BEFORE INDEPENDENT HEARING COMMISSIONERS APPOINTED BY THE WAIMAKARIRI DISTRICT COUNCIL

IN THE MATTER OF	The Resource Management Act 1991 (**RMA** or **the Act**)
AND	
IN THE MATTER OF	Hearing of Submissions and Further Submissions on the Proposed Waimakariri District Plan (**PWDP** or **the Proposed Plan**)
AND	
IN THE MATTER OF	Hearing of Submissions and Further Submissions on Variations 1 and 2 to the Proposed Waimakariri District Plan
AND	
IN THE MATTER OF	Submissions and Further Submissions on the Proposed Waimakariri District Plan by **Mark and Melissa Prosser**

SUPPLEMENTARY EVIDENCE OF SHARN BERNARD HAINSWORTH IN RESPONSE TO OFFICER REPORT ON BEHALF OF MARK AND MELISSA PROSSER REGARDING HEARING STREAM 12C

DATED: 8 July 2024

Presented for filing by:
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INTRODUCTION

1 My name is Sharn Bernard Hainsworth.

2 I have prepared a statement of evidence regarding Hearing Stream 12C in support of Mark and Melissa Prosser's submission on the Proposed Waimakariri District Plan (**PWDP**) to rezone approximately 73 ha at Mandeville from Rural Lifestyle Zone (**RLZ**) to Large Lot Residential Zone (**LLRZ**).

3 My qualifications and experience are set out in that statement. I confirm that this supplementary statement of evidence is also prepared in accordance with the Environment Court's Code of Conduct.

4 On 23 May 2024 the Waimakariri District Council (**Council**) released an Officer Report for Hearing Stream 12C prepared under section 42A of the RMA containing an analysis of submissions seeking Large Lot Residential Zone and recommendations in response to those submissions (**Officer Report**).

5 The Officer Report recommends that the Prosser rezoning submission be rejected. My supplementary evidence is filed in response to that Report.

SCOPE OF SUPPLEMENTARY EVIDENCE

6 In my supplementary evidence I address the following matters:

(a) My supplementary evidence responds to those parts of the Officer Report that address matters within scope of my expertise, with particular emphasis on matters where there is a difference of view between myself and the Officer Report.

7 In preparing my supplementary evidence I have:

(a) Reviewed the Officer Report and the Appendices to that Report relevant to my area of expertise;

(b) Reviewed my evidence in chief filed earlier on behalf of the Submitters; and

(c) The Panel's questions to the s42A report writer (Appendix 1 to Minute 27)

(d) Reviewed the Officer's preliminary response to written questions on Large Lot Residential Rezoning (the **Response Document**);

(e) Reviewed other materials specifically mentioned in my supplementary evidence discussed below.

CONTEXT AND APPROACH

8 As mentioned, the Officer Report recommends decline of the Prosser rezoning submission. A range of reasons are given for this recommendation, some of which relate to my area of expertise.

9 The approach I have adopted in this supplementary statement of evidence is to identify those parts of the Officer Report (including Appendices attached to that Report) where I disagree with the Officer Report and to explain my reasons for disagreement.

RESPONSE TO OFFICER REPORT

Detailed soils assessment

10 **At paragraph 159**, the Officer Report states: "I agree with part of the assessment undertaken by Mr Hainsworth. Points to note from the assessment is that the soils in the eastern portion of the site were considerably wet and the drainage would not be easily addressed."

11 I agree with this part of the Officer report.

12 Continuing on in paragraph 159, the Officer Report states "I do not agree with Mr Hainsworth's statement in his evidence that the LUC Survey Handbook states that LUC Class 4s land has a severe physical limitation for arable use or that the site can be remapped for the purposes of achieving the outcome sought by private landowners."

