven't got many que- it depends on how you go in your cross-examination but I don't, I haven't got many questions at all.

20

**THE COURT: COMMISSIONER EDMONDS**

I think you've got a fair idea of where we're coming from in terms of the questioning and your witness has been sitting down the back presumably.

25 **THE COURT: JUDGE BORTHWICK**

He's prepped for (inaudible 17:21:20).

**THE COURT: COMMISSIONER EDMONDS**

You'll be prepared.

**THE COURT: JUDGE BORTHWICK**

So just make sure Mr Hodgson has our minute, he's got considerable experience and a bit like Ms Marr, doesn't know a lot about deemed permits but knows a lot about planning, is able to assist the Court on these other wider  
5 issues, what are the tools in the tool box, should be fine as a gap and need to do something about it.

**MS FORD:**

(Inaudible 17:21:43).

**10 THE COURT: JUDGE BORTHWICK**

Very good, so that will be my particular interest. All right, good. We're adjourned through to 10 with reasonable confidence that we will finish. Right, thank you.

**COURT ADJOURNS: 5:20 PM**

15

# Notes of Evidence Legend

## National Transcription Service

Indicator	Explanation
<b>Long dash –</b>	<p>Indicates interruption:</p> <p>Q. I think you were – (<i>Interrupted by A.</i>)</p> <p>A. I was – (<i>Interrupted by Q.</i>)</p> <p>Q. – just saying that – (<i>First dash indicates continuation of counsel's question.</i>)</p> <p>A. – about to say (<i>First dash indicates continuation of witness' answer.</i>)</p> <p>This format could also indicate talking over by one or both parties.</p>
<b>Long dash</b> (within text)	<p>Long dash within text indicates a change of direction, either in Q or A:</p> <p>Q. Did you use the same tools – well first, did you see him in the car?</p> <p>A. I saw him through – I went over to the window and noticed him.</p>
<b>Long dash</b> (part spoken word)	<p>Long dash can indicate a part spoken word by witness:</p> <p>A. Yes I definitely saw a blu – red car go past.</p>
<b>Ellipses ...</b> (in evidence)	<p>Indicates speaker has trailed off:</p> <p>A. I suppose I was just... (<i>Generally witness has trailed off during the sentence and does not finish.</i>)</p> <p>Q. Okay well let's go back to the 11<sup>th</sup>.</p>
<b>Ellipses ...</b> (in reading of briefs)	<p>Indicates the witness has been asked to pause in the reading of the brief:</p> <p>A. "...went back home."</p> <p>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.</p> <p>A. "At the time...called me over."</p>
<b>Bold text</b> (in evidence)	<p>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":</p> <p>Q. How many were in the car?</p> <p>A. <b>Interpreter: There were six.</b></p> <p>Q. So six altogether?</p> <p>A. <b>Yes six</b> – no only five – <b>sorry, only five.</b> (<i>Interpreter speaking – witness speaking – interpreter speaking.</i>)</p>
<b>Bold text in square brackets</b> (in evidence)	<p>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:</p> <p>Q. So you say you were having an argument?</p> <p>A. Not argue, I think it is negotiation, ah, re – sorry. <b>Negotiation, bartering. [I think that's what he meant]</b> Yeah not argue.</p>