

**BEFORE THE COMMISSIONERS ON BEHALF OF
THE OTAGO REGIONAL COUNCIL**

Consent No. RM16.093.01

BETWEEN

CRIFFEL WATER LIMITED

Applicant

AND

OTAGO REGIONAL COUNCIL

Consent Authority

BRIEF OF EVIDENCE OF DR AMANDA JANE BATCHELOR BELL

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BRIEF OF EVIDENCE OF DR AMANDA JANE BATCHELOR BELL

1. My name is Amanda Jane Batchelor Bell. I am a shareholder and director of Criffel Water Limited. I currently Chair the CWL Board and have been taking the lead role in co-ordinating the replacement of the deemed permits on behalf of CWL Shareholders.
2. My academic and professional background includes a doctoral degree in veterinary science and running the high performance deer operation on Criffel Station. I am also a shareholder and director of the company that owns Criffel Station. My veterinary science specialist interest relates to proactive animal health programmes and agricultural technology. I also have a particular interest in aspects of water quality in public health, and the development of water catchment management solutions that positively affect human, animal and ecosystem health.
3. I am the chair of Ministry for Environment Freshwater Improvement Fund Wanaka Water Project that is developing an integrated catchment plan for the Upper Clutha including engagement with the local communities on values, implementing riparian plantings and managing urban research projects. I am a member of the Fresh Water Leaders Group, a ministerial advisory group that has been providing independent advice to the Government on freshwater management policy and standards development. I am a Trustee of One New Zealand that inspires and educates communities to utilise the Sustainable Development Goals developed by the United Nations.
4. I have a company AgResourced that provides advice and governance to businesses in the primary sector.
5. CWL and Criffel Station take a whole ecosystem approach that gives expression to Te Mana o Te Wai; this refers to the integrated and holistic health and wellbeing of waterways. In my view and as tabled in the government's recent Proposed National Policy Statement for Freshwater the following are aspects that need to be considered :
 - (a) Ecosystem health
 - (i) Water quality

- (ii) Water quantity
 - (iii) Habitat
 - (iv) Aquatic life
 - (v) Ecological processes
- (b) Recreational activity
 - (c) Mahinga Kai
6. I utilise future thinking in my work and leadership roles coupled with a One Health approach (optimal integrated health of water, environment, animals and people). One Health future thinking entails looking forwards 30 to 50 years, working through shared visions then back casting to today. It is necessary to understand what we know, what we don't know, the gaps in the science and data, before working with relevant stakeholders to create a roadmap to deliver on the long term vision. The vision is to deliver enduring sustainable, healthy environments and in particular waterways. I work with broad stakeholder groups – including NZ communities, catchment farmer groups and businesses on growing understanding and developing actions on an agreed future. There are opportunities for improvements both in terms of ecosystem health, but also broader urban and rural community health – which inevitably include water use to support drinking and economic uses.
7. I am aware that the Resource Management Act contains specific recognition of the relationship between Maori and their ancestral water (section 6(d)). Out of that relationship comes the concept of Te Mana o te Wai in the NPS Freshwater Management (Objective AA1 and Policy AA1). The interconnectedness between water and the broader environment (the health of the water body and the health of the people) is not unique to Maori culture and values. Many of those ideas are shared in Pakeha culture. I hold those values and they are at the core of One Health Future thinking. We need to acknowledge that caring for the wellbeing of people (including the local people that continue to live,

work, and feed themselves in this catchment), cannot be left out of the Te Mana o te Wai equation. Te Mana o te Wai warns against short term siloed thinking and favours collaboration on long term goals.

BACKGROUND

8. Criffel Water Limited was formed in 2015 to co-ordinate the replacement of 7 deemed permits¹ that share water taken at the weir on the north branch of Luggate Creek. The takes have a combined maximum rate of take of 601.8l/s. Prior to the formation of the company the Criffel Water Scheme had operated on an Agreement Re Water Supply (dated 25 March 1969).
9. The permit holders recognised the need for a co-ordinated approach to the future management of the scheme and its infrastructure, enabling healthy ecosystems and low flow management due to the fact that replacement permits would be subject to a minimum flow.
10. The scheme itself was established in the 1969 when Water Race Licence holders joined together to build the Criffel Weir. The Weir operates as the single take point for all deemed permit holders within the Criffel Scheme. Water is then conveyed by a combination of piping and open races to the various shareholders.
11. During the life of the scheme irrigation methods have evolved. Initially scheme members utilised a variety of border dyke and flood irrigation. In more recent times scheme members have carried out infrastructure upgrades to establish almost 620ha of spray irrigation. This is a combination of pivot irrigation (Wallis, Morris, and Cooper) and K-line (Jeremy Bell Investments Limited (Criffel Station), Feint and Corbridge). There are further opportunities to develop spray irrigation in the future with approximately 450ha of potential future irrigation area identified.²

¹ A summary setting out the deemed permits being replaced by this application was attached at Appendix 1 of the application.

