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

EVIDENCE OF STUART JOHN FORD ON BEHALF OF MARK AND MELISSA PROSSER

DATED: 5 March 2024

Presented for filing by: Chris Fowler Saunders & Co PO Box 18, Christchurch T 021 311 784 chris.fowler@saunders.co.nz

INTRODUCTION

- 1 My full name is Stuart John Ford.
- I am a Director of The AgriBusiness Group and work as an agricultural and resource economist based in Christchurch. I have a Diploma in Agriculture and a Bachelor of Agricultural Commerce from Lincoln University and have undertaken post graduate studies in Agricultural and Resource Economics at Massey University.
- I am a member of the New Zealand Agriculture and Resource Economics

 Society and the Australia Agriculture and Resource Economics Society. I am also a member of the New Zealand Institute of Primary Industry Management.
- I have spent over thirty years as a consultant in the primary industries, with the last twenty five years specialising in agricultural and resource economics and business analysis.
- I have given evidence to District and Regional Council hearings, Special

 Tribunals to consider Conservation Orders and the Environment Court in my
 capacity as an agricultural and resources economist.
- My specific experience which relates to the capacity of soils and their value for productive uses includes my working for both the applicants and Councils. I have experience in relation to the productive capacity of elite / highly productive soils in the Auckland District which was gained from my role as a consultant resource economist for HortNZ.
- 7 This experience includes:
 - (a) Evidence to the Auckland Council on their Proposed Auckland Unitary
 Plan for a number of parties in relation to elite and prime soils.
 - (b) Evidence given on behalf of Auckland Council to the Environment Court in relation to the appeal of the Self Family Trust in regard to a land zoning decision on elite soils.
 - (c) Evidence given to an Auckland Council hearing as to the appropriate zoning of land at Clevedon.
 - (d) Initial report on the productive potential of land owned by Strategic Land Holdings at Waiau Pa.

- (e) Support for Auckland Council in preparing a Section 42A report on a development proposal at Patumahoe South in relation to the productivity of the land.
- (f) Support for Auckland Council in preparing a Section 42A report on a development proposal at O'Hara Waiuku in relation to the productivity of the land.
- (g) Provision of evidence to the Environment Court on the productive potential of the land known as Sticky Forest adjacent to Wanaka.
- I have been engaged in a large number of assessments that relate to the impacts of the National Policy Statement on Highly Productive Land (NPS-HPL) across New Zealand.
- I have read the Environment Court's Code of Conduct and agree to comply with it. My qualifications as an expert are set out above. The matters addressed in my evidence are within my area of expertise, however where I make statements on issues that are not in my area of expertise, I will state whose evidence I have relied upon. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed in my evidence.

SCOPE OF EVIDENCE

- 10 In my evidence I address the following issues:
 - (a) The impact of the National Policy Statement on Highly Productive Land (NPS-HPL), should it apply.
 - (b) The impact of changing from the current consenting status of the site which is RC205106, granted October 2020, providing for a 20 lot subdivision of the site to the proposed rural residential zoning.
 - (c) The impact of changing from the current land use to the rural residential zoning.

CONTEXT

The site is currently held in two titles and is legally described as Lot 6 DP 2038 held within Record of Title CB21K/781 and Lot 8 DP 314202 held within Record of Title 56165 and consists of approximately 78ha. I understand that Evidence of Stuart Ford for Prosser dated 5 March 2024 (Agricultural Productivity)

- the proposed subdivision is for approximately 74ha with the remaining 4 ha remaining as a rural lot.
- An existing resource consent RC205106, granted October 2020 provides for a 20 lot subdivision of the site to 4ha lots.
- Mark and Melissa Prosser of Ohoka Farm Holdings Ltd currently seek to change the zoning of the site in the proposed Waimakariri District Plan from rural to rural residential and develop the site into lots ranging in size from 2,500 m2, with an average of 5,000 m².

