

**BEFORE THE PALMERSTON NORTH CITY, MANAWATŪ DISTRICT (MDC)
AND TARARUA DISTRICT COUNCILS**

IN THE MATTER of the Resource Management Act 1991 (“the Act”)

AND

IN THE MATTER NOTICES OF REQUIREMENT by NZTA under s168 of the Act for the construction, operation, maintenance and improvement of approximately 11.5km of new State Highway between Ashurst and Woodville to replace the closed section of SH3 through the Manawatū Gorge and associated works, known as the Te Ahu a Turanga, Manawatū Tararua Highway Project (“the Project”)

Timothy James Martin

**ADDENDUM TO EVIDENCE ON BEHALF OF THE DIRECTOR-GENERAL OF
CONSERVATION
(Ecology)**

Dated: 4 April 2019

COUNSEL:
SARAH ONGLEY
Barrister
Phone: (06) 7699400
Fax: (06) 7699425
Email: sarah@ongley.co.nz
PO Box 8213
New Plymouth 4342

1. INTRODUCTION

- 1.1. My name is Dr Tim Martin.
- 1.2. I submitted a statement of evidence on terrestrial ecology (EIC) on behalf of the Director-General of Conservation on 15 March 2019.
- 1.3. I have the qualifications and experience set out in my EIC.
- 1.4. I repeat the confirmation given in my EIC that I have read the 'Code of Conduct' for Expert Witnesses (2014) and that my evidence has been prepared in compliance with that Code.
- 1.5. In this Addendum I comment on proposed designation conditions and on the Addendum to Dr Forbes EIC.

2. EXTENT OF WETLAND LOSS

- 2.1. Dr Forbes recommends a condition to survey exotic wetlands at the Outline Plan stage¹. This is in response to my identification of possible exotic wetlands within the designation using Google Earth imagery that, if confirmed, have not been included in the quantum of loss. I agree with Dr Forbes that these need to be delineated and assessed through field surveys. However Condition 5 does not include reference to this survey, and this is needed to confirm the extent of wetland loss within the footprint. If additional wetland areas are confirmed, these will then need to be addressed in the positive effects package.
- 2.2. This survey to determine wetland extent needs to be undertaken according to current best practice which considers hydrology, soils, and vegetation (for example, as per Clarkson 2013)². The Applicant's definition of ">50% cover of wetland indicator species"³ is very limiting, and is likely to exclude some wetland areas from this assessment.
- 2.3. Reference to the extent of exotic wetland loss in the designation in Condition 5 (2.74 hectares), needs to acknowledge that this is an estimate, and may increase following field surveys.

¹ Dr Forbes EIC at [69a].

² https://www.landcareresearch.co.nz/_data/assets/pdf_file/0003/71949/vegetation_tool_wetland_delineation.pdf

³ Dr Forbes' Addendum at [23].

3. RIGOUR AROUND “MITIGATION HIERACHY”

- 3.1. Condition 5 relates to ‘environmental bottom lines’ in that it limits the maximum areas (hectares) of each ecosystem type that may be *removed* (noting that removal differs from disturbance). I refer to the advice note on condition 5(e) stating:

“For the area measurements listed in respect of the old-growth forests (alluvial) and raupo-dominated seepage wetlands (high value), the maximum areas specified are based on an assessment that clearance of those areas would have a less than ‘Very High adverse’ effect under EIANZ, 2018.”

- 3.2. However, since Dr Forbes’ EIANZ assessment in the NOR an additional habitat type has now been identified as having high ecological values (divaricating Coprosma shrubland, originally assessed by the Applicant as “low value”). The same rigour has not been applied to assessing whether clearance or disturbance of those areas would have a less than ‘very high’ adverse effect prior to developing these bottom lines.

4. ‘ECR’s’

- 4.1. Condition 13 (terrestrial ecology) presents precise ECRs to address indigenous vegetation loss. These ECRs do not reflect the Applicant’s view that ECRs will need to be reassessed once restoration sites are confirmed⁴, particularly with regards to additionality and permanence. The proposed ECRs can be only be regarded as the minimums proposed by the Applicant. If ECRs are to be referred to in the conditions, a framework for their reassessment must also be proposed (e.g. the forest planting ECRs are based on the assumption that the site is exotic pasture⁵). If additionality is less than this (e.g. a planting site is mixed pasture and scrub, or a wetland restoration site already has an indigenous component), then the ECRs need to correspondingly increase, and the wording of this condition needs to reflect this.

- 4.2. Dr Forbes’ Addendum states that his ECRs do not depend on the presence or absence of ‘At Risk’ species because those are absorbed

⁴ Dr Forbes Addendum at [27], [29].

⁵ Dr Forbes Addendum at [27], [29].

under the broader consideration of ecological value. However I understand that he did consider the presence of swamp maire in developing the ECR for raupo reedland, and thus the ECR for this habitat type, at 1:4, is higher than for wetlands where Threatened or At Risk species have not been confirmed as present, which are 1:3. I have encouraged Dr Forbes to consider the presence of other Threatened or At Risk species for developing other ECRs. For example, in my EIC I stated that if At Risk lizard species were confirmed as present in shrublands, the ECRs should correspondingly increase⁶.

- 4.3. Ultimately, for the reasons set out in my EIC at [10.18] – [10.33], I do not consider that ECRs are sufficiently robust. In that respect, I also rely on the opinion of Dr Lloyd.

