542A.

37

Before the Hearings Panel
At Waimakariri District Council

Under	Schedule 1 of the Resource Management Act 1991
In the matter of	the Proposed Waimakariri District Plan
Between	**Rolleston Industrial Developments Limited**
	Submitters
And	**Waimakariri District Council**

Summary Statement of evidence of Stuart Ford on behalf of Waimakariri District Council on Private Plan Change RCP031

Date: 4th August 2023

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 at Lincoln.

2 I provided the report titled "PC 31 Ohoka – Productivity Assessment and comment on the NPS-HPL - Technical specialist report to contribute towards Council's section 42A hearing report." for the Waimkarariri District Council. That report was included in the Section 42A report.

3 In that report I commented on the applicant's report "Assessment of Potential Loss of Productive Land" which was provided by Mr Mthamo and provided my own assessment of the productivity of the land and the impact of the National Policy Statement on Highly Productive Land (NPS-HPL). Subsequently Mr Mthamo has provided you with his Evidence in Chief (EIC) and Mr Everest has provided you with his report which is titled "PC31 to Operative Waimakariri District Plan - Economic Viability Assessment" which is included as Attachment G to Mr T Walsh's EIC. In this statement I comment on these two reports.

4 I have prepared this summary statement of evidence on behalf of the Waimakariri District Council (**District Council**) in respect of the Private Plan Change RCP031 (**RCP031**).

5 I am authorised to provide this evidence on behalf of the District Council.

QUALIFICATIONS AND EXPERIENCE

6 I have a Diploma in Agriculture and Bachelor of Agricultural Commerce from Lincoln University and have undertaken post graduate studies in Agricultural and Resource Economics at Massey University.

7 I am a member of the New Zealand Agriculture and Resource Economics Society and the Australian Agriculture and Resource

Economics Society. I am also a member of the New Zealand Institute of Primary Industry Management.

8 I have spent over 40 years as a consultant in the primary industries, with the last twenty-five years specialising in agricultural and resource economics and business analysis.

9 I have specific expertise and experience which relates to the capacity of soils and their value for productive uses include working for both applicants and Councils. I have experience in relation to the productive capacity of elite / highly productive soils much of this experience has been gained from my role as a consultant resource economist for HortNZ.

10 I have extensive experience in assessing the impact of the NPS-HPL on land throughout New Zealand (see appendix A).

11 I have prepared and presented evidence to District and Regional Council Hearings Panels as well as the Environment Court and Special Hearing Panels on Conservation Orders.

Code of conduct

12 Although this is a Council Hearing, I have read the Code of Conduct for Expert Witnesses contained in the Practice Note issued by the Environment Court January 2023. I have complied with that Code when preparing my written statement of evidence and I agree to comply with it when I give any oral evidence.

13 My qualifications as an expert are set out above.

14 Except where I state I rely on the evidence of another person, I confirm that the issues addressed in this statement of evidence are within my area of expertise, and I have not omitted to consider material facts known to me that might alter or detract from my expressed opinions.

MR MTHAMO'S EVIDENCE IN CHIEF

15 I state in my report in summary that:

16 *Mr Mthamos statement relies on the Environment Canterbury's Regional Policy Statement definition of versatile soils rather than the NPS-HPL to identify the range of LUC classification which could guide his assessment of the productive capacity of the site. He fails to convince us of the veracity of the constraints that he has identified because:*

16.1 *In my view an assessment of the productivity of land should be carried out on its highest and best use which may not necessarily be its current use.*

16.2 *The majority of the constraints he has identified are theoretical and he hasn't proven the connection between his theoretical constructs and what is possible on the site.*

16.3 *The LUC classification is based on a 1 to 50,000 scale map which is too coarse for a property of this size.*

16.4 *For the majority of his constraints, he has presented a worst possible example rather than an average situation.*

16.5 *He has not stated what the properties Baseline GMP loss rate is and the example that he has included is not helpful in determining what it is.*

17 In his evidence to you Mr Mthamo has responded to my report. I have considered what he has said and still consider that my statement is correct. There is however some additional information in Mr Mthamos evidence that wasn't in the initial applicant's evidence that I think that it is important to expand on.