SUMMARY

- LUC Assessments Ltd have carried out a detailed survey of the soils within the Site and have classified the Land Use Capability (LUC) of the site1. The only area of land which meets the definition of Highly Productive Land (HPL) in the NPS-HPL is the 11.8ha of Class 3 land.
- I am aware that the NPS-HPL doesn't apply to the site because the land has already been consented for subdivision to 4 ha lots and because the site is zoned as rural lifestyle in the proposed Waimakariri District Plan. Even so, for completeness, I have completed an assessment under clause 3.10 of the NPS-HPL to illustrate that the impacts of the proposed rezoning of the Site to rural residential, including that part of the site containing land which meets the definition of Highly Productive Land (HPL), are positive. This assessment also informs my analysis of the impact of the existing 4ha lot subdivision consent.
- It is my opinion that on the 11.8ha of land which is classified as HPL that irrigated arable and pastoral land uses are theoretically possible but not horticultural.
- Given the constraints on land use, the highest and best land use of the site is 'Irrigated Dairy Support' as represented by heifer grazing. The 11.8 ha of HPL is unable to be considered as commercially viable.
- The Gross Revenue from the site, if it were in its consented 4 ha form, is relatively modest at approximately \$74k and the Earnings Before Interest and Tax (EBIT) is not significant at approximately \$25k.

¹ LUC Assessments Ltd, 2023: Land Use Capability Assessment: 2 Ashworth Rd, Ohoka, 7692. Evidence of Stuart Ford for Prosser dated 5 March 2024 (Agricultural Productivity)

- The current financial performance of the site is a reasonably substantial Gross Revenue of approximately \$271k and a satisfactory EBIT of \$121k.
- 20 What I can conclude from this analysis is that there would be a large proportionate drop in the financial performance of the site from its current best and highest use to the consented best and highest use but the loss of agricultural financial performance from the consented use to the proposed use is not significant.
- On this basis I consider that the loss of productive farmland, because of the rezoning of the site to large lot residential, will be minimal and should not impede future development of the site.

THE RECEIVING ENVIRONMENT

The location and surrounds of the site (boundaries highlighted in red), are shown in **Figure 1.** The town of Mandeville which is characterised by large lot residential urban development is to the immediate South and West of the site. Further to the West and North there is rural lifestyle block development while to the East there is an area of larger lifestyle blocks. The only large scale farm unit is a dairy farm which is at the top left of the figure.



Figure 1: Map of the site showing the neighbouring land uses (Google Earth) the boundaries shown in this figure are approximate.

The site is partially irrigated by a centre pivot irrigator.

THE IMPACT OF THE NATIONAL POLICY STATEMENT ON HIGHLY PRODUCTIVE LAND

I am aware that the NPS-HPL doesn't apply to the site because the land has already been consented for subdivision to 4 ha lots and because the site is zoned as rural lifestyle in the proposed Waimakariri District Plan. Even so, for completeness, I have completed an assessment under clause 3.10 to illustrate that the net impacts of the proposed rezoning of that part of the site containing HPL are positive. This assessment also informs my analysis of the impact of the existing 4ha lot subdivision consent.

Productivity

- The productivity of the site is determined by a number of factors including the nature of the soils, the climate and the scale of the operation. The viability2 of the site is determined by the ability of the site to return profits from the farming of the site to offer the owners a sufficient return.
- LUC Assessments Ltd have carried out a detailed survey of the soils as a site-specific 1:12,500 scale soil map and have classified the Land Use Capability (LUC) of the site3. In that report they display their findings on the soil types as shown in **Figure 2**.



Figure 2: The soils on the site as described by LUC Assessments Ltd

- I note that the soils are listed in a generic form as LUC Assessments note that the individual soil types which they identified were distributed in a patchy format throughout the site which precluded them from delineating them individually. LUC Assessments note that the soil types were not contiguous and that they were spread out across the area.
- Definitions of the key soil physical properties that are listed in the SMap fact sheets reports⁴ for the soils present on the site are shown in Table 1.

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Evidence of Stuart Ford for Prosser dated 5 March 2024 (Agricultural Productivity)

² I use the definition for viability that is used in the Cambridge dictionary which is "the ability of a business, product, or service to compete effectively and to make a profit".

³ LUC Assessments Ltd, 2023: Land Use Capability Assessment: 2 Ashworth Rd, Ohoka, 7692.

