

Before the Independent Hearing Panel
at Taupo

in the matter of: Proposed Plan Change 36 to the Taupo District Plan –
Request under Schedule 1 of the RMA to rezone Rural
Land to Residential at Whareroa North by The
Proprietors of Hauhungaroa No. 6

to: **Taupo District Council**

Applicant: **The Proprietors of Hauhungaroa No.6**

Rebuttal Evidence by **Chris Wedding** on behalf of The Proprietors of Hauhungaroa No.6

Date: 5/06/2020

1. INTRODUCTION

Name and qualifications

1.1. My qualifications and experience are set out in my Evidence in Chief.

[Expert Witness Statement]

1.2. I confirm that I have read the “Code of Conduct for Expert Witnesses” contained in the Environment Court’s Consolidated Practice Note 2014 and agree to comply with them in giving evidence in this proceeding. Except where I state that I am relying on evidence of another person, this written 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 expressed in this evidence.

2. SCOPE OF EVIDENCE

2.1. My rebuttal Evidence follows an Expert Witness Conference between Mr William Shaw and myself on Thursday 28 May 2020, and as detailed in our joint Witness Statement. I address outstanding, relevant matters.

3. COMMENTS ON THE RESOLVED AND OUTSTANDING MATTERS

3.1. I agree with Mr Shaw that the indigenous vegetation and habitats, including those within ‘Area 2’, or the area outside SNA 062 previously described as ‘low scrub of bracken and shrubs’, now triggers the same biodiversity significance criteria (five criteria) as the surrounding vegetation within SNA 062 on the basis that it now has canopy cover consistent with surrounding SNA vegetation and therefore would support similar habitats for flora and fauna.

3.2. I understand that Mr Shaw agrees, in principle, that the actual and potential adverse effects of the proposal on ecological values can be managed, mitigated and offset, to achieve a Net Environmental Gain, in accordance with an Ecological Management Plan (EMP). We both agree that such an EMP should be approved by Council prior to commencement of Stage 1. However, I understand that Mr Shaw considers that a higher level of certainty of the provisions of the EMP that would achieve a Net Environmental Gain, should be provided prior to consenting. Specifically, these provisions are:

1. A statement confirming land security of the areas identified in Figure 2 of my Evidence in Chief;
2. An indication of the existing ecological values within the offset opportunity areas identified in Figure 2 of my Evidence in Chief;

3. Status of any existing fencing of the of the areas identified in Figure 2 of my Evidence in Chief;
4. Monitoring, maintenance term and requirements

3.3. I have viewed correspondence with Merilyn Connolly who has confirmed that the land where I have identified more than 20 ha for potential restoration opportunities is within the ownership of Whareroa Station. Therefore, any of it could be restored and protected in perpetuity as required for a biodiversity offset.

3.4. In response to Mr. Shaw's concerns regarding his requirement for more certainty of restoration potential, I have undertaken a desktop review of the areas in Figure 2 of my Evidence in chief. I have reproduced those areas and numbered them 1-7 in Figure 1 (below) and identify approximately 22 ha of revegetation and enhancement opportunities. I consider that approximately 8 ha of these areas could be revegetated because they are currently bare ground (e.g. areas 2, 3, 4 and 5, Figure 2) or dominated by pine trees which could be removed and replaced with indigenous vegetation (e.g. area 1, Figure 3). The other areas appear to support some composition of exotic and native scrub vegetation, which would have some habitat value but could be substantially improved with enhancement measures through weed removal, infill planting with native vegetation, provision of pest management and legal protection. I consider that the availability of these areas and their indicative restoration potential provides a very high level of certainty that a biodiversity offset would be achieved, following the remediation and mitigation measures that would be undertaken onsite.

3.5. My desktop review indicates that some of the areas identified in Figure 1 of my rebuttal evidence appear to be already fenced (e.g. 2, 3, 5) and others would benefit from provision of fencing from stock (e.g. area 4). Any biodiversity offset that involves ecological restoration alongside SNA062 would be fenced where it is not already protected from livestock.

