

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of the Proposed Waikato Regional Plan
Change 1 and Variation 1 to Proposed Plan
Change 1: Waikato and Waipā Catchments

Block 2 Hearing – Part C

AND

IN THE MATTER of the submissions and further submissions
by Ravensdown Limited
(Submitter ID 74058)

**STATEMENT OF EVIDENCE OF ANNA MARY WILKES
ON BEHALF OF RAVENSDOWN LIMITED**

3 MAY 2019

SUMMARY

- A. Ravensdown Limited (**Ravensdown**) is a farmer-owned co-operative with nearly 2,000 shareholders based in Waikato. Ravensdown is a science-focused organisation delivering quality agri-products, technologies and services, and is an integral part of the food creation process, whether the food is grown for livestock or for humans.
- B. Ravensdown recognises the need for the environmental impacts of farming to be mitigated and is supportive of an effects-based approach. However, it is important that farmers' ability to operate is protected and they retain the opportunity to innovate and to run farm businesses that are productive, sustainable and profitable.
- C. While some of Ravensdown's submissions have been addressed through the section 42A Report's recommendations for amendments to PC1 and Variation 1, a number of matters require further consideration and amendment.
- D. In this context, I have suggested changes to the data provision requirements under the Permitted Activity Rule for Low Intensity Farms (Clause C(f) of Rule 3.11.5.2) that will result in actual data being provided to the Council rather than potentially inaccurate estimates.
- E. I have also commented on the use of Overseer and recommended amendments that reflect the functionality of the new Overseer FM platform and encourage nationally consistent approaches to modelling. The exact nature of these amendments are discussed in Ms Taylor's evidence and Appendix B of her evidence.

1. INTRODUCTION

- 1.1 My full name is Anna Mary Wilkes
- 1.2 I am employed by Ravensdown Limited (**Ravensdown**) as an Environmental Policy Specialist. I have worked in this role since February 2017.
- 1.3 I have a Bachelor of Science in Microbiology (1997) and a Master of Science with Honours in Biochemistry (2000) from the University of Canterbury. I also have a Master of Resource and Environmental Planning with Honours (2018) from Massey University.
- 1.4 I am an Associate Member of the New Zealand Planning Institute and a member of the Resource Management Law Association.
- 1.5 I am presenting evidence as a representative of Ravensdown, and not as an expert witness.

2. SCOPE OF EVIDENCE

- 2.1 In preparing my evidence, I have reviewed the following documents:
- (a) Proposed Waikato Regional Plan Change 1: Waikato and Waipā Catchments (**PC1**) and Variation 1 to the Proposed Waikato Regional Plan: Waikato and Waipā River Catchments (**Variation 1**), hereafter referred to as '**PC1 and Variation 1**';
 - (b) The section 42A Report covering Parts C1 to C6 (Policies, Rules and Schedules (most)), hereafter referred to as the '**section 42A Report**';
 - (c) Appendix C of the section 42A Report containing the "Tracked Changes" recommendations on PC1 and Variation 1; and
 - (d) The evidence prepared by Ms Carmen Taylor, a planning consultant with Planz Consultants Limited, and Mr Mark Fitzpatrick, Business Manager – Environmental for Ravensdown Environmental.
- 2.2 The scope of my evidence is to provide contextual background to Ravensdown's interest in PC1 and Variation 1, and to address some specific

functionality issues, prior to Mr Fitzpatrick addressing matters pertaining to implementation and Ms Taylor addressing specific planning matters in her evidence.

- 2.3 In **Section 3** of my evidence, I provide an overview on Ravensdown's general interest in regulatory processes and the construct of the business as a farmer-owned co-operative. In **Section 4** of my evidence, I discuss specific matters arising from PC1 and Variation 1, namely, consent duration, farm data requirements under Rule 3.11.5.4 and three specific issues associated with the use of Overseer and how that has been incorporated into PC1 and Variation 1.

