

From: [Georgina Hamilton](#)
To: [Plan Hearings](#)
Cc: [mwebb](#); [Judy Blakemore](#); [Julia Crossman](#); "[Andrew Mockford](#)"; [Keri Johnston](#); [Greg Ryder](#); [grantporter@xtra.co.nz](#); [Saunders, Caroline](#); [Tim Ensor](#)
Subject: Plan Change 7: Opihi Flow and Allocation Working Party (PC7-382) - Evidence in Chief
Date: Friday, 17 July 2020 5:50:39 pm
Attachments: [Evidence of Mark Webb 17.7.20.pdf](#)
[Evidence of Gregory Anderson 17.7.20.pdf](#)
[Evidence of Mark Hawkins 17.7.20.pdf](#)
[Evidence of Grant Porter 17.7.20.pdf](#)
[Evidence of Caroline Saunders 17.7.20.pdf](#)
[Evidence of Murray Bell 17.7.20.pdf](#)
[Evidence of Dan Davies 17.7.20.pdf](#)
[Evidence of Keri Johnston 17.7.20.pdf](#)
[Evidence of Dr Gregory Ryder 17.7.20.pdf](#)
[Evidence of Gregory McAlister 17.7.20.pdf](#)
[Evidence of Timothy Ensor 17.7.20.pdf](#)
[Evidence of Jonathan Sutherland 17.7.20..pdf](#)

Dear Tavisha

We act for the Opihi Flow and Allocation Working Party (**OFAWP**), submitter no. PC7-382.

We **attach** for filing, in relation to the above matter, statements of evidence in chief of the following witnesses on behalf of the OFAWP:

1. Mark Webb (OFAWP representative – Fish & Game);
2. Gregory Anderson (OFAWP representative – North Opuha);
3. Murray Bell (OFAWP representative – Upper Opihi);
4. Deiniol Davies (OFAWP representative – South Opuha);
5. Mark Hawkins (OFAWP representative – Te Ana Wai);
6. Keri Johnston (hydrology);
7. Dr Gregory Ryder (ecology/freshwater quality);
8. Grant Porter (economics);
9. Dr Caroline Saunders (economics);
10. Tim Ensor (planning);
11. Gregory McAlister (drone footage);
12. Johnathan Sutherland (drone footage).

Kind regards,

Georgina Hamilton
Partner



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**BEFORE INDEPENDANT HEARING COMMISSIONERS
APPOINTED BY THE CANTERBURY REGIONAL COUNCIL**

UNDER: the Resource Management Act 1991

IN THE MATTER OF: Proposed Plan Change 7 to the
Canterbury Land and Water Regional
Plan – Section 14: Orari-Temuka-Opihi-
Pareora

**STATEMENT OF EVIDENCE IN CHIEF OF DEINIOL (DAN) TREFOR DAVIES
ON BEHALF OF THE OPIHI FLOW AND ALLOCATION WORKING PARTY
(SUBMITTER NO. PC7-382)**

Dated: 17 July 2020

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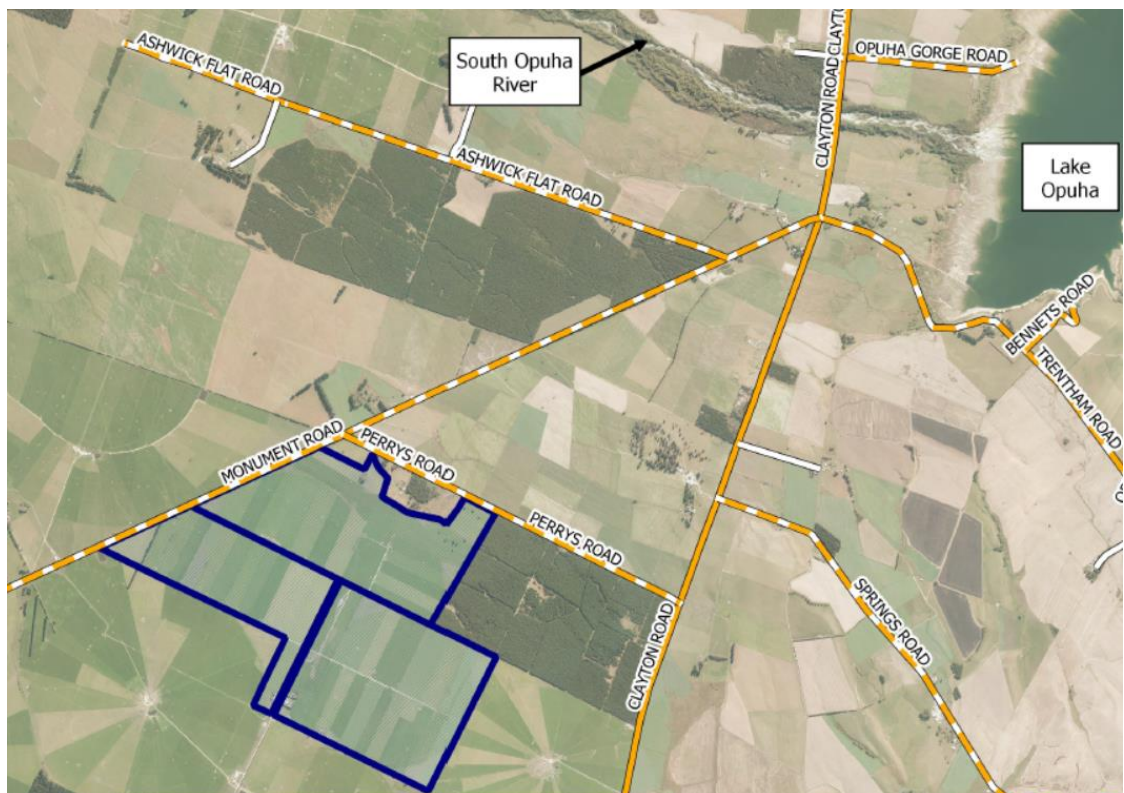
1. INTRODUCTION

