

Before the Western Bay of Plenty District Council's Hearing Panel

IN THE MATTER

of the Resource Management Act 1991

AND

IN THE MATTER

of Plan Change 93 to the Bay of Plenty District
Plan (Te Puna Springs Estate Limited)

**STATEMENT OF REBUTTAL EVIDENCE OF NEILL RAYNOR
FOR TE PUNA SPRINGS ESTATE LIMITED
4 JULY 2022**

1. Qualifications and Experience

1.1 My full name is Neill Emerson Raynor.

1.2 I am a consultant civil engineer at Aurecon New Zealand Limited. I set out my relevant qualifications and experience in my statement of evidence dated 23 June. I confirm that I have read the expert witness code of conduct set out in the Environment Courts Practice Note 2014. I have complied with the code of conduct in preparing this further statement and I agree to comply with it while giving oral evidence before the Hearings Panel. Except where I state that I am reliant on the evidence of another person, this written evidence is within my area of expertise. I have not admitted considering material or facts known to me that might alter or detract from the opinions expressed in this evidence.

2. Scope of Evidence

2.1 This statement of evidence responds to the evidence of Susan Ira and Kathleen Thiel-Lardon, and Keith Hamill.

3. Evidence of Susan Ira

3.1 Susan Ira has referred to through her evidence on the lack of integrated design and the lack of inclusion of Low Impact Design elements within the applicant's proposal.

3.2 As detailed in 6.12 of my primary evidence the stormwater management system proposed has not allowed for on-site treatment, attenuation or low impact design features, but has not precluded any of these measures. It is considered the proposal would be the most conservative in that it provides the greatest area required for the standalone ponds and wetlands.

3.3 My evidence in 6.13 to 6.18 describe the Low Impact design and on-site management features that could be incorporated into the development of the land proposed for rezoning. Mr Colliers Rebuttal Evidence has suggested additional Stormwater management provisions be included such as

8.4 Stormwater Management

At the time of building or subdivision consent (whichever occurs first) stormwater management measures shall be implemented (where appropriate) as follows:

i) The use of rain gardens and similar systems for water quality treatment

ii) Stormwater detention tanks in park and carparking/roading areas for stormwater attenuation.

- 3.4 In section 33 of Susan Ira's evidence the on-line nature of the attenuation pond is raised and the BOPRC Stormwater Management Guidelines as a preference for off-line ponds. While this is preferable for this site it becomes quite difficult given the two significant upstream catchments that pass through the site, with an existing impounding embankment resulting in ponding within the site.
- 3.5 The extension of the existing pond to create the larger attenuation area is the most space efficient way of providing the necessary attenuation. As detailed in 6.78 of my evidence the runoff from the developed areas would pass through off-line treatment and extended detention ponds and which is consistent with the BOPRC Stormwater Management Guidelines. The attenuation element only is on-line.
- 3.6 The intention is that baseflow from upstream catchments and the on site spring would continue to pass through the attenuation area and there would not be a larger surface area of water unless the ecologists deem this an enhancement.

4. Evidence of Kathleen Thiel-Lardon

- 4.1 In paragraph 23 of Ms Thiel-Lardon's evidence, she identifies adverse effects of flood velocity, flood depth and flood extent.
- 4.2 Regarding flood flows, within Section 5 of the Infrastructure Servicing Report supporting the application, and also in 3.4 and 3.5 of my primary evidence, the flood flow rate, and therefore flow velocity, have been mitigated in line with the BOPRC's Stormwater Management Guidelines. In addition the extended detention proposed for the development runoff is an accepted method of limiting the peak runoff from the more frequent rain events to protect the downstream channel from potential erosion. This is effective mitigation for the channel between the site and Armstrong Road.
- 4.3 Regarding effects lower in the catchment, the full catchment of the Armstrong Road culvert joins the site's tributary just upstream of Armstrong Road. As described in 3.21 to 3.24 and Figure 4 of my primary evidence 6ha site is a minor portion (1.2% by area) of the 515 ha overall catchment.
- 4.4 Downstream of Armstrong Road the railway embankment impounds the peak runoff without overtopping. At this location the catchment is even larger by an additional 160ha. The site is less than 1% by area of the catchment to the railway bridge embankment.
- 4.5 Paragraph 35 to 44 is related to the ability to fit the attenuation and treatment facilities within the area identified in the application.
- 4.6 In addition to this Keith Hamill's evidence, paragraph 24, refers to the loss of existing stream extent in the southern reach, the diversion of a section of southern reach and the loss of 105m of stream and tributary under the pond.

4.7 I have overlaid the stream locations onto the development layout and an alternate attenuation detail that deepens the wider attenuation pond area outside of the existing stream margin is able to be achieved. This will avoid the loss of existing stream through the proposed pond area. This requires further excavation to achieve however a layout that will provide the pond volume required has been developed and shown in Figure 1 below.



Figure 1 revised stormwater management areas layout

4.8 The wetland and extended detention facility for the southern-most development area is located between the existing streams which results in some encroachment into the previously identified developable footprint, which is consistent with Ms Thiel-Lardon's assessment.

4.9 These types of changes to the final developable areas are not unexpected or precluded by the Plan change. The Structure Plan areas are intentionally indicative, and it is common in my experience that at detailed design stage of consenting, District and City Plan Structure Plans are varied, including infrastructure placement and indicative developable areas.

