Before the Independent Commissioner
Appointed by the Selwyn District Council

Under	the Resource Management Act 1991
In the matter of	a hearing on submissions to the Partially Operative Selwyn District Plan, Variation 2: Levi Road rezoning
	Foodstuffs (South Island) Properties Limited
	Applicant

Statement of Evidence of Ruben Thielmann

7 March 2025

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Introduction

1 My name is Ruben Thielmann.

2 I am a Civil Technician (NZDE Civil) with 12 years' experience in the Civil engineering field. I am currently employed as a Civil Technician at Powell Fenwick Consultants and have held that position since June 2012.

3 This evidence is provided in support of Foodstuffs (South Island) Properties Limited (**Foodstuffs**) request to rezone 157 Levi Road, Rolleston (the **Site**) from Medium Density Residential Zone (**MRZ**) to Large Format Retail Zone (**LFRZ**), and insert a new Outline Development Plan (**ODP**) replacing DEV-RO1 – Variation 2 to the Partially Operative Selwyn District Plan (**PDP-V2**). My role has been to provide additional information regarding servicing the Site, in respect of water, wastewater and stormwater. I prepared the Design Advice memorandum in response to Selwyn District Council's request for further information, dated 19 August 2024.

4 I have visited the Site and am familiar with the area.

5 In preparing this statement of evidence I have considered the following documents:

(a) Design Advice Memorandum prepared by Powell Fenwick, dated 19 August 2024;

(b) Relevant parts of the Section 42A Report prepared by Craig Friedel, dated 28 February 2025 (Appendix 5 – Hugh Blake-Manson: Infrastructure and servicing evidence statement); and

(c) The Selwyn District Council Engineering Code of Practice.

Code of Conduct for Expert Witnesses

6 While this is not a hearing before the Environment Court, I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court of New Zealand Practice Note 2023 and that I have complied with it when preparing my evidence. Other than when I state I am relying on the advice of another person, this evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

Scope of Evidence

7 I have prepared evidence regarding the serviceability of the Site, in respect of water and wastewater, for the consented PAK'nSAVE supermarket and the additional proposed Mitre 10 commercial activities (**the Proposal**), including:

(a) estimating the water and wastewater demand from the consented PAK'nSAVE (**PNS**) supermarket and liaising with Davie Lovell Smith regarding the additional commercial activity proposed by Mitre 10 (**M10**);

(b) considering the extent to which the wastewater discharges that would be enabled by the Proposal are less than, or equivalent to, what would be generated from housing densities of 15hh/ha;

(c) the extent to which the drinking water demand that would be enabled by the Proposal is less than, or equivalent to, what would be generated from housing densities of 15hh/ha;

(d) whether there is likely to be sufficient capacity in SDC's reticulated water and wastewater supplies to accommodate the Proposal;

(e) how any trade waste discharges from the site would satisfy SDC's Tradewaste Bylaw.

Estimated wastewater demand for the Proposal

8 During the design phase of the PNS development, conversations were had with Council to establish the allowed daily wastewater discharge for the PNS site. Council noted that the typical Trade Waste discharge for similar developments in the area was around 5,000 litres per day. However, due to changes in processes and water saving features incorporated into the PNS design, a value of 3,500 litres per day, and flows of up to 2l/s, was agreed for the Trade Waste discharge; noting that this would be reevaluated once the supermarket is operational. For the below calculations, a conservative value of 5,000 litres per day has been used.

9 It is also acknowledged that there is an additional component of domestic waste. In this instance, the PNS is expected to have 95 on-site staff per day. Table H4 of AS/NZS 1547 indicates a typical wastewater design flow of 30-50 litres per person per day for rural factories and shopping centres. Allowing for 95 staff per day and 50 litres per person per day, equates to a total of 4,750l/d of domestic waste from the PNS development.

10 Hence the total discharge for the PNS equates to 9,750 litres per day, and an average sewer flow of 0.113l/s.

11 Davie Lovell Smith, the Civil engineers engaged to undertake the design for the proposed M10 development, have indicated an expected trade waste wastewater demand of 2,000 litres per day for the M10.

