

**BEFORE THE FRESHWATER COMMISSION**

<b>UNDER</b>	the Resource Management Act 1991 (the <b>Act</b> or <b>RMA</b> )
<b>IN THE MATTER</b>	of an original submission on the Proposed Regional Policy Statement for Otago 2021 ( <b>PRPS</b> )
<b>BETWEEN</b>	<b>OTAGO WATER RESOURCE USER GROUP</b>  <b>Submitter FPI043</b>  <b>FEDERATED FARMERS NZ INC</b>  <b>Submitter FPI026 and FSFPI026</b>  <b>DAIRY NZ</b>  <b>Submitter FPI024 and FSFPI024</b>
<b>AND</b>	<b>OTAGO REGIONAL COUNCIL</b>  <b>Local Authority</b>

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**EVIDENCE IN CHIEF OF BRUCE DUNCAN STUART JOLLY:  
ADDITIONAL EVIDENCE FOR FRESHWATER PARTS**

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**EVIDENCE IN CHIEF OF BRUCE DUNCAN STUART JOLLY:  
ADDITIONAL EVIDENCE FOR FRESHWATER PARTS**

1. This brief of evidence is the same as the brief filed in relation to the Otago Regional Policy Statement 2021 - non freshwater parts. New evidence not previously provided to the non-freshwater panel is added in text that is shaded grey for ease of identification.

**Introduction**

2. My name is Bruce Duncan Stuart Jolly. I am a company director and farmer living at 135 Morris Road, Wanaka.
3. I am the current chairman of the Lindis Catchment Group Incorporated and director of various irrigation and farming companies in the Lindis catchment.

**Ardgour Station**

4. My family history is with Ardgour Station, a 3150 Ha sheep and Beef property in the Lindis Catchment.
5. Ardgour Station runs about 3200 Merino ewes and winters about 3400 lambs. Merino Lamb meat is sold into the restaurant trade under the Silere brand.
6. In recent years I have developed a cherry operation on the property and introduced Wagyu genetics for exporting high value beef in the United States market.
7. Ardgour Station is an example of a farming business that has diversified into high value food products, but they all have the same thing in common. A complete reliance on secure access to irrigation.
8. We currently irrigate 160ha with water supplied by Lindis Irrigation Limited. There is also 90ha irrigated using water from the Clutha River supplied by Ardgour Pipeline Ltd. The irrigation areas are identified on Appendix 1. The majority of this area is irrigated with

pivot irrigators, although we still do some flood irrigation on the shoulders of the seasons when the pivots are not demanding 100% of the water or there is no rationing. The flood areas may only get 2-3 passes per season and are planted in drought surviving pastures such as Lucerne. This means they respond quickly to any irrigation or rain when it is available.

9. We have been utilising the same amount of Lindis River water on our property since 1929. In that time, we have built up a considerable amount of knowledge about how to best manage our farm to account for the harsh conditions. It is very unusual for us to not face some sort of head wind each season whether it is frequent drought (that can occur throughout the year), hot summers, long and cold winters, rabbit plagues and volatile market forces. The small amount of irrigation that we have is absolutely critical in allowing us to withstand these conditions.
10. Although the irrigated area is relatively small it is the difference between profit and loss in many years. It gives us options and allows us to respond to the various other challenges that we may face. It allows us to grow winter supplements during a drought, hold on to lambs if the market falls, gives us a place to put stock when the hill blocks are unavailable due to pest control works and allows us to fatten our stock before sale, so we can maximise value.

#### **OWRUG submission**

11. I give this evidence on Otago Water Resource Users Group Inc. It is my understanding that OWRUG wishes to achieve some acknowledgement in the proposed Regional Policy Statement that transitioning land and water use to achieve the various "Vision" for the catchments (rohe) in Otago will take a long period of time and so provision needs to be made for a lengthy transition period in regional plans and future resource consent applications.

12. My understanding is that the Lindis catchment is part of the Dunstan Rohe of the Clutha Mata-Au Freshwater Management Unit (FMU). I am told that the following vision statements apply to the whole of the Clutha Mata-au FMU:

*In the Clutha Mata-au FMU:*

*1. management of the FMU recognises that:*

- (a) the Clutha Mata-au is a single connected system ki uta ki tai, and*
- (b) the source of the wai is pure, coming directly from Tawhirimatea to the top of the mauka and into the awa,*

*2. fresh water is managed in accordance with the LF–WAI objectives and policies,*

*3. the ongoing relationship of Kāi Tahu with wāhi tūpuna is sustained,*

*4. water bodies support thriving mahika kai and Kāi Tahu whānui have access to mahika kai,*

*5. indigenous species migrate easily and as naturally as possible along and within the river system,*

*6. the national significance of the Clutha hydro-electricity generation scheme is recognised,*

