

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of the Proposed Waikato Regional Plan Change
1 – Waikato and Waipa River
Catchments (“Proposed Plan or PC1”)

AND

IN THE MATTER of submissions and further submissions by Oji
Fibre Solutions (NZ) Limited

**STATEMENT OF REBUTTAL EVIDENCE OF FRANCIS GORDON
SCRIMGEOUR ON BEHALF OF OJI FIBRE SOLUTIONS (NZ) LIMITED
FOR HEARINGS PARTS C1-6**

10 MAY 2019

INTRODUCTION

1. My full name is Dr Francis Gordon Scrimgeour.
2. I hold a Bachelor of Agricultural Science with 1st Class Honours from Lincoln College (1977) and a PhD from the University of Hawaii at Manoa (1989).
3. I am a Professor of Economics at Waikato University. I am also Head of the School of Accounting, Finance and Economics.
4. A summary of my experience as an economist and my commitment to comply with the Expert Code of Conduct is set out in my statement of primary evidence for the Block One hearings dated 15 February 2019.
5. The purpose of this statement of rebuttal is to address the statement of evidence by Dr Graeme Doole for the Block 2 hearings.

RESPONSE TO THE EVIDENCE OF DR DOOLE

6. I affirm Dr Doole's evidence concerning:
 - (a) The importance of a "careful, graduated transition from the current state towards a state where improved water-quality outcomes are observed throughout the Waikato River catchment" (para 2.1);
 - (b) The importance of economic modelling (Sections 3 to 7); and
 - (c) The importance of the dairy sector (Section 8).
7. However, there are other matters where my evidence contrasts with that of Dr Doole due to differing views on analysis undertaken or items excluded and I address these differences below
8. Dr Doole's statement is dairy-centric in that it argues for accepting the plan change as proposed and not increasing obligations on the dairy sector (see para 2.2). This is problematic in that the statement provides no evidence as to whether the proposed plan is the best way to proceed to achieve the environmental outcomes or to share the costs of achieving the outcomes. The statement provides no basis for assessing whether under PC1 as proposed the dairy sector would do too little or more than

sufficient in terms of the requirement that catchment water quality improve.

9. Mr Doole's evidence is problematic, being presented as a framework of costs and benefits falling on dairy alone rather than on all affected sectors. Commensurate and meaningful calculations are not made for all affected sectors.
10. The statement highlights the variation in impact on different dairy farmers (e.g. para 6.6) but it does not address the issue of how the proposed plan has varying requirements for different dairy farmers based on historical practice rather than future impact on the environment. The statement is silent on grandparenting and the risk of perverse incentives and environmental and economic outcomes associated with the proposed plan. He does not contrast his preferred approach by, for example replacing grandparenting with proposed alternatives such as appropriate allocations per FMU based on biophysical measures (e.g. natural capital), a solution that may overall generate more equitable and more efficient outcomes and which would at least partly address his concerns about financial impacts on individual dairy farmers.
11. The modelling work undertaken by Dr Doole (paras 1.5(b) and 1.5(c))¹ suggest that it would have been straightforward for Dr Doole to have:
 - (a) Compared the effectiveness, costs and distribution of costs to different dairy farmers using a grandparenting approach to an alternative approach such as allocations per FMU; and /or
 - (b) Compared the costs per ha and per farm or business unit for different sectors –e.g. dairy; forestry; horticulture, sheep and beef.
12. Completing an analysis as I have described above would enable interested parties to dispassionately compare:
 - (a) The environmental effectiveness of PC1 rules e.g. grandparenting with other rules for different parts of the population of dairy farmers;

¹ "I developed and applied the HRWO economic model..." and "I wrote 10 reports describing the development of the HRWO economic model..."