3.6. Mr. Shaw considers that there is not enough certainty about monitoring and maintenance requirements, and the management term. I consider that the details of monitoring and maintenance should be provided in the EMP, which would be approved by Council. In my opinion, maintenance such as regular weed removal, replacement of failed plants and pest control, should be undertaken by an independent contractor for a minimum period of five years and until 90 % plant survival and 95% canopy closure by plantings is achieved. This means that monitoring and maintenance should be continued beyond five years, until these requirements are met. I consider that 90 % plant survival and 95% canopy closure are important measures of healthy and ecologically viable plantings. For example, weed reinvasion would be minimal beneath a closed canopy. These are typical requirements of mitigation and restoration plantings that attach to subdivision/development consents.

3.7. Mr. Shaw considers that the Whareroa Stream Riparian Habitat would need to be distinguished in the proposed offset because it comprises older, larger trees, and that there are likely to be higher levels of moisture on the lower slopes. These attributes contribute a higher overall ecological value than other areas of SNA vegetation at the Whareroa North Site. I concur with Mr. Shaw's opinion and it is now acknowledged in the revised Appendix 8, in reference to the

requirements of the Ecological Management Plan. I note also that some of the potential offset locations are similarly low lying and would support soils with a higher moisture content, such as Area 1, as identified by contours, but also because SNA 062 in this area generally follows the Whareroa Stream. Again this level of detail can be specified at the time of development when the actual effects on the SNA will become apparent and therefore also the level of offset that needs to be provided.

- 3.8. With regard to fragmentation and edge effects associated with the access road and bridge, Mr. Shaw considers that such effects are not minor, and should be acknowledged in mitigation and offsetting. At paragraph 21 of his rebuttal evidence, Mr. Shaw states that edge effects are not discussed in relation to habitat degradation, and states that *Detectable edge effects have long been known to extend for up to 50 metres into indigenous forest (Young and Mitchell 1994), and the proposed new road would result in a large proportion of the area being affected by edge effects.*

Whilst I consider that fragmentation and edge effects are generally minor, such effects are provided for in dense buffer planting, including future canopy species, along all newly created edges of the access road, and a minimum 2 m dense planting where residential lots adjoin SNA 062. These minimum requirements are identified in Appendix 8.

- 3.9. Based on my site visit in 2019, I consider that all of the areas of SNA vegetation that I walked through, including parts of 'Area 3' where the proposed road could be, had relatively high levels of light, noise and wind that are typically attributed to 'edge effects'. In my opinion, this is partly because the vegetation is a seral community- that is, it consists mostly of pioneer and small tree species (fivefinger, kanuka) typical of a young regenerating ecosystem described by Singers and Rogers (2014) as broadleaved scrub/forest, and lacks some species and tiers of forest structure that would be expected within a climax forest, such as totara, matai, kahikatea forest (Singers & Rogers 2014). I also consider that such 'edge effects' are partly because of the ongoing damage and suppression of regeneration caused by pig rooting, rat, possum and rabbit browse throughout this seral vegetation.

I note also that Mr. Shaw references Young and Mitchell (1994), who draw their research conclusions from mature, podocarp broadleaved forest fragments, which would have much greater structure and biological diversity, than the regenerating vegetation at the North Whareroa site.

- 3.10. I refer to Mr. Michael Keys' evidence in Chief, where he estimates approximately 500 m of access road would be required to connect the proposed Whareroa North site through SNA 062. This would result in approximately 1 km of potential edge effect, accounting for both sides of the road.
- 3.11. Following onsite mitigation measures that would include dense buffer planting and pest animal control, I consider that opportunities for offset planting at locations 1 to 5 (Figure 1) could further offset potential residual edge effects on SNA062 through reduction or removal of edges at other locations. For example, the length of edge at area 2 (Figure 2) is approximately 725 m. Offset planting could reduce this edge to 70 m by infilling this gap. Area 1 (Figure 3) has an edge of 746 m which could be removed entirely through restoration measures.

4. CONCLUSION

- 4.1. Overall, I consider that the actual and potential adverse effects of the proposal on ecological values can be managed, mitigated and offset, to achieve a Net Environmental Gain, in accordance with an Ecological Management Plan (EMP) and as set out in the revised Appendix 8. I consider that I have provided a sufficiently high level of certainty that a Net Environmental Gain is achievable through the provisions of an EMP and I agree with Mr. Shaw that such an EMP should be approved by Council prior to commencement of Stage 1 as part of the consent package that will be required for geotechnical investigations and indigenous vegetation removal.