⁴ https://smap.landcareresearch.co.nz/maps-and-tools/factsheets/

Table 1: Physical properties of the soil types as listed in SMap fact sheets.

Soil Name	Darnley	Darnley	Darnley	Leeston	Pahau
SMap Name	Darnley_6 a.1	Darnley_1a. 1	Darnley_7a. 1	Leeston_1a. 1	Pahau_2a. 1
Depth Class	Very shallow (0 - 20 cm)	Shallow (25 - 60 cm)	Shallow (15 - 35 cm)	Shallow (20 - 45 cm)	Moderatel y deep (70 - 90 cm)
Rooting Depth	Unlimited	80 - 90 (cm)	60 - 90 (cm)	70 - 100 (cm)	Unlimited
Depth to stony layer	Shallow	Shallow	Shallow	Shallow	Moderatel y deep
Texture profile	Silt	Silt	Silt	Clay	Silt
Topsoil stoniness	Very Stony	Slightly stony	Moderately stony	Slightly stony	Stoneless
Drainage class	Moderatel y Well	Moderately well drained	Moderately well drained	Poorly drained	Imperfectl y drained
Profile Available Water (0 to 100 cm)	Moderatel y to low (82 mm)	Moderate (104 mm)	Moderately to low (78 mm)	Moderate (111 mm)	Moderate 116 mm

- 29 The Darnley soils, which make up the largest area of the site can be described as shallow silts which have a slightly to moderately stoniness, are moderately well drained and have a moderate to low Plant Available Water (PAW). The Leeston soils are shallow clays that are slightly stony, are poorly drained and have a moderate PAW. The Pahau soils are moderately deep silts which are stoneless, imperfectly drained with a moderate PAW.
- The Darnley 6a.1 and 7a.1 soils, because of their shallow nature, are theoretically suitable for pastoral land uses while the deeper Darnley 1a.1 and the Leeston and Pahau soils are theoretically suitable for arable or pastoral land uses.

Land Use Capability (LUC)

LUC Assessments have assessed the LUC status of the site as shown in **Figure**3.



Figure 3: LUC classes of the subject land. Light green area is predominantly Class 4 the Blue area is Class 3.

32 In their report they describe their assessment as follows:

On the higher terrace of the property (western side), LUC Assessments found 60.8 ha of land classified as LUC 4s (which correlated to the regional NZLRI LUC classification of 4s7) and LUC 3s (which correlated to the regional NZLRI LUC classification of 3s5).

They go on to outline:

Although this portion of land contains some shallow 3s land, LUC Assessments argue that this section should not be considered HPL given the limitations imposed by the LUC 4s portion.

LUC Assessments found that the section in the north contained 11.8 ha of a mixture of 3w (correlates with the 3w1 regional scale LUC classification) and 3s land. The area in the north contained clay loam textured Gley Soil with gravels occurring between 20-45 cm (Figure 11). This meets the definition of HPL (LUC 1-3)

LUC Assessments found that the most eastern portion of the property contained Typic Orthic Gley, Argillic Orthic Gley (clay textured) and Typic Perched-Gley Pallic Soil. It was found that 4.8 ha of land was noticeably different to the rest of the farm in terms of soil and is reflected in the LUC Classification i.e., the limitation is wetness rather than depth of gravels and stoniness of the soil. LUC Assessments have allocated this portion of the section as 4w and therefore does not meet the criteria for HPL.

From the assessment carried out by LUC Assessments I conclude that although the area shown to the East in Figure 3 has approximately 20% of LUC 3 land amongst the LUC 4 land because it is scattered, non-contiguous

- and unable to be delineated it has been classified as LUC 4, which is the dominant classification of that area of land.
- The only area of land which meets the definition of HPL in the NPS-HPL is the 11.8ha of Class 3 land which is the triangular shape of blue in Figure 3.