3. RAVENSDOWN LIMITED

Ravensdown's Interest in Regulatory Processes

- 3.1 Ravensdown takes an interest in a wide range of resource management matters that relate to rural and industrial activities and participates in planning processes at the national and regional level through preparing submissions on regulatory, policy and plan mechanisms prepared under the Resource Management Act 1991 (**RMA**).
- 3.2 In participating in policy and regulatory development processes, Ravensdown recognises the need for the environmental impacts of farming to be mitigated and is supportive of an effects-based approach. However, it is important that farmers' ability to operate is protected and they retain the opportunity to innovate and to run farm businesses that are productive, sustainable and profitable.
- 3.3 In addition, although not relevant to the PC1 and Variation 1 hearings, Ravensdown has its own manufacturing, quarrying and bulk fertiliser store activities to service its customers. Ravensdown supports the need to mitigate the effects of its operations on the environment and is committed to fulfilling its environmental obligations in order for its business activities to continue.
- 3.4 In particular Ravensdown participates in planning processes to ensure policies and regulations incorporated into plans or other planning mechanisms, seek and find an optimal balance between any necessary amendments to farming activities, as well as its industrial operations, and the use of the products it has

developed to assist with sustainability, growth and production in the rural sector, and ultimately the economic and social wellbeing of the rural community and New Zealand

Ravensdown's Shareholders in Waikato

- 3.5 Ravensdown has nearly 2000 shareholders in the Waikato region, although not all of these will be located within the Waikato and Waipā catchments. Over half of these are dairy farmers, with the remainder comprising a mix of sheep, beef, other livestock, horticulture and cropping systems.

Ravensdown's Business

- 3.6 Ravensdown exists to enable smarter farming for a better New Zealand. As a farmer-owned co-operative, Ravensdown's products, expertise and technology help farmers reduce environmental impacts and optimise value from the land.
- 3.7 Ravensdown is an integral part of the food creation process, whether the food is grown for livestock or for humans. Ravensdown tests for, advises about, buys, ships, stores, spreads, measures and maps food-creating nutrients and fertiliser for its farmers in an integrated way.
- 3.8 Ravensdown is a science-focused organisation delivering quality agri-products, technologies and services. Ravensdown provides:
- (a) Practical insights, trusted guidance and lab-based diagnostic data on soil and plant samples.
 - (b) Environmental consultancy to assist farmers to mitigate impacts and move beyond compliance.
 - (c) Quality agri-products including agrichemicals, seeds and animal health products.
 - (d) Manufacturing superphosphate at dedicated plants in Christchurch, Dunedin and Napier.
 - (e) Lime quarries producing agricultural lime products.
 - (f) Logistics and storage of bulk fertiliser and other products to ensure they are available when needed.

- (g) Global sourcing from top tier suppliers.
- (h) Capability for precision fertiliser application by ground and by air.
- (i) Map-and-measure technology for better on-farm decision making.
- (j) Innovation and research to ensure advice and solutions are based on sound science.

3.9 Ravensdown operates a network of fertiliser bulk stores, quarries and three superphosphate manufacturing plants throughout New Zealand. In Waikato there are 11 bulk stores throughout the region, and lime quarries at Te Pahu and Te Kuiti.

3.10 Ravensdown provides the nutrients that nourish New Zealand's soil which, in turn, feed the plants and animals that deliver the products that can command a premium on the world stage. Smarter farming is all about smarter choices for the environment. Sales are important but as a farmer-owned co-operative, it is not Ravensdown's policy to sell farmers more than they need. Precision agriculture is about the right amount of the right inputs in the right place, applied at the right time. Smarter farming is also about always having the right reason – the focus on the environment, community and kaitiaki (stewardship).

3.11 Nutrient losses from fertiliser are uneconomic for a farmer to sustain and these potential losses can be managed using a range of techniques including appropriate advice on product type, application rates and timing. Ravensdown is generally supportive of the approach in PC1 and Variation 1 to control nutrient losses through good management practices (or Good Farming Practices (**GFP**) in PC1 and Variation 1) detailed in Farm Environment Plans (**FEP**) and supported by Nutrient Budgets.

