
in the matter of: the Resource Management Act 1991

and

in the matter of: an application by the Central Plains Water Trust to take water from the Waimakariri River

and applications by the Central Plains Water Trust to use water from the Waimakariri and Rakaia Rivers and for all associated consents required for the construction and operation of the Central Plains Water Enhancement Scheme

in the matter of: a Notice of Requirement by Central Plains Water Limited to the Selwyn District Council for the designation of land for works associated with the construction and operation of the Central Plains Water Enhancement Scheme

Brief of evidence of Gerald Herbert Clemens

Dated: 19 June 2008

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BRIEF OF EVIDENCE OF GERALD HERBERT CLEMENS

- 1 My full name is Gerald (Gerry) Herbert Clemens.
- 2 I am a director and chairman of Waimakariri Irrigation Limited (*WIL*) and am authorised to give this evidence on its behalf.
- 3 *WIL* holds the consents necessary for an 18,000 hectare irrigation scheme drawing water from the Waimakariri and distributing this water through races between the Waimakariri and the Ashley Rivers. The command area is approximately 40,000 hectares and as at April 2005, the scheme has 269 shareholders.
- 4 Due to the location of the *WIL* intake and its interest in water allocation it has a significant interest in the applications by the Central Plains Water Trust (*CPW*). Although it is not necessarily opposed to the *CPW* scheme per se, it is insistent that the scheme only be developed in a manner that protects the infrastructure and interests of *WIL* and other existing abstractors.

Background to the Browns Rock intake site

- 5 The *WIL* scheme is based on the original stockwater race network initiated by the Waimakariri Ashley Water Supply Board over 110 years ago.
- 6 The Board's stockwater race network was officially opened in November 1896. The opening followed significant debate on the appropriate position of an intake on the Waimakariri River. The debate related to economics and water reliability, and was principally between two sites – Rockford (a more upstream site) and the current site at Browns Rock.
- 7 Although doubts had been expressed over the Browns Rock due to the River's ability to meander away from the north bank, economics (£10,000 versus £31,000) favoured the lower, but potentially less reliable intake site. Despite the initial concerns, the intake has proved to be very dependable - especially considering the fact that it is reliant on a very active, aggrading, braided and meandering river. Nevertheless, the water race operators have always had to carry out works in the river bed to ensure that a flow of water reaches the Browns Rock intake site.

- 8 The original use of the Browns Rock intake site was for the supply of stockwater to 45,700 hectares of land between Oxford and Rangiora. However, following a particularly severe drought in 1988/89 farmers in the Waimakariri-Ashley area suddenly found themselves subject to the controls that had been implemented by the North Canterbury Catchment Board to limit all takes in the area.
- 9 For the first time ever farmers found that they were prohibited from taking water from surface streams such as the Ashley and Cust, and from groundwater wells in some areas. It was estimated by the then Ministry of Agriculture and Fisheries that the 1988/89 drought cost the Canterbury region \$50 million in lost agricultural production and these effects were particularly felt in the scheme area.
- 10 Irrigators quickly realised the impact of competing uses for water and the situation became so critical that the District Council even investigated the concept of diverting water from the stockwater races into the Cust River in an attempt to supplement surface water flows for the irrigators.
- 11 However, it was soon accepted that such supplementation would have been limited due to the small size of the races. This line of thought nevertheless led to the idea of using the water race network as a base for the development of a much larger and more reliable irrigation race network.
- 12 A WDC Irrigation Committee was established to initiate scheme planning. Applications were eventually made to Environment Canterbury and the Waimakariri District Council for the consents necessary for the WIL scheme – these consents were granted in 1996.
- 13 Having successfully obtained consents, it was decided to form a co-operative company that would issue a prospectus and raise the funds and, in short, replace the WDC Irrigation Committee. The company was registered as Waimakariri Irrigation Ltd (*WIL*) in April 1998 and as a cooperative company in June of that year.
- 14 The Browns Rock intake is also used by the Waimakariri District Council (*WDC*) for stockwater supply between the Waimakariri and Ashley Rivers. WDC share some of the distribution race infrastructure with WIL.

The WIL scheme today

- 15 As noted in my introduction section, WIL holds all the consents necessary for an 18,000 hectare irrigation scheme across a command area of approximately 40,000 hectares. Approximately half of this land (9000 hectares) is in Dairy Farms, and this generates revenue of approximately \$80 million.
- 16 Perhaps the most important of the consents for both the CPW hearing and WIL's own scheme is CRC000585* that authorises the take and use of up to 10.5 m³/s of water from the Waimakariri River (*the take consent*). A copy of this consent is annexed as "GHC-1".
- 17 The take consent was varied on the 8 March 2007 to become CRC000585.5 that authorises a take of 10.5 m³/s for the purposes of irrigation and stockwater supply. This variation also introduced a management plan regime that will be progressively rolled out for all scheme members. The management plan regime will ensure WIL irrigators audit their on farm irrigation systems to help maximise the efficient and sustainable use of water on their farms.
- 18 The move to individual (as well as scheme based) efficiency audits will ensure that the WIL scheme is one of the most significant and responsible users of water in the Canterbury region.
- 19 The scheme is however completely reliant on its intake at Browns Rock. I understand that the Commissioners have already visited the intake site via jet boat during an earlier site visit as a part of this hearing. However, it also important to note that if Ngai Tahu Property Limited decides to advance with its own scheme then it is likely that it too will share the same intake location. WIL is also in discussions with MainPower concerning the use of the WIL main distribution race from the intake for hydro-electricity generation.
- 20 There are accordingly a number of entities besides the existing WIL and WDC irrigation and stockwater supplies that are reliant on the intake location and main race distribution system.
- 21 The intake itself is a relatively unusual, but successful, 'floating boat' design. It has been designed to operate in (and withstand) the rigours of a Waimakariri River in full flood, but on a number of occasions has been completely buried in gravel requiring extensive in river works to restore flow to the scheme.