Land Use Potential

- It is my opinion that on the 11.8ha of land which is classified as HPL that irrigated arable and pastoral land uses are theoretically possible but not horticultural.
- While the potential for intensive horticultural land use has been considered it is not considered viable for a number of reasons:
 - (a) The cold winters limit the potential range of horticultural crops;
 - (b) The site is remote from any post harvest packaging and processing facilities which would add large additional growing costs; and
 - (c) The potential for reverse sensitivity from the surrounding neighbours that are situated in relatively close proximity would mean that investors in horticultural and arable activities are most likely to seek alternative production areas where there is no threat of reverse sensitivity becoming a production issue.
- To maximise the productivity of either of pastoral or arable land uses would require that the land was farmed as one entity that is able to achieve the economies of scale that are necessary in farming in Aotearoa. The 11.8ha that is HPL does not achieve the necessary scale.
- The area of land available would severely limit the ability to carry out a crop rotation for an arable growing operation. The block of land would have to be incorporated into a bigger growing operation in order to achieve sufficient scale to enable the landowner to maximise productivity and achieve commercial viability.
- While it is not impossible for landowners to join together to maximise the possible financial returns from joining their land together for one collective use it is my opinion that the necessary driver to achieve this goal is that the financial returns from joining the land together must be advantageous to both parties. It is my opinion that the distance required for a current arable

- farmer to travel would preclude them from being interested in combining their current property with such a small block of land.
- Additionally, the shape of the block would make it difficult to carry out cultivation with modern wide machinery. This could be overcome by including it in the land immediately to the east, but as identified the soils in this area are predominantly shallow and moderately stony which do not make them conducive to high yielding arable crops. Therefore, it is extremely unlikely that it would be attractive for an arable farmer to incorporate this wider block of land into their overall operation, even if the distance travelled was considered worthwhile.
- While it may be possible to combine the use of the land for pastoral land uses it is my opinion that this would not be attractive to another pastoral farmer because the size of the block and the fact that there would be the need to travel into an area which is more densely developed by lifestyle blocks and large lot residential which would not be an attractive proposition for a farmer to enter into.

Viability

- It is my opinion that given the constraints on land use, the highest and best land use of the site is 'Irrigated Dairy Support' as represented by heifer grazing. In order to assess the commercial viability of the site, I have assumed that this land use is able to be managed across 11.8 ha of the site.
- For the dairy support model, I have used TAG's Dairy Support model which has been altered to reflect the stocking rate, prices paid and costs of farming in the Canterbury Region.
- The key financial metrics of this model are shown in Table 2. The Earnings

 Before Interest and Tax (EBIT) measure shows the amount of surplus which is

 generated which is available to pay interest incurred in operating, taxation to
 be paid and an additional sum which rewards the management of the

 property.

Table 2: Key financial metrics of Dairy Support representative models (\$ / ha)

	Dairy Support
Gross Farm Revenue	3,860
Farm Operating Expenses	2,126
Earnings Before Interest and Tax	1,733

45 If the 11.8 ha was available for production, the financial performance could be as shown in Table 3.

Table 3: Financial performance of Dairy Support (\$/ha)

	Dairy Support
Gross Farm Revenue	45,548
Farm Operating Expenses	25,087
Earnings Before Interest and Tax	20,449

- Although calculating the amount that would be required to provide sufficient income is very subjective if I were to provide a sense check by providing for a return for management of 1.5% of the Gross Revenue and Interest payments on 40 percent of the capital value of the property at 7%, the total required would be \$19,754. Note that there would be no tax to pay as the net taxation position of the site under the assumptions made would be a \$696 loss.
- It is my opinion that pastoral land use that could operate on 11.8 ha of the site is unable to provide sufficient income to provide for interest, taxation and a return for management as a stand-alone unit. Therefore, I conclude that the 11.8 ha of HPL is a site unable to be considered as commercially viable.

Consideration of the NPS-HPL

- Clause 3.10 in the NPS-HPL Exemption for highly productive land subject to permanent or long-term constraints states that:
 - (1) Territorial authorities may only allow highly productive land to be subdivided, used, or developed for activities not otherwise enabled under clauses 3.7, 3.8, or 3.9 if satisfied that:
 - (a) there are permanent or long-term constraints on the land that mean the use of the highly productive land for land-based primary production is not able to be economically viable for at least 30 years; and
 - (b) the subdivision, use, or development:
 - (i) avoids any significant loss (either individually or cumulatively) of productive capacity of highly productive land in the district; and