13. The notified vision of contained specific vision statements for the Dunstan, Manuherekia, and Roxburgh areas, being:

*(b) in the Dunstan, Manuherekia and Roxburgh rohe:*

*(i) flows in water bodies sustain and, wherever possible, restore the natural form and function of main stems and tributaries to support Kāi Tahu values and practices, and*

*(ii) innovative and sustainable land and water management practices support food production in the area and reduce discharges of nutrients and other contaminants to water bodies so that they are safe for human contact, and*

*(iii) sustainable abstraction occurs from main stems or groundwater in preference to tributaries,*

14. I have no understanding of what is intended to change in the Lindis Catchment (part of the Dunstan Rohe) to achieve these goals. These outcomes are what the Lindis Catchment irrigators were trying to achieve through the reconsenting of the deemed permits granted by the Environment Court<sup>1</sup>. I am aware that not all parties approved of those new resource consents, so what amounts to “sustainable” abstraction of groundwater is not very clear.
15. My evidence is directed at explaining why it is that transitioning land and water use takes a long time so that the Commissioners may have a practical understanding about the challenges faced by farmers. I have two examples to offer, the Tarras Water Limited Scheme; and the reconsenting of the Lindis Catchment by Lindis Catchment Group Inc.

#### **Tarras Water Limited**

16. As described above water is critical for us. Because of that we have tried to be proactive in our planning for a post 2021 environment. I have been investigating our options for over 10 years. These investigations have included:
  - (a) Possibility of drawing water from the Clutha catchment;
  - (b) Development of Tarras Water Limited.
17. I was involved back in 2006, right from the start in the community’s investigation in to developing a community irrigation scheme taking water from the Clutha River or large-scale storage of Lindis River water and the formation of Tarras Water Limited (TWL). I was a director of that company and was greatly disappointed by its failure in

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<sup>1</sup> Starting with the minimum flow decision *Lindis Catchment Group Inc v Otago Regional Council* [2019] NZEnvC 166, upheld by the High Court in *Otago Fish and Game v ORC* [2021] NZHC 3258. The first interim decision on the permits direct referral application was issued on 8 November 2019 – *Lindis Catchment Group v ORC* [2019] NZEnvC 179.

June 2013. From those ashes I purchased the consent granted to TWL to take water from the Clutha and started work on a private scheme to irrigate 340ha of my flat lowest land that meet my criteria of being affordable. This was land that had not previously been irrigated.

18. Some of my immediate neighbours enquired about joining me to convey Clutha Water to our properties. After the failure of TWL I was very reluctant to complicate my scheme and allow the outcome to be potentially affected by others. However, after further negotiations I joined forces with 5 other properties and we established Ardgour Pipeline Ltd in January 2015. I agreed to the formation of this company on the condition that the water would be conveyed directly to my property using my preferred design which had already been completed with the appropriate easements in place. We began construction of the Ardgour Pipeline in January 2015, this was completed, and the scheme began operating in October 2015. This was the culmination of work that began in 2006 and took a number of pathways and diversions, some of which led nowhere. I have never gone back and calculated the costs expended and/or wasted over the years that the investigations and scheme options were developed.

#### **Lindis Catchment Group Reconsenting**

19. I was a director of Lindis Irrigation Limited and a board member of Lindis Catchment Group Inc during the reconsenting of the Lindis Catchment deemed permits that were granted by the Environment Court. The point that needs to be understood is that the final grant of resource consents by the Environment Court was the combination of approximately 10-15 years of work by the Catchment to put itself in the position to change the way in which water was taken and used in the catchment. And we still have all of the physical work ahead of us to implement the new permits.
20. The Lindis Catchment requires some explanation. It extends from the High Country at Lindis Pass (separating the Clutha and Waitaki

catchments) at approximately 1,925m above sea level and flows roughly southwards to its confluence with the Clutha River at Bendigo, between Wanaka and Cromwell. The Lindis Catchment is predominantly hill country and has a long and proud history of fine wool production.

21. In the early years following World War 1 the Crown developed a series of gravity races utilising mining privileges to open up farmland in the catchment. The race and irrigation network, with the associated mining privileges, were sold to the farmers in the Roger Douglas years in the late 1980s. The face value of the permits supplying the race network was about 3,600 l/s. The race network delivered water to the scheme members by gravity and although old, was highly efficient to operate and maintain.
22. The downside of taking water high in the catchment is that in the dry of summer, a reach of the lower catchment was often dewatered. The basic idea behind the scheme promoted to the Environment Court was to decommission the race network and replace it with pumped groundwater from lower in the catchment delivered under pressure through a rising main network to farmer subscribers. By that means, the dry reach in the summer would have the continuous flow of water restored. That won't help native fish, because trout had already eaten them to extinction in the main stem of the river.
23. The problem then faced by water users in the Lindis Catchment is that the farming systems, and in particular the gravity race network established by the Crown in the 1920s could not operate under the minimum flow and primary water allocation regime for the Lindis adopted by the Regional Council through Plan Change 5A. The Lindis Catchment Group therefore faced the real prospect that it would not be able to access water after October 2021 (when the deemed permits expired) and so exercised its right to appeal the minimum flow and primary allocation to the Environment Court.

