

Selwyn District Plan Review

Rural Zone Density and Minimum Lot Size

Farm Advisory Review of Options



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1. Introduction

The purpose of this report is to review the rural density options developed by the planner, with regard to productive viability of the land from a farming perspective. Productive capability and viability of farm land, whether it be utilised for livestock farming, cropping, horticulture, vegetable production etc, is affected by many factors of which the following are some examples:

- Soil type, fertility and depth;
- Land topography;
- Climatic influences such as rainfall, wind exposure and temperature;
- Access to irrigation;
- Altitude and the impact this has on the seasonal variation and the “growing season”;
- Property Size with regards to the minimum critical size for a farming system to be viable;
- Proximity to further processors and markets – particularly for fresh produce and specialist crops;
- Availability of expertise and available infrastructure.

All of the above factors will influence the type of farming system that best suits the land class.

As documented in the Rural Character Assessment, the Selwyn District has one of the most diverse range of land types and climates that are farmed on in New Zealand, ranging from the most extensive livestock farming in the high country to very intensive livestock and cropping under irrigation on the Plains. It is also in close proximity to the South Islands largest city and as such there is good access to a large population as well as international shipping and airport distribution.

Given that the majority of farming activity in the Selwyn region is based on livestock production for meat and fibre, dairy farming and intensive cropping, these systems have been used to analyse the productive capability and financial viability of the proposed lot sizes listed in section 12.

2. Land Size Farming Viability

The viability of farm systems has been undertaken for each region and applicable commentary given for the various options within each zone. The evaluation has been undertaken on an Earnings Before Interest, Tax & Depreciation (EBITD) to standardise comparisons. As such, this does not take into account the level of investment required for land and infrastructure. Industry information has been used from the Beef and Lamb NZ, Sheep and Beef Farm Survey Data and the Dairy NZ Economic Survey 2015-16. A summary of these analyses are displayed in Table 1 (Sheep and Beef) and Table 2 (Dairy)

Table 1: Beef and Lamb South Island Farm Survey Data.

Farm Class	EBITD per Hectare	Applicable Zones
1. S.I. High Country	\$ 38.91	High Country
2. S.I. Hill Country	\$ 148.89	Upper Slope Port Hills / Ext. Malvern Hills
6. S.I. Breeding Finishing	\$ 351.14	Lower Slope Port Hills/ Malvern Hills
7. S.I Intensive Finishing	\$ 627.31	Outer Plains
8. Mixed Finishing	\$ 983.83	Outer Plains

* Average from data 2013/14 – 2017.18F (5 years)

Table 2: Dairy NZ Economic Survey 2015 – 2016 Data.

Average Payout 2011.12 - 2015.16*	\$6.08 per Kg Milk Solid
Average South Island Production 2015.2016**	1248 Milk Solids per Ha
Average Nett NZ Farm Working Costs 2011.12 - 2015.16***	\$3.52 per Kg Milk Solid
Calculated EBITD per Hectare	\$3195 per hectare

*Table 5.6 Page 32, Dairy NZ Economic Survey 2015 - 2016

**Table 5.10 & 6.5 Pages 37 & 49, Dairy NZ Economic Survey 2015 - 2016

***Table 5.2 Page 26, Dairy NZ Economic Survey 2015 - 2016

Whilst the analysis provides some indication on operational profitability, there is a wide distribution across individual farming enterprises and many farms will perform at a significantly higher level than quoted in tables 1 and 2.

2.1. Port Hills

Lower Slopes

The lower slopes currently have a minimum lot size of 40ha. Based on table 1 this lot size could be expected to return an EBIT of \$350 per hectare or \$14,000 for 40 hectares. Whilst this is not an economic unit, some smaller blocks may be owned in conjunction with nearby or adjoining upper slope properties, providing a balance in land class.

Upper Slopes

The Upper Slopes currently have a minimum lot size of 100ha. Based on Farm Class 2, S.I. Hill Country (Table 1), The EBIT of a minimum sized lot would be \$14,890, which is similar to the Lower Slope zone.

2.2. Inner Plains

The Inner Plain minimum lot size is 4ha. It is very difficult to operate these lots economically with mainstream farming systems and generally they are utilised as residential lifestyle properties. The lack of scale, infrastructure and farming knowledge on most of these properties precludes the ability to make a sustainable return. Furthermore, most of these properties would have an effective farmable area considerably less than 4 hectares.

