

**BEFORE THE HEARINGS PANEL**

**IN THE MATTER**

of the Resource Management  
Act 1991

**AND**

**IN THE MATTER**

of the Proposed District Plan  
for Waimakariri District

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**HEARING STREAM 12C: REZONING REQUESTS (LARGE LOT RESIDENTIAL  
ZONES)**

**SUMMARY STATEMENT OF EVIDENCE OF NEERAJ PRATAP  
(STORMWATER)**

**ON BEHALF OF**

**ANDREW CARR (SUBMITTER #158)**

**12 JULY 2024**

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## **1. INTRODUCTION**

- 1.1 My full name is Neeraj Prithvi Pratap.
- 1.2 I have previously provided a statement of evidence (dated 26 February 2024) and a supplementary statement of evidence (dated 5 July 2024) regarding stormwater matters for the Submitter's request for the rezoning of 308 Cones Road and 90 Dixons Road (**the site**). My qualifications and experience remain as set out in those statements of evidence.
- 1.3 The purpose of this summary statement of evidence is to provide an overview of my position, as outlined in those two statements of evidence.
- 1.4 This summary statement of evidence has been prepared in accordance with the Code of Conduct for expert witnesses contained in the Environment Court of New Zealand Practice Note 2023.

## **2. SUMMARY OF EVIDENCE**

- 2.1 I previously prepared detailed technical reports regarding stormwater matters at the site (Annexures B and C to my Evidence in Chief). In these reports I set out that:
  - a. For 308 Cones Road, test pitting on site did not identify any potential locations for discharge of stormwater to land. Discharge to land does not appear viable without further investigations to locate soils for rapid infiltration. However, I consider that a suitable solution is for discharge to an existing drain with additional runoff generated from the proposed development being attenuated before being discharged. I proposed such a design solution within my report.
  - b. For 90 Dixons Road, based on the investigation for 308 Cones Road, I assumed that it is likely that a system adopting rapid infiltration would not be viable. Further site specific investigations would be required to identify if rapid infiltration of stormwater would be achievable. I assessed the potential storage requirements to attenuate additional runoff generated from development of the site and based on a maximum impermeable area of 20%, found that 900 cubic metres of additional storage may be required.

- c. I therefore proposed that a potential design solution for 90 Dixons Road could incorporate at least one, and potentially several, attenuation basins into which stormwater will flow prior to being discharged via a controlled outlet. I am aware that two such basins are shown indicatively on the ODP.
- 2.2 Based on my assessments, I concluded that with proper development layout and engineering design, stormwater can be appropriately managed within site. Such detailed assessments can be (and in my experience usually are) carried out when land use / subdivision consents are sought.
- 2.3 The Officers' assessment of the site is set out in Section 5.4 of the s 42A report produced by Mr Mark Buckley and in paragraphs 68 to 73 of the Engineering Assessment (Appendix D to the s 42A report) produced by Council's Senior Civil & Geotechnical Engineer Mr John Aramowicz.
- 2.4 Mr Aramowicz seeks that overland flow paths (**OLFPs**) and drains within the site are protected and identified on the ODP. I agree that drains need to be protected, and I confirm that these are identified on the ODP. OLFPs were not shown but this was because, as noted in my technical reports, engineered modifications and/or diversion of the OLFPs may be undertaken as part of any proposed development. Thus in my experience, minor OLFPs within a site are not typically shown on an ODP.
- 2.5 However I understand that the Submitter is willing to amend the ODP in this manner, and that a revised ODP has been produced that includes minor OLFPs.
- 2.6 Mr Aramowicz sets out details of the proposed stormwater attenuation basins at the southeastern and southwestern corners of 90 Dixons Road are not fully resolved and the sizes shown on the ODP may not be sufficient. I confirm that in my technical report I calculated that 900 cubic metres of additional storage may be required (on an assumed development maximum impermeable area of 20%). The areas shown on the ODP are easily able to accommodate this but I agree with Mr Aramowicz that the areas shown for the basins should be noted as being "*indicative only*". This change has been made to the ODP.
- 2.7 In his response to the Hearing Panel's questions, Mr Buckley sought further details as how the stormwater basins integrate with the OLFPs. In respect of the southeastern basin, the site has a natural fall from west to

east, meaning that the site contours can be engineered during the subdivision design to convey flows to the proposed basin location. The southwestern basin is located at an existing depression within the site, which again means that it would be straightforward to engineer the site contours to convey flows to this location.

- 2.8 Mr Buckley also queried how stormwater infrastructure will integrate downstream of the site. I confirm that the stormwater management solutions on site and described in my Evidence in Chief are based on attenuating post-development flows such that pre-development flows are not exceeded. Therefore, development facilitated by the requested rezoning will not have any material effects downstream.

### **3. CONCLUSIONS**

- 3.1 Based on my technical assessments attached to my Evidence in Chief, I consider that there are appropriate solutions for stormwater management at the site.
- 3.2 I have considered and responded to the Council Officers queries, and there appears to be only one point of difference between us. This is that the Council wishes for the minor OLFPs to be shown on the ODP whereas in my experience they are not typically shown because they may be appropriately modified as part of the development design. However, to respond to the Council's request, the Submitter is willing to show them.
- 3.3 In his report, Mr Buckley recommends that the submission is accepted and that the site is rezoned as LLRZ. From a stormwater perspective, I agree with his recommendation.

**NEERAJ PRATAP**

**12 JULY 2024**