24. During the course of mediation discussions with other parties, it became apparent that the replacement permits would form a critical part of determining how water could be accessed and used in catchment, and whether that might be environmentally acceptable to the other parties. The Lindis Catchment Group therefore expedited a proposal to discontinue the gravity race network and replace it with a sequence of downstream in-ground bore takes that would feed a pressurised distribution network to the various farm shareholders. The purpose of doing that was to overcome much of the complaints about the use of the race networks, which effectively left a stretch of the river dewatered during dry summer months. Farmers therefore had to take on the problem of fixing the situation created by the Crown more than a century before, at private cost.
25. Ultimately, the Environment Court granted resource consents and a plan change appeal against a minimum flow of 550 litres per second against evidence produced by Lindis Catchment Group and supported by economic analysis, that economically feasible irrigation in the catchment could not be achieved at a higher level of minimum flow. Higher levels of minimum flow (900 litres per second that was supported by Fish and Game Otago), would result in inefficient irrigation practices being entrenched because the irrigation supply would not be reliable enough to support pivots or conversion to horticultural crops such as cherries.
26. All of this explains that 15 years of work has gone into designing a regime where the economic needs of farming and the environmental needs of the river could be very carefully examined by the leading experts to find the “sweet spot” where all of the needs could be met. Lindis Catchment Group is now embarking on the long and expensive process of implementing the Environment Court’s decision, predicated against a minimum flow of 550 litres per second. If that limit were to rise, then as the Environment Court found, the project would not be feasible.



27. There are logistical constraints which means that implementation of change takes a very long time. The main examples of constraints needing to be overcome by farmers are:
- (a) Farming models are limited by physical constraints (soil type, altitude, rain fall, aspect etc.) so choices are often limited. Conversion from one land use to another, or one irrigation system to another, is not possible everywhere.
  - (b) Consenting takes time. New regimes take years to design, examine feasibility, get community buy-in, and apply for and get through the required permits.
  - (c) That land access issues for shared infrastructure can also take years to negotiate. The race scheme was developed by the Crown, who had powers to access private land. For the replacement scheme, the network easement have to be negotiated, surveyed and registered with everyone's banks and secured interest holders having to be on board. All that takes time.
  - (d) Off-farm infrastructure is often constrained. An example in Central Otago is the electricity network. Getting electricity network operators (Aurora Energy Limited) to add new network capacity in the rural area to power things such as bores, pump systems, electronic connections to run all the gear, and pivot infrastructure takes years to plan and implement. In 2019 I calculated that this will require more capital contributions to Aurora Energy for further electricity network extensions/upgrades and establishment easements across neighbouring private and Crown owned land. This will cost in the vicinity of \$1000/ha. This development will put the annual irrigation costs up by \$65/ha plus additional interest payments
  - (e) On-farm infrastructure is also a logistical constraint. Water storage, water pumps, and irrigation hardware (e.g., pivots) are

all geared to a specific water reliability metric and crop type. Changing water reliability (e.g., by changing minimum flows) leads to stranded assets and crop failure.

- (f) Farms are usually family businesses. Farmers are usually capital-constrained and rely upon the trading banks for access to development capital. Shifting between farming systems and infrastructure is a once-in-a-generation exercise to create the equity headroom to meet banking requirements. To take my example, in 2019 I calculated the cost associated with the Lindis Irrigation water development has been approximately \$6500/ha for consultants, designs, irrigators, pumps, pipes, dam construction, stock water infrastructure, fencing, Aurora Energy capital contributions and easement costs. For the 70ha converted from flood irrigation to sprinkler there was \$2500/ha additional costs with removing border dykes, head races, trees and fencing. The annual operating costs have gone from \$85/ha for flood type irrigation to \$445/ha (at 2019 electricity pricing) and there are also the interest payments on the development expenditure. I have no doubt that in 2022 those numbers look worse. And it wont get any better in the future.
28. What I hope you can see and understand is that the regional planning instruments need to acknowledge that although change might be inevitable for some, it can't happen in a hurry because the parties that end up paying for it (farmers) face massive financial and logistical barriers to implement change.
29. In the lifecycle of a typical farm in Central Otago, change of the kind we lead in the Lindis Catchment is a once-in-a-lifetime project.

**What needs to be done to achieve the vision statements?**

30. As I said in paragraph 9, I have no understanding about what the actual goals are behind the vision statements for the Dunstan. If what we have to do is implement the new permits granted by the

Environment Court, then I have no problem with them. But I don't know if that is what they mean.

31. If something in addition is required, then I have real doubts about what is achievable since the feasibility of the scheme at a minimum flow of 550l/s is at its tipping point already. But without knowing what the actual goals are, I don't know how they will be achieved, or by who. The answer to these questions could only be known, once we understand the change that is required.

Date: 28 June 2023

B D S Jolly