- (ii) avoids the fragmentation of large and geographically cohesive areas of highly productive land; and
- (iii) avoids if possible, or otherwise mitigates, any potential reverse sensitivity effects on surrounding land-based primary production from the subdivision, use, or development; and
- (c) the environmental, social, cultural and economic benefits of the subdivision, use, or development outweigh the long-term environmental, social, cultural and economic costs associated with the loss of highly productive land for land-based primary production, taking into account both tangible and intangible values.
- (2) In order to satisfy a territorial authority as required by subclause (1)(a), an applicant must demonstrate that the permanent or long-term constraints on economic viability cannot be addressed_through any reasonably practicable options that would retain the productive capacity of the highly productive land, by evaluating options such as (without limitation):
 - (a) alternate forms of land-based primary production:
 - (b) improved land-management strategies:
 - (c) *alternative production strategies:*
 - (d) water efficiency or storage methods:
 - (e) reallocation or transfer of water and nutrient allocations:
 - (f) boundary adjustments (including amalgamations):
 - (g) lease arrangements.
- In relation to 1 (a), it is my opinion that the use of HPL for primary production on the site is not able to be economically viable for at least 30 years and that in coming to that conclusion I have evaluated the following reasonably practical options:
- The model that I have used to test the commercial viability of the block has used the highest and best possible land use option that have been derived because of factors including the lack of size and the shape of the block and the large distances from farming operations which they could be combined with.

- 51 The model used reflects the average performance of the representative model.
- 52 In relation to 1 (b) (i), I are of the opinion that the loss of 11.8 ha of HPL is not significant in the Canterbury Region which contains 824,286 ha of available HPL land5.
- 53 In relation to 1(b) (ii), I am of the opinion that the proposal avoids the fragmentation of large and geographically cohesive areas of HPL because the site is effectively on the border between HPL and non HPL land and therefore the remaining HPL land will maintain its cohesive nature.
- 54 In relation to 1(b) (iii), I am of the opinion that the proposal avoids any potential reverse sensitivity effects on surrounding land-based primary production from the land use outcome. This is because much of the surrounding land comprises rural residential blocks which means that the subdivision of this block of land would be unlikely to add to the potential or create any new reverse sensitivity issues.
- 55 In relation to 1(c), Mr Paynes Ecological Evidence demonstrates that large lot residential development undertaken in accordance with the proposed Outline Development Plan would result in at least no net loss of biodiversity, and most likely, a biodiversity net gain.
- 56 The negative environmental impacts from farming activity such as Nitrogen leaching into the groundwater and Greenhouse gas emissions will cease with the change in land use.
- 57 The social impacts are positive because the addition of new residential sites will add to the social fabric of the area by adding increased population of the immediate area.
- 58 The economic impact is positive because, as explained previously, the site's highest and best use for primary production is not commercially viable so effectively its transition to another (residential) land use will be a positive benefit.
- 59 As detailed above, it is my opinion that the costs associated with the loss of HPL will be limited because it is not economically viable to use the site for

⁵ Journeaux, P et al (2017): Analysis of drivers and barriers to land use change. A Report prepared for the Ministry for Primary Industries

- primary production. I have concluded that the net environmental, social and economic impacts are positive.
- It is my conclusion that the proposed rezoning of the site to enable the residential development meets all of the limbs in the clause 3.10 (1) test. By satisfying the requirements of 3.10 (2) in that the permanent or long-term constraints on economic viability cannot be addressed through any reasonably practicable options that would retain the productive capacity of the highly productive land Waimakariri District Council should be satisfied that this HPL can be subdivided, used, or developed for activities not otherwise enabled under clauses 3.7, 3.8, or 3.9 of the NPS-HPL.

The impact of changing from the current consenting status of the site which is 4ha lots to the proposed rural residential zoning.

