BEFORE HEARING COMMISSIONERS at CHRISTCHURCH

IN THE MATTER	of the Resource Management Act 1991
AND	
IN THE MATTER	of the proposed Variation 5 to the Proposed Canterbury Land and Water Regional Plan – Nutrient Management and Waitaki
BETWEEN	DairyNZ Limited
AND	Canterbury Regional Council

STATEMENT OF PRIMARY EVIDENCE OF MR TONY MARK FRANSEN FOR DAIRYNZ LIMITED

22 July 2016

Corporate Office: Private Bag 3221,
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1. INTRODUCTION

1.1 My full name is Tony Mark Fransen. I graduated from Massey University, Palmerston North, with a Bachelor of AgriScience majoring in Agriculture.

1.2 I am a member of the New Zealand Institute of Primary Industry Management.

1.3 I am currently employed as a Developer (Sustainability) in the Research and Development Team with DairyNZ Limited. I have been with DairyNZ for over four years, and have certificates of completion for both the Intermediate and Advanced courses in Sustainable Nutrient Management in New Zealand Agriculture, at Massey University.

1.4 Representing DairyNZ I have engaged with Regional Council staff in various regions to put steps in place to help farmers with the implementation of regional plan changes. I have participated in stakeholder workshops, advisory groups and industry consultation sessions in relation to nutrient management and the development of Regional Plans. I prepared and presented the DairyNZ Sustainable Milk Plan to gain Environment Canterbury approval under the Canterbury Land and Water Regional Plan ("CLWRP") Schedule 7 in 2014.

1.5 I have completed Environment Canterbury's Farm Environment Plan auditor training. I am a member of the Industry OVERSEER Working Group and have worked closely with Regional Council staff on implementation of the CLWRP. In recent years I have provided formal and informal advice to the Canterbury Regional Council (Council) to assist in policy development, including the development of Plan Change 5. I was involved in the development of written good management practices as part of the Matrix of Good Management project. This included collecting dairy farmer feedback to inform the position.

1.6 I have been authorised by DairyNZ to provide this evidence on its behalf. I wish to clarify that I am submitting this evidence in my capacity as a representative of DairyNZ representative and not as a technical expert. However, the nature of my role at DairyNZ does mean I have relevant experience in the evolution of the CLWRP and the development of Plan Change 5.

Code of Conduct

1.7 I have read the Environment Court's Code of Conduct for Expert Witnesses contained in the Environment Court's Practice Note 2014, and I agree to comply with it. In that regard, I confirm that this evidence is within my area of expertise except where I state that I am relying on the evidence of another person. I have not omitted to consider

material facts known to me that might alter or detract from the opinions expressed in this evidence. In respect of paragraph 7.2(b) of the Code of Conduct, I record that I am an employee of DairyNZ.

2. SCOPE OF EVIDENCE

2.1 DairyNZ's interest in Plan Change was outlined in the submissions lodged on 11 March 2016 and 13 May 2016 respectively. I have been asked to provide evidence:

- Summarising DairyNZ's approach to the Plan Change 5 process;
- Outlining the remaining areas of concern, having regard to the Section 42A Report prepared by Environment Canterbury (ECan) officials, and
- Summarising DairyNZ's technical evidence

3. DAIRYNZ'S APPROACH TO PLAN CHANGE 5

3.1 DairyNZ was closely involved in the Matrix of Good Management Project (MGM). The project's key objectives were to:

- Define what Good Management Practice (GMP) looks like across different farm types in Canterbury and,
- Develop a model framework to quantify the expected Nitrogen and Phosphorous losses from Canterbury farm systems, soils and climates when farms operate at industry-agreed GMP.

3.2 The MGM Project subsequently resulted in the production of:

- Commonly agreed descriptive GMP's across the primary industries;
- A matrix of Nitrogen and Phosphorous losses for a suite of representative farm types, and
- A suite of modelling proxies to enable GMP to be modelled specifically to each farm using existing OVERSEER nutrient budgets.

3.3 The matrix and modelling proxies are now integral parts of ECan's Farm Portal which was developed to help farmers benchmark their environmental performance by

comparing their Nitrogen ("N") and Phosphorous ("P") losses using OVERSEER, with predicted GMP values.

3.4 DairyNZ maintains its support for many aspects of Plan Change 5 including its:

- Focus on defining industry agreed GMP, and using farm environment plans to implement them;

- Adopting the Baseline GMP approach to addressing equity issues and, provide confidence that all farmers are working to GMP; and

- Establishment of a Farm Portal to provide an efficient mechanism for collecting farm nutrient loss information for collation, environmental modelling and reporting and enabling farm benchmarking against GMP.

4. KEY AREAS OF CONCERN

4.1 DairyNZ does however remain concerned that the fertiliser and irrigation modelling proxies are technically flawed and should not be used as the sole or primary basis for declining consent applications.