1.1 My full name is Deiniol (Dan) Trefor Davies.

1.2 I represent the Cascade Creek irrigators on the South Opuha River. My evidence provides a summary of my involvement as a member on the Opihi Flow and Allocation Working Party or "FAWP".

1.3 I have been dairy farming on Ashwick Flat in the Fairlie Basin for 23 years and have dairy farmed for the last 33 years. I farm one of the original three dairy farms that started irrigation with the development of the Opuha Dam. The farm is 320ha, and we run 590 cows as a self-contained unit, with all young stock and wintering on farm.

1.4 Our farm is located on the south side of the South Opuha River as shown in the map below:



1.5 Our farm is one of 12 farms supplied by water from the Cascade Irrigation Scheme. The Scheme takes water directly from the South Opuha River approximately 6km upstream of Lake Opuha, and distributes water to the farms through a piped system. The Cascade consent (CRC060099.2) authorises the abstraction of water at a rate of 636 litres/second and is a BA consent as the

Scheme holds shares in Opuha Water Limited (**OWL**). Of the 2282ha irrigated land within the Scheme, we irrigate 280ha on our farm.

2. THE SOUTH OPUHA CATCHMENT AND THE CASCADE IRRIGATION SCHEME

- 2.1 The South Opuha catchment is in the foothills to the North of Mt Dobson and is fed from snow melt and rainfall. Although the South Opuha is not a large river, its flow has proven to be consistent over the 23 years that I have farmed at Ashwick Flat in being able to supply current water abstraction without adverse effecting river flows.
- 2.2 The River is 10km long from the foothills until it feeds Lake Opuha. It has been documented by Environment Canterbury that the River has excellent water and ecological habitat quality.¹ It is a huge asset to the whole community both economically and environmentally, so it is very important for us to protect it and ensure it is utilised sustainability for future generations to benefit from.
- 2.3 The Cascade scheme was established in 1997 with the opening of the Opuha Dam, and was originally an open race system feeding holding ponds. However, it became very obvious that this system had many faults and was a very inefficient use of water. In 2007, a large capital investment was therefore made to upgrade the Scheme to a fully piped system from intake to irrigators. The system includes approximately 5km of pipeline that provides pressurised gravity feed water with 100% utilisation and the ability to alter the abstraction rate at the intake immediately to protect river minimum flows during summer. This new system also gave the ability to accurately and regularly keep measurements of irrigation abstraction. The system gives a reading every 15 minutes and this information is available to any interested parties.
- 2.4 It also became clear early on that the method for managing the River during periods of water restrictions implemented by ECan was unsustainable and environmentally damaging for the River. This was because the way in which ECan required restrictions to be applied would result in high flows one day followed by extremely low flows the next.

¹ E.g. Page 60 of Hayward (2019), Surface water quality and aquatic ecology technical report to support the Orari-Temuka-Opihi-Pareora limit-setting process, Memo 6 (Opihi River catchment – Ecological flow review), page 5.

- 2.5 As a result, the Cascade Scheme implemented its own water management approach, similar to a water users group. As the River reaches its lower summer flows, a nominated person takes total control of all irrigation abstraction and allocates available water amongst consented users. For the last 17 years, I have been responsible for managing this system.
- 2.6 The system involves running one or more farms each for a 24hr period depending on the amount of water available until all users have had their allocation, whilst ensuring the River never drops below its minimum flows. This system has been used for 17 years very successfully and has proven very beneficial to the River, by keeping a constant steady flow. ECan is aware of our management approach and encourages its use.
- 2.7 The current minimum flow during the summer months of 500 litres/second mirrors the River's natural summer flows so when irrigators are on full restrictions, the River continues to flow at 500 litres/second or lower. This is the South Opuha's natural summer flow and numbers on a piece of paper do not alter this fact.
- 2.8 I have read in various documents prepared during the OTOP ZIPA process about an "aspiration to meet cultural flows", which for the South Opuha would have year-round flows of 1200 litres/second. Based on my knowledge and experience of the South Opuha, I consider such comments show a complete lack of understanding of the hydrology of the catchment as such flows are simply unachievable because they would not occur naturally, i.e. without abstraction.