- (b) The environmental effectiveness of PC1 rules e.g. grandparenting with other rules for all land owning sectors;
 - (c) The economic cost of PC1 rules e.g. grandparenting with other rules for different parts of the population of dairy farmers;
 - (d) The economic cost of PC1 rules e.g. grandparenting with other rules for all land owning sectors;
 - (e) The relative cost and the ability to pay for PC1 rules e.g. grandparenting with other rules for different parts of the population of dairy farmers;
 - (f) The relative cost and the ability to pay for PC1 rules e.g. grandparenting with other rules for all land owning sectors;
13. Further analysis could have compared the loss of value for different sectors and the variation within sectors.
14. Dr Doole justifies the use of Input-Output models in para 3.3 of his statement. In my view such models improve understanding (despite limitations) at the national level; have marginal value at the regional level and are not reliable at the level of FMU. Their accuracy declines as the level of analysis (national / regional /FMU) declines due to (a) lesser data available at the region and sub-regional levels and (b) the low number of entities sampled by the Department of Statistics. The fixed coefficients are problematic in that they estimate a uniform response to a change without taking account of the fact that technologies and the mix of economic inputs will change as the regulations have their impact. The similarities between Figure 1 and Figure 2; between Figure 3 and Figure 4; and between Figure 5 and Figure 6 show degrees of consistency which would be unexpected in practice. It should be noted that Dr Doole indicates additional limitations of this modelling in para 2.1(c).
15. Discussion of costs to the dairy sector as in para 4.3 are specified in absolute value and not as percentages. This helpfully shows potential impact on the economy but fails to indicate if this is a small or large percentage of total costs and hence the marginal effect on both production volumes and profits. They are reported as annual values but there is no interpretation as to how they would change though time due to more amelioration activity; changes in technology or production regime; changes in product prices; changes in climate change policies, an

increased obligation to protect and provide valued biodiversity or any other factor. We know from the 1980s experience that farmers changed their production practices significantly after the removal of subsidies which meant there was not a uniform loss of welfare.

16. Discussion about risk in Section 7 does not consider the capital risk which applies to other land users. To achieve water quality improvements all impacted sectors will take a capital loss. As one of the highest value land uses, dairy land can revert to a lower value land use which limits the land's potential decline in value. Other lower value land uses also take a capital loss which in some cases is probably larger in percentage terms than that for dairy and may potentially drive abandonment of land as it may have negative value in production. This would be a bigger equity concern. Accurate interpretation of these effects requires comparison of both direct capital losses and opportunity costs associated with capital for all land uses. Dr Doole does not discuss his assumption that existing dairy land values are based on a use of land that has historically not been subject to more than minimal regulation designed to internalise the cost of associated environmental externalities on water quality.
17. Dr Doole appears to have significant confidence that farm environment plans (para 9.3) will achieve the water quality improvements required by the Vision and Strategy without curtailing existing dairy farm values, notwithstanding the uncertainties associated with their uptake and what reductions must be achieved. This contrasts with the pessimism expressed in para 4.7 of his evidence about change being "plagued with inefficiency as farmers learn how to meet the needs of the legislation..." and in para 9.1 where he highlights "variation in management skill and farm resources."
18. Alternatively, PC1 could be changed to avoid grandparenting and excessive reliance on unclear requirements for farm environment plans by allocating rights and obligations to FMU and, if this is not achievable in the interim by requiring all land users in the catchment to make efforts to reduce their loss of N and other pollutants to the environment by applying the best practicable methods of management, (for example, via resource consents with clear management plan obligations).

CONCLUSION

19. I disagree with the evidence of Dr Doole in para 2.1a that the dairy sector is “expected to bear most of the economic impact of the proposed PC1”.
20. I affirm that the appropriate contribution of the dairy sector depends on the pollutant contribution of the sector and the ability to reduce the impact of that pollutant load in a cost-effective manner.
21. I disagree with the focus of Dr Doole’s evidence on “more” mitigation as he describes in para 2.2.²
22. I affirm that the current challenge is to devise a Plan that will achieve the targets for the first ten years and lay a platform for achieving the 80 year targets.
23. I disagree with Dr Doole’s evidence in para 4.3 regarding the relative size of the dairy sector costs when he provides no evidence about the size of the cost to other sectors.
24. I affirm that the costs to all sectors should be estimated consistently for the sector as a whole and for the diversity of land uses within the sector.
25. I disagree with the conclusions in Dr Doole’s evidence in para 7.3 about the probability of dairy farm foreclosure but I do acknowledge his caveat in para 7.4³
26. I affirm that economic and social impacts of capital losses should be considered for all sectors and note that anecdotal evidence suggest these are large for both sheep and beef farmers and for forest owners.
27. I disagree with the focus of Dr Doole’s evidence on total costs to a sector as in his section 4.

² “...there are several clear reasons why requiring the dairy sector within the Waikato River catchment to mitigate more...”

³ “Nevertheless, the exit of these farmers would likely allow their replacement with business operators who are more efficient from an economic and/or environmental perspective. This may serve to dampen the negative effects of farm insolvency at the catchment level.”

28. I affirm the importance of cost effective achievement of environmental goals for all sectors.
29. I also affirm that cost effective achievement of environmental goals is better achieved by abandoning grandparenting in favour of a commitment to FMU allocation of rights and / or requirements for best practice in the interim.

Dr Francis Gordon Scrimgeour