5. FURTHER PLANTING (ADDITIONAL TO ‘ECRs’)

- 5.1. Condition 13 relates solely to replacement and offset planting. In expert conferencing, Dr Forbes agreed that plantings are also needed to address edge effects, and that these plantings are a separate quantum from those provided to address direct habitat loss. These are not included in Condition 13, or alternatively, in the LMP conditions (Condition 12). The consent conditions need to specifically address the location and extent of plantings to address forest edge effects.
- 5.2. Condition 13 c) refers to the Ramarama Protection Area in Dr Forbes EIC (Figure 2). I note that for the indicative alignment and ecosystem type plans (March 2019, Sheet 2 of 10) that this “Ecological No-Go Zone” overlaps with a proposed spoil site.

6. AVIFAUNA

- 6.1. Condition 16 states that for vegetation clearance in old-growth forests between September and January that there is a preconstruction survey to identify nesting whiteheads. If the intent of this condition is to prevent nest loss for this At Risk species, the survey needs to include the key nesting habitats of whitehead, including scrub and shrublands, and exotic forests (e.g. radiata pine plantations)⁷.

⁶ Martin EIC at [10.20 b].

⁷ Heather, B. Robertson, H 1996. The Field Guide to Birds of New Zealand. Viking, New Zealand.

- 6.2. Condition 16 f) specifies the need for a pre-construction survey of wetlands for cryptic bird species, but no subsequent management actions if these are confirmed. As per the previous clause for pipit (16 e), an exclusion area around nesting areas until nesting is completed would be an appropriate management response.

7. TERRESTRIAL INVERTEBRATES

- 7.1. The conditions now include an invertebrate management plan (Condition 16A). This measure is at least partly in response to the identification of shrubland habitats that are likely to provide habitat for At Risk moth species, set out in my EIC.
- 7.2. This condition does not adequately address the parts of the mitigation hierarchy that require consideration of avoidance first. In my opinion Condition 16A c) should refer to detailed measures to “retain” habitats for At Risk or Threatened taxa impacted by the Project. The majority of the shrubland habitats in question are within an indicative spoil site, and avoidance of most of this habitat may be achievable.
- 7.3. Condition 16A specifies that preconstruction surveys will be undertaken to determine the presence of At Risk or Threatened taxa. As described in my EIC, there are prior records of two At Risk moth species within the designation, and these specialise on indigenous shrubs in the genus *Olearia*. Given this information, the consent condition should stipulate that the invertebrate survey must include, but not be limited to, the early successional shrubland habitats at Chainage 9000-1000 where *Olearia* species are present. This will ensure that one of the most likely habitats for At Risk invertebrates within the designation is adequately investigated.
- 7.4. The requirements for the invertebrate survey also need to state that the survey will include light-trapping over two survey periods: August-December inclusive and April-June inclusive. These periods are the flight times of the two At Risk moth species that may be present. The current status of both of these species needs to be investigated so that the invertebrate management plan can address the adverse effects on these species, if one or both are confirmed as present.
- 7.5. Condition 17a) iii) H) specifies that the plantings for divaricating *Coprosma* shrubland includes the genera *Coprosma* and *Olearia*.

Whilst this is correct, invertebrates are often specific not to a host genus but a particular host species. It is therefore important that the shrubland replacement plantings include the same species as those being lost, including *Olearia virgata*, *Olearia solandri*, and *Coprosma rhamnoides*. Otherwise the plantings may result in the replacement of shrubland, whilst still resulting in habitat loss for particular invertebrate species. These particular plant species should be specified and should not be subject to “plant availability”.

- 7.6. Condition 16A specifies that if At Risk species are detected, that the terrestrial invertebrate plan will include measures such as optimal timing of vegetation clearance, and restoration of invertebrate habitats. Whilst these are appropriate measures, the first management step in this case should be a reassessment of the project, to determine if any habitats for At Risk species can be retained.

8. ECOLOGICAL MANAGEMENT PLAN

- 8.1. Condition 17 a) states that animal pest management should maintain a 5% residual trap catch/tracking index score. This should refer to $\leq 5\%$, otherwise management could be in breach of the condition by achieving a greater reduction in pest animals.

9. LANDSCAPE MANAGEMENT PLAN

- 9.1. Condition 12 states that the Landscape Management Plan must give particular consideration to “the integration of works required by the LMP with the replacement and offset planting required by Condition 13”, and “that planting required by Condition 13 may also be considered to achieve the outcomes of the CEDF and LMP”. Whilst I fully support the integration of plantings across the project, it is critical that the key drivers for the locations of the plantings for Condition 13 are the ecological requirements, and that the requirements of the CEDF and LMP never compete with the requirements of the terrestrial ecology plantings.
- 9.2. Condition 12 f) notes that all plantings required by the LMP within the wind farm must not exceed 1.5 m at maturity. For the avoidance of doubt, this same clause should also exclude all forest plantings required by Condition 13 from the same area, as plantings 1.5 metres at maturity cannot be used to address forest loss.

- 9.3. Condition 31 states that any planting and ecological effects management measures required by Condition 12, 13, and 17 must be maintained and managed according to the LMP and EMP. This condition now needs to be updated to also refer to any requirements of Condition 14, 15, 16, and 16A.

Tim Martin
4 April 2019