

Location: RDRML -
joint hearing
30 April 2018

IN THE MATTER OF

The Resource Management Act 1991

AND

IN THE MATTER OF

resource consent applications by Rangitata Diversion Race Management Limited (RDRML) to the Canterbury Regional Council and Ashburton District Council for resource consents for the construction, operation and maintenance of the Klondyke Water Storage Facility, its associated water takes from and discharges to the Rangitata River, and all associated activities

STATEMENT OF EVIDENCE OF EVAN CHISNALL FOR MHV WATER LTD

30th of April 2018

Introduction

1. My name is Evan Chisnall, I am a fifth generation farmer on the Canterbury Plains, a shareholder and director for MHV Water Limited and a BCI shareholder and ground water abstractor. I now provide evidence on the benefit of the proposed Klondyke Water Storage Facility and the associated 10 cumec flood flow take from the Rangitata River to my farming operation.

Background

2. We are a family owned business running six farms and run 6000 cows producing 2.9 million milk solids annually over 1640 hectares ('Ha').
3. When my Grandfather had the home farm and was one of the first to adopt irrigation he said he was doing it for future generations. He started irrigating 280 Ha of a 314 Ha farm using border dyke irrigation in the 1940s. Under this method we used on average 800 mm of water per ha per annum. Water was received on a two weekly roster, it took three weeks to get around the farm and if you didn't take your allocation of water when it was available you had to wait until you were next rostered to receive water. Given the soil types in the Hinds Plains we are never more than two weeks from a drought and moisture deficits in the soil, so it was very rare for farmers not to take their water because you couldn't be sure you wouldn't need it before you were next rostered on. The soil was used as storage, but it was over full capacity and was, we now know, leaching nutrients to groundwater.
4. In 2002 we expanded our farming operation from 314 Ha by purchasing 355 Ha and in 2006/2007 we converted 355 Ha to dairy from sheep, beef, cropping farming. We then converted the 314Ha property in 2008/2009 to dairy. In 2012 we bought and converted a further 450 Ha; then in 2013 we bought and converted 520Ha, taking us to 1,640 Ha. Of this 40 Ha fodder beet the rest in dairy farming.
5. As we converted the 355 Ha to dairy we also moved to spray irrigation aiming for 90% of the property to be under pivot irrigation giving us a high degree of efficiency, we also recognised the importance of reliability, so we built 130,000 cubic metres of storage, giving us 366 cubic metres ('m³') of storage per

Ha. We were driven to build this storage due to the sub-optimal levels of reliability that are associated with the water supply from the Rangitata Diversion Race ('RDR'). In that regard, while the RDR provides water with a good level of efficiency, the reliability is dependent on river levels in both the Rangitata and Ashburton rivers, when on restrictions. This is not sufficient to enable us to meet the demands of plant growth and market expectations regarding the delivery of the agricultural products we supply. We faced considerable uncertainty and with no collective scheme storage available we took it upon ourselves to make a substantial investment in on-farm storage.

6. Under spray irrigation our average annual application is 450 mm compared to 800mm under border dyke irrigation. I expect this to be greatly reducing our nutrient leaching and thus our impact on the environment.
7. As we developed farms we continued with the aim to be efficient, 90% under pivots and reliable with storage, each farm has on farm ponds as well as scheme storage. 317m³/Ha of on farm storage plus 291m³/Ha of scheme storage on average.
8. We have invested over \$1 million in on-farm storage, not including the land value, to provide us with the ability to use water more efficiently and have reliability. In addition to the costs to us of using water more efficiently, we also have the opportunity cost of not being able to use the land on our farm productively, as it is now utilised as water storage. Having centralised storage would provide another option to having to utilise land on farm.
9. Having storage provides us with the reliability to irrigate when water is needed by the plants, not just when water is available. This reduces unnecessary leaching of nutrient to groundwater and saves on electricity costs for pumping.
10. Having storage centrally would reduce our on farm pumping costs for our farms that are on piped networks (both lines fees and electricity) and electricity on our open channel properties.
11. We employ 35 people and house 18 families on our properties which provides a carry on benefit to the wider economy.
12. I currently hold groundwater consents that are running concurrently with the water that I take from the scheme. The groundwater is to provide reliability in times of restrictions and with greater reliability coming from scheme storage the reliance on this source of water would be reduced, providing a beneficial environmental outcome as less water would be drawn from the aquifer.
13. The benefits of storage are both for us personally and also for the environment. We are using less water, leaching less water and nutrients to the aquifer, have improved growing cycles and less electricity costs on our piped infrastructure farms.

Summary

14. Low reliability forces you to irrigate just in case because you don't know if water will be there when needed, whereas high reliability and efficiency with moisture monitoring and weather forecasting allows you to wait until plants have the requirement, allowing farmers to optimise water use while reducing risk of leaching nutrients.
15. We support the building of the Klondyke storage pond as it will increase reliability leading to good decision making by farm managers. One of the farms I own is three farms below the proposed building site and I feel comfortable with its construction having been to information days held by RDRML. As my Grandfather did, I feel that I'm leaving the land and New Zealand in a better place and hope my grandchildren will continue to take pride in past endeavours and continue to progress.

Thank You
Evan Chisnall