

**IN THE MATTER** of the Resource Management  
Act 1991

**AND**

**IN THE MATTER** of a Notice of Requirement by  
Central Plains Water Limited

**AND**

**IN THE MATTER** of an Application for  
Resource Consent by the Central Plains Water  
Trust

## **Further Statement of Geoffrey Vernon Butcher**

### **Introduction**

1. Mr MacFarlane has provided both “Evidence in Reply”, and Evidence (Sept 2009) on the on-farm benefits of a CPI scheme with no dam storage of water. Mr Donnelly has used the latter information to estimate a revised cost benefit analysis and economic impact analysis. I have been asked by Selwyn District Council to review the revised briefs of evidence. Rather than undertake a detailed analysis of their evidence, I have viewed the revisions in light of the deficiencies which I noted in my original evidence, and also comment on some apparent inconsistencies between the changed scheme as described by Mr MacFarlane and the analysis presented in the most recent MacFarlane and Donnelly evidence.

### **Continuing Deficiencies**

2. In my original evidence and Supplementary report I identified four main areas where there were significant differences between the applicant’s evidence and the evidence of other parties. These were as follows:
  - GDP Impacts: Impacts on GDP were calculated in a way which was not credible at a national level;
  - Price assumptions: Dr Brown and I were concerned that there had over a short period been a very large increase in the price of milk assumed (although I accepted that the final figure used was not unreasonable in terms of a 7 year moving average), and we as well as Mr Ford were concerned that the price assumptions were given without reference to any independent source of price series;
  - Production Efficiency: The analysis assumed a very significant increase in the productivity of all dairying land, including that which is currently irrigated.

- Opportunity Cost of Water: A zero opportunity cost of water was assumed<sup>1</sup>, whereas all other economists argued that the water would have value to other alternative users.

3 The subsequent evidence addressed some of these issues, but in my view deficiencies remain as follows:

### **GDP**

4 The misleading comments about potential impacts on GDP remain.

### **PRICES**

5 Mr MacFarlane (evidence in reply) commented on macro drivers for increased prices, but these drivers have been around for many years and this has not led to a sustained increase in prices. In his most recent evidence, the assumed price for lamb has been increased 20 % since the previous evidence. As with the previous increase in milk prices, the lamb price increase appears to have been driven by recent price increases, whereas this analysis is supposed to represent average real outcomes over the next 30 years. The recent collapse in milk prices demonstrates the folly of using short term price shifts as an indicator of long term averages. I would prefer to see the prices underpinned by some independent analysis of longer term prices, such as the 7 year average advocated by Mr Ford (including the last 3 years, the current year and forecasts for the next 3 years).

### **PRODUCTIVITY INCREASES**

6 The original reasons advanced by Mr MacFarlane for the dairying productivity increases were, in my opinion, primarily related to changes likely to occur over time regardless of whether CPI occurs. In his “Evidence in Reply”, (para 33 *et. seq.*), Mr Macfarlane reiterated a number of these reasons but also argued that a significant part of the increase was due to some of the existing irrigated land having limited water availability at present. He did not specify what proportion of existing dairying land suffered from limited water availability, yet he continues to assume that all existing dairying land will have an increase in net profit from \$1,995 / Ha to \$3,224 / Ha, perpetuating the error of the previous analysis. Given the significance of the increased dairy productivity in terms of the overall economics of the project and the need to include in the economic analysis<sup>2</sup> only the proportion of productivity increases due to irrigation, I would have expected to see a more detailed breakdown of the source of the productivity increase.

7 Given that the initial “with CPW” productivity assumptions appear to have been maintained in these revised submissions<sup>3</sup>, the applicant has clearly assumed that reliability of supply remains the same under the combined options of accessing groundwater, CPW run-of-river supply, and on-farm storage. Unfortunately, the

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<sup>1</sup> Mr Donnelly does identify potential costs associated with a loss of in-stream uses, although he does not place any value on these.

<sup>2</sup> As opposed to future farm financial performance, which I acknowledge is important in deciding whether CPI will be attractive to farming investors.

<sup>3</sup> Physical production per Ha has not changed since the previous evidence.

supplementary evidence does not include discussion on this fundamental issue, but one would expect that reliability would reduce under the amended proposal. Not only that, and as Mr MacFarlane acknowledges, farmers may persist with low reliability for a number of years before incurring the development expenditure associated with on-farm storage, and this will delay the timescale over which productivity enhancements are achieved, and therefore the time scale over which scheme benefits are realised. Mr Donnelly does not address this issue however, and it appears as if the uptake of productivity benefits from the CPW scheme remains that same with this amended proposal as with the original.

## **OPPORTUNITY COST OF WATER**

8 The opportunity cost of water is still ignored. This point was addressed in Minute 10 of the Commissioners dated 14 July 2009. In para 12.13 the Commissioners note that

*“We think it would be artificial to quantify the benefits of the CPW scheme in isolation, versus the “do-nothing” option. We believe that it is likely that if CPW does not proceed, then other schemes will be undertaken in its place. These schemes, either individually or in combination may result in lower levels of economic output than the CPW proposal, but would still confer economic benefits with lesser environmental cost”.*

9 I endorse that conclusion, One of the general concerns with the economic analysis submitted by the Applicant was the “do nothing” scenario that had been proposed, whereas it is likely that in the absence of the CPW scheme, other development proposals would be actioned accessing some or all of the available ground and/or surface water, with concomitant economic benefits. To this extent, the economic analysis of the Applicant overstates the net economic benefits attributable to the scheme.

## **LAND AREAS**

10 In his revised evidence Mr MacFarlane refers to areas of land for water storage which appear to be around 5 % of the land area<sup>4</sup>, and he has allowed for the development of this water storage in his capital costs. However, the value of this land has not been included as a cost to the scheme.

11 Mr Donnelly argues (para 10) that land purchase is a transfer cost and for this reason he has excluded the \$28 million estimate of Mr Lewthwaite. I agree<sup>5</sup> that the proportion of the land purchased which remains in dryland production has no opportunity cost (purchase constitutes a transfer cost), and in evidence in reply (para 112) Mr Donnelly calculated that perhaps half of this land would still be in production on embankments etc. with the remainder being lost for production by going into canals etc. and being a cost to the scheme. Mr Donnelly now says that the opportunity cost of lost productive land “is reflected in the loss or revenue in the with scheme scenario, i.e. compared to the without scheme scenario”. For this

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<sup>4</sup> Para 7.3. 13 Ha on a 260 Ha property.

<sup>5</sup> With Mr Donnelly, para 109 *et. seq.* evidence in reply.

to be the case, the area of land on which production is lost in the “Prior to Commissioning CPI” would need to be greater<sup>6</sup> than the area of land on which irrigated production takes place. However, the areas shown in Appendix 1 of the most recent evidence show that the lost area of production is 76,000 Ha and the gained area of irrigated production are the same in both scenarios. Hence I conclude that this opportunity cost has been ignored.

### **Conclusion**

I continue to be of the view that the applicant has not demonstrated that the proposed Central Plains Irrigation Scheme (without dam) meets the s7 (b) test of being an “efficient” use of resources.

Geoffrey Vernon Butcher  
October 2009

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<sup>6</sup> By the area of land taken up by canals and on-farm storage.