In section 12.1.4 (Option 4), the Planner suggests extending the Inner Plains Zone south of Lincoln, southwest of Rolleston/South of Burnham, north west of Rolleston – short stretch along Railway Road, and a short stretch along Old West Coast /Halkett Roads. With the inability to achieve productive viability from these small blocks and the

general inability to get irrigation water, the benefits of this boundary extension is questionable.

2.3. Outer Plains

The Status Quo minimum lot size for this zone is 20ha and it has been proposed in Option 3 to alter this to 40ha and in Option 4 to split this zone into lower (20ha) and upper (40ha) segments. The following provides some indication of the financial viability of this land based on information from tables 1 and 2:

		<u>EBITD</u>	
		20 ha	40ha
Class 7:	SI Intensive Finishing	\$12,550	\$25,100
Class 8:	SI Mixed Finishing	\$19,680	\$39,360
Dairy Farm		\$63,900	\$127,800

Whilst the Dairy Farming option is significantly better than the other farm systems, this requires much greater investment and it is also unlikely the EBITD per hectare will be retained on smaller land areas, especially 20ha, due to operational inefficiencies.

Even though these smaller lot sizes are largely uneconomic in their own right, they are often associated strategically with another property, for example dairy support blocks, and as such provide significant economic impact. Owners of smaller land holdings may also have off farm income which the farm income supplements.

The Central Plains Irrigation Scheme will provide irrigation to in excess of 40,000 hectares in the Outer Plains zone. This will increase productivity and in time provide other farming options on this land, potentially making smaller farming units more sustainable. With the proximity to Christchurch and the associated national and international distribution infrastructure, the Outer Plains could become a major supplier of produce such as fresh vegetables. Based

on this rationale, smaller land holdings would become more economic.

2.4. Malvern Hills

The current minimum size for the Malvern Hills zone is 20 hectares and based on table 1, the EBITD for this lot size could range from \$3000 to \$7000, depending on the farming intensity. This is obviously not an economic lot size and given there is limited scope for irrigation, this is unlikely to change. Therefore, the changes proposed in Option 3 to increase from 20 hectares to 40 hectares appears more suitable for this zone than for the Outer Plains zone.

2.5. High Country

This land class represents some of the most extensive farm land in New Zealand and therefore farm sizes are generally large. Based on the Rural Character Assessment Maps provided, there are minimal areas of land below the 120 hectare minimum or between 120 - 240 hectares.

Based on table 1, the average EBITD for 120 hectares would only be \$4,670. However, farming properties within this zone possibly contain the most diverse land types from the very extensive high country to more intensive lower farmland and flats. This more intensive land type is often the minority in land area but can be the major contributor to farm performance and profitability. Therefore, the economic performance of these areas will be significantly better than the average for the farm.

3. Summary

The financial analysis above shows that the minimum lot sizes across the zones are not generally financially viable as standalone farm businesses and therefore it is unlikely that smaller minimum sizes would add to increased productivity or profitability.

When reviewing the differences between the options presented within section 12, there is generally minimal variation in lot sizes that would significantly impact farming productivity and/or profitability. The following are comments relating to those changes that could cause impact from a farming perspective:

- i. Option 4 – Extension of the Inner Plains Zone south of Lincoln, southwest of Rolleston/South of Burnham, north west of Rolleston – short stretch along Railway Road, and a short stretch along Old West Coast /Halkett Roads.

4ha properties are usually uneconomic and are generally used for live style purposes. Therefore, any affected properties that are currently outside of the inner plains zone could be subdivided into 4 hectare lots which would potentially reduce the productivity of the land.

- ii. Outer Plains – Option 3 and 4

Option 3 proposes increasing the minimum size to 40 hectares which would be more aligned to the Ashburton District Plan for Rural B & C. With the increased availability of irrigation in this zone, the productive capability of land in this area will increase making smaller land holdings more viable. However, it is unlikely that 20 hectare units will become viable as standalone businesses unless new technologies and/or new farming opportunities such as market gardening become available.

Option 4 splits the Outer Plains into lower and upper areas with minimum lot sizes of 20 hectares and 40 hectares respectively. This is a potential compromise between Option 3 and the status quo (Option 1).

- iii. Malvern Hills – Option 3

This proposes the minimum lot area be increased from 20 hectares to 40 hectares. Given the reduced intensity of this area compared to the Outer Plains and the limited irrigation opportunity, this would support an increase in the minimum size to 40 hectares.

When reviewing the impact of any Plan changes on farm profitability, consideration needs to be given to the fact that many farming systems have relatively low rates of return on capital and a significant amount of the financial viability has been based on increased land values over time. Therefore, if changes in minimum lot sizes alter land values, this could impact a farmer's long term financial return.