BEFORE THE TARANAKI REGIONAL COUNCIL AND NEW PLYMOUTH DISTRICT COUNCIL

MT MESSENGER BYPASS PROJECT

In the matter	of the Resource Management Act 1991
and	
In the matter	of applications for resource consents, and a notice of requirement by the NZ Transport Agency for an alteration to the State Highway 3 designation in the New Plymouth District Plan, to carry out the Mt Messenger Bypass Project

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STATEMENT OF REBUTTAL EVIDENCE OF CORINNE HANNAH WATTS (TERRESTRIAL INVERTEBRATES) ON BEHALF OF THE NZ TRANSPORT AGENCY

30 July 2018

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INTRODUCTION

1. My name is Corinne Hannah Watts.

2. This rebuttal evidence is given in relation to applications for resource consents, and a notice of requirement by the NZ Transport Agency ("the **Transport Agency**") for an alteration to the State Highway 3 designation in the New Plymouth District Plan, to carry out the Mt Messenger Bypass Project ("**the Project**"). It is my third statement of evidence for the Project, following my evidence in chief ("**EIC**") dated 25 May 2018 and my supplementary statement of evidence ("**Supplementary Evidence**") dated 17 July 2018.

3. I have the qualifications and experience set out in my EIC.

4. I repeat the confirmation given in my EIC that I have read the 'Code of Conduct' for expert witnesses and that my evidence has been prepared in compliance with that Code.

5. In this evidence I use the same defined terms as in my EIC and Supplementary Evidence.

RESPONSE TO EVIDENCE

6. This evidence responds to the evidence of Mr Eric Edwards on behalf of DOC.

7. I note that Mr Edwards considers that adverse effects on invertebrates will be "*adequately compensate[d]*" (subject to pest management targets being achieved). In this rebuttal evidence I respond to specific points raised by Mr Edwards in respect of invertebrates. I note that Mr MacGibbon responds in his rebuttal evidence to the biosecurity points raised by Mr Edwards.

8. I also briefly respond to the evidence of Dr Laurence Barea in respect of 'no net loss' and invertebrates.

MANGAPEPEKE FLOODPLAIN[1]

9. Mr Edwards raises concerns about effects on invertebrate values in the Mangapepeke Valley floor associated with the vegetation type “WF8” – a warm forest series which commonly is associated with kahikatea and pukatea forest. He notes that the Project drawings indicate that approximately half of the Mangapepeke Valley floor will be occupied by construction related infrastructure, and that there will be "*considerable disruption to wetland hydrologic integrity from cover over and raised areas of fill, main access roads and extensive redirection of channelled water and runoff (over land) water flows*".[2]

[1] Refer to Section 3 of Mr Edwards' evidence.
[2] At 3.16 – 3.17.

10. Mr Edwards goes on to state:[3]

> "*The various chapters of the draft Ecology and Landscape Management Plan (ELMP) outline numerous measures to regenerate indigenous dominance where these high value invertebrate habitats of the Mangapepeke catchment currently exits. However these are not measures that would restore. Rather, new faunal habitats and new faunal associations would result that are not 'like for like' faunal associations*."

11. In response, I note that the "WF8" habitat in the Mangapepeke catchment is highly degraded from grazing and agriculture, resulting in the surviving treeland (e.g. small fragments of kahikatea) and scrub being scattered over a ground cover of predominantly exotic rushes and pasture species.[4] These induced pasture-rushland wet communities are common throughout the valleys of humid north Taranaki and western Waikato.[5]

12. I agree with Mr Edwards' statement in his paragraph 3.13 that the Mangapepeke and Mimi Valley floors "*can be expected to be important for invertebrates*". However, the invertebrate taxa that are listed in Appendix 2 of Mr Edwards' evidence, and that were identified to species level in surveys carried out for the Project, are commonly found and widely distributed. For example, the straight-horned weevil, *Rhinorhynchus rufulus*, is recorded commonly on Podocarp trees from Northland to Stewart Island.[6] The remaining taxa listed in Appendix 2 could only be identified to genera, and could in theory be 'range restricted' and/or rare, but this is unlikely.

13. The proposed restoration planting regime aims to restore plant species that are now absent from the Mangapepeke catchment, such as swamp maire and *Coprosma tenuicaulis*. This will increase the plant diversity of this habitat type.[7]

14. In my opinion, the planned replanting of absent plant species to restore this habitat type, currently in a highly degraded state, and its invertebrate community, will adequately replace the WF8 habitat being modified and lost.

SEDIMENTATION EFFECTS

15. In his paragraph 5.1, Mr Edwards refers to the proposed response to possible sedimentation events. Mr Ridley addresses the likelihood of such events occurring, and the nature of the proposed response, in his evidence for the Transport Agency, and I rely on his evidence in that respect.

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[3] At 3.18.
[4] AEE Technical Report 7a (Vegetation)
[5] Nick Singers, pers. comm.
[6] Klimaszewski and Watt 1997.
[7] Nick Singers, pers. comm.

16. As outlined in my EIC,[8] the Mimi and Mangapekpeke Stream catchments are prone to natural events resulting in high sediment deposition. Therefore, it is likely that the terrestrial invertebrate communities occupying these habitats (e.g. the kahikatea swamp forest) have adapted, such as being mobile dispersers, to such events.

17. It is my opinion that an event resulting in deep sediments covering vegetation would likely result in only short-term impacts on the invertebrate community due to these adaptations. In addition, elements of the invertebrate community that are vulnerable to sedimentation, such as aquatic invertebrates, are being monitored at a high level (see Chapter 8 in the ELMP). I consider the proposed regime for addressing possible sedimentation events is appropriate in terms of invertebrate values and effects.

NO NET LOSS

18. In his evidence on biodiversity offsetting, Dr Laurence Barea states that:[9]

> "*There is no rigour provided to support how the Applicant's experts (other than Mr Singers) have determined the proposal is sufficient to achieve no net loss. In many cases there is lack of sufficient baseline data to support the claim. For some fauna there are no available or reliable techniques for determining no net loss*."

19. In respect of invertebrates, I have always made it clear that it is very difficult to conclusively demonstrate the level of effects that the Project would have, and therefore precisely what is needed to ensure 'no net loss'. However, as set out in detail in my EIC, I have taken a conservative approach to assessing effects, in order to account for that uncertainty.[10]

20. I have carefully considered the impact of the proposed Restoration Package on invertebrates. As per the conclusion in my EIC (reiterated in my Supplementary Evidence) I remain of the view that the 'no net loss' aim will be achieved for invertebrates, noting in particular the clear link between the health of vegetation communities (and the pest management and planting measures that specifically target that point), and the health of invertebrate communities.

Corinne Hannah Watts

30 July 2018

[8] Paragraph 97.
[9] At paragraph 2.5.
[10] See paragraphs 54 – 55.