BEFORE INDEPENDENT HEARING COMMISIONERS

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER Proposed Waikato Regional Plan Change 1: Waikato and Waipa River Catchment

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STATEMENT OF PRIMARY EVIDENCE OF DAVID FRANCISCUS BURGER FOR DAIRYNZ LIMITED SUBMITTER 74050

3 MAY 2019

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Qualifications and experience

1. My full name is David Franciscus Burger.

2. I hold the position of Strategy and Investment Leader for Responsible Dairying at DairyNZ. This role includes responsibility for developing and managing DairyNZ investment relating to environmental sustainability, including water quality, greenhouse gas emissions, community engagement, and associated farmer change programs.

3. I hold a Ph.D in Limnology (2006), Masters of Science in Freshwater Ecology (First Class Honours, 2000), and Bachelor of Science (1998) from the University of Waikato (UW).

4. I am a water quality scientist with more than 18 years of national and international experience in applied water resources management generally, including the impacts of land use on surface water quality, water quality management and restoration (rivers, lakes, water supply reservoirs, shallow coastal zones), ecosystem modelling, catchment accounting frameworks, and lake nutrient and phytoplankton dynamics. I have published 15 international peer-reviewed journal publications and more than 55 client and technical reports in these areas. Previous roles I have been employed in are Environment Manager and Senior/Water Quality Specialist at DairyNZ (2013-18), Research Scientist/Advisor Deltares Singapore and Associate Singapore-Delft Water Alliance (2010-13), Researcher/Adviser Water Quality and Ecosystems Management at Deltares in the Netherlands (2006-09), and PhD student and Post-Doctoral Researcher at the University of Waikato (2001-06).

5. Recent work on the Waikato-Waipa River catchment has been related to the Waikato-Waipa Restoration Strategy (Governance Group and Technical Advisory Group, 2017-18), DairyNZ, Waikato River Authority and MPI co-funded Upper Karapiro Sustainable Milk Plan Study (Scientist, 2014-16), WRC-WRA-DairyNZ, UW Waikato Shallow Lake modelling and restoration assessment (Advisor and project manager, 2017-18), and assessment of factors influencing phytoplankton in the Waikato River (2014-15).

6. I am also the executive liaising with the Waikato Dairy Leaders Group (WDLG), formed in 2012 and comprised of governance representatives of milk processors, DairyNZ and federated farmers. Throughout the development of PC1, WDLG has

continued to meet to try to find common ground and provide a unified voice for Waikato dairy farmers, while working towards a collective solutions to the Waikato's water quality challenges

Scope of Evidence

7. My evidence pertains to Proposed Waikato Regional Plan Change 1 – Waikato and Waipa River catchments (PC1). I am giving evidence to outline the DairyNZ viewpoint in relation to both PC1 and future land and water plan changes to assist achieving the Vision and Strategy.

DairyNZ approach to PC1

8. DairyNZ's submission supports the overall intent of PC1 as the first step toward improving water quality in the long term, thereby assisting achievement of the Vison and Strategy for the Waikato and Waipa River catchment, including the need for all dairy farmers to take action to achieve these objectives.

9. Supporting dairy farmers to improve their environmental performance is at the heart of everything we do at DairyNZ. Getting the basic preparations right in the first plan change will assist the rate and scale of behaviour change needed to meet the 2096 desired water quality attributes. DairyNZ's approach to Block 2 of the PC1 hearings is to ensure the overall direction and intent of PC1 is retained and that this allows the Waikato Dairy sector to continue to thrive, as farmers make the first set of changes towards full achievement of the Vision and Strategy.

10. DairyNZ supports the overarching Vision and Strategy and agree with the assessment that restoring and protecting the Waikato River is a long-term undertaking that will require far reaching land-use change over time. Consequently, a phased approach is required with PC 1 providing the vital first step towards achieving the 2096 water quality objectives. The staged approach is necessary to sustain regional economic performance and safeguard the wellbeing of Waikato's local communities, while at the same time assuring that change gets under way now as we develop the additional knowledge, tools and solutions required to allocate and transition to the future situation in a robust, fair and optimised way.

11. Waikato is an important dairy farm region (as noted in Dr Doole's evidence) and we have welcomed the opportunity to work constructively with WRC and other community stakeholders at every stage of the PC1 development process over the last eight years. This has included contributing to significant pieces of scientific and

technical work to improve our collective understanding of water quality state and drivers, farm system options and economic impacts, to help support the overall development of the robust and evidence-base required to develop effective and enduring solutions.

12. The Waikato Dairy Leaders Group, a governance level group set up in 2012 to provide a unified voice for dairy farmers in Waikato, has worked hard to distil the key matters it wishes to see retained in PC1, and these were set out in the DairyNZ presentation of Block 1 evidence by Ms Young. I wish to draw the Commissioners attention to that fact that all parties agree that:

    (a) All four contaminants must be managed in the life of this plan change (Sediment, Phosphorous, Microbes and Nitrogen);

    (b) A staged approach is necessary to retain vibrant, local communities and regional economy;

    (c) We need to manage land use change to achieve the desired water quality outcomes over the long term;

    (d) Actions must make a difference by 2026, and;

    (e) Reductions of contaminants from all farms in this plan change will make future plan changes and long-term targets more manageable.

