

BEFORE THE CANTERBURY REGIONAL COUNCIL

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of applications for water permits to take and use water from the Hakataramea River and its tributaries

BY ROBERT HAY ROBERTSON
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RG AND ZL PRINGLE
RW AND ME SUTTON
STAR HOLDINGS LIMITED
NJ SMALL
HAKATARAMEA STATION (1990) LIMITED
Applicants

**STATEMENT OF DAVID STEWART IN RESPONSE TO MINUTE OF
COMMISSIONER SKELTON DATED 22 MARCH 2010**

Dated 13 April 2010

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MAY IT PLEASE THE PANEL

- 1 In response to the Fourth Minute dated 22 March 2010 in relation to Row xxii of Table 3 of the WCWARP, the following comments are made.
- 2 Until the release of the Fourth Minute, my understanding is that the applicant parties were not aware that the CRC had prepared the memorandum attached as Appendix One of the Fourth Minute, and that the flows contained therein had in fact been approved by the CRC in accordance with Row xxii.
- 3 Appendix One was dated 9 July 2009, and was prepared nine months after the Lower Waitaki Hearing adjourned in October 2008. It was prepared in response to an earlier Minute dated 18 May 2009.
- 4 I prepared evidence on behalf of the MRNAG applicants in October 2008, including in relation to the difficulty of setting minimum flows in the Hakataramea Tributary Catchments. This evidence was in part in response to the section 42A reports circulated prior to the commencement of the hearings, although it was not heard until March 2010.
- 5 In the preparation of that evidence, Ms Johnston and I had met with CRC Surface Water Hydrologist Mr Adam Martin in September 2008 to discuss the issue of minimum flows in the Hakataramea River tributaries, following questions raised by the Hearing Commissioners about the validity of minimum flows recommended in s42A reports. We were concerned that the recommendations of Mr Martin and his colleague Ms Suzanne Gabites had been ignored by the CRC Investigating Officer, particularly in the respect of the Hakataramea water bodies. This meeting formed the basis of my evidence.
- 6 Mr Martin confirmed that CRC's recommendations to the section 42A report writer at the time were in fact to manage all abstractions in the catchment including those from Station Stream and Homestead Creek at SH82 (Main Highway Bridge Recorder site) as the correlations obtained for the tributary catchments were generally poor (R^2 values as low as 0.64).
- 7 However, the CRC Investigating Officer ignored this advice and in her section 42A report, she proceeded with the minimum flows obtained from what was considered to be poor correlations.
- 8 On the last day of the Lower Waitaki hearings (2 October 2008) I was approached by ECan to be their hydrologist for the Upper Waitaki applications. In January 2009 I decided that the best way to undertake the job was to have the applicant's consultants collect the data and write their hydrology reports and that I would review the reports and would accompany their hydrologists to the various sites where water was to be abstracted. My intention was to get agreement between ECan and the applicants on

the minimum flows before the Hearings so that it was not left to the Commissioners to make the decisions on these flows.

