30 August 2005

Hon Marian Hobbs
Minister for the Environment
Parliament Buildings
WELLINGTON

Dear Minister

NEW ZEALAND AND SOUTHLAND FISH AND GAME COUNCILS: APPLICATION FOR A WATER CONSERVATION ORDER ON THE ORETI RIVER

Thank you for your letter of 22 August 2005 requesting further information from the applicant pursuant to section 201(3) of the Resource Management Act 1991. In particular you have requested that the term "hydraulically connected groundwater" as used in paragraph 34 of the application be better defined and have referred us to the definitions contained in the groundwater section of the Regional Fresh Water Plan for Southland.

The intent of paragraph 34 of the application is to seek a provision in the water conservation order which recognises the fact that groundwater takes can affect surface flows, and that in the case of the Oreti River upstream of Mossburn the taking of groundwater should not affect surface flows by more than 5% in order to protect the river's outstanding features and characteristics.

Policy X – Stream Depletion Effects of Proposed Variation 2 of the Regional Fresh Water Plan for Southland as recommended in the Hearing Report defines degrees of hydraulic connection and specifies the relationship between each degree of hydraulic connection and surface water flows for management purposes.

Our clients have reviewed the approach recommended in the Hearing Report and consider it to be appropriate. They would be comfortable with a similar approach in a water conservation order on the Oreti River. We consider that it would not be appropriate for a water conservation order to refer to a policy in a regional plan – particularly one which is not beyond challenge, and accordingly the WCO needs to set out the regime.

We suggest that the appropriate wording might be:

> *"(1) No resource consent may be granted or rule included in a regional plan which could result in a cumulative rate of take of surface water and groundwater hydraulically connected to the Oreti River upstream of Mossburn of more than 5% of the instantaneous flow of the Oreti River as measured at the Three Kings water recorder.*

(2) The restriction in clause (1) above shall only apply to groundwater where the hydraulic connection is determined to be direct, high or moderate as defined in clause (3).

(3) For the purposes of this clause the following definitions apply:

(a) Direct hydraulic connection is where the effect of 7 days continuous abstraction at the maximum rate on an adjacent surface water body is greater than or equal to 80 percent of the maximum pump rate.

(b) High hydraulic connection is where the effect of 7 days continuous abstraction at the maximum rate on an adjacent surface water body is less than 80 percent of the maximum pump rate and the effect of 150 days of pumping at the continuous rate required to deliver the seasonal volume is greater than or equal to 60 percent of the average continuous pump rate.

(c) Moderate hydraulic connection is where the effect of 7 days continuous abstraction at the maximum rate on an adjacent surface water body is less than 80 percent of the maximum pump rate and the effect of 150 days of pumping at the continuous rate required to deliver the seasonal volume is either:

a. less than 60 percent but greater than or equal to 30 percent of the average continuous pump rate; or

b. exceeds 5 litres per second.

(4) Where there is a direct hydraulic connection between the groundwater source and the Oreti River upstream of Mossburn then for the purpose of calculating the effect on the surface flow of the Oreti River at the Three Kings recorder the effect will be determined as the maximum instantaneous rate of take of groundwater.

(5) Where there is a high hydraulic connection between the groundwater source and the Oreti River upstream of Mossburn then for the purpose of calculating the effect on the surface flow of the Oreti River at the Three Kings recorder the effect will be determined as the greater of:

(a) the effect of 150 days pumping at the continuous pump rate required to deliver a nominated seasonal volume; or

(b) the effect of continuous pumping at the maximum permitted pump rate over the period required to deliver the seasonal allocation.

(6) Where there is a moderate hydraulic connection between the groundwater source and the Oreti River upstream of Mossburn then for the purpose of calculating the effect on the surface flow of the Oreti River at the Three Kings recorder the effect will be the effect of 150 days of pumping at the continuous pump rate required to deliver the seasonal volume."

The above provisions adopt the same approach as the Proposed Variation in the Regional Fresh Water Plan for Southland. Having said that we recognise that implicit in this is an understanding of the approach to be taken to calculate the degree of hydraulic connection (ie the use of bore tests and computer modelling) and an understanding that all groundwater

takes need to be expressed in terms of seasonal volumes as well as maximum rates of take. It may be that these concepts need to be worked into any WCO provision as well.

We trust this answers your request.

Yours faithfully
ANDERSON LLOYD CAUDWELL

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