

**IN THE MATTER OF:    The Resource Management Act 1991**

**AND:                    Submissions and further submissions in relation to  
Proposed Variation 2 to the Proposed Canterbury Land  
and Water Regional Plan – Section 13 Ashburton  
(Hinds/Hekeao Plains)**

**AND:                    VALETTA IRRIGATION LIMITED**  
  
**Submitter**

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**REBUTTAL EVIDENCE OF IAN MCINDOE**

**DATED 29 MAY 2015**

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## **INTRODUCTION**

- 1 My name is Ian McIndoe
- 2 My qualifications and experience are set out in my statement of evidence dated 15 May 2015.
- 3 I have been asked by Valetta Irrigation Limited (**VIL**) to provide rebuttal evidence in relation to Variation 2 to the Proposed Canterbury Land and Water Regional Plan.
- 4 The scope of my rebuttal evidence is limited to comments on aspects of the statement of evidence of Mr Michael Thorley for Te Runanga O Ngai Tahu (dated 15 May 2015) concerning alternative water allocation approaches.

### **Michael Thorley**

- 5 I agree with Mr Thorley's statement at paragraph 52 that the ideal situation from a water (quantity) balance view is to have users primary water supply sourced from one of the surface water schemes that is used in conjunction with groundwater. That is the basis of the proposal being put forward by VIL as described in my primary evidence. Although Mr Thorley refers to the fact that this is already occurring on farms, the VIL proposal is to do it on a scheme basis, which in my view will result in greater efficiencies of water distribution and use.
- 6 I also agree with Mr Thorley's statement at paragraph 53, that a much more rigorous review of paper allocation and actual use is warranted. With the assistance of other staff at Aqualinc, I have completed this exercise (to the best of our current knowledge) for the Valetta Irrigation Scheme to determine the benefits of a combined surface-groundwater scheme. The outcome of that review is recorded in my primary evidence.
- 7 At paragraph 54, Mr Thorley notes if demand reliability is lowered, a reduction in annual irrigation requirements can be achieved. While I generally agree with that statement, I note that reliability will be decreased in the years when water is most needed (as occurred in the 2014/15 irrigation season, when many irrigators utilised their full allocation).
- 8 In a combined surface water – groundwater scheme, it is certainly correct that reducing seasonal demand for groundwater is possible using more precise irrigation methods, as the surface water is applied more efficiently, and goes further. That results in less groundwater being used, which is what VIL is

proposing. In the Valetta Scheme, groundwater pumping has a significant energy cost associated with it, while surface water is delivered under pressure and does not require pumping. For that reason, there is a financial incentive to use surface water rather than groundwater.

- 9 I agree with Mr Thorley's statement at paragraph 57 that creating separate allocation blocks could assist in dealing with the apparent "paper" over-allocation. Mr Thorley qualifies his statement, adding "*depending on whether the resource consents are subject to adaptive management conditions and/or used in conjunction with surface water irrigation schemes*".
- 10 The key point here is that separate allocation blocks, with conditions appropriate to achieving particular outcomes, are a way of managing allocation. One of the desired outcomes of Variation 2 is to increase lowland stream flows. Increasing groundwater flow in the aquifers helps to achieve that, which is why I have suggested in my primary evidence that one of the conditions of VIL's proposed B allocation block for the Valetta Groundwater Allocation Zone be that the combined use of surface water and groundwater must result in an increase in the average groundwater flow. That limits the use of the allocation block water to situations where the desired outcomes will be achieved.
- 11 At paragraph 58, Mr Thorley expands on the separate allocation block concept and includes "dual supplies" as one of the four groups of users. Although he has used "dual supplies" in a general sense, I support the concept, and suggest that the majority of the dual supply users will be in schemes, of which the Valetta Irrigation Scheme is one.



**Ian McIndoe**  
29 May 2015