

**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**

**SUPPLEMENTARY EVIDENCE OF DANASH SOOKDEV
IN RESPONSE TO OFFICER REPORT
ON BEHALF OF MARK AND MELISSA PROSSER
REGARDING HEARING STREAM 12C**

DATED: 8 July 2024

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INTRODUCTION

- 1 My name is Danash Sookdev.
- 2 I have prepared a statement of evidence regarding Hearing Stream 12C in support of Mark and Melissa Prosser's submission on the Proposed Waimakariri District Plan (**PWDP**) to rezone approximately 73 ha at Mandeville from Rural Lifestyle Zone (**RLZ**) to Large Lot Residential Zone (**LLRZ**). My qualifications and experience are set out in that statement. I confirm that this supplementary statement of evidence is also prepared in accordance with the Environment Court's Code of Conduct.
- 3 On 23 May 2024 the Waimakariri District Council (**Council**) released an Officer Report for Hearing Stream 12C prepared under section 42A of the RMA containing an analysis of submissions seeking Large Lot Residential Zone and recommendations in response to those submissions (**Officer Report**).
- 4 The Officer Report recommends that the Prosser rezoning submission be rejected. My supplementary evidence is filed in response to that Report.

SCOPE OF SUPPLEMENTARY EVIDENCE

- 5 In my supplementary evidence I address the following matters:
 - i. My supplementary evidence responds to those parts of the Officer Report that address matters within scope of my expertise, with particular emphasis on matters where there is a difference of view between myself and the Officer Report.
- 6 In preparing my supplementary evidence I have:
 - i. Reviewed the Officer Report and the Appendices to that Report relevant to my area of expertise, including the following documents:
 1. Officer Report Appendix D – Engineering Assessment: WDC Memo prepared by Mr Aramowicz dated 13 May 2024 (**Engineering Assessment**); and
 2. Officer Report Appendix E - Mandeville and Ohoka Wastewater Modelling: WDC Memo prepared by Kalley Simpson dated 15 November 2021 (**Wastewater Modelling Memo**);

- ii. Reviewed my evidence in chief filed earlier on behalf of the Submitters;
- iii. Reviewed other materials specifically mentioned in my supplementary evidence discussed below.

CONTEXT AND APPROACH

- 7 As mentioned, the Officer Report recommends decline of the Prosser rezoning submission. A range of reasons are given for this recommendation, some of which relate to my area of expertise.
- 8 The approach I have adopted in this supplementary statement of evidence is to identify those parts of the Officer Report (including Appendices attached to that Report) where I disagree with the Officer Report and to explain my reasons for disagreement.

RESPONSE TO OFFICER REPORT

Available capacity within wastewater network

- 9 At paragraph 152 the Officer Report states that the Prosser Proposal is not integrated with infrastructure because there is no capacity in the wastewater system. The basis for this comment is provided at para 152 of the Officer Report which refers to advice received from Mr Aramowicz detailed in the Engineering Assessment as follows:¹

In relation the Council's wastewater network, the existing system was constructed with capacity only for the existing land zoning, and for the zoning proposed by Council.

There is no capacity within the Mandeville-Rangiora rising main for the wastewater discharge that would result from the Applicant's proposal to zone 2 Ashworths Rd as LLRZ

- 10 I do not agree with the above comments recorded in the Engineering Assessment for the reasons discussed below.
- 11 First, the Engineering Assessment does not refer to or assess the merits of my earlier evidence that identifies three options for servicing the Prosser Proposal.²

¹ Refer Officer Report, Appendix D; Memo prepared by Mr Aramowicz dated 13 May 2024 at [49]-[50]

² See Evidence of Danash Sookdev at [58]-[65].