12 It is also acknowledged that there is an additional component of domestic waste. In this instance, Davie Lovell Smith have indicated that the M10 will be serviced by 65 on-site staff per day. Table H4 of AS/NZS 1547 indicates a typical wastewater design flow of 30-50 litres per person per day for rural factories and shopping centres. Allowing for 65 staff per day and 50 litres per person per day, equates to a 3,250l/d of domestic waste associated with the M10 staff. Hence the total discharge for the M10 equates to 5,250 litres per day, and an average sewer flow of 0.061l/s.

13 It should be noted that M10's development is proposed to contain a café. While the wastewater discharge associated with the café's trade waste has been included in the calculations, the domestic wastewater discharge associated with customer component to the café has not. It is acknowledged that this would increase the discharge from the site; however, if included, the total discharge from the M10 development would still be significantly lower than the comparable 3.3ha residential development with a 15hh/ha density.

Estimated water demand for the Proposal

14 The proposed water demand associated with the PNS development is expected to be around 20m³ per day, with an average daily demand flow of 0.23l/s. This is based on data collated from other Foodstuffs Supermarkets of a similar size.

15 Davie Lovell Smith, the Civil engineers engaged to undertake the design for the proposed M10 development, have indicated that the proposed water demand associated with the M10 is expected to be below 60m³ per day, with an average daily demand flow of 0.69l/s. This is based on data collated from other M10 developments of a similar size.

Wastewater Demand – comparison with housing densities

16 The provided Council's Infrastructure Assessment notes an allowance of 15 households/hectare for this site, when assessing the capacity of the Waste Water Treatment Plant. The total site area is 7.3ha (or approximately 109 households). This is comprised of approx. 4.0ha PNS site area (or approximately 60 households) and 3.3ha M10 site area (or approximately 49 households).

17 Council have noted that this household density equates to an equivalent peak instantaneous discharge to its network of 0.34 l/s per ha. This appears to

equate to 220l/person/household with 3.5 people per household (vs 2.7 in the SDC Code of Practice), and using a peaking factor of 2.5 (as used in the SDC Code of Practice). For the whole site 7.3ha site this is equal to 2.44l/s (1.34l/s for the PNS and 1.10l/s for the M10).

18 Depending on the number of people per household used in the assessment, the allowance for the total site would be in the range of 65,000 - 84,000 litres (35,610 – 46,030 litres for the PNS and 29,390 - 37,970 litres for the M10).

19 The expected 9,750 litres of wastewater discharged from the PNS site is substantially lower than the 35,610 - 46,030 litres that would be discharged from an equivalent sized residential development.

20 The expected 5,250 litres of wastewater discharged from the M10 site is substantially lower than the 29,390 - 37,970 litres that would be discharged from an equivalent sized residential development.

Water Demand – comparison with housing densities

21 Paragraph 41 of the summary statement by Hugh Blake-Manson outlines the allowable water demand as approximately 0.23 litres per connection per hectare. I consider the above has been noted incorrectly and should read 0.23l/s per connection. 0.23l/s per connection has been used to assess the following calculations.

22 Calculating the total discharge from a 7.3ha residential development with 15hh/ha and a 0.23l/s discharge per household (7.3x15x0.23) equates to approximately 25.18l/s, or a daily volume of 2175m³ per day for the whole site (1192m³ per day for the PNS and 983m³ per day for the M10).

23 The estimated daily water use for the PNS development is expected to be around 20m³ per day. This demand is well below the allowable 1192m³ noted above.

24 The estimated daily water use for the M10 development is expected to be less than 60m³ per day. This demand is well below the allowable 983m³ noted above.

Conclusion

25 The above wastewater calculations show that the PNS development will result in an average daily demand of approximately 27% (using the more conservative assessment) of the SDC stated wastewater allowance for a 4ha residential development with a 15hh/ha density.

26 The above wastewater calculations show that the M10 development will result in an average daily demand of approximately 18% (using the more conservative assessment) of the SDC stated wastewater allowance for a 3.3ha residential development with a 15hh/ha density.

27 The above water calculations show that the PNS development will result in an average daily demand of approximately 2% of the SDC stated water allowance for a 4ha residential development with a 15hh/ha density.

28 The above water calculations show that the M10 development will result in an average daily demand of approximately 6% of the SDC stated water allowance for a 3.3ha residential development with a 15hh/ha density.

29 Given the above, it is expected that the 7.3ha PNS and M10 developments would have a lower water and wastewater demand than a 7.3ha residential development with a 15hh/ha density.

Ruben Thielmann