BEFORE THE HEARINGS PANEL
FOR THE PROPOSED WAIMAKARIRI DISTRICT PLAN

UNDER	the Resource Management Act 1991 (RMA)
IN THE MATTER	of the Proposed Waimakariri District Plan
AND	
IN THE MATTER	of Hearing Stream 7A: Residential, Large Lot Residential, Variation 2: Financial Contributions and Ecosystems and Indigenous Biodiversity

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STATEMENT OF EVIDENCE OF PHILIP BRYCE GROVE ON BEHALF OF THE CANTERBURY REGIONAL COUNCIL

ECOSYSTEMS AND INDIGENOUS BIODIVERSITY

30 AUGUST 2024

Canterbury Regional Council's Solicitor
PO Box 4341 CHRISTCHURCH 8140
DX WX11179
Tel +64 3 379 7622
Fax +64 379 2467

Solicitor: L F de Latour / K T Dickson
(lucy.delatour@wynnwilliams.co.nz / kate.dickson@wynnwilliams.co.nz)

WYNN WILLIAMS

SUMMARY STATEMENT

1 The Canterbury Regional Council (**Regional Council**) submission was generally supportive of the notified Proposed Waimakariri District Plan (**pWDP**) provisions subject to this hearing stream. The Regional Council did, however, seek some amendments to the provisions relating to the Ecosystems and Indigenous Biodiversity chapter.

2 My evidence focuses on the provisions where the Regional Council's submission points were not accepted and/or where further information on submission points was sought from the Regional Council by way of evidence and in particular addresses the Regional Council's requested changes to ECO-P2 and ECO-R4 regarding controls on land use activities near Significant Natural Areas; and the request that ECO-SCHED3 – Table ECO-2 be amended to include threatened / at risk non-vascular plants.

INTRODUCTION

3 My full name is Philip Bryce Grove.

4 I am a Principal Scientist at the Regional Council, a position I have held since 2023. Before that I was Science Team Leader (2007-2023) and terrestrial ecologist in the Science Group (2001-2007).

5 I hold a Doctor of Philosophy in Botany – Plant Ecology from the University of Otago which I acquired in 1998.

6 I have prepared this evidence on behalf of the Regional Council.

CODE OF CONDUCT

7 Whilst I acknowledge that this is not an Environment Court hearing, I confirm that I have read and am familiar with the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023. I have complied with the Code of Conduct in preparing this evidence and I agree to comply with it while giving any oral evidence during this hearing. Except where I state that I am relying on the evidence of another person, my evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

8 Although I am employed by the Regional Council, I am conscious that in giving evidence in an expert capacity that my overriding duty is to the Hearing Panel.

SCOPE OF EVIDENCE

9 I have been asked to provide evidence in relation to the Ecosystems and Indigenous Biodiversity chapter of the pWDP.

10 My evidence addresses:

(a) the Regional Council's submission point on ECO-P2 and ECO-R4 regarding controls on land use activities near Significant Natural Areas (**SNAs**); and

(b) the Regional Council's request that ECO-SCHED3 – Table ECO-2 be amended to include threatened / at risk non-vascular plants.

11 In preparing my evidence I have reviewed the following documents:

(a) the Section 32 report prepared and notified by Waimakariri District Council (**WDC**) in relation to the pWDP;

(b) the notified provisions of the Ecosystems and Indigenous Biodiversity chapter of the pWDP;

(c) the submissions made on the notified provisions Ecosystems and Indigenous Biodiversity chapter;

(d) the S42A report in relation to the Ecosystems and Indigenous Biodiversity chapter of the pWDP;

(e) the Canterbury Regional Policy Statement 2013 (**CRPS**);

(f) the National Policy Statement for Indigenous Biodiversity (**NPSIB**); and

(g) the evidence of Ms Victoria Watt on behalf of the Regional Council.

Controls on land use activities near SNAs

12 The Regional Council's submission sought an amendment to ECO-P2(3) for it to apply to all SNAs, and also to capture other activities that can affect biodiversity such as cultivation, and sowing pasture species

(rather than just irrigation). A similar amendment was sought to ECO-R4.

13 The Regional Council's submission points on this matter are noted in paragraphs 665 (ECO-P2) and 744 (ECO-R4) of the s42A report. The Regional Council supported the objective of protecting SNAs from effects of adjoining land uses such as irrigation. However, irrigation is not the only activity that can result in adverse cross-boundary effects on adjoining or nearby SNAs.