- 12 The three options are as follows:
- 13 **Option 1:** Gravity collection wastewater network to WDC network; this involves a gravity system to collect wastewater from individual dwellings within the Site and then a gravity system to convey wastewater to connect with the WDC pressure main at the Dawsons Road / Wards Road intersection;
- 14 **Option 2:** Gravity collection wastewater network to an on-site pump station and to WDC network; this involves a gravity system to collect wastewater from individual dwellings within the Site that connects to an underground storage chamber. The storage chamber would be designed so that (if required) wastewater can be released during off-peak hours when there is adequate capacity within the WDC system. From the storage chamber wastewater would be pumped via a new pressure sewer main to the WDC pressure main at Dawsons Road / Wards Road intersection or to the Bradelys Road pump station; and
- 15 **Option 3:** Low pressure sewer system; this involves provision of a pump and storage chamber on each site with capacity to hold wastewater for 24 – 48 hours. The onsite storage chamber would be designed so that (if required) wastewater can be released during off-peak hours when there is adequate capacity within the WDC system. Each onsite storage chamber would be connected to a Low Pressure Sewer (**LPS**) system that collects wastewater from within the Site. The LPS system would then connect with a new pressure sewer main that pumps wastewater to the WDC pressure main at Dawsons Road / Wards Road intersection or to the Bradelys Road pump station.

Evaluation of options

- 16 Since lodging my evidence, I have considered each of the above options further and make the following comments. Each of the above Options are potentially feasible however some seem better than others. In this regard, Option 1 does not attenuate wastewater flows before discharge into the WDC system and so is least favored.
- 17 Options 2 and 3 both have design features that attenuate wastewater flows. Option 3 relies on storage within multiple storage chambers owned by individual landowners. It is more dispersed and potentially more difficult to maintain and administer by WDC.

- 18 Option 2 relies on a single large storage chamber owned by the Council that would serve the entire development. It would be easier to maintain and operate by WDC. It would also provide more control over wastewater flows than Option 3. For this reason, subject to feedback from WDC officers, it is my preferred option for the Proposal.
- 19 Overall I am confident that either Option 2 or Option 3 would work for this Site. Final details can be resolved at the subdivision phase and through detailed design.

Effect of 20 lot subdivision consent

- 20 Since lodging my evidence, I have also considered the above options with respect to the 20-lot subdivision consent issued by WDC dated 19 October 2020 (**subdivision consent**). This consent confirmed that connection of 20 lots from the Site into the WDC pressure main at the Dawsons Road / Wards Road intersection was available.
- 21 I assume that these connections were approved on the basis that the consent holder would establish a gravity collection wastewater network to connect the site to the above WDC pressure main.
- 22 As discussed above, Option 2 and Option 3 involve on-site attenuation and then connection to a new pressure sewer main that pumps wastewater to the WDC pressure main at Dawsons Road / Wards Road intersection or to the Bradley's Road pump station.
- 23 The change from a gravity system to a pressurised system is important. The volume of wastewater in a pressurised system per allotment is significantly less than for a gravity system because a pressurised system is closed and is not susceptible to unexpected problems of inflow and infiltration from properties.
- 24 This means that a pressurized system is able to accommodate a higher number of connections when compared to a gravity system serving the same development.
- 25 This point can be illustrated by reference to the subdivision consent. Based on Water New Zealand Pressure Sewer Guidelines February 2020 – Section B2.4 Design Methodologies a capacity safety factor of 1.2 per dwelling unit during Average Dry Weather Flows (ADWF) is applied for wastewater.

- 26 Taking into account the initial Wet Weather Flow factor of 4 for the consented wastewater, a comparison between the gravity system and the pressure system results in a factor of 3.33 ($4/1.2 = 3.33$). When this is multiplied by the 20 lots approved under the subdivision consent (3.33×20), it results in an equivalent 67 lots serviced by the pressurized rising main.
- 27 Accordingly, in my view WDC has already allocated the equivalent of 67 lots from the Site when a pressurized rising main is used to convey wastewater instead of a gravity system. On this basis the additional demand created by the Prosser Proposal is only 48 additional lots ($67+48 = 115$).
- 28 In summary to this point, the conversion to a pressurized system and the attenuation of peak flows provided by Option 2 (or Option 3) above means that there will be adequate capacity within the WDC wastewater system to accommodate the Prosser Proposal.

CONCLUSION

- 29 Overall, I am confident that a solution to provide wastewater capacity to service the Site is available to support the development.
- 30 Wastewater servicing options are available to the Site without adverse effects on the receiving environment or operation of the existing WDC infrastructure system.
- 31 Thank you for the opportunity to present my evidence.

Danash Sookdev
8 July 2024