The sites modelled N Losses.

18 Mr Mthamo has provided the Overseer Summary Report in order to establish the Nitrogen Baseline for the property. Under the Canterbury Land and Water Regional Plan (CLWRP) a farm must calculate its average Nitrogen losses for the years of 2009 to 2013. In the summary report provided in Mr Mthamos evidence there are only two years that are reported which are within the five year reporting timeframe, 2012 and 2013. So, we have to assume that 14 kg N/ha/yr, which is the average of the two years reported, is the properties baseline figure.

19 Mr Mthamo goes on to state that:

"From the foregoing it is clear that the N losses have been kept at low levels through prudent farm system management which has also meant keeping inputs low levels with the consequence being less than optimal productivity."

20 I have been using Overseer and its predecessors for at least the last 25 years of my career to calculate nutrient losses in both research projects and on my clients' properties. What I have learned from that experience is that by far the largest determinant of the scale of Nitrogen losses of any system is the nature of the soils. Soils which I would describe as heavy, that is soils that are clay based and are poorly drained, are very low in the quantum of Nitrogen leached through the soil profile compared to soils that are light, that is, sand or loam based and are free draining, even if they are running exactly the same farming system.

21 I have calculated a large number of nutrient budgets for dairy farms on the same soils as those found on the applicant's farm that are leaching Nitrogen at the same rates as those being achieved at the applicant's farm. Many of these are relatively high input and high productivity farms with one who has consistently produced kilograms of milksolids per ha which are in the top 25% of Fonterra suppliers within the district

with a baseline of 16 kg N/ha/yr from a high input system. My point is that the soils on the applicant's farm are very forgiving in terms of Nitrogen leaching and that the nature of the soils has a far greater impact on the rate of Nitrogen leaching than any system management, the rate of inputs or the ability to achieve optimum productivity.

22 I am not convinced that the Nitrogen leaching status of the farm is a valid constraint to its land use potential.

23 Mr Mthamo then goes on to conclude (at 91.1) that:

"The site has no potential for increased intensification and the current low productivity (as demonstrated by the current low stocking rates) will be an on-going issue due to the nutrient constraints. The fact that the site has LUC Class 2 and 3 soils is not reflected by the Site's productive potential."

24 It is my understanding that the current dairy farming system is one which is focused on producing animals of superior genetic material which can be used in the dairy industry to improve productivity. One of the aspects of this sort of system is to stock animals at a relatively low stocking rate but to milk them for a longer lactation at a higher rate of production than what is achieved on normal farms. I would expect that the productivity of the farm under the current management would be at or above what can be achieved on a normal farm. Mr Mthamo hasn't produced any data to verify his contention that the farm is in fact low productivity or that there is any connection between the current productive status of the farm and nutrient constraints.

25 In the "Land Use Capability Survey Handbook -3rd Edition" which is the Bible for LUC Classification it states that:

"The Land Use Capability (LUC) Classification is defined as a systematic arrangement of different kind s of land according to those properties that determine its capacity for long term sustained production.

Capability is used in the sense of suitability for productive use or uses after taking into account the physical limitations of the land."

26 I cannot reconcile this description of the classification system with Mr Mthamos opinion that the classification of the site does not reflect the sites productive potential, it is my understanding that the LUC classification system is designed specifically to reflect the productive potential of the land. This leads me onto my next point.

The use of the 1:50,000 scale mapping.

27 At his paragraph 118 of his Evidence in Chief (EIC) Mr Mthamo states that:

"While I recognise the fact that farm specific mapping might yield different results, I am not convinced that for this Site the LUC classes would be very different to those currently mapped. The geotechnical investigations that have been undertaken on the Site to date confirm this view."

