

From: [Ryan O'Sullivan](#)
To: [Plan Hearings](#)
Subject: Evidence from submitter 439 Ryan O'Sullivan on behalf of Glenire farm Ltd
Date: Friday, 17 July 2020 10:59:25 am
Attachments: [EVIDENCE GLENIRE FARM -Ryan O Sullivan submitter 439.doc](#)

Hi,

Please find attached evidence in word doc format in support of our case re PC7 / OTOP.

Thanks Ryan

**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 OF RYAN JAMES O’SULLIVAN ON BEHALF OF
GLENIRE FARM LIMITED (SUBMITTER NO. PC7-439)**

Dated: 17 July 2020

INTRODUCTION

1. My name is Ryan James O'Sullivan.
2. I am a director and shareholder in Glenire Farm Limited, a dairy and dairy support business located near Fairlie.
3. I am providing this evidence on behalf of Glenire Farm Limited.
4. I also declare that I am the board chair of Opuha Water Limited (**OWL**). I have submitted evidence on behalf of OWL, (Submitter number PC7 381)
5. I hold a B.Com Ag from Lincoln University, majoring in Farm Management and Valuation. Prior to going farming 12 years ago, I held various positions in the field of agribusiness finance.
6. In 2017 I was awarded a Nuffield scholarship and was able to study agriculture systems abroad with a focus on comparing pasture fed dairy with containment dairy in the US and Europe.
7. My day to day role is farming, overseeing and managing the operations of the dairy and dairy support business described below.

SCOPE OF EVIDENCE

8. I submit this evidence in relation to PC7 Sec 14: OTOP and specifically to the PC7 provisions relating to the tributary flow regimes on the Te Ana Wai, tables 14(r) & 14(s).
9. This evidence is written in conjunction with and support of evidence submitted by my father **William Dermott O'Sullivan** (Submitter PC7 240) who is also a shareholder in Glenire. If practical, it may be useful to read this evidence alongside his.
10. Where Dermott's evidence speaks to wider picture of water in South Canterbury and his experiences/history of access to irrigation for our farm business, my evidence will focus on the on-farm impacts to Glenire of PC7.

11. I will reference other evidence supplied by experts on behalf of OWL including Grant Porter (economics), Kerri Johnston (hydrology) and Greg Ryder (ecology).

BACKGROUND ON GLENIRE

12. Glenire's main enterprise is seasonal supply dairy production from 1200 cows milked on 350 ha of irrigated pasture.
13. Outside of this dairy platform, we farm an additional 485ha of un-irrigated land to support the dairy farm comprising winter grazing, replacement stock rearing and some beef, as well as grain and fodder production for dairy herd supplementation.
14. Alongside my father, wife and 3 children, we employ another 6 people to assist us in operating the business. Prior to conversion to dairy in 2008, the farm enterprise of sheep/beef and crop would support 2 families.
15. Some of these employees have their own families and over the years, by them living and working on our farm they have contributed to kindergartens, schools, local sports clubs, Lions and other organisations and businesses in Fairlie and beyond.
16. In addition to the human capital our farm has been able to contribute to the district, our operational spend on farm inputs is some 4 times what it was pre-conversion to dairy, much of which is spent locally.
17. Irrigation with security of supply has been the enabler for Glenire and other OWL shareholders to grow and prosper.
18. The Mackenzie District is fortunate to have a strong agricultural sector underpinned by the Opuha dam, particularly at present given Covid 19 has seen the local international tourism industry fall off a cliff.

IRRIGATION ON GLENIRE

19. Our consent allows for abstraction of up to 103 litres per second (this drops off in 3 blocks as the river flow drops) and we have an on-farm water storage dam with 365,000 m³ capacity which buffers any shorter term irrigation restrictions and allows better utilisation of water (e.g. winter pond filling).

20. We irrigate a predominance of heavy clay based soils and our location experiences mostly lower evapotranspiration rates than other parts of Canterbury (less wind-run, cooler nights) meaning our water usage per ha irrigated is at the lower end of the range required in Canterbury for pasture production.
21. Around 90% of our irrigation is applied with pivot irrigator with a small area of roto-rainer and k- line spray.
22. Given that we have a storage pond, we also have an additional consent for up to 350 litres/sec of BN or 'high flow' water which allows us to harvest high flows (when the Opihi river at SH1 >15,000litres /sec and the Te Ana Wai is >1,500 l/sec) although in practice we can only capture about 200 litres/sec due to practical limitations of getting it into the pond.

EFFICIENT WATER USE

23. We are a business that manages a large irrigated area with a relatively modest amount of water so we take a very careful approach to managing and conserving the resource to achieve maximum benefit from it.
24. We irrigate only when required and use 4 moisture probes to inform decision making. We pay particular attention to weather forecasts so as to create a deficit soil moisture status to receive rainfall. This winter we have invested another \$7,000 in a weather station, primarily for its ability to assess evapotranspiration losses to assist further with irrigation scheduling.
25. Our efforts around water management and other environmental compliance and stewardship have recently been validated by being awarded an 'A' in our farm environment plan (FEP) audit last month, both for the dairy farm and runoff properties.
26. We have been measuring water quality at our cost for the past 4 years on a monthly basis 3km downstream of our dairy farm at the SH8 Bridge. This is to establish a baseline for the river below us and give early indication of any negative trends that may emerge. The water quality on the Te Ana Wai is generally good across all key measures as discussed in the evidence supplied by Greg Ryder, and it's important it stays that way.