3. THE FAWP

- 3.1 When the opportunity to get involved with the formation of the FAWP, I saw this as a chance to have a say and hopefully help make the right decisions for our community. I joined the FAWP with Chad Steetskamp, who also farms in the South Opuha catchment and is part of the Cascade Scheme.
- 3.2 The FAWP was formed to support the OTOP Zone Committee. It became very clear early on that this community based group had an overwhelming task to come up with flow and allocation regime recommendations for the North Opuha, South Opuha, Upper Opihi and Te Ana Wai Rivers. Although full of good intentions, the group had no support from ECAN in the form of promised

environmental and economic studies to guide and make informed recommendations.

- 3.3 The FAWP is made up from a diverse group of local community representatives and not under the influence of ECan, including Timaru District Council, Fish and Game, environmental and financial professionals, Opuha Dam, farmers from each of the local catchments and Zone Committee representatives. DOC and local iwi have been invited but never represented.
- 3.4 This group has spent countless hours over the last 2 or so years at regular meetings discussing the best way forward from many different perspectives. With no independent environmental or economic studies being available, the group had to commission its own to enable all parties involved to make informed decisions. The studies commissioned by the FAWP have also been used by other groups, as even in the final stages of the ZIPA process, there has been no robust independent environmental or economic information provided by ECan to inform the Zone Committee's recommendations.
- 3.5 The outcome of the FAWPs work to date has been a set of recommended flow regimes and as an informed community group feel these recommendations best meet the requirements of the community and the environment. For the South Opuha, the FAWP recommendations include increases in minimum flows three years after PC7 becomes operative, based on the advice given to the group by Greg Ryder and Mark Webb, and a regime for high flow takes.
- 3.6 These recommendations were adopted by the OTOZ Zone Committee and included in the ZIPA, however, the ZIPA also included a second step of increased minimum flows to take effect at eight years following PC7 becoming operative, recommended by ECan.
- 3.7 Our whole group was extremely disappointed that all the community driven work that was undertaken during 2017 and 2018 was completely disregarded in the final ZIPA, without any explanation or information to back up their decision making. The Zone Committee's recommendations go against their own protocols, which were established at the start of this process, namely to identify community driven solutions.

4. IMPACTS OF PC7

- 4.1 The ZIPA's recommendations for the South Opuha River have been included into PC7.
- 4.2 With a 600 L/s minimum flow during summer (as proposed by PC7 as "step 2"), our ability to farm through the summer would be extremely high risk and some seasons would not be viable. This would not only affect the summer but also the effect would be felt for the rest of the season including growing of winter feed.
- 4.3 I am really concerned about how this would affect my family and the families of the people we have working on our farm. My wife and I have nine children, our share-milker has five children and our other employee has two children. If the "step 2" minimum flows became a reality, this would change the whole economics of the farm. The first step for us would be to reduce cow numbers, and in doing so, we would lose one employee straight away. While the farm might struggle on, in the dry years, the viability of the farm would be questionable.
- 4.4 This snowball effect would also necessitate the purchase of extra feed to mitigate the feed deficit created in the summer months, again extra cost with fulling production resulting in changes to our current system, less cows having to graze young stock off and finding winter grazing off farm. Again, higher costs with fulling production all creating an unsustainable farming operation.
- 4.5 Another consequence of the proposed changes is our current low input nitrogen system (80 Kgs N Per ha/year) would have pressure put on it and the necessity to grow more feed at the start of the season would require higher use of nitrogen fertilizer to achieve this, something that I have been very successful in avoiding over the 23 years of current production and something that is very much at the forefront of sustainability for the dairy industry moving forward.
- 4.6 The impact of these changes on the farming community in and around Fairlie would also be seen in the wider community, and in particular, school roles as families leave the District to find employment elsewhere. This is likely to mean less resources and ability for schools to offer the current range of subjects.

- 4.7 There is no way to prepare for increases in minimum flows whether now or in the future. The only way to mitigate the damage would be investing in storage, which in my case would require an investment of \$2million, increasing debt and interest payments. Changes to the high flow regime in PC7 would also be required to enable these types of takes to be available.
- 4.8 In my view, it is crucial that the focus of the PC7 process is on its original intentions of ensuring sustainable use of our fresh water resources and the improvement of water ways that do not meet relevant standards, not a water grabbing exercise, which will result in severe damage to affected communities without benefit to the environment. I consider that to achieve the best result it is very important that any changes to current minimum flows are based on facts backed up by studies and science and not just good intentions.

5. CONCLUSIONS

- 5.1 In my 23 year involvement with the South Opuha River, and particularly the last 17 being responsible for managing the Cascade Scheme's abstraction during water restrictions, I feel I have formed a very good understanding of its characteristics and behaviour.
- 5.2 I strongly recommend any changes made to the current minimum flow regime need to be very carefully considered using factual information, as the current ECan recommendations will have massive implications for not only the directly affected farmers, but also the Fairlie and wider communities without any proven environmental benefits.

Dan Davies

17 July 2020