28 It is my experience that in situations where a field scale view of the LUC classifications is carried out on a particular site that the classification of the land often changes from the assessment in the LRIS. It is my opinion that if the constraints of wetness were as limiting as Mr Mthamo has portrayed them as to the productivity of the land that a downgrading of the current, high level, classifications would be justified. I am quite surprised that the applicant hasn't engaged an expert to perform a more detailed LUC classification and that Mr Mthamo is not convinced that they would be different. Therefore, I am comfortable with using the LUC classification taken from the LRIS.

Trivialisation

29 In various parts of his EIC Mr Mthamo accuses me of "minimising" or "trivialising" his assessment of various constraints. I take strong exception to his view of my evidence. It is my opinion that my evidence, where it questions the veracity of Mr Mthamos evidence, seeks to point out that there is little or no connection between what Mr Mthamo has described and the actual impacts on the land itself. He describes a theoretical impact but doesn't describe what long term or permanent constraint that this impact has on the productive capacity of the land.

30 At no point have I offered an opinion as to the scale of the impact therefore I cannot see how he is correct in asserting that I have minimised or trivialised the impact. What I say in my summary is that he hasn't convinced us of the veracity of the constraints.

MR EVEREST'S EVIDENCE

31 Mr Everest has carried out an Economic Viability Assessment in order to assist you to make an assessment of whether or not it is able to be economically viable and therefore meet or not meet the requirements of 3.10 (1) of the NPS-HPL.

32 I would note that Mr Everest has calculated the effective area of the farm using mapping software to be 10.8% of the total area which is much closer to my observation of similar Canterbury dairy farms being up to 10% than Mr Mthamos estimate of being "*in the order of 10 - 25%*" which would justify my comment that it "*is not helpful in determining the area that is available for productive purposes because it expresses too great a spread to be able to afford us any comfort in its accuracy.*"

33 In his section 3.5 Reverse Sensitivity he traverses the issue and concludes that "*While the current use of land is for dairy farming and arable cropping, a prudent primary production operator of the PC31*

site would likely expect to have to operate a more conservative farm programme in coming years in order to meet residential amenity expectations. A more conservative production programme, results in poorer profitability and often makes properties economically unviable."

34 In coming to this conclusion Mr Everest has apparently not considered Policy 9 of the NPS-HPL which states that "*Reverse sensitivity effects are managed so as not to constrain land-based primary production activities on highly productive land.*" This part of the legislation has been enacted to ensure that the sort of scenario, which Mr Everest conjects as being likely, is not possible. The whole point of the NPS-HPL is to maintain the productivity of HPL land in its current state.

35 In section 3.13 Managing reverse sensitivity and cumulative effects the NPS-HPL states that:

> *(1) Territorial authorities must include objectives, policies, and rules in their district plans that:*
>
> (a) *identify typical activities and effects associated with land-based primary production on highly productive land that should be anticipated and tolerated in a productive rural environment; and*
>
> .....

36 Even if the NPS-HPL does not apply, it is my understanding that the Waimakariri District Plan and Canterbury Regional Policy Statement have provisions to protect rural production activities from reverse sensitivity. Far from there being a risk for farmers to expect that their future farming operation will need to be more conservative in order to meet residential expectations their current activities will be protected from complaints by legislation in order to maintain the current productive capacity of productive land.

37 In his *Section 5 Economic Viability* Mr Everest has identified three practically viable land use options being Irrigated Livestock Trading,

Dairy Farming and Horticulture. From his explanation in *4.1 Practically the viable land uses for the site are*: he has modelled Horticulture as a Vegetable and arable farming rotation as a proxy for vegetable production.

38 He has tested each of the options to determine their commercial viability against his criteria of achieving a specified renumeration to the owners and achieving a return on capital (ROC) of 4%.

39 While we cannot see the workings of his models, I am surprised that his Irrigated livestock trading model achieves Earnings Before Interest and Tax of $1,080 when a five year average of the B+LNZ's Class 6 Finishing Breeding representative model shows a $612 EBIT whilst having breeding animals as part of the system and being dryland. I would have expected that the difference between the two models would have been significantly greater.

