

IN THE MATTER OF

the Resource Management Act 1991

AND

IN THE MATTER OF

Notices of requirement for designations under section 168 of the Act, in relation to Te Ahu a Turanga; Manawatū Tararua Highway Project

BY

NEW ZEALAND TRANSPORT AGENCY
Requiring Authority

JOINT STATEMENT OF DR FORBES AND DR MARTIN (ECOLOGY EXPERTS)

22 February 2019

INTRODUCTION

1. This joint witness statement relates to expert conferencing on the topic of ecology.
2. This joint witness statement relates to the notices of requirement lodged by the New Zealand Transport Agency ("**Transport Agency**") for designations under section 168 of the Resource Management Act 1991 ("**RMA**"), in relation to Te Ahu a Turanga; Manawatū Tararua Highway Project (the "**Project**").
3. The expert conferencing was held on Friday, 22 February 2019 at the Auckland office of Wildland Consultants, 12 Nixon Street, Grey Lynn.
4. Attendees at the conference were:
 - (a) Dr Adam Forbes for the Transport Agency; and
 - (b) Dr Timothy Martin for the Department of Conservation.

CODE OF CONDUCT

5. This joint statement is prepared in accordance with section 4.7 of the Environment Court Practice Note 2014.
6. We confirm that we have read the Environment Court Practice Note 2014, and in particular Appendix 3 – Protocol for Expert Witness Conferencing, and agree to abide by it.

PURPOSE AND SCOPE OF CONFERENCING

7. The purpose of conferencing was to identify, discuss, and highlight points of agreement and disagreement on two key ecological issues, as noted below, arising from the notices of requirement relating to the Project, and the submissions received in relation to them.
8. The scope of the issues covered at this conference was limited to:
 - (a) **Definitions and requirements for mitigation, offsetting, and compensation** and
 - (b) **The adequacy of the Environmental Compensation Ratios (ECRs) proposed by the Applicant**
 - (c) **Any requests for additional information.**

AGREED ISSUES

9. Definition of mitigation: Dr Martin and Dr Forbes discussed and agreed with the definitions of mitigation in the Biodiversity Offsetting under the Resource Management Act guidance document (Maseyk et al., 2018) and the Ecological Impact Assessment (EIANZ, 2018) guidance document. In this context, mitigation planting seeks to reduce the severity of impact at the point at which the impact occurs (i.e., minimise effects on the residual habitat). An example for this project would be buffer plantings to minimise microclimate edge effects at a newly-cut forest edge. Using this definition, plantings for this purpose are separate from plantings to address habitat loss due to vegetation clearance. Dr Forbes noted some examples where restoration replacement plantings have been referred to as mitigation (e.g., Transmission Gully) and that the terminology and definitions are evolving over time. However, Dr Martin and Dr Forbes agree that regardless of the terminology used, the quantum of replacement plantings for any particular habitat type needs to consider factors such as value of habitat being lost, time lag for replacement, and the risk of failure.
10. Dr Martin and Dr Forbes agree on the definition for biodiversity offsets provided by Maseyk et al. (2018) with further explanation provided by Horizons One Plan Policy 13-4. Dr Forbes and Dr Martin commented on the package of positive ecological effects set out in Revised Table 6.A.1, as they relate to the offsetting principles described in Table 1 of Maseyk et al., (2018) are as follows:
 - (a) Limits to offsetting – we agree that the proposed effects envelopes have minimised the loss of old-growth alluvial forest and raupo dominated seepage wetland containing swamp maire. We agree that the residual impacts for these ecosystems need to be addressed through compensation.
 - (b) No-net-loss and preferably a net gain – Dr Forbes and Dr Martin both acknowledge that the proposed package does not fully meet the principle of no-net-loss under the Maseyk et al. (2018) biodiversity offsetting framework. The existing condition of the restoration sites has not been confirmed at this stage (as the restoration sites are unconfirmed) and this is an important detail for determining the appropriateness of an offset, and whether no-net-loss is likely to be the outcome. Dr Forbes explained that the ECRs for forests and

shrublands were proposed on the basis that those restoration sites would be in exotic pasture, meaning the additionality was reasonably certain. Dr Martin and Dr Forbes noted that the additionality of any given wetland restoration site was less certain, and that restoration sites would require an assessment of wetland type, wetland extent, and existing values, to determine the suitability of the site, and the level of additionality available. Dr Forbes and Dr Martin agree that the ECRs, and how they apply to a restoration site, will need to be reassessed once the restoration sites are confirmed. This process will need to be undertaken to ensure adequate size, equivalence and additionality. Dr Martin has concerns regarding the low ECRs for some ecosystem types (particularly with regards to time lags, and where restoration cannot increase extent of a habitat type e.g. seepage wetlands).

11. Dr Martin considers that using a compensation approach there may be scope within the potential planting sites, with appropriate ECRs, to address the residual adverse effects on indigenous forest and shrublands. However, Dr Martin notes there is likely to be a shortfall in terms of wetland restoration areas (as the proposed areas may be too small or cannot reasonably demonstrate additionality). Dr Forbes considers there to be good potential for both terrestrial and wetland restoration sites within the potential restoration areas currently identified or at other nearby sites. Dr Martin and Dr Forbes agree on the importance of confirming and securing suitable restoration sites.

DISAGREEMENT AND REASONS

12. Dr Martin disagrees with the low ratios for some of the proposed ECRs. Under a compensation approach, the ratios need to consider the ecological value of habitats to be lost, the time lag to reach an equivalent state at a restoration site, and the risk of failure. The ecological value assigned by the Applicant to indigenous dominated seepage wetlands was 'Moderate', and for manuka, kanuka, shrublands was 'Low'; these should have been assessed as High and Moderate respectively. Dr Martin also disagrees with the ecological significance assessment; in his view all indigenous vegetation within the footprint meets at least one of the criteria for significance.
13. Dr Martin also notes that the ECRs inadequately account for time lag for restoration areas to achieve a similar state to the habitats lost. For example, a ratio of 1:1 does not account for any time lag, where this ratio is used, and some older forest types have ECRs lower than younger forest types (e.g.

advanced secondary broadleaved forests 1:4, compared to younger kanuka forest that is 1:5). The ECR for advanced secondary broadleaved forests should be increased to at least 1:5, and for manuka kanuka shrublands to at least 1:2.

14. Dr Martin notes that a ratio of 1:1 for exotic dominated seepage wetlands does not acknowledge that this is habitat that cannot be replaced; the restoration proposed can only improve condition. The Applicant should increase the ECRs for all wetland types to account for the net loss of wetland extent that will occur.
15. Dr Martin notes that the Applicant needs to reconsider the ECRs to account for ecological value and time lag. These ECRs also need to be acknowledge the higher risk that also results from a compensation approach, and the lack of certainty regarding the location of restoration sites.

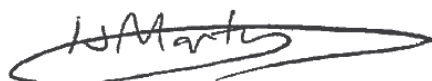
ADDITIONAL INFORMATION REQUESTS

16. Dr Martin requested the following information:
 - (a) A map of vegetation, including exotic types, for CH4000-4500.
 - (b) Description of indigenous dominated seepage wetlands (moderate value).
 - (c) Confirmation of the occurrence of exotic wetlands between CH8200-8800 and CH12000-12400.

Date: 22 February 2019



A Forbes



T Martin