- 9 I discussed the idea with Keri Johnston and she agreed with this approach and promoted it to the other consultants involved.
- 10 As a result, a very different process was followed in the Upper Waitaki to that in the Lower Waitaki and was fully supported by the applicants, their consultants, Central South Fish and Game Council and the Department of Conservation. This took place before the Minute issued from the Commissioners on 18 May 2009.
- 11 At this stage, the Chair of the Panel had indicated that the Panel wanted as much agreement before the Hearing as possible. This only reinforced the appropriateness of the process that had been adopted. When we started we did not know what the outcome would be in terms of how the Panel would apply the agreed flows, although the concept of going to the Hearing with agreed flows was accepted by all applicants.
- 12 As part of the process, the applicants employed two independent hydrologists to undertake a series of gaugings, and, in some cases, continuous water level recording in water bodies where abstraction was proposed. Using this data in flow correlations allowed minimum flows to be determined. It was agreed that an R^2 value of at least 0.90 was needed.
- 13 I reviewed this material, discussed the results with the applicant's hydrologists and recommended changes where I thought they were necessary. At this point in the process, the applicants and the CRC were in agreement on the minimum flows.
- 14 The next step was to have these reviewed by interested submitter groups (namely Fish and Game and the Department of Conservation). This occurred, and after some discussion and a few minor changes their support for the minimum flows was obtained.
- 15 At this point I emailed all those involved in the low flow discussions a list of the agreed minimum flows and without exception they all emailed back to me their agreement to those flows. At this stage, Gillian Ensor (ECan) presented the agreed minimum flows to Dr Bryan Jenkins so that he could approve them by the end of August 2009. The agreed minimum flows were finally signed off by Dr Bryan Jenkins on 28 August 2009. A memorandum of agreement was presented to the Upper Waitaki Hearing Commissioners on February 2010 attached to my evidence and this memorandum listed all the agreed minimum flows and contained the signatures of all interested parties including ECan, the applicants and their consultants, Central South Island Fish and Game Council and the Department of Conservation.
- 16 My view was that, given the importance of the minimum flows, particularly in light of the fact that they are being considered part of the plan, it was vital that all parties were able to have input into their setting.

- 17 This process did not occur in the Lower Waitaki. The minimum flows of Appendix One are not supported by the applicant groups for reasons given in evidence in October 2008 and March 2010. What was supported by the applicant group was the recommendation by Mr Martin and Ms Gabites of ECan which was that all applications should be subject to a minimum flow of 4500 l/s at the Hakataramea River water level recorder at the Main Highway Bridge.
- 18 Throughout the Upper Waitaki consent application process, there was no discussion at all of the Lower Waitaki tributaries. The first I knew that Dr Jenkins was to sign off on the flows for the Upper Waitaki was in about July 2009. As it now transpires, this is when the Hakataramea minimum flows were submitted to Dr Jenkins to sign off as well. I was aware that Dr Jenkins was intending to sign off the flows for the Upper Waitaki, but I was unaware at the time that the flawed low flow recordings for the Hakataramea tributaries were to be signed off by Dr Jenkins. The first I knew of the Hakataramea flows being signed off was when the Fourth Minute of 22 March 2010 issued, and was sent to me.

Water sharing

- 19 With regards to flow sharing, the impracticalities of flow measurement as discussed in the reconvened hearing in March 2010 also apply to flow sharing. If it is not possible to measure it, it is not possible to determine a flow sharing system or regime. In reality, flow sharing will occur by default as the intakes are such that as much if not more water will flow past the intakes as is diverted into storage during an event when flow is available for storage.
- 20 I refer to paragraph 7 of Commissioner Skelton's Fourth Minute regarding Station Stream and Homestead Creek. The flow derivation of the five year return period 7 day low flows and the mean flows for these streams could be classed as no better than poor. The R^2 correlations for these sites was 0.84 and 0.80 respectively and the ECan hydrologists (Mr Martin and Ms Gabites) recommended that these flows not be used in minimum flow setting. The fact that flows have been provided does not make them correct and it certainly does not mean that high flows in these two catchments are any easier or possible to measure than flows in other Hakataramea River tributaries as presented to the Commissioners in March 2010. In the report where these flows can be found along with their derivation ("Seven day mean annual low flow mapping of the tributaries of the Waitaki River" prepared by Suzanne Gabites and Graeme Horrell 2005) in relation to Homestead Creek it specifically states "Use 7DMALF and mean with caution as well outside range of measured flows".
- 21 In the case of Homestead Creek, it has been noted that this stream has a surface connection with the Hakataramea River only 2 – 3 times per year during the largest floods. The normally dry streambed between where the water from Homestead Creek goes underground to the Hakataramea River main stem has no aquatic biota values at

all as it is dry for at least 360 days out of 365 days on average. To release half of the inflow (even if it could be measured at these high flows) into the Hakataramea River when it is also likely to be in flood is a pointless exercise as it is unlikely to make it as far as the Hakataramea main stem.

Dave Stewart

13 April 2010