4.2 DairyNZ's concerns regarding the N fertiliser proxy are long-standing and were raised during the MGM Project, and in its submissions on the Plan Change 5 process. DairyNZ's concerns stem from the fact the current fertiliser proxy relies on a number of assumptions (such as supplement and pasture quality, N fixation by legumes, animal feed requirements, and the efficiency of N use by plants and animals) and is therefore prone to compounding errors when applied to individual farms. In addition, DairyNZ considers that it is likely to result in higher leaching for high production farms. It is also likely to generate leaching numbers for low production farms that are disproportionally lower than their current leaching rates.

4.3 During the MGM Project DairyNZ recommended that the current fertiliser proxy should be replaced by one based on the N Surplus approach, a position which was repeated in its submissions on Plan Change 5. DairyNZ also recommended that ECan should provide an alternate consenting pathway in addition to the Farm Portal and, establish a process for reviewing and moderating erroneous Portal results.

5. SUMMARY OF EVIDENCE

5.1 Having reviewed the section 42 report and consulted widely with other primary sector organisations, DairyNZ's submission focusses on two key issues namely:

- The deficiencies in ECan's modelling approach, with specific reference to the proposed fertiliser modelling proxy and, the examination of an alternate proxy based on the Nitrogen surplus approach, and

- The appropriateness of the environmental outcomes and limits that ECan proposed for the Northern Fan and Hakataramea River.

5.2 DairyNZ wishes to record its support for the expert evidence being presented by Irrigation New Zealand regarding the flaws in the proposed irrigation modelling proxy and, the need to develop an alternate approach that more accurately reflects GMP.

5.3 DairyNZ also supports the expert evidence being presented by Fonterra regarding the need to introduce an alternate pathway enabling farmers to have their Nitrogen loss limits defined by a means other than the Farm Portal in those circumstances where there is demonstrable evidence that the Portal has produced erroneous results.

Witnesses

5.4 DairyNZ has filed evidence from the following witnesses:

(a) **Dr Stewart Ledgard -** Principal Scientist at AgResearch. Dr Ledgard provides a technical assessment of the strengths and weaknesses of the proposed fertiliser proxy relative to DairyNZ's alternate proxy. He concludes on balance that farm N Surplus has a number of advantages because it is using farm data that is readily available and, his main reservation with the N Surplus method allowing moderately high Nitrogen fertiliser inputs in future for sheep and beef farms (and hence increased leaching losses) has been addressed by not allowing farms to increase their N Surplus if below the threshold.

(b) **Dr Bruce Thorrold** – Strategy & Investment Leader (Productivity) at DairyNZ. Dr Thorrold concludes that an alternative fertiliser modelling proxy based on the N Surplus approach provides a more technically robust, accurate and equitable means of achieving ECan's desired environmental outcomes.

(c) **Mr Mark Neal –** Dairy Systems Specialist at DairyNZ. Mr Neal modelled the effects of Plan Change 5 (Parts A and B) on dairy farms. He concludes that the section 32 report does not make a strong case for the choice of individual modelling proxies, and there is a cost associated with their implementation. DairyNZ's alternative fertiliser modelling proxy can achieve similar N loss reductions as ECan's approach and at a lower economic cost to farm businesses. In relation to Part B and farming operations in the Lower Waitaki, Mr Neal concludes that the requirement to reduce

N loss to 90% of GMP is unlikely to be required as there are greater gains to be made by farmers shifting from current practise to GMP than were anticipated by ECan during the limit setting process. This GMP reduction is likely to be achieved via the proposed irrigation proxy.

(d) **Mr Justin Kitto -** Water Quality Specialist at DairyNZ. Mr Kitto's evidence analyses the appropriateness of the environmental outcomes and limits for the Northern Fan and the Hakataramea River. His evidence concludes that the environmental outcomes and limits as notified in the Plan are acceptable provided **all** parts of the solutions package are implemented, particularly for riparian planting and farm environment plans

(e) **Dr Glen Treweek** – Soil Scientist at Aqualinc Research Limited. Dr Treweek investigated nutrient losses beyond the root zone in the Northern Fan with farm-specific data. His results show that large reductions in N loss are likely simply by farmers operating at GMP potentially negating the requirement to operate at 90% of GMP.

6. CONCLUSION

6.1 DairyNZ recognises that beyond supporting the economic well-being of New Zealand's urban and rural communities, the dairy sector must manage its environmental footprint in a sustainable manner. Consequently, DairyNZ supports the objectives of the CLWRP and many aspects of the Plan Change 5 process.

6.2 DairyNZ does however respectfully request that the Commissioners adopt its alternative approaches in relation to the fertiliser modelling proxy, and the environmental outcomes and limits for the Northern Fan and the Hakataramea River. These alternate approaches will ensure that the intended environmental outcomes are achieved while taking into account the associated social, cultural and economic effects.

Tony Fransen
22 July 2016