Chris Wedding

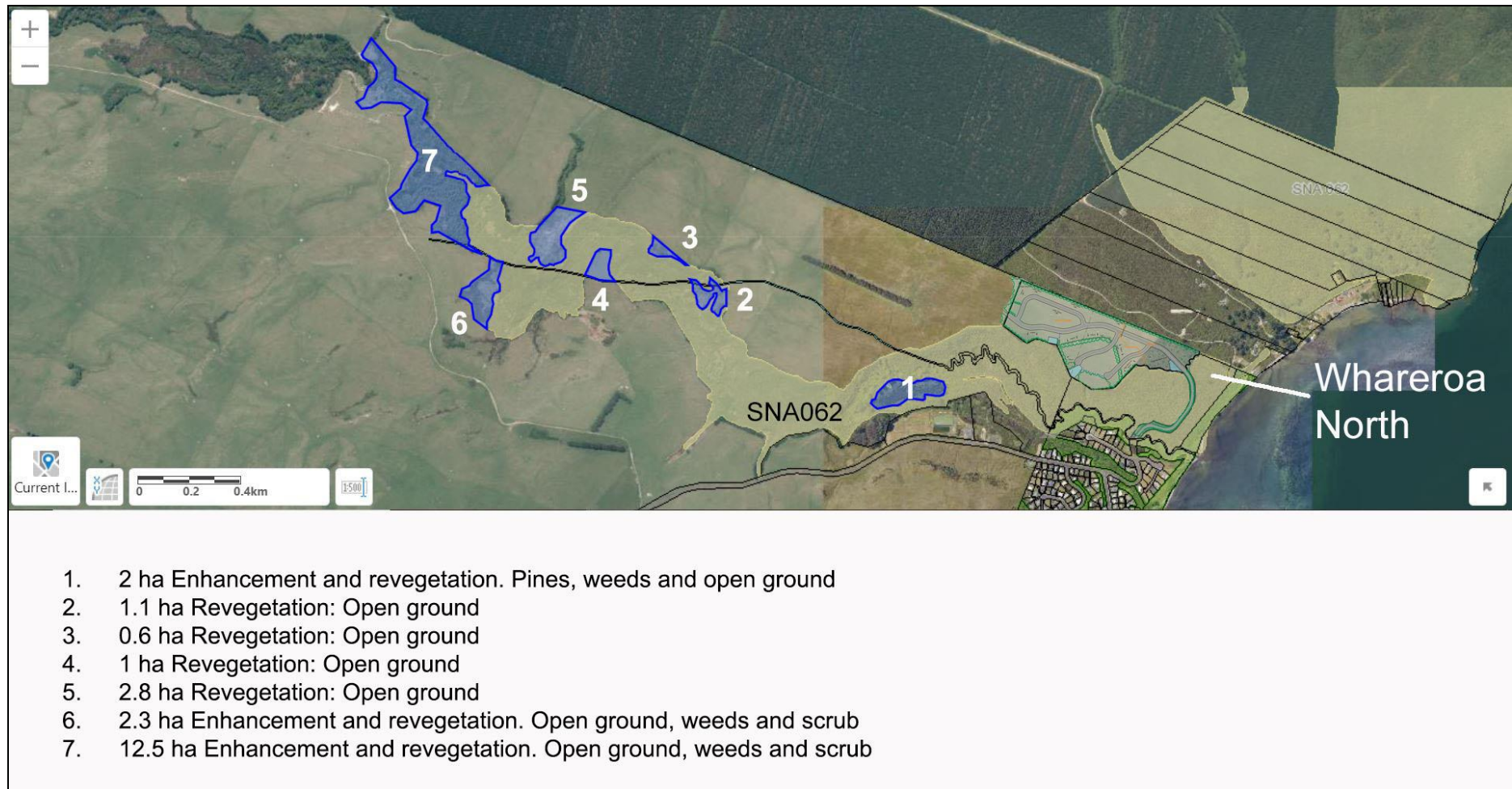


Figure 1. Potential biodiversity offset opportunities for revegetation and enhancement of exotic-dominated vegetation.



Figure 2. Areas 2, 3, 4 and 5 appear to be 'open ground' and therefore represent opportunities for revegetation.



Figure 3. Area 1 appears to be dominated by pine and other exotic vegetation where there are opportunities for revegetation and enhancement. Contours indicate that this area is low lying and would support a higher moisture content, similar to the Whareroa Riparian Habitat area