

**IN THE MATTER**

of the Resource Management Act 1991

**AND**

**IN THE MATTER**

of submissions and further submissions by Rangitata Diversion Race Management Limited to the proposed Canterbury Land & Water Regional Plan

**RESPONSE TO QUESTIONS ASKED IN RELATION TO EVIDENCE OF NIGEL ROLAND BRYCE (HEARING 2 AND 3)**

**REFERENCE TO 10 KG/N/HA**

1. I was asked by Commissioner van Voorthuysen to clarify where the 10kg per hectare trigger threshold as set out in my Supplementary Rebuttal Evidence for Hearing 2 had come from. I verbally stated that this had been influenced by the evidence of Mr Antony Roberts, however I would need to confirm this.
2. I have reviewed this matter further, and confirm that the 10kg threshold in his Supplementary Rebuttal evidence for Hearing 2 was influenced through my background discussions with representatives of the Primary Sector Group as this relates to the definition of 'changed'. While I did not qualify this reference within my evidence, it is clear from the evidence of other members of the Primary Sector Group that there is general support for a kg/N/ha threshold to be imbedded within the definition of 'changed'.
3. Relating to this matter, the Commissioners asked expert witnesses presenting on the Overseer Nutrient Budget model at the Hearing on Tuesday 7th May; what changes in nitrogen loss shown by Overseer would be appropriate to signal a material change in N loss? Dr Edmeades and Dr Roberts both suggested that a 10% change in N loss would be too stringent for some land uses, and therefore the Commissioners asked for an alternative suggestion to consider. This is addressed within the Supplementary evidence of Mr Antony Roberts dated 23<sup>rd</sup> May 2013.
4. I note that Mr Roberts recommends a kg/N/ha threshold of greater than 15 kg N/ha (range 10-20 kg N/ha) given +30% uncertainty around the estimate requiring to demonstrate change. I have further considered this matter and accept Mr Roberts rationale and recommendation for a 15 kg N/ha threshold being more appropriate on the basis of the +30% uncertainty around the estimate.
5. For the reasons set out in my Supplementary Rebuttal evidence, other than the acceptance of an alternative kg/N/ha threshold within the definition of 'changed', my proposed definition of 'changed', remains as per that set out in my Supplementary Rebuttal evidence, with the exception of the following amendment (shaded in blue below). Given the need to maintain a threshold or limit for farm managers to work against, I have retained reference to both kg/N/ha and the % change in N loss.

*"Change in farming activity means any one or more of:*

1. *irrigation of all, or any part of, a property that was un-irrigated at 11 August 2012, except that this clause does not apply to:*
  - (a) *those properties that hold shares in an irrigation scheme or a scheme operated by a*

- Principal Water Supplier and these shares were purchased before 11 August 2012;*
- (b) *those properties that hold shares in an irrigation scheme or a scheme operated by a Principal Water Supplier and these shares were purchased after 11 August 2012, and the scheme holds a water permit that authorises the application of water (for irrigation) over the command area within which these properties are located;*
2. *an increase in the consented volume of water available to be used on the property compared with that consented at 11 August 2012, except that this clause does not apply to:*
- (a) *those properties that holds shares in an irrigation scheme or a scheme operated by a Principal Water Supplier and these shares were purchased before 11 August 2012;*
- (b) *those properties that hold shares in an irrigation scheme or a scheme operated by a Principal Water Supplier and these shares were purchased after 11 August 2012, and the scheme holds a water permit that authorizes the application of water (for irrigation) over the command area within which these properties are located;*
3. *greater than a 10% increase in the annual average stock units carried on the property, compared with the annual average stock units averaged over 1 July 2010 to 30 June 2013; or*
4. *greater than a 20% increase in the annual horticultural or arable yield, compared with the annual horticultural or arable yield averaged over the period 1 July 2010 to 30 June 2013.*

*Where the matters in 1 to 4 are exceeded, a change does not occur if the loss of nitrogen from the property used for that farming enterprise does not increase by more than 15 kg per hectare or 10% above the average nitrogen loss from the same property for the period between 1 June 2010 and 31 May 2013. The amount of nitrogen loss shall be estimated using the Overseer or equivalent nutrient model using average data from the 36 months preceding 1 June in any year and expressed as kilograms per hectare per year. and "Changed" in relation to the nutrient management policies and rules has the same meaning"*