² A map of the current and future irrigation areas is attached to the evidence of Mr Simpson.

12. As part of this process we have been investigating what infrastructure upgrades will be necessary in order to improve the efficiency of the scheme as a whole to enable us to reduce the amount of water taken. The Evidence of Roger Simpson covers this in greater detail. The difficulty that CWL shareholders have is that until there is certainty on water availability, we are unable to develop a satisfactory business case to deliver upgrades to the scheme. A satisfactory business case is not a “nice to have”, but rather an essential precondition to access borrowed capital to investigate in irrigation infrastructure. From my personal knowledge, few of the shareholders will be able to invest in efficiency upgrades to the scheme without being able to borrow money on standard commercial terms.

EVOLUTION OF THE APPLICATION

13. As will be apparent from the documentation provided to you in the Agenda, this application has been on foot for a long time and has evolved considerably over the course of the process. The CWL shareholders have not changed over this time but the people we have engaged with at the various entities have. In some cases we are now dealing with three changes in personnel. There has also been some small sales of land within the Criffel Command Area since the application was first sent to ORC.
14. The original application was prefaced on the information set out in the David Hamilton and Associates Limited Report “*Criffel Water Limited – Luggate Creek – Water Volumes and Rate of Take*”, dated 8 September 2015. The report assessed the scheme command area of 1500ha and determined that approximately 1200 hectares of that area could be irrigated with the water available.
15. The application was prepared on the basis that it would be subject to the minimum flow identified in the Otago Regional Plan: Water. CWL also sought consent to continue taking water through the winter for the purposes of hydro-generation. This was because of discussions with Mr Peter Wilson of Fish and Game in 2016. F&G were supportive and saw no issues with the water take and meeting of the minimum flow.

Mr Wilson further identified as a win-win opportunity that hydro-electricity could support the scheme operation and add power to the grid. This was possible due to the agreed healthy state of the Creek, the amount of water flow required to keep the races operating through winter and the gravity drop from the weir to the flats.

16. In response to questions from Kai Tahu Ki Otakou Limited (now Aukaha), CWL commissioned Dr Richard Allibone to report on the effects of the residual flow through the weir on downstream fish habitat. At that time, the only issue that remained unresolved between CWL and KTKO (Matt Dale and Tim Vial) was the potential that future upgrades of the weir might reduce the assessed residual flow through the weir (assessed by David Hamilton as approximately 90 l/s), to something closer to the weir's consented residual flow limit of 50 l/s.
17. Subsequent to receipt of Dr Allibone's report, KTKO asked for a full set of conditions to be provided to support a written approval. At that stage, no issue was raised about consent term, only maintaining existing residual flows through the weir. Months went passed before we were able to obtain a draft set of conditions from Peter Christophers (then the ORC officer handling the application)
18. CWL offered KTKO a condition for a residual flow of 90l/s. KTKO made further enquiries about monitoring the residual flow. Having taken advice we advised that monitoring was not feasible due to the nature of the Weir structure and the Luggate Creek boulder terrain below the weir. Instead we agreed to offer a specific review condition that would enable a review of the residual flow in the event that the Weir was upgraded in a way that would affect how it was operating and therefore the flows through it. .
19. Unfortunately, despite it appearing that KTKO were agreeable to the suite of conditions proposed by CWL it ultimately did not provide its affected party approval. There was significant time lag between providing the data, the verbal positive discussions and the next response. We were advised in late 2018, by new personnel we had not dealt with before, that an affected party approval was not going to be

forthcoming because Aukaha were reviewing their approach to deemed permit replacement applications. As such CWL requested (due to the difficulty in gaining any responses and slow response turn around timeframes given that we were entering into year 4 of trying to progress this application) that the application be notified to them in order to progress matters. This occurred and Aukaha filed a submission in opposition to the application.

