

## Josephine Laing

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**From:** Kirsty Jacomb <Kirsty.Jacomb@chapmantripp.com>  
**Sent:** Friday, 18 September 2020 4:35 PM  
**To:** Plan Hearings  
**Cc:** Ben Williams; Bianca Sullivan; Brent Walton  
**Subject:** Rebuttal evidence on plan change 7 to the Canterbury LWRP by Waimakariri Irrigation Limited  
**Attachments:** WIL\_Neil\_Thomas\_rebuttal\_evidence.pdf; WIL\_Stuart\_Ford\_rebuttal.pdf; WIL\_Mike\_Copeland\_rebuttal.pdf; WIL\_David\_Black\_rebuttal.pdf; CHCDOC01-#1571651-v2-WIL\_Bianca\_Sullivan\_rebuttal.pdf

Kia ora Tavisha,

Please find **attached**, on behalf of Waimakariri Irrigation Limited, rebuttal evidence on the proposed Plan Change 7 to the Canterbury Land and Water Regional Plan of:

- Neil Thomas
- Dr David Black
- Bianca Sullivan
- Stuart Ford
- Michael Copeland

Ngā mihi,  
Kirsty

KIRSTY JACOMB  
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*Under:* the Resource Management Act 1991

*In the matter of:* Proposed Plan Change 7 to the Canterbury Land and Water Regional Plan

*And:* a submission (PC7-349) and further submission (FPC7-349) by **Waimakariri Irrigation Limited**

Statement of rebuttal evidence of Stuart John Ford

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Dated: 18 September 2020

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## **STATEMENT OF REBUTTAL EVIDENCE OF STUART JOHN FORD**

### **QUALIFICATIONS AND EXPERIENCE**

- 1 My full name is Stuart John Ford. I am an Agricultural and Resource Economist at The AgriBusiness Group.<sup>1</sup>
- 2 I have the qualifications and experience as stated in my evidence in chief (*EIC*) dated 17 July 2020.
- 3 I repeat the confirmation given in my EIC that I have read and agree to comply with the Code of Conduct for Expert Witnesses as contained in the Environment Court Practice Note 2014.

### **SCOPE OF EVIDENCE**

- 4 This statement of rebuttal evidence responds to the evidence of Mr Geoff Butcher and Ms Janice Carter, expert witnesses for Christchurch City Council.

### **THE COST OF THE IMMEDIATE CONVERSION OF IRRIGATED FARM LAND TO DRYLAND FARMING AND FORESTRY**

- 5 Mr Butcher suggests in his evidence that the nitrate nitrogen level in the Christchurch aquifer may be able to be kept below 1.0 mg/L if all currently irrigated farmland in the Nitrate Priority Area (*NPA*) was converted to dryland farming and forestry immediately.<sup>2</sup> Through discounted losses of the change in revenue he calculates the cost of achieving this nitrate nitrogen level to be \$2.52 billion.<sup>3</sup>
- 6 At paragraph 26 of his evidence Mr Butcher notes that this is an aspirational long term target and is not what the Christchurch City Council is seeking to achieve through its submission on PC 7. He also points out that he is not aware of any formal modelling of his proposition.<sup>4</sup>
- 7 Clearly, Mr Butchers' approach is a much more extreme proposition in terms of both the expected water quality outcomes and the calculated cost. As is apparent from other evidence, there are also a number of alternative options available which would achieve the same outcome, if it was considered desirable, at a much lower cost.
- 8 To this extent I defer to Mr Copeland who highlights in his rebuttal evidence that the range of alternative options Mr Butcher has considered all have much lower costs than immediately converting

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<sup>1</sup> All abbreviations I use in this evidence are the same as in my Evidence in Chief.

<sup>2</sup> Refer to Evidence in Chief of Geoff Butcher, at paragraphs 28 and 29.

<sup>3</sup> Refer to Evidence in Chief of Geoff Butcher, at paragraph 31.

<sup>4</sup> Refer to Evidence in Chief of Geoff Butcher, at paragraph 28.

all irrigated land in the NPA to dryland farming and forestry.<sup>5</sup> Presumably there are other alternatives that Mr Butcher has not calculated that also deserve analysis and consideration.

- 9 Mr Butcher, I assume correctly, describes additional health costs as either the costs of worse health outcomes or the cost of treating drinking water in order to reduce levels of nitrate nitrogen below a known standard.<sup>6</sup> He then discusses environmental costs and benefits without putting any economic value on them.<sup>7</sup>
- 10 My evidence in chief is most relevant to the costs Mr Butcher has not assessed. Other impacts that have not been assessed (and which would be similarly informed by my evidence) would include the social impact of Mr Butcher's scenarios.
- 11 If, for example, PC 7 required all irrigated land within the NPA to be converted to dryland farming and forestry there would be a considerable amount of social and financial disruption caused by the fact that the existing irrigated land owners would immediately lose all of the investment in their properties that can be associated with their ability to irrigate their land.
- 12 This would result in a very high proportion of bankruptcies across the land owners affected. This would not only adversely affect the land owners but would flow through to the wider community. Money lenders, predominantly the banks, would also be required to write off a considerable proportion of their loans because the amounts of their loans would not be recoverable.
- 13 This social and financial consideration would also need to be factored into any possible consideration of Mr Butcher's analysis.

**INCLUDING LOWER NITRATE NITROGEN TARGETS THAN THOSE PROPOSED IN THE S 42A REPORT**

- 14 As well as suggesting a 1 mg/L target be added to Tables 8-5, 8-7 and 8-8, Ms Carter suggests that the reduction targets in Table 8-9 should be brought forward to reduce nitrate concentrations that may enter the Christchurch aquifer more quickly than what is currently proposed.<sup>8</sup> She suggests reductions in nitrates of:<sup>9</sup>

14.1 40% for dairying and 20% for other farm types by 2030;

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<sup>5</sup> Refer to Evidence in Chief of Michael Copeland, at paragraphs 9 and 10.

<sup>6</sup> Refer to Evidence in Chief of Geoff Butcher, at paragraphs 41 and 42.

<sup>7</sup> Refer to Evidence in Chief of Geoff Butcher, at paragraph 43 to 45.

<sup>8</sup> Refer to Evidence in Chief of Janice Carter, at paragraph 26.

<sup>9</sup> Refer to Evidence in Chief of Janice Carter, at Appendix 1, page 9.

14.2 60% for dairying and 30% for other farm types by 2040; and

14.3 80% for dairying and 40% for other farm types by 2050.

- 15 It is necessary to highlight that there has been no modelling of Ms Carters' suggested amendments. This means environmental impacts have not been analysed; nor have the social and economic implications been considered. It is therefore difficult for me to provide specific comment on the suggested approach beyond simply noting that the impact of the amendments, particularly the economic impact, has not been sufficiently considered or assessed.
- 16 Regardless, it seems likely that the economic impact of the greater reduction requirements will be more severe than the reductions set out in the notified version of plan change 7 and assessed in my evidence in chief.

**S J Ford**  
**18 September 2020**