40 I agree with the financial performance of his Dairy model which achieves much the same EBIT as my model. I am somewhat intrigued that his arable / vegetable model achieves a higher EBIT than his Dairy model. In all of the modelling that I have done it is very rare for an arable / vegetable model to achieve a higher EBIT than a Dairy model.

41 It is however pleasing to see that he has projected the productivity of the land at about the same level as myself as reflected in achieving a very similar income and expenditure as a dairy farm, meaning that he has assessed the various constraints that are on the land and has come to the conclusion that they aren't significantly limiting on production.

42 In his *Figure 1: Enterprise Profitability and Return on Capital* he has used the current rating valuation to determine the value of land and improvements to use in his calculation of Return on Capital which is $105,837 /ha. This is a very high value for rural dairy land. I would expect that Dairy land would sit at a value of around $60,000 / ha in Canterbury currently, depending on the intensity of improvements. The value that has been given to the site in the rating valuation in my opinion

is in relation to its potential for lifestyle development at the time that the valuation was carried out, before the NPS-HPL came into being.

43 If we were to value the land at a more realistic $70,000 /ha, which in my opinion is a high value for Dairy land, then the resulting Return on Capital for the three land uses are as shown in Table 1 with the Livestock Trading achieving a 1.5% ROC, the Dairy Farm achieving a 4.9% ROC and the Arable / Vegetable model achieving a 5.4% ROC.

Table 1: Enterprise Profitability and Return on Capital with realistic valuation ($/ha)

	Livestock Trading	Dairy	Arable/ vegetable
Land Value	70,000	70,000	70,000
Capital Stock	1,331	4,573	-
Plant and Machinery	898	1,636	5,292
Total Capital	72,229	76,209	75,292
EBIT	1,080	3,742	4,038
ROC	1.5%	4.9%	5.4%

44 If we are to then combine the owners renumeration and the ROC, as explained in Mr Everest's report at Paragraph 37, we find that the Dairy farm exceeds the target specified by Mr Everest by $79,291 and the arable/ vegetable model exceeds it by $125,436.

45 I then come to the conclusion that the two land uses under a more realistic valuation are economically viable using Mr Everest's criteria and would meet his requirement under the NPS-HPL but it also shows that even if the NPS-HPL doesn't apply the land can still be considered to be commercially viable based on Mr Everest's view of its productivity.

Date: 4/08/2023

.....

Appendix A: Stuart Fords experience in land use productivity and the NPS-HPL:

- Evidence to the Auckland Council on their Proposed Auckland Unitary Plan for a number of parties.
- 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.
- Evidence given to an Auckland Council hearing as to the appropriate zoning of land at Clevedon.
- Initial report on the productive potential of land owned by Strategic Land Holdings at Waiau Pa.
- 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.
- 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.
- Provision of evidence to the Environment Court on the productive potential of the land known as Sticky Forest adjacent to Wanaka.
- Provision of a report on the commercial viability of Rangitane River Park - Kerikeri to be used in a re zoning application.
- Provision of a report on the agricultural productivity and commercial viability of land at Kairua Road Tauranga.
- Provision of a report on the agricultural productivity and commercial viability of land at Maungatautari Road Cambridge for the Arvida Group.
- Reports on the agricultural productivity and commercial viability of land and their status under the NPS-HPL for five different submitters to the Selwyn District Council.
- Support for the Waimakariri District Council in preparing a Section 42A report on a development proposal at Ohoka in relation to the productivity and the commercial viability of land.
- Support for the Ashburton District Council in relation to an application to subdivide land which is HPL.
- Provision of a report on the impact of the NPS-HPL on a proposed solar farm development in Selwyn District.
- Provision of a report on the impact of the NPS-HPL on a proposed urban development at Saddle Hill Mosgiel.
- I am currently engaged in a similar capacity for proposals in Auckland, Canterbury and in the Bay of Plenty.