4.10 An indicative cross section across the attenuation area is shown as

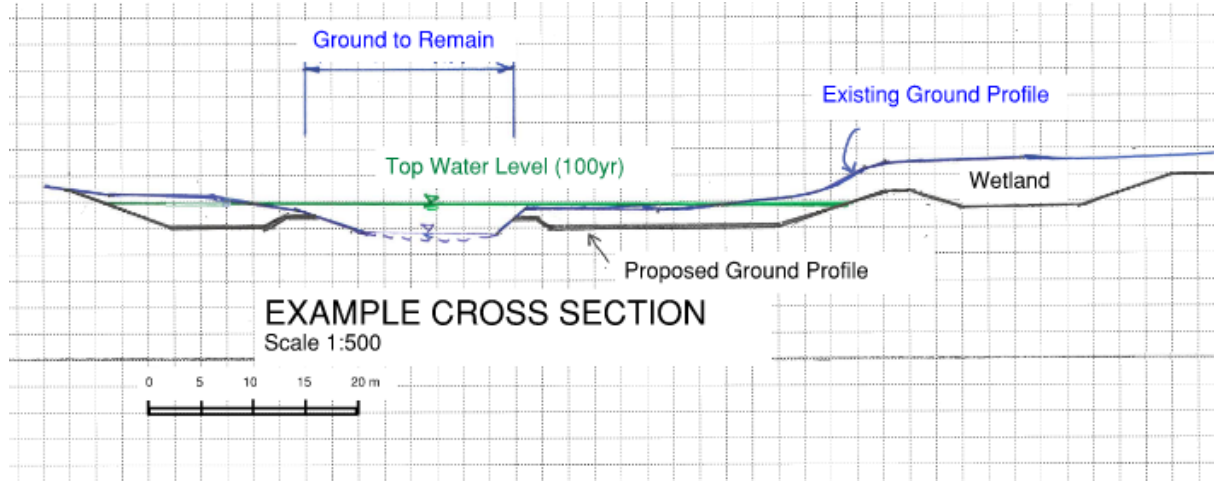


Figure 2 below.

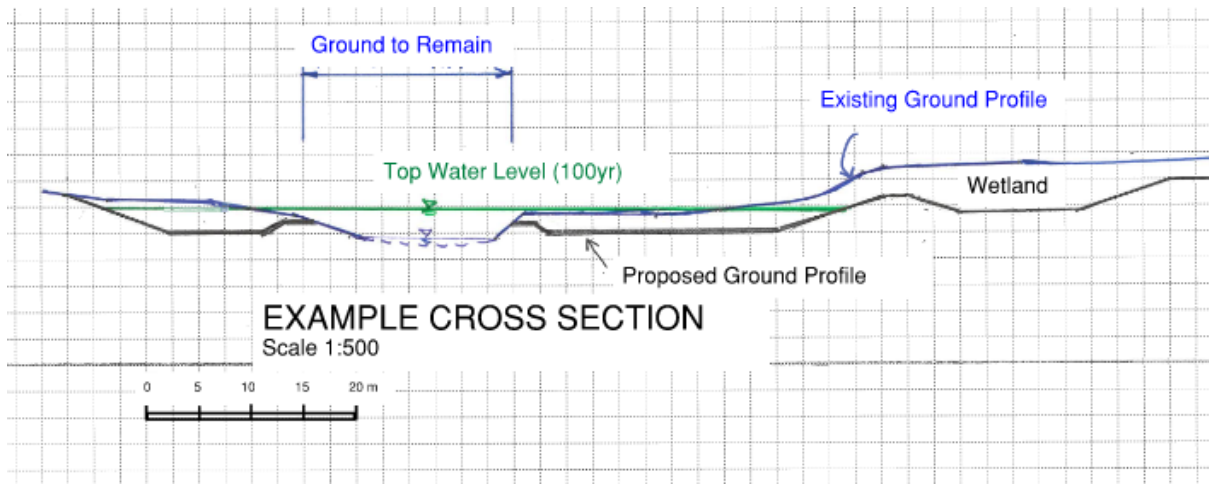


Figure 2 Cross section of proposed stormwater management area

- 4.11 As per 6.12 of my primary evidence any storage and treatment facilities included with the lot development will reduce the overall size and extent of the indicative attenuation and treatment areas shown on the structure plan .
- 4.12 What the above shows is that there is a stormwater design solution for the site which will result in no stream loss and in fact the ability to enhance and provide a net gain in terms of streams. This will be further refined once the location of buildings and parking areas are defined with the potential for attenuation (and treatment) in commercial carparking areas.
- 4.13 As detailed in 3.3 above Mr Colliers Rebuttal Evidence has suggested additional Stormwater Management Provisions be included to provide certainty these matters are included in the consenting assessment process.

5. Evidence of Keith Hamill

- 5.1 Mr Hamill's evidence states in Paragraph 24 a) and b) that there is loss of raupo wetland, stream and tributary under the pond as it is permanently wet and deep. The pond filling to provide attenuation only occurs when it is raining and less than a day after the rain has ceased the pond will empty out. At all other times the attenuation will only contain baseflow from the upstream catchments and the spring and therefore not permanently wet or deep. Ms. Wilcox covers these matters in her evidence. The pond function and design will be undertaken in consultation with ecologists to ensure a suitable hydrological regime for reinstating any lost raupo wetland extent.

Neill Raynor
4 July 2022