BEFORE INDEPENDENT HEARINGS COMMISSIONERS AT SELWYN

IN THE MATTER OF	Clause 21 of the First Schedule of the Resource Management Act 1991 (Plan Change 67)
IN THE MATTER OF	**GW WILFIELD LIMITED** (Applicant)

STATEMENT OF EVIDENCE OF VICTOR MKURUTSI MTHAMO ON BEHALF OF GW WILFIELD LIMITED

VERSATILE SOILS AND FLOOD HAZARD

Dated: 14 September 2021

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INTRODUCTION

1 My name is Victor Mthamo. In my evidence I provided an assessment of the soil's productivity capacity and flood hazard.

VERSATILE SOILS

2 The PC67 area includes 13.7 ha of Land Use Capability (*LUC*) Class 2 soils and 19.7 ha of LUC Class 3 soils. These soils are classed versatile soils under the draft National Policy Statement – Highly Productive Soils NPS-HPL) and the Canterbury Regional Policy Statement (*CRPS*).

3 A review of site specific factors relevant to the productivity of those soils indicates that:

(a) The climate in the area causes soil moisture deficits. Water is not available for irrigation to mitigate the effects of the deficits and meet the crop demand. This severely constrains intensive crop production.

(b) Nutrient application rates will be limited by the nutrient limits set out in the Canterbury Land and Water Regional Plan. Reducing nutrient applications affects the crop yield potential. Therefore, the soil's productivity potential is not realised.

(c) Advances in technology and farming techniques over the years have been such that the removal of up to 33.4 ha of these soils is unlikely to result in any significant loss in production as this can be made up for elsewhere in the district, and even on soils of lower LUC classes.

(d) The developable area in the context of the total LUC 1 and LUC 2 soils in the district and the region is very small (0.004% and 0.024% respectively). The actual developed area is even smaller if the drinking water protection zone and other factors are taken into account.

(e) The site is bound by an existing subdivision and lifestyle blocks. I expect significant resultant reverse sensitivity issues associated with intensifying agricultural production in such an area.

4 For these reasons, it is my opinion that the effect of PC67 on district and regional agricultural productivity potential is insignificant or less than minor.

FLOOD HAZARD

5 The majority of the PC67 site is not affected by large flooding depths, with only 1% of the area experiencing flooding depths of up to 960 mm. Over 80% of the plan change area has depths <600 mm.

6 The area that is shown as being susceptible to flooding can be managed through detailed engineering design. Mitigation measures that can be implemented at the subdivision engineering stages include:

(a) raising the finished house floor levels to comply with the District Plan and the CRPS; and

(b) elevating the house sites or lowering the road corridors to convey secondary stormwater flows through the site.

7 In summary, my assessment shows that there are no areas of high flood hazard within the site boundary which would render it inappropriate for development.

RESPONSE TO THE EVIDENCE OF KEITH ROGER TALLENTIRE

8 In Paragraph 123 of his evidence Mr Tallentire writes "*I acknowledge that Mr Mthamo considers that site specific factors suggest the LUC classifications of the PC67 soils misrepresent their current versatility for productive use, and that any loss of versatile soils through PC67 would be insignificant in in the context of Selwyn and Canterbury. My concern however is that again PC67 is being considered in isolation and I note that he reaches the same conclusions for other plan changes currently being processed in Selwyn"*.

9 In response to his concerns regarding the cumulative loss of versatile soils, I have:

9.1 Gone through all the Selwyn District Plan Changes (operative and proposed) to estimate the amount of LUC Classes 1- 3 soils to help me understand the net changes or loss in versatile soils since 2018 when

Selwyn District published the baseline report[1] on versatile soils which quantified the amount of versatile soils at that time to when PC67 was lodged. This covers Plan Changes 48 to 67 (inclusive).

9.2 Searched through the Selwyn District Council and Canterbury Regional Council websites for land use consents that would also result in potential losses in versatile soils between 2018 and 2019. The significant land use consents related to quarrying activities of which Roydon Quarry was the largest within LUC Classes 1-3. The other quarrying activities were outside of LUC Classes 1-3. I have listed the relevant ones in **Attachment 1**. Finding the relevant information from these websites was difficult. Therefore, it is possible that my list is not exhaustive as there are some small consents that I may not have been able to pick up. If they are, these would be few and of such a small scale that they would not change the total areas in **Attachment 1** by anything greater than a percentage point.

10 Table 1 below provides a summary of (**Attachment 1**) the total loss in versatile soils that I was able to identify.

Table 1 – Changes in Versatile Soils Since 2018-PC67

LUC Class	Area	PC48-67	Net HPL after PCs	%age HPL Losses
LUC Class 1	6,522	2.30	6,519.70	0.035%
LUC Class 2	46,111	189.38	45,921.62	0.411%
LUC Class 3	87,927	265.06	87,661.94	0.301%
Total	**140,56**	**456.74**	**140,103.26**	**0.325%**

11 Table 1 shows that the cumulative potential loss in productive soils since 2018 up to and including PC67 is 0.325%. Therefore, the concerns regarding cumulative effects expressed in Mr Tallentire's Paragraph 123 may have been overstated.

Victor Mthamo

14 September 2021

[1] *Selwyn District Council. 2018. Baseline Assessment. Versatile Soils. Report DW015. https://www.selwyn.govt.nz/property-And-building/planning/strategies-and-plans/selwyn-district-plan/selwyn-district-plan-review/supporting-information/baseline-reports2*

ATTACHMENT 1 – QUANTIFICATION OF CHANGES IN VERSATILE SOILS IN SELWYN DISTRICT

Plan Change	LUC 1	LUC 2	LUC 3	Total	Comments
PC49	2.3	5.8		8.1	
PC50					Fonterra Darfield - no new loss of land
PC54			31.3	31.3	
PC59			19.5	19.5	Total PC59 area = 31.4 ha but 11.9 ha developed prior to 2018.
PC60			17.9	17.9	
PC61			30.76	30.76	Industrial
PC62		42.9	17.1	60	
PC63			60.6	60.6	
PC64	0	0	0	0	All in LUC Class 4
PC66		27.28		27.28	Commercial
PC67		13.7	19.7	33.4	
Roydon Quarry		99.7	68.2	167.9	Fulton Hogan. 2.9 ha is in LUC4
Total	**2.3**	**189.38**	**265.06**	**456.74**	