

TABLED AT HEARING

Date 16/10/2009

IN THE MATTER OF the Resource Management Act 1991

AND

IN THE MATTER OF resource consent applications by Killermont Station Ltd and Williamson Holdings Ltd to take and use water in the Upper Waitaki Catchment.

SUPPLEMENTARY EVIDENCE OF IAN MCINDOE

AHURIRI WATER CONSERVATION ORDER (WCO)

1. I have prepared this supplementary evidence at the request of Killermont Station Ltd and Williamson Holdings Ltd.
2. I had stated in my main evidence that the applications by Killermont Station and WHL Killermont to take water from the Ahuriri River would comply with the minimum flow requirements of the Ahuriri WCO.
3. The CRC S42a position is that the takes proposed by the WHL Killermont application, in conjunction with other proposed takes, means that the Ahuriri River is overallocated and that WHL proposed takes do not comply with the WCO. That position arises from the way that CRC have interpreted the WCO, where they treat the allowable reduction in flows as allocation blocks.
4. Mr Whata's interpretation is that the WCO is about maintaining minimum flows in the river, and is not about maximum abstraction rates. Mr Kyle also notes in his evidence that the WCO requires minimum flows to be retained in the Ahuriri River. The WCO does not refer to maximum abstraction rates.

WCO Minimum Flows

5. The minimum flows prescribed in the WCO for the Ahuriri River have been summarised in Table 1. The minimum flows specified in the Order are to be retained in the Ahuriri River at all times.

Table 1: Ahuriri River minimum flow regime under the WCO

Period	South Diadem Flow (m³/s)	Allowable reduction in flow upstream of SH8 (m³/s)	Allowable reduction in flow downstream of SH8 (m³/s)
1 May - 31 Jan	>12	0.6	1.2
1 Feb - 30 April	>10	0.6	1.2
1 May - 30 April	>15		2
1 May - 30 April	>25		3

6. In addition to that summarised in Table 1, the WCO under Section 5(6) also allows for up to 0.5 m³/s to be taken from the Ahuriri River for the

augmentation of the flow in Omarama Stream. A consent to do so is held by Omarama Station and Tara Hills Station (CRC010727.1).

Existing Abstraction

7. Table 2 provides a summary of all existing consents to take and use water from the Ahuriri River that are governed by the WCO.

Table 2: Existing resource consents to take and use water from the Ahuriri River under the Ahuriri River WCO

Consent	Consent holder	Expiry date (dd-mm-yy)	Consented rate (m ³ /s)	Water source
CRC010728.1 (CRC916063B.1)	Omarama Station & Tara Hills Station	31-01-36	0.5 ¹	Ahuriri River (upstream of SH8)
CRC011354 (CRC011354.1)	Omarama Station Ltd	31-01-36	0.4 ¹	Ahuriri River (upstream of SH8)
CRC961829	Otamatapaio Station (1993) Ltd	14-11-31	0.5	Ahuriri River (downstream of SH8)
CRC012623	Mr & Mrs J H & P M Kerr	31-01-36	0.0235 ²	Groundwater (upstream of SH8)
CRC961118.1	Chain Hills Limited	24-01-31	0.0253 ²	Groundwater (upstream of SH8)
CRC961359.1	Blackhead Quarries Limited	13-03-31	0.03 ²	Groundwater (upstream of SH8)
TOTAL			1.4788	
Note 1: Includes 50 l/s abstracted for stock and domestic supply				
Note 2: CRC assessment of stream depletion effect				

8. Three of the takes, Tara Hills, Omarama Station and Otamatapaio Station, have divers associated with the takes. Tara Hills is consented to divert up to 500 l/s, while Omarama Station can divert up to 600 l/s. However, the combined divert under Tara Hills and Omarama Station (CRC010728.1) is 1,000 l/s. The divert rate for Otamatapaio Station is 800 l/s.
9. All divers are used to operate rotary fish screens and return the water not taken for irrigation back to the river just below the point of take.
10. Of the existing takes listed in Table 2, three are groundwater takes, which CRC has assessed as potentially affecting flows in the Ahuriri River. The flows in Table 2 are CRC's stream depletion assessments. In my view, only two (Kerr and Blackhead Quarries) are likely to impact on the Ahuriri River through stream depletion. The third (Chain Hills Ltd) is about 2 km from the Ahuriri River and in my view will have no impact on the Ahuriri River.
11. All three groundwater takes and the Otamatapaio divert/ take are downstream of the points where significant streams (Omarama Stream, Henburn, Quailburn and Willowburn) flow into the Ahuriri River and where gauging has confirmed an increase in flow that is significantly greater than the combined takes – the gain at Otamatapaio is up to 5 m³/s. This means that in reality, the existing groundwater takes and the Otamatapaio divert/take will not reduce

Ahuriri flows below the designated minimum flows or in fact below South Diadem flows.