13. DairyNZ's approach to farm plans is that where possible, focus remains on identifying farm-specific environmental actions in line with good farming practice principles, leaving scope for farm-specific solutions and innovation in how environmental outcomes are best achieved on each property. This approach is supported by the National Good Farming Practice Action Plan for Water Quality (2018), which DairyNZ co-developed in partnership with the primary sector, regional councils and central government. This document sets out a commitment by all parties to work together towards supporting the implementation and reporting of good farming practices nationally, and further supports the value of good farming practices and farm environmental plans to improve water quality outcomes.

14. DairyNZ is also working with government agencies and other sectors on the concept of an integrated farm plan that addresses all aspects of the farm business, including water, climate change, biodiversity, biosecurity and animal care on farm. Other national policy workstreams that DairyNZ is involved in such as reducing greenhouse gas emissions and safeguarding indigenous biodiversity should also deliver water quality co-benefits at the regional scale.

15. One of the purposes of PC1 is to further develop the technical knowledge base required to better inform future plan changes and meet the long-term objectives. There are significant gaps in this knowledge currently, including property-level footprint, the key farm-system intervention points, and the most feasible mitigation options to improve water quality outcomes at catchment and sub-catchment scales. Preparation of the evidence base for future limits should be based on a broad assessment of land use suitability, and management of the four key contaminants, rather than the short-term focus on nitrogen allocation contained in many submissions to PC1.

DairyNZ long term view of land use in Waikato River catchment and achieving the Vision and Strategy

16. DairyNZ supports the view that PC1 should focus on all contaminants that are affecting water quality. I am aware that many landowners see nitrogen as the 'development nutrient', and that the more they are constrained, the more future opportunities they lose. In my view, the PC1 nitrogen management approach does not, and should not represent a long-term allocation of nitrogen discharge rights.

17. DairyNZ supports the requirement for dairy farms with nitrogen losses above the 75th percentile to reduce their nitrogen footprint within this plan change. We believe there is a misconception that PC1 reflects grandparenting of current dairy farm nitrogen losses. The 75th percentile approach will lead to a sector-wide reduction in nitrogen footprint at the catchment scale and these reductions will be further supplemented by additional, incremental decreases in contaminant losses through the adoption of farm-specific environmental plans across all farms, including dairy, which we know will also lead to improvements for all contaminants.

18. With other senior managers and directors, I have been involved in discussions with Beef and Lamb NZ, which we intend to continue. So far, we have made progress towards developing overarching principles that should apply to all areas in New Zealand.

19. In my view, the application of these principles to the Waikato River Catchment is that:

    a) In the long-term land use should reflect the suitability of each land parcel in its catchment context. Land use change on dairy farms will be required to meet the Vision and Strategy;

b) However, in the short term it is important to recognize invested capital and allow for a transition to the future land use, and;

c) Where there is headroom then it is reasonable for low emitters to increase nitrogen loss. But it is our view that nitrogen loss headroom does not exist in the Waikato catchment when current nitrogen losses are compared with the challenge of meeting the Vision and Strategy in the long term.

20. In 2017, I was involved in the Waikato Regional Council Strategic direction setting process (Long term Plan). In terms of meeting the Vision and Strategy in the long term, one of the messages was the need to commence action towards reducing the catchment footprint now, while continuing to gain understanding of Waikato catchment, river and lake water quality dynamics to meet the future objectives. This knowledge builds the level of confidence required around catchment loads, attenuation, lag time, impact on ecosystem values and mitigation options, to underpin further load reduction targets.

21. In the longer term a rural planning framework for understanding the feasibility for alternative land use optimisation and planning, together with edge of field mitigation options at scale is needed. This framework is required to help identify changes at a sub-catchment level where mitigations applied on an individual farm will not be enough to meet challenging long-term water quality targets. This would include investigating where land use and mitigations such as constructed wetlands and forestry are best located in each sub-catchment, and what impact implementation will have on reducing sediment, phosphorus, nitrogen, and E. coli, and implications for regional economics and communities. DairyNZ believes that there is insufficient data and knowledge to support this approach being taken at the catchment or sub catchment scale in this plan change.

22. DairyNZ, and the farmers we represent, are committed to playing their part towards achieving the Vision and Strategy over the long term. DairyNZ is generally supportive of PC1, and at a broad level we want to see the following aspects retained:

(a) All four contaminants must be managed - sediment, microbes, nitrogen and phosphorus

(b) Staged approach

(c) Manage land use change to achieve desired water quality outcomes

(d) Require actions that will make a difference by 2026

(e) Establish a baseline of nitrogen loss

(f) For now, require all farmers to hold to a baseline nitrogen loss, and require the highest nitrogen leaching farms to reduce, assuming the next plan change process will reassess what is needed to achieve the Vision and Strategy.

3 May 2019

David Burger