- 22 WIL also hold consents CRC952566 to disturb the bed of the Waimakariri River and CRC952567 to divert flows towards the intake. At various times works have been required to maintain or enhance flows towards the intake site. This costly and disruptive exercise – not only to scheduled irrigation but also to effects in the Waimakariri River.
- 23 The intake itself is fitted with a 5mm slot-based screen which, due to the floating boat design, is orientated horizontally to the bed of the River allowing water to flow 'upwards' towards the surface and through the fish screens.
- 24 Water then flows into settling ponds where WIL has a considerable and ongoing need to remove silt and other particulates by mechanical means. To give some idea of the scale of this task, WIL currently has approximately 12000 tonnes of sediment stockpiled from excavator abstraction. This continues to accumulate at approximately 5,000 tonnes per annum. The turbidity of water entering through the WIL intake is therefore very important.
- 25 Equally, the absence of Didymo from the Waimakariri is critical to WIL. Although WIL has already applied for (and now holds) a permit from Biosecurity New Zealand to convey the material, the impact of Didymo could be significant to both the functioning of the WIL intake and wider WIL scheme right down to an individual farmer level.
- 26 The main ongoing consents for the scheme will expire in 2031.

WIL and its interests in Central Plains

- 27 In terms of the intake itself, any works in the river bed and/or sediment flushing by Central Plains would increase the turbidity in the river. This would lead to additional cleaning/settling requirements by WIL. It would also be very pronounced during times of low flow – within which Central Plains may still undertake river works without actually exercising their take. This would even be even more pronounced during the initial construction period.

- 28 However, the much more profound effect on WIL is the possibility of altered sediment flows and the possible impact on braided river geomorphology. Given that the CPW intake will need to capture a large portion of flows on the south bank, WIL considers there is a very real risk flows could be taken away from their current path along the north side of the River. This would reduce the reliability of the WIL intake and cause considerable disruption to scheduled irrigation and impose further diversion requirements on WIL.
- 29 The 'lower' CPW intake is approximately 3.5 km upstream of the intake site at Browns Rock. However, the proposed discharge of water for the settling pond and fish bypass occurs almost directly opposite and just upstream of Browns Rock.
- 30 As described previously in this evidence, the intake site for WIL has always been subject to concerns about water flow and reliability. At this stage it is difficult to see how a divert of up to 40 cumecs towards the south bank in proximity to WIL would not lead to an adverse effect on the other side of the river.
- 31 The other significant interest is flow sharing and allocation in the Waimakariri River.
- 32 WIL holds consent to take *A permit* water. It is by far the largest *A permit* holder and is reliant on this reliability for the operation of the WIL scheme.
- 33 As set out in the evidence of Mr Callander, there are currently a number of uncertainties or misunderstandings regarding the proper application of the Waimakariri River Regional Plan (*WRRP*). However, regardless of this, the current situation is that there are a number of *existing A permit* holders who are subject to reduced abstractions or restrictions once the flow falls below 63 cumecs at the Old Highway Bridge.
- 34 CPW have proposed conditions that appear to allow them to abstract water down to a measured flow of 41 cumecs at the Old Highway Bridge. Based on the existing allocation and what Mr Callander understands to be the proper application of the *WRRP*, the only circumstances WIL considers this should be able to occur is for the small take of *A permit* water for which it currently has priority over Ngai Tahu.

- 35 Any other use of *A permit* water would be better done through agreement and a direct transfer of any other consent holder's unused flows.
- 36 I also understand that CPW has now acknowledged the potential use by WIL of its own winter flows, and that whether these flows are used or not, they are still allocated to WIL. On this basis, and separate to this hearing process, WIL is prepared to discuss with CPW the possibility of transferring some of its take to CPW on a temporary and seasonal basis.

Conclusion

- 37 WIL is not necessarily opposed to the CPW scheme and irrigation per se. However, as presently proposed, WIL cannot accept the possible effects on its intake site and the potential flow sharing suggested by CPW.
- 38 It might be possible for the applicant to develop conditions to address a number of the concerns, however the fact remains that current proposal is to abstract a very large quantity of water at a location (particularly if the lower intake site is chosen) which could have a very negative effect on WIL.
- 39 WIL has an existing reliable and very significant irrigation scheme and hopes the Hearing Panel is particularly cautious in granting anything that could have an adverse effect.

Dated: 19 June 2008

Gerry Clemens