13 I disagree with this part of the Officer Report.

14 I believe that I have correctly described the LUC Class 4s land on the site, as having severe physical limitations to arable use. My opinion is based on the

description of LUC Class 4 land, in the Land Use Capability Survey Handbook (3rd edition 2009) (**LUC Survey Handbook)**, which states that:[1]

> *"Class 4 land has severe physical limitations to arable use. These limitations substantially reduce the range of crops which can be grown, and/or make intensive soil conservation and management necessary. In general, Class 4 land is suitable only for occasional cropping (e.g. once in 5 years or less frequently) although it is suitable for pasture tree crops or production forestry. The most common limitations which may occur include:*
>
> - *Moderate to high susceptibility to erosion under cultivation.*
> - *Strong rolling slopes (16-20º).*
> - *Very shallow (<20 cm) and/or stony, or very stony soils.*
> - *Excessive wetness after drainage.*
> - *Frequent flooding.*
> - *Very low moisture holding capacity.*
> - *Severe structural impediments to cultivation.*
> - *Low fertility difficult to correct (e.g. Al toxicity)*
> - *Moderate salinity.*
> - *Severe climatic limitations."*

15 I note bullet point 3 above states one of the most common limitations is: "very shallow (<20cm) and/or stony, or very stony soils". This limitation is relevant in this case.

16 The 60.8 ha map unit on this site that 1:12,500 scale soil and LUC mapping has mapped it as being a map unit containing 80% 4s7 + 20% 3s5 land. The land is dominated by soil that has less than 20cm of soil over a soil horizon containing greater than 35% gravels (gravels).

17 The soil limitation cannot simply be removed by irrigation. In this case, as I have stated in paragraph 31 of my evidence, the soils are at varying depths and have different germination times, and there is a higher risk of drought where differential irrigation is not available on the site. There is a high risk that crops in the unirrigated parts of the 60.8 ha map unit will fail in droughts. Even in the irrigated area, there other risks remain around

[1] LUC Survey Handbook, at page 58.

differential germination times, and being limited to having to use direct drilling.

18 The 4s7 + 3s5 map unit in question has a mapped area of 60.8 ha in my 1:12,500 scale map. At 1:50,000 scale, the scale of the New Zealand Land Resource Inventory (**NZLRI**) or S-map, the LUC Survey Handbook, states that the minimum delineable unit size is 10-40 ha. This unit is larger than a 1:50,000 minimum map unit, but contains 16 times more information within it because of the nature of the mapping completed for this exercise. There should be no question that the information is technically bone fide, such that under the NPS-HPL the land is defined as not versatile or highly productive.

19 As a former Manaaki Whenua Landcare Research pedologist, now working at Whenua Kōrero Ltd (formerly called LUC Assessments Ltd), my colleague Nadia Laubscher and I have produced these maps. We have produced these maps according to the standards of farm-scale soil mapping and to the standard of S-map. The map units have then been converted into LUC classes using the LUC Survey Handbook and correlated to regional LUC units found in the NZLRI. The new 12:500 scale map units contain more information but correlate both to S-map and to the NZLRI. This follows the guidelines in p 15 of the NPS-HPL Guide to Implementation.

REPLY TO RESPONSE DOCUMENT

20 I have reviewed the Response Document and although it is not entirely clear, it appears that the Reporting Officer now accepts my view that there are severe physical limitations associated with LUC Class 4s land.[2]

CONCLUSION

21 The area is zoned RLZ in the PWDP and was such prior to the commencement of the NPS-HPL, and is therefore exempt from the application of the NPS-HPL pursuant to clause 3.5(7)(b)(ii).

22 My more detailed soil and LUC mapping provides important information upon which Stuart Ford has been able to base his conclusions about the productive capacity of the site.

[2] Reply Report, at page 12, in response to para 159

23 In terms of the detailed technical information about the more detailed mapping on the site, I believe that I have correctly described the LUC Class 4s land on the site, as having severe physical limitations to arable use (as described in Section 3.2.4 of the LUC Survey Handbook.[3]

24 The soils are at varying depths and have different germination times, and there is a higher risk of drought where differential irrigation is not available on the site. There is a high risk that crops in the unirrigated parts of the 60.8 ha map unit will fail in droughts. Even in the irrigated area, there other risks remain around differential germination times, and being limited to having to use direct drilling.

25 One of the most common limitations in the LUC Survey Handbook is "very shallow (<20cm) and/or stony, or very stony soils", as described in the LUC Class 4s land on this site.

26 Thank you for the opportunity to present my evidence.

Sharn Hainsworth
8 July 2024

[3] LUC Survey Handbook, at page 58