- The consented 4ha subdivision of the site is essentially anticipated rural lifestyle development.
- Throughout my career I have always been of the opinion that rural lifestyle land is best incorporated into any economic analysis at half the productive capacity and economic performance of what it would be analysed as a full economic farm. While I don't have any research results to back up this assumption, I believe that it satisfactorily accounts for those lifestyle dwellers that do so because of that ability to live in significant separation from their neighbours and gives them the ability to carry out leisure activities on their land which aren't connected to traditional rural production systems and those that are interested in maximising the rural production from their land.
- It is my impression that the former rural lifestylers far exceed the number of the latter. I am of the opinion for this exercise this assumption is generous in the assumption of the productive output.
- It would not be possible to irrigate the site if it was in 4 ha blocks.
- In the consented scenario, given the soil types that are on the land I am of the opinion that its highest and best use is dryland sheep and beef farming.
- The sheep and beef model that I have used to create the financial performance of the site is the Beef and Lamb NZ's (B+LNZ) farm monitoring representative model Class 6 Canterbury / Marlborough finishing and

- breeding model. It represents performance of a dryland model within a 650 mm rainfall area.
- I have assumed that it is appropriate to use this model over the whole 78ha area.
- In **Table 4** I have shown the financial performance of the B+LNZ's representative model on a per ha basis and the assumed financial performance of the site if it was in 4 ha lots.

Table 4: Financial performance of the site if it were in 4 ha blocks.

	Financial returns from the B+LNZ model. \$/ha	Financial returns from the site if it were in 4 ha lifestyle blocks.
Gross Farm Revenue	1,907	74,373
Farm Operating Expenses	1,260	49,140
EBIT	646	25,194

Table 4 shows that the Gross Revenue from the site, if it were in its consented form, is relatively modest at approximately \$74k and the EBIT is not significant at approximately \$25k.

THE IMPACT OF CHANGING FROM THE CURRENT LAND USE TO THE PROPOSED RURAL RESIDENTIAL ZONING.

- All of the agricultural productivity of the site would be lost if the site was rezoned as proposed to Large Lot Residential
- 71 Currently the highest and best use of the land 90% irrigated and 10% dryland dairy support. The financial performance of the site currently would be as is shown in **Table 5.**

Table 5: Financial performance of the site currently.

	Current Performance
Gross Farm Revenue	271,294
Farm Operating Expenses	149,442
Earnings Before Interest and Tax	121,782

72 **Table 5** shows that the current financial performance of the site is a reasonably substantial Gross Revenue of approximately \$271k and a satisfactory EBIT of \$121k.

Evidence of Stuart Ford for Prosser dated 5 March 2024 (Agricultural Productivity)

CONCLUSION

- An existing resource consent RC205106, granted October 2020 provides for a 20 lot subdivision of the site to 4ha lots.
- Ohoka Farm Holdings Ltd seek to change the zoning of the site in the proposed Waimakariri District Plan from rural to rural residential and develop the site into lots ranging in size from 2,500 m2, with an average of 5,000 m2.
- It is my opinion that pastoral land use that could operate on 11.8 ha of the site which is classified as NPS-HPL is unable to provide sufficient income to provide for interest, taxation and a return for management as a stand-alone unit. Therefore, I conclude that the 11.8 ha of HPL is a site unable to be considered as commercially viable.
- It is my conclusion that the proposed rezoning of the site to enable the residential development meets all of the limbs in the clause 3.10 (1) test. By satisfying the requirements of 3.10 (2) in that the permanent or long-term constraints on economic viability cannot be addressed through any reasonably practicable options that would retain the productive capacity of the highly productive land Waimakariri District Council should be satisfied that this HPL can be subdivided, used, or developed for activities not otherwise enabled under clauses 3.7, 3.8, or 3.9 of the NPS-HPL.
- 77 The Gross Revenue from the site, if it were in its consented 4 ha form, is relatively modest at approximately \$74k and the EBIT is not significant at approximately \$25k.
- 78 The current financial performance of the site is a reasonably substantial Gross Revenue of approximately \$271k and a satisfactory EBIT of \$121k.
- 79 What I can conclude from this analysis is that there would be a large proportionate drop in the financial performance of the site from its current best and highest use to the consented best and highest use but the loss of agricultural financial performance from the consented use to the proposed use is not significant.
- On this basis I consider that the loss of productive farmland, because of the rezoning of the site to large lot residential, will be minimal and should not impede future development of the site.

81 Thank you for the opportunity to present my evidence.

Stuart Ford 5 March 2024