20. Following the submission CWL and Aukaha engaged in further discussions. The Aukaha submission raised a wide range of issues (including in relation to the minimum flow and other matters that CWL considered to be beyond the scope of the CWL consent application). The Aukaha submission was also based on inaccurate assumptions. Out of date modelling and old data used by Mr Tom Heller in the original application documents was utilised to formulate their response. The original modelling was carried out prior to the application being filed because at that time ORC did not use telemetry for the SH6 flow monitoring site and there was only a small flow rate dataset. CWL also did not have telemetry in 2014 so we relied on a small number of manual flow rate measurements and modelling. We now have 3 years of telemetric data and can be much more specific and have greater understandings of the relationships between flow takes, water quality, fish habitats and the whole ecosystem.

10 Year Term

21. The key issue of concern to CWL is the submission that sought that consent only be granted for 10 years. This has been adopted by the ORC's reporting officers in their recommendation. The officers' report at pages 42-44 ignores the financial implications of their recommendation and deals with it purely as an administrative exercise.
22. For our scheme, such a short term consent would not support an adequate rate of return on investment for this period of time to enable the scheme to undertake the efficiency upgrade works (which achieve only a marginal improvement in productivity because the irrigation infrastructure is already in place). It would extremely difficult to access

the capital expenditure and obtain bank funding for such a short window. Some of the upgrades are significant (such as the pipeline to the Corbridge Block) which could not be supported without also enabling future irrigation through the use of supplementary water.

23. Mr Roger Simpson's evidence details the existing and proposed investments in irrigation infrastructure. Commitments of that magnitude will require bank support for all of the shareholders. CWL cannot raise funds as it holds no assets, funds have to be privately raised, in our case through land sales and secured against land assets. The current banking environment is not supportive of further investment in farm development. The process from initiation of land sales through to implementation of an upgrade in our situation is estimated at 3.5 to 4 years. There is no way that the financial planning, infrastructure design, and roll-out can be completed inside 5 years. There will need to be a progressive roll-out project as each shareholder's capital needs allows. This is particularly the case for designing and building water storage to fully utilise the supplementary allocations, and new irrigation development. There is also the complication re intensification that is part of the proposals of the recent draft Freshwater NPS; a requirement for a resource consent before changing to a more intense land use. This adds further uncertainty as to whether new irrigation is possible, increased time to apply for consents in an environment where regional councils have stated they have capability and capacity issues and increased cost to go through the process. Consultation with the CWL shareholders indicates that a 10 year program will be needed to roll out the upgrades. But actually paying for them is a different matter.
24. Having completed the infrastructure upgrades, rates of return will likely see a 20 year plus pay-back period (with term borrowing that reflects that). During that time, the consents must be secure to support the funding required. There are also a number of other regulatory changes and requirements (NPSFW and NESFW) that will require significant capital commitment by landowners to meet in the next five years such as stock exclusion and farm environmental plans.

25. I disagree with the reporting officers that short-term consents are more “efficient”.³ From a consent holder’s point of view, “efficient” means minimising money being wasted. CWL and its shareholders have already spent in excess of \$200,000 on this resource consent process. To go through that all again in 10 years is not just inefficient, it is impossible to sustain from an extensive pastoral farming system in the Upper Clutha. Costs of that magnitude will force farmers into intensification and land development, which is exactly the opposite of where the new NPS seems to be heading. Extensive grazing systems have to be low cost systems to be sustainable.
26. I also disagree that in 10 years we will have any better idea of the future planning regime. Since 2011 we have had 4 iterations of the NPS freshwater management (2011, 2014, 2017, and the draft released just recently). I have no reason to think that the next 10 years will be any different. Fresh water has become highly politicised. All we can deal with is what we have today.
27. It is clear that scheme members would be unable to commit to efficiency upgrades in return for less water if they have to be done in 5 years, and access to water is only secured for 10 years.

Recent engagement with Aukaha.

