IN THE MATTERof the Resource Management Act 1991

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IN THE MATTER of submissions and further submissions by Orari Water Society Incorporated

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SUPPLEMENTARY STATEMENT OF EVIDENCE OF RICHARD TREVOR DE JOUX (HEARING 3)

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1. I have been informed that the Commissioners have one question for Mr Ryder relating to his evidence at paragraph 4.52, page 19 – why was the 50L/s minimum flow problematic - is it because Coopers Creek runs dry downstream even if the SH72 site is running at 50 L/s?

2. I was involved with the resource consent hearings in 1997 for the Orari River resource consents, and was also a party to the mediation and subsequent Environment Court consent order relating to the granting of those consents.

3. I believe it is important that the Commissioners are provided with the background for the 50 l/s minimum flow for Coopers Creek at SH72 Bridge.

4. In 1997, resource consents were granted for abstractions within the Orari River catchment and its tributaries. The consents were granted but were appealed by Central South Island Fish and Game Council on the grounds that minimum flows were required to protect instream ecology and fisheries.

5. At that consent hearing in 1997, Central South Island Fish and Game Council Officer Frank Scarf noted in section 3.1 of his evidence that "little is known about the hydrology of the subject resource areas identified in Table 1". In section 3.2 of his evidence, Mr Scarf estimated a flow of 50 l/s for Coopers creek is about a 1:10 year event.

6. The minimum flow of 50 l/s for Coopers Creek at SH72 Bridge was established in 1998 by an Environment Court consent order (RMA 556/97). The flow was based on the estimate of the 1:10 year low flow for Coopers Creek as calculated by Mr Scarf.

7. The minimum flow of 50 l/s was imposed on resource consents CRC970445 (Stalker – now surrendered), CRC962360 (Kerse) and CRC962478 (Mowat). The minimum flow was also imposed on consent CRC971884.3 (Kingston), granted subsequent to the consent order.

Other consents within the wider Coopers Creek area have been granted without any Coopers Creek minimum flow conditions.

8. In my opinion, the problems with the minimum flow include the following matters

    a. ECan do not maintain a continuous flow recorder at the site, therefore the minimum flow is not adequately monitored.

    b. There are other abstractions within the area that may or may not affect the flow in Coopers creek Springs, but which are not subject to any minimum flow requirement.

    c. The frequency at which a flow of 50 l/s or less at SH72 Bridge occurs shows that the original estimate of 1:10 year event was incorrect. Restrictions have regularly been imposed on consents CRC962360, CRC962478 and CRC971884.3 while other nearby abstractions have continued to be exercised.

    d. There has been a noticeable build-up of gravel within Coopers Creek near SH72 Bridge, resulting in low surface flows because the bulk of the water is retained in the stream as underflow. Because of the gravel build-up ECan river engineers have recently carried out major earthworks in the stream below SH72 bridge for flood protection. This work has also appeared to have affected the surface flow in the Creek.

9. The greatest obstacle is the lack of historical flow data for Coopers Creek. Since September 2011, ECan have operated a flow monitoring site within the Coopers Creek springs upstream of the confluence with the Scotsburn/Kowhai streams. This site is shown in Figure 4 and plates 1 to 3 of my evidence in chief.

10. In paragraph 10 of her S42A report prepared for the change in minimum flow site for consent CRC962360.1 (Kerse), Ms Black notes "Initial investigations by Lee Burbery (Hydrogeologist for Lincoln Ventures) for this application indicated that it was difficult to make conclusions about the relationship between Coopers Creek and the Orari River from which correlations and flow relationships could have been drawn. Mr Burbery recommended more data collection would be needed before any conclusions could be made. While some of the data collection has been implemented (flow information from Coopers Creek); the applicant has not pursued aquifer testing from their bore as they consider there to be too many external factors which could affect the reliability of the results."

11. I have reviewed the data collected to date and although I consider there is a direct relation between the Orari River and Coopers Creek there is an insufficient record period to allow a reliable correlation at this time.

12. It is my understanding that the Orari Steering Group agreed the flow regimes proposed in Section 14 for Coopers Creek was an interim decision until a better understanding was gained with more hydrology data and the use of water meters to verify the model. This is reinforced by the proposed review clause referred to in paragraph 39 of my evidence.

References cited:

Black, S; 2013: Section 42A Officers report for consent application CRC962360.1 (I J & J A Kerse).

Scarf, F; 1997: Submission from Central South Island Fish and Game Council, prepared for a hearing of resource consent applications to take water from Coopers Creek, Clandeboye Drains and associated groundwater.

Richard de Joux
14 June 2013.