27. We are always looking to improve and are well aware of further water saving technologies either being developed or currently available in which we would like to invest. These include variable rate/water exclusion control for pivots but with investment costs well into 6 figures, we require some longer-term certainty as to our future baseline water access before we can justify these sorts of sums.

CURRENT RESTRICTIONS REGIME

28. The Te Ana Wai irrigators collectively (Te Ana Wai Water Users Group TWUG) abstract a combined allocation of 252 litres per second from the river (although the A block allocation is assessed as 280 l/sec in the plan). Glenire draws 103 l/sec or 40% of the allocation and ours is the only take 'upriver', the remaining 3 takes are clustered around Cave in the mid-lower section of the river.

29. Our take of 103 l/sec at Glenire reduces to 73 l/sec per sec when the river drops below 600 l/sec, reduces further to 37 l/sec when the river gets to 500 l/sec and ceases fully at 400 l/sec. The 30 l/sec reduction at 600 l/sec river flow can be utilised at a runoff located near Cave for the duration the river stays above part or full restriction.

30. This partial restriction regime is known as 'stepped'. Basically the minimum flow of 400 l/sec has 100 l/sec added to it and becomes the point where abstraction drops to 50% allocation. As a water user group we are easily able to pair up into 2 groups of two abstractors and take 50% allocation each on alternate days.

31. The hydrology work done by Kerri Johnston assesses our existing water availability at 92% - adequate but certainly at the lower end of what passes as 'bankable'.

32. While we do have fairly frequent short periods of restriction, we can manage these with our storage however the Te Ana Wai does experience some infrequent periods of extended low flow such as 1985 and 2001 when the river ran at less than 400 l/sec from Jan/Feb until well into May.

PROPOSED RESTRICTIONS REGIME

33. There are 2 parts to the PC7 flow regimes, step one - table 14(r) and pro-rata restrictions - table 14(s). Some background to how the step 1 regime was generated is outlined below.

Flow and Allocation Working Party (FAWP)

34. It was signalled by the OTOP Zone committee in early 2017 that there was a community desire to increase minimum flow regimes on the tributaries. For the Te Ana Wai river users, existing water reliability, as stated above is 92% which is marginal so this was an ominous bit of news, how we could give up flow while retaining adequate water security?
35. To investigate and address this challenge, OWL led the formation of the Flow and Allocation Working Party. It was a forum to bring abstractors and environmental interest groups together to see if some common ground could be found on modifying tributary flow regimes.
36. While I was not a member on this group personally, my father Dermott was and the group spent a lot of time finding some solutions, as he outlines in his evidence.
37. The end result basically was that by increasing flows outside of the peak irrigation season, some ecological gains could be achieved while leaving summer flows (mid Dec –Mid Mar) close to existing minimum flows to assist with irrigation reliability.

Step 2 –Pro Rata Restrictions (PRR)

38. A second delayed set of restrictions was introduced in PC7 in the form of pro-rata restrictions. The move away from a stepped restriction regime explained earlier in favour of a more common regime on other Canterbury rivers, pro-rata restriction has a significant detrimental impact to our water reliability. In practice this means taking the irrigation allocation block of 280 l/sec and adding it to the proposed step 1 minimum flow say in mid-summer of 450 l/sec = 730 l/sec. This becomes the flow from where restrictions will commence, on a pro-rata basis down to a zero take at 450 l/sec.
39. Keri Johnston's water reliability modelling assesses the new number under this regime to be 73% which is a very significant impact and be very tough on our business.
40. As an aside, the physical taking of water and meeting compliance under this regime will be physically difficult. The TWUG will be faced with allocating between 1 l/sec and 252 l/sec between mid-summer river flows of 451 l/sec and 730 l/sec variable probably on a daily basis.

41. The pro-rata regime was set down to commence in 2035 under PC7, but that has been shortened to commence in 2025 under the Sec 42(a) report, more on this later.

OPERATIONAL IMPACT

Viability

42. The economic evidence prepared by Grant Porter shows on average EBIT reduction for a 'modelled' dairy operation to be 6% under step one and a 12% drop under PRR regime. While I respect Grants attempt at this assessment, modelling a reduction in irrigation water reliability is fraught with difficulty as one must deal in averages which can be misleading.

43. By the law of averages, one could have one foot in a pot of boiling water and one in some iced water and, on average, be comfortable!

44. He does acknowledge this somewhat with the statement 'In dryer years than the average the impacts of my results above only get worse'.