3.12 Mr Fitzpatrick leads Ravensdown Environmental, a user-pays consultancy that operates as a business unit within Ravensdown. He will expand on the service offering of the consultancy in his evidence.

4. MATTERS ARISING FROM PC1 AND VARIATION

Consent Duration

- 4.1 Ms Taylor will expand on the specific provisions that relate to consent duration.
- 4.2 Based on our experience with consent durations issued in other regions, primarily Canterbury, we consider that consent durations of 10 to 15 years are appropriate in the Waikato context. Durations less than 10 years pose an unreasonable burden on both farmers, their consultants and the Waikato Regional Council (**Council**).
- 4.3 Our preference is that a consent duration of least 10 years provides farmers with a sufficient timeframe to implement any necessary mitigations to achieve reductions in contaminant losses, while providing a degree of certainty in forward planning capital investment in farm infrastructure.

Rule 3.11.5.2 – Provision of Farm Data

- 4.4 The permitted activity rule for low intensity farming (Rule 3.11.5.2) includes a requirement for properties over 20ha to provide a range of data on an annual basis (Clause C (3)(f)). Ravensdown notes that the requirements, as drafted, will pose difficulties for farmers to provide accurate data to the Council, as some of the information (e.g., monthly average stock numbers and fertiliser application) will not be able to be provided in advance as currently proposed in the recommended rule.
- 4.5 Decisions on stock class and numbers and fertiliser application rates will be made dependent on a range of factors (e.g., market conditions, feed availability and plant nutrient requirements) on a finer timescale. Ravensdown considers, as outlined in **Appendix B of Ms Taylor's evidence**, that amendments to the recommended rule are required in order to align the data provisions to a previous 12 month period rather than a future 12 month period. This approach will ensure that accurate data is provided to Council.

Overseer

- 4.6 There are three matters relating to the use of Overseer in PC1 and Variation 1 that I wish to comment on:

- (a) Overseer version changes and Nitrogen Reference Point (**NRP**) recalculation
- (b) Council access to Overseer data
- (c) Council's Nitrogen Reference Point Guide

Overseer Version Changes and NRP Recalculation

- 4.7 The second part of Clause (c) in Schedule B (Clause B(a) in Appendix B of Ms Taylor's evidence) requires the NRP to be recalculated "*whenever a new version of Overseer... is released.*" It is my understanding that the new cloud-based Overseer FM platform operates differently from the previously numbered versions of Overseer. Overseer FM will be updated much more frequently than the significant twice yearly updates that have occurred on previous Overseer versions. The cloud-based system for storing data means that NRPs will be automatically updated as model updates are made, rather than the previous manual process that was required to update files when new versions of Overseer were released. This makes the clause requiring recalculation of the NRP redundant, in my view.
- 4.8 I note that this functionality of Overseer FM updates means that there will, essentially, be two NRPs for each farm: the 'initial' NRP which will be the one first registered and presumably used for the calculation of the 75th percentile; and the 'mobile' NRP which will be the reference point that will move with updates to the Overseer model. It is the 'mobile' NRP against which farm system changes and FEP actions will be modelled and compared to demonstrate progress towards achievement of reductions in nitrogen leaching.
- 4.9 In this context, and as set out in Ms Taylor's evidence (Section 6.6), we have suggested some amendments to Schedule B that reflect the difference between the 'initial' NRP and the NRP that will be used to monitor improvements in property level nitrogen leaching.

Council Access to Overseer or Other Software/Models

- 4.10 The farming activity rules (Rules 3.11.5.1A, 3.11.5.2A, 3.11.5.3, 3.11.5.4) include a condition requiring "*full electronic access to Overseer or any other software or system that models or records diffuse contaminant losses for the farming land use*" to the Council. Ravensdown has recommended that this

clause be deleted (as outlined in **Appendix B** of **Ms Taylor's evidence**), not because it is inherently opposed to the provision of modelling data, but because accessing this information is of limited or no value to the Council.

