

**BEFORE COMMISSIONERS APPOINTED BY THE CANTERBURY REGIONAL  
COUNCIL**

**In the matter** of proposed Plan Change 5 to the Canterbury Land and Water  
Regional Plan

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**STATEMENT OF EVIDENCE OF NICOLE IRENE PHILLIPS FOR  
BENMORE IRRIGATION COMPANY**

**22 July 2016**

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## **Qualifications and Experience**

- 1 My full name is Nicole Irene Phillips.
- 2 I hold a Bachelor of Science degree from Lincoln University and Intermediate and Advanced certificates in Sustainable Nutrient Management from Massey University. I am also a Certified Nutrient Management Advisor. I am a Professional Member of the NZ Industry of Primary Industry Management (NZIPIM) and am an Environment Canterbury approved Farm Environment Plan Auditor.
- 3 I have worked throughout Canterbury and Otago for the past seven years, with an emphasis on OVERSEER modelling and Farm Environment Plans.
- 4 I have considerable experience in the farm management of large high country stations in the Mackenzie basin having lived and managed Glenrock Station, a partially irrigated 11,000-hectare property for six years with my husband, Shane between 2006 and 2012.
- 5 I currently live and farm on a 4500-hectare dryland hill country property in the Hakataraamea Valley with my husband and family.
- 6 Whilst this is a Council hearing, I acknowledge that I have read and am familiar with the Environment Court's Code of Conduct for Expert Witnesses, contained in the Environment Court Practice Note 2014, and agree to comply with it. My qualifications as an expert are set out above. Other than where I state that I am relying on the advice on another person, I confirm that the issues addressed in this statement are within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

## **Background of the Benmore Irrigation Company Limited application**

- 7 I am providing OVERSEER advice for Benmore Irrigation Company (**BIC**) in relation to its application to increase the irrigation command area currently authorised under CRC981619.1. This application does not include an increased water take, however it does require a resource consent to discharge nutrients from farming activities.
- 8 This application was lodged in March 2015 – well before the notification of Plan Change 5 (**PC5**).

9      The OVERSEER modelling for this application was lodged using version 6.1.3. Since lodging there have been three updates to the OVERSEER model, being versions 6.2.0, 6.2.1 and most recently in May 2016, version 6.2.2.

#### **Reason for evidence**

- 10     I understand that the BIC submission opposes the unutilised portion of the Haldon Zone load limit, on the basis that the limit does not recognise applications that were before Environment Canterbury, and awaiting processing. Obviously, the BIC application falls within this category.
- 11     Therefore, BIC have asked me to provide evidence which mirrors information which will be available in the BIC application hearing, outlining the most up-to-date OVERSEER figures.

#### **OVERSEER modelling**

- 12     BIC has asked me to provide the most up-to-date modelling (done under OVERSEER version 6.2.2) in relation to the proposed irrigation expansion. This information, in relation to the anticipated loss of Nitrogen and Phosphorus, can be seen below at Figure 1.

Figure 1: Final Nitrogen and Phosphorus loss separated into nutrient allocation zones.

Nitrogen losses v6.2.2	Baseline	Proposed	Increase/Decrease
Red	99,486	96,104	-3,382
Orange	65,199	67,480	2,281
SLZ	134,751	113,376	-21,374

  

Phosphorus losses	Baseline	Proposed	Increase/Decrease
Red	1,423	1,396	-27
Orange	148	568	421
SLZ	1,358	1,609	250

- 13     The significant change proposed by the applicant in the proposed OVERSEER models is the introduction of soil moisture monitoring equipment for all spray irrigated blocks for both existing and new.
- 14     The introduction of soil moisture monitoring equipment shows a reduction in Nitrogen loss when compared to the baseline period on most of the shareholders' properties.

15 I understand that PC5 proposes to amend the Nutrient Allocation Zone, relevantly on Map PC5-17, which increases the area within the Ahuriri (Red) zone. The generated outputs shown in Figure 1 are derived using the Nutrient Allocation Zones as established under the Land and Water Regional Plan.

Dated 22 July 2016

Nicole Irene Phillips