14 Other land use activities such as cultivation, sowing pasture species, exotic forestry, fertiliser application, stock grazing and use of agrichemicals, can all impact on nearby SNAs and their constituent biodiversity. Therefore, the Regional Council submitted that appropriate controls on other land use activities near SNAs were also required to better give effect to CRPS Policy 9.3.1 – Protecting Significant Natural Areas which requires that areas identified as significant will be projected to ensure no net loss of indigenous biodiversity or indigenous biodiversity values as a result of land use activities.

15 The Regional Council's submission which seeks that both ECO-P2 and ECO- R4 apply to both mapped and unmapped SNAs has been recommended to be accepted by the s42A author. I support this recommendation.

16 However, the aspects of the Regional Council's submission seeking that the policy and rule apply to other land use activities (beyond just irrigation) has been rejected by the s42A reporting officer. The reporting officer accepted (paragraphs 677, 759) that other land use activities (in particular grazing and cultivation) can affect biodiversity values of nearby SNAs but considered "on balance" that despite having "ecological benefits" – that is, providing for the protection of significant natural areas as directed by the CRPS – further controls would be "overly restrictive on existing activities".

17 In the Waimakariri District, and other parts of the Canterbury Region, effects on adjoining areas of significant indigenous vegetation have resulted from agricultural intensification (both with and without irrigation) and from exotic forestry. This is because naturally dry, low nutrient indigenous vegetation is sensitive to irrigation, nutrient and exotic seed/vegetative propagules inputs from neighbouring land.

18 As land use intensity increases, there is a concurrent increase in resources (e.g. water and nutrients) required to support production. Spillover of water and/or nutrients into neighbouring indigenous vegetation makes the indigenous vegetation more vulnerable to invasion by weedy non-native species present in agricultural and plantation forest systems. In addition, spillover of nutrients to naturally low-nutrient systems disadvantages the native species which have slow relative growth rates and, therefore, limited ability to respond to increased soil nutrients. Spillover of both water and/or nutrients from adjacent land, therefore, has the potential to modify indigenous ecosystems by facilitating exotic plant invasions and lowering native species diversity (Walker et al 2019; Walker 2020).

19 The Regional Council's submission on this matter was supported in the evidence of WDC ecologist Ms Kate Steele appended to the s42A report. While accepting the validity of the ecological evidence on this matter, the reporting officer simply set it aside in their final recommendations.

20 Therefore, in my opinion ECO-P2 and ECO-R4 in the Waimakariri District Plan do not give effect to CRPS Policy 9.3.1(3).

21 In my opinion, if ECO-P2 and ECO-R4 as recommended by the s42A officer are adopted by WDC I would anticipate further and ongoing reduction in ecological values for many of the Waimakariri District's remaining SNAs. Areas identified as significant will *not* be protected to ensure no net loss of indigenous biodiversity or indigenous biodiversity values as a result of land use activities.

Listing of non-vascular plants in ECO-SCHED3 – Table ECO-2

22 ECO-SCHED 3 (renumbered as SCHED 2 in the s42A recommendations) lists naturally uncommon ecosystems, and species that are threatened, at risk, or reach their national or regional distribution limits in the Waimakariri District (which are referred to in ECO-MD1).

23 The Regional Council's submission point on this matter is noted in paragraph 563 of the s42A report. The submission sought amendment of Table ECO-2 to include 'threatened' and 'at risk' *non-vascular* plants. (N.B. for this purpose lichens, as well as mosses, liverworts and hornworts, were considered to be non-vascular 'plants'.)

24 In the assessment at paragraph 567 of the s42A report, it was noted that WDC's in-house ecologist agreed with the Regional Council's request and recommended the submitter provide such a list via evidence. This advice to make the amendment to Table ECO-2 was accepted by the reporting officer "provided ECan provide the list of these threatened and at risk non-vascular plants via evidence."

25 While I acknowledge this 'in principle' agreement to the proposed amendment, understanding of the conservation status of indigenous non-vascular flora is a specialist (and relatively recent) subject area In the timeframes available to prepare this evidence, I have not been able to finalise a list for inclusion. I proposed to seek to table a list at the hearing itself and recommend that WDC consider having the list of threatened / at risk non-vascular plants peer reviewed by a non-vascular flora specialist prior to its inclusion in Table ECO-2.

Dated this 30th day of August 2024

Philip Bryce Grove

References

Walker S., Brownstein G., Monks A. 2019. Avoiding cross-boundary effects on agricultural land use on indigenous dryland habitats in the Canterbury region: consenting guidelines and planning recommendations. Manaaki Whenua – Landcare Research Contract Report LC3636.

Walker S. 2020. Measured edge effects on indigenous grassland and shrubland vegetation on low-relief topography in Canterbury. Manaaki Whenua Landcare Research Contract Report LC3866.