45. While an average 12% drop in EBIT could be tolerated, what it means in practice is that over 3 seasons you will get maybe 2 with no impact then one year with a 36% impact - an average of 12% - but the 36% drop in one season is a significant blow. If this was to occur back to back - not a highly unlikely probability, then the ongoing support of the bank and overall confidence in the future of the business becomes a major issue.

Mental Stress

46. This is a less tangible impact but still a valid discussion because it certainly does have an impact. In 2015 we suffered a 20% drop in production due to the drought and loss of water access.

47. This event has created an almost subconscious level of uncertainty of what lies ahead as each summer approaches, but we know the probabilities are low of it repeating, say one in ten or 15 years, which we live with.

48. Under the PRR regime, uncertainty will become very pre-occupying, a lingering feeling of dread of what summer will bring – will we be rejoicing in continuous irrigation or will you dragged into a whole raft of tough decisions on buying supplement, sending stock

out grazing, drying off cows, laying off staff and hard conversations with the bank about ongoing support.

49. This type of uncertainty really takes the fun out of farming, affects decision making, confidence levels and overall mental wellbeing. It is a place where no farmer wants to be.
50. Droughts don't happen suddenly they gradually arise and slowly tighten their grip. Sometimes they end quickly and other times they drag on relentlessly and there is no way of knowing –uncertainty is the enemy of any business but particularly farming as weather is only one of the factors that challenge us on a daily basis.

Loss in Asset Value/ Saleability

51. In addition to the effect on profit and loss and mental stress is the balance sheet impact. How irrigation reliability adds value to land is not a sliding scale between say 70% reliability and 100%, with high reliability irrigated farms trading for X and 70% reliable farms trading for 70% of X.
52. It is a binary equation not a sliding scale. What this means is there is a trigger point where irrigation adds tangible value to a farm, or it does not and reverts to a dryland farm with some water - but not sufficient water security to make a material investment – more like some sort of insurance policy for the odd short dry spell.
53. It is arguable where that trigger point is but I would assess it somewhere around 87%-90% reliability and the PRR regime certainly tips us below this threshold - having some irrigation, but not enough to invest in a high water dependent system such as dairying.
54. For those like us with infrastructure already in place, the effect is exacerbated - the money has been sunk on assets to leverage the water but no longer has utility to its full extent. Infrastructure such as cowsheds, housing and paddock improvements become stranded assets, the property overcapitalised and added value of these improvements must be discounted. As a consequence, valuations are marked down and lending margins and equity assessments by the bank rapidly unwind.

TIMING

55. While our base case is a move to the step one regime and not beyond that, if PRR must occur, there is an issue around timeframes.
56. As alluded to earlier the timing of the PRR regime has reduced from 2035 in the ZIPA to 2025 in the Sec 42a report.
57. If faced with PRR regime, there are some unpalatable options we will have to look at deploying to adjust our business. They may include the following, in no particular order;
- downsizing the business so as to reduce water demand in line with access. - will require substantial debt reduction to right-size our debt with new valuations. Estimate would be in the order of 1/3rd of our existing business so 400 cows and 2 FTE staff members.
 - build more water storage to offset the reduced access to summer water – an estimated cost north of \$1.2m
 - Have OWL look with us at some infrastructure options to remove some abstraction off-river (in the Cave area) and replace with piped water ex- scheme so as to reduce the impact of the PRR regime –cost and viability unknown.
58. All of these mitigation options are major undertakings and will require long time horizons to explore and/or execute. Requiring them to occur by 2025 is not reasonable by any definition, we need at least 10 years to adapt, not 4.
59. At this point it is worth asking the question is the PRR required –is it not sensible to evaluate the effects of the step one changes on river health first before rolling out PRR? The in-stream river health gains sought by the community may be met with step one and imposing imminent carnage in the case of the TWUG businesses may not be required.
60. De-coupling is a concept I spoke to in my submission on behalf of OWL. In the case of the TWUG, the value proposition in being affiliated to OWL under a PRR regime is very marginal and logic would suggest we would be better going alone. This is with the exception of becoming involved in a potential OWL-led infrastructure solution

mentioned above. This is a far from ideal situation for the wider scheme as is discussed in detail in other submissions.

CONCLUDING COMMENTS

61. The proposed step 1 increases in the minimum flow regime on the Te Ana Wai, are generally acceptable to the TWUG. While we don't move from our existing flow regime to step 1 willingly, we do so because we understand the importance of sustaining the balance in the river and retaining our licence to operate with the community.
62. The ecological benefit as assessed by Greg Ryder with the higher shoulder season flows are assessed as making a positive impact which validates the change.
63. Moving to a pro-rata restriction regime destroys irrigation reliability and will have major economic impacts of our business as outlined above
64. The PRR changes according to Greg Ryder are expected to have little or no impact on the river ecology and therefore are completely disproportionate to the economic loss.
65. In addition to this, if the PRR regime must proceed, the timeframe for which it is proposed in the Sec 42(a) is completely unreasonable, given the significant mitigation undertakings that will be required for us to adapt.

Ryan O'Sullivan

17 July 2020