- 4.11 It is my understanding that in the new Overseer FM platform, there is no 'parameter report' generated by the model. In previous Overseer versions, this report would provide details of the input parameters used to generate the modelled nitrogen loss rate.
- 4.12 Overseer FM is a cloud based platform with a farm-based account that people, including Councils, with permissions can access. However, unless the person accessing the account (or accessing any other modelling software) has specific knowledge of the model and its inputs and outputs, there is no value in the access. As I understand, one of the challenges with the Overseer FM platform is that I could access a farm account and modify the NRP or other files and while the record of my time of access would be retained, no detail of any modifications I may have made is retained. This is a known challenge that other regional councils are working to address with Overseer Limited.
- 4.13 I acknowledge the Council's desire to be able to review data used in the calculation of the NRP. In order to achieve this desired outcome, I consider that the information required can be made available on request, or in accordance with NRP reviews specified in consent conditions, as proposed in the amendments to Schedule B contained in **Ms Taylor's evidence (Appendix B – refer to amended Clause B(a))**.

Council's Nitrogen Reference Point Guide

- 4.14 Ravensdown considers that the development of a Nitrogen Reference Point Guide for the Waikato region, as set out in Method 3.11.4.13 and referred to in Schedule B Clause (d) is problematic. This is because there appears to be no requirement for development of this guidance in conjunction with industry practitioners who have in-depth knowledge of the workings and work-arounds required to use Overseer successfully.
- 4.15 PC1 and Variation 1 requires practitioners to meet the requirements for a Certified Farm Nutrient Advisor in order to prepare Nitrogen Reference Points. It is therefore reasonable to assume that these people will have a sound working knowledge of Overseer and the guidance documents produced by

Overseer (e.g., Best Practice Data Input Standards). To impose an additional layer of guidance specific to Waikato has the potential to undermine the credibility of the certified practitioner to model a Nitrogen Reference Point in the manner they see best fit.

4.16 I acknowledge that the Council seeks a consistent modelling approach for a range of farm system types and that that is the key driver behind the development of the NRP Guide.

4.17 As Mr Fitzpatrick will explain, Ravensdown's environmental consultants do not work solely in one region. If every region adopts its own specific set of modelling guidance, this becomes onerous on practitioners and it would seem far more efficient to use nationally consistent guidance for Overseer modelling.

4.18 The Industry Overseer Working Group comprises a mix of practitioners and regional council representatives from around the country and meets quarterly (approximately) in Christchurch. While originally intended to provide a forum to debate and resolve Overseer modelling issues in Canterbury, the group has been extended to a national level in an attempt to share knowledge and ensure consistency in Overseer modelling approaches. The group is frequently attended by Overseer Limited, in relation to impending changes/upgrades and as a forum for feedback. On this basis, Ravensdown would prefer that any region-specific guidance for Overseer modelling in Waikato was agreed through the existing or perhaps a regional branch of the Industry Overseer Working Group, and that the collective knowledge of both practitioners and Council staff is used to mutual benefit.

5. CONCLUSION

5.1 While some of Ravensdown's submissions have been addressed through the section 42A Report's recommendations for amendments to PC1 and Variation 1, a number of matters require further consideration and amendment. In addition to the three matters discussed in my evidence (Overseer versions and NRP recalculation; access to Overseer data; and Council's Nitrogen Reference Point Guide), Mr Fitzpatrick and Ms Taylor have addressed remaining matters which in our opinion warrant further consideration.

5.2 Ravensdown supports effects-based approaches to regulation, if needed, to reduce the environmental impacts of farming. As outlined in our evidence there are some aspects of PC1 and Variation 1 that we consider could be amended in order to provide clarity to plan users and give Council the information they seek in order to progress the reduction of contaminant losses to the environment, particularly from farming activities.



Anna Wilkes

3 May 2019