#### **RELATIONSHIP OF PROPOSED NOTE 1 TO TABLE 12 WITH POLICIES 4.46 AND 4.47**

6. I was asked by Commissioner van Voorthuysen to consider the relationship between my proposed Note 1 (set out in Appendix A to my Evidence in Chief to Hearing 3, and which I discuss at Section 8.9 of this evidence), Table 12 and Policies 4.46 and 4.47.
7. Firstly, I address Policy 4.47 at paragraphs 7.11 to 7.29 of my EIC for Hearing 1 and recommend a number of amendments to this policy as set out in Annexure C to this evidence. My recommended amendments seek to ensure that Policy 4.47 is (i) more appropriately aligned with Policy 7.3.4(2) of the Regional Policy Statement, and (ii) provides for the commensurate level of certainty for existing infrastructure provided that ongoing efficiency improvements and the reduction of adverse effects will be required, where appropriate, as part of any re-consenting process.
8. I read Policy 4.47 as relating specifically to over-allocated catchments. It provides that any further allocation is limited to (a) any abstraction necessary to meet community drinking and stockwater requirements and (b) the replacement of existing resource consents. Given that the ADC take is an existing abstraction it would be subject to Policy 4.47(b) as part of any future re-consenting process. I note that the ADC's existing consent was recently re-consenting in February 2012, however, any review of this existing consent could (and I contend, should) be advanced to give effect to the catchment specific flow and allocation regimes under Section 13. This implies, in my opinion, that the catchment specific policies and outcomes therein will have greater weight when addressing catchment specific outcomes, especially where the Section policies are more explicit in addressing specific water allocation outcomes.
9. Policy 4.46 (as notified) essentially enables the taking of water for group or community

drinking water supplies by not requiring compliance with flow and allocation regimes provided the water supply is managed to restrict the use of water for those supplies during periods of low flows or water levels. I note that the section 42a Report recommends that the reference to 'drinking' be deleted and that the policy be amended to give priority to drinking water and stockwater needs.

10. Therefore, I read policies 4.46 and Policy 4.47 as being directly relevant to the consideration of stockwater supplies as they provides for their priority as part of any new abstraction in an over-allocated catchment. Policy 4.46 also provides that these abstractions do not have to comply with minimum flow and allocation regimes.
11. While Policy 4.46 and 4.47 are directly relevant to the ADC's existing abstraction, so too are the policies under Section 13 of the Regional Plan. Section 13.4 states that the policies in this section apply in addition to those set out in Section 4 of the Plan. In my opinion, where the policies in Section 13 are more explicit to the ADC's existing take (for example Policy 13.4.1) these should be read as having greater weight. Put another way, while Policies 4.46 and 4.47 provide for a specific outcome relating to existing stock water supplies, I read Section 13 policies as specifying a more targeted outcome. As a consequence, it would be appropriate for them to be afforded priority, should there be a conflict with the policies set out in Section 4. I appreciate, however, that the Plan does not draw this distinction and therefore there is a degree of ambiguity here. The area of greatest uncertainty is in relation to the tension created between Policy 13.4.7 and Policies 4.46 and 4.47. The ADC sought that Policy 13.4.7 be amended so that the ADC stock water system or community water supplies will not be the subject of minimum flows or flow restrictions set out under Section 13. While I accept that the amendment sought by the ADC's submission could be seen to be consistent with the outcome reflected within Policy 4.46, ultimately it does not go to the heart of addressing over-allocation of the Ashburton Catchment and simply places greater emphasis on other abstractors to address this. I do not see this as being an equitable or appropriate outcome.
12. My proposed inclusion of Note 1 to Section 13 rules seeks to ensure that existing stockwater supply takes, such as the ADC's take, is subject to the rules of Section 13. This, in turn, will also ensure that the ADC's existing abstraction is able to be reviewed in line with the outcomes in Policy 13.4.1, and the medium term flow and allocation regimes provided for under Table 12.

**Nigel Roland Bryce, B.REP, NZPI.**

12<sup>th</sup> of June 2013