28. Given the alignment between myself as representative of CWL and the representative of Aukaha in generational ecosystem health – articulated through the One Health, Te Mana o te Wai and Mauri Ora principles, CWL agreed that there would be utility in engaging in a wider discussion and hui in an effort to further explore the common ground that existed between CWL and Aukaha that may enable the development of a longer term solution. There was also acknowledgement of the approach that had been signalled by the government for NPSFW in the launch of Healthy Waterways.
29. These discussions also covered in the first two meetings, the wider issue to NZ of the benefits of collaboration particularly in waterways where there was agreement that there was good water quality, healthy

³ Officers’ report, page 43, 5th bullet point from the bottom.

ecosystems and proactive waterway management. The waterway management specifics included stock exclusion ranging up to 100m; low fertiliser application rates (if any) in the broader catchment, abundant fish, quality habitat, and recreational enjoyment. Aukaha indicated strong support and a high likelihood of their ability to work with us on remaining points of concern by the end of June 2019. Both parties agreed that a hearing was not where they saw this being resolved due to alignment on generational healthy ecosystems principles. The two parties also discussed the opportunity to illustrate a different pathway was possible through collaboration and working together in resolving these applications. This waterway was also noted by the Aukaha representative to being one that 25 years was a possibility for consent due to the positive ecosystem health, the alignment on Te Mana o Te Wai and only two parties to engage with on takes.

30. It was on this basis that we agreed over the course of several months to have a series of meetings with Aukaha. As well as confirming alignment on waterway management, the first of these was about identifying the key issues of concern to them. The outcome of that discussion was to identify 3 key values:
 - (a) Mahinga Kai – including Cabbage Tree, Long Fin Eel (Tuna) and Koaro;
 - (b) Cultural Associations with the Catchment; and
 - (c) Flow variability – linked to the concept of Te Mana o Te Wai.
31. Discussions at subsequent meetings revealed concerns from Aukaha that the existing flow and allocation regime may not deliver on those values. We also discussed opportunities to enhance these values in ways that did not relate to flow management at all. For example, riparian management, information sharing and dissemination associated with cultural values and so on.

32. In some of the later meetings we also included representatives from Luggate Irrigation/Lake McKay and other stakeholders including Fish and Game and DoC.
33. Unfortunately, it became apparent that a solution was not going to be achievable despite positive early agreement on Te Mana o Te Wai and agreement that water quality was very good, habitat, suggestions that this was an application that could be supported for a 25 year consent and a wish to illustrate collaborative approaches to resolving these issues. In my view the sticking points were primarily;
- (a) The minimum flow and whether it is sufficient to maintain values – noting that despite repeated requests Aukaha were unable to articulate for us what values were not being provided for; and
 - (b) Consent term – Aukaha were seeking a short term consent so that if an alternative flow regime was to be implemented through the NPSFW, Freshwater Management Unit process, it would be implemented on renewal of the consents.
34. Given the advice of our expert team and the needs of our shareholders for longer term certainty we agreed that further discussions were unlikely to be fruitful and requested that the Council continue processing the application.
35. During the course of these discussions the application by Luggate Irrigation Company and Lake McKay Station was also in train. One of the matters that Aukaha consistently raised was how cumulative effects would be assessed. Until relatively recently discussions between parties was intermittent. There were some high level agreements around flow sharing conditions, but not on allocation. The relationship between the consent applications and the future sharing of water was becoming an impediment to making progress with Aukaha. For this reason it seemed sensible for the CWL and Lake McKay/Luggate Irrigation Company Limited applications to adopt the same approach to calculation of the primary allocation and to flow sharing so Aukaha could see clearly how they fit together. This was achieved between the CWL prehearing meeting and the Lake McKay/LIC prehearing meeting.

36. Although there is now a more formal relationship between the CWL and Lake McKay/LIL consents, there has always been a co-operative history of flow sharing and communication between the parties.

Tuna

37. I now understand that a major concern is the potential for Luggate Creek to host the reintroduction of Tuna (Longfin Eel). I wholeheartedly support that goal. CWL is prepared to commit to working with Aukaha if, or when, a project takes shape. At the present time it is hard to be very specific about what CWL's contribution might be to the project as we don't know if or when it might happen, and the project's needs might be. But we will certainly co-operate with any plan that Aukaha might produce.

CONCLUSION

38. CWL supports most of the report's recommendations.

39. Our key concerns relate to the period for rolling out the upgrades and the term of consent.

40. Had we known that a 10 year consent was on the cards, we would have stuck with our original application, which was effectively just a rollover of the existing permits based upon use history and compliance with the minimum flow.

41. I feel very strongly that by committing to a reduced primary allocation in conjunction with a commitment to carry out efficiency upgrades, CWL has played it's best hand for the long term health of the environment. In return, we need at least 25 years, and preferably 35 years, to make that work for the shareholders.

Date: 8 October 2019

Amanda Jane Batchelor Bell