CRC approach

12. CRC has calculated existing consented allocation to be 1.9784 m³/s. This clearly includes the takes listed in Table 2 above plus 500 l/s for divers, i.e. 200 l/s for Omarama Station/ Tara Hills and 300 l/s for Otamatapaio Station.

Applicant approach

13. Mr Whata has stated that the WCO does not specify maximum allocation rates. Neither does it specify that divers must be included in an allocation block. It provides for allowable flows below specified minimum flows. My interpretation is that where a divert does not cause the flow to go below a designated allowable minimum flow, the divert should not be counted.
14. As 200 l/s of the Tara Hills/ Omarama Station divert returns to the river above the point of take for the remaining consent holders, ie above the groundwater takes and Otamatapaio, it should not be counted. That means the maximum reduction in flow due to existing takes is 1.7784 m³/s, if counting all three groundwater takes and ignoring tributary inflows in the lower catchment - a very conservative approach in my view.

PROPOSED ABSTRACTION

15. Table 3 lists proposed takes from the Ahuriri River, in order of priority.

Table 3: *Proposed resource consents to take and use water from the Ahuriri River under the Ahuriri River WCO*

Consent	Applicant name	Notifiable date (dd-mm-yy)	Consented rate (m ³ /s)	Water source
CRC041331	Killermont Station Ltd	22-12-03	0.1	Ahuriri River (upstream of SH8)
CRC041777	Killermont Station Ltd	27-02-04	0.175	Ahuriri River (upstream of SH8)
CRC041788 CRC073115	Williamson Holdings Ltd – Killermont Station	27-02-04 01-05-07	0.75	Ahuriri River (upstream of SH8)

16. Ohau Company Trust has also applied to take and use water at a rate of 0.25 m³/s from the East branch of the Ahuriri River. However, the East branch is not covered by the WCO (as identified in Section 2(a) of the order), and has therefore is not included in Table 5.
17. The WHL Killermont proposed consent CRC073115 includes an additional 0.2 m³/s divert to operate a mechanical fish screen. This take is at the top of the catchment before any other takes and once again, there is no need to include the divert flow to meet WCO minimum flow requirements. The 0.2 m³/s of water is returned to the river not more than 100 m downstream of the proposed take point, restoring the flows by that amount.

18. In terms of flow reductions below South Diadem flows, the WHL Killermont take will reduce river flow briefly by $0.95 \text{ m}^3/\text{s}$, but after the discharge back to the river, it will be a $0.75 \text{ m}^3/\text{s}$ reduction.
19. The Killermont Station Woolshed take will at most reduce river flow by $0.175 \text{ m}^3/\text{s}$ and the Pebbly take by $0.1 \text{ m}^3/\text{s}$, i.e. a total of $0.275 \text{ m}^3/\text{s}$. Combined with the WHL Killermont take, the overall reduction due to proposed takes is $1.025 \text{ m}^3/\text{s}$.
20. Adding the impact of the proposed new takes on river flow onto the impact from existing takes (using CRC's figure adjusted for the Tara Hills discharge) gives a combined total potential reduction of $2.803 \text{ m}^3/\text{s}$. The WCO allows for a $2 \text{ m}^3/\text{s}$ reduction in flow based on South Diadem flows between 15 and $25 \text{ m}^3/\text{s}$ and $3 \text{ m}^3/\text{s}$ at flows above $25 \text{ m}^3/\text{s}$, so all takes can easily comply with the WCO. If the takes mean that allowable flow reductions in the lower flow bands would be exceeded, then priority of takes will determine who is able to take from the river.
21. The above calculations assume all takes are continuously and fully exercised concurrently. In addition, the calculations do not account for known flow gains due to contributing tributary streams, or flow changes due to groundwater recharge or discharge.
22. In practice, all takes will not be continuously operated at the same time. Consent conditions such as annual allocation limits or weekly allocation limits do not allow that to happen. Also, it is known that there are significant natural flow gains in some reaches and possible losses in other reaches, so the flows remaining in the river will vary.
23. Given those impacts, Killermont Station and WHL Killermont will need to be able to demonstrate that the allowable flow reductions in the Ahuriri River are maintained. This will be assessed by allowing for other takes and any natural gains and losses in the river.
24. The applicants may need to establish gauging sites at suitable locations to enable monitoring of flow to ensure that any take complies with the WCO. They may also form water user groups to best manage the takes.

I. McIndoe

Signed _____ Ian McIndoe

October 2009