**BEFORE INDEPENDENT HEARING COMMISSIONERS**
**AT PALMERSTON NORTH**

| | |
|---|---|
| **IN THE MATTER** | of the Resource Management Act 1991 |
| **AND** | |
| **IN THE MATTER** | an application for a **Notice of Requirement** by **New Zealand Transport Agency** to the Palmerston North City Council, Manawatu District Council and Tararua District Council for **E AHU A TŪRANGA MANAWATŪ TARARUA HIGHWAY** |

---

# STATEMENT OF EVIDENCE OF CHRISTINE BRIDGET ROBSON On behalf of AGRESEARCH LIMITED

## PLANNING

## 15 MARCH 2019

---

**INTRODUCTION**

1. My name is Christine Bridget Robson.

2. I hold a Bachelor of Agricultural Science and a Master of Philosophy in Resource and Environmental Planning, both from Massey University. My consultancy (Eland) specialises in Resource Management Act (RMA) policy design and implementation. My clients include central and local government, industry, land owners and iwi.

3. My 35 years of resource management experience spans regional and central government and industry. My work most relevant to this case includes RMA policy development for regional policy statements and regional plans. My experience ranges from "ground zero" decisions on acquiring raw science for policy development to policy design and policy implementation.

4. I am familiar with the Ballantrae research station. The Massey BAgSci degree course I did used data from it and as students we visited the site. I am familiar with the Manawatu gorge area, as I worked on the ground in both Pohangina and the Paihiatua area while I was a soil conservator and planner with what is now Horizons Regional Council.

5. I have been engaged by the appellant AgResearch Ltd to give planning evidence on their behalf in these proceedings.

**EXPERT WITNESS CODE OF CONDUCT**

6. I have read and am familiar with the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014. I agree to comply with that Code. Other than where I state that I am relying on the advice of another person, this evidence is within my area of expertise and I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

**PURPOSE AND SCOPE OF EVIDENCE**

7. My evidence analyses aspects of the process NZTA used to identify route risks and consult on the routes for the Manawatu-Tararua highway that relate to RMA planning. It identifies that NZTA and its advisors' understanding of the nature and national value of the AgResearch research station "Ballantrae" and the long-term experiment on the Ballantrae farm was insufficient for them to appropriately consider the effects of the proposed road route on the research site. To clarify, the 486ha Ballantrae research station has a long term experiment on it. The eight plots of that experiment in aggregate cover 37 hectares of Ballantrae. In the evidence below, the concern AgResearch has is the effects on the long term experiment, not the entirety of Ballantrae station. AgResearch is very willing to work with NZTA to identify refinements to the route that may affect other parts of Ballantrae, but that avoid damage to the long-term experiment.

8. The consequence of NZTA's level of consideration of the effects of the proposal on the 37Ha long-term experiment has led to inadequate responses being provided to the risks their chosen route poses to the station. The tightly compressed consultation timeframe post route choice has compromised efforts by AgResearch and the wider agricultural research community to explain those risks.

9. The view of the science and economic experts from AgResearch is that the effects of a deep road cut through this research station and specifically the long-term fertiliser and grazing study are only amenable to being avoided, not mitigated. NZTA's analysis of effects to date only considers the effects of reducing the area of the research station. It does not consider the unknown adverse effects on the hydrological and biological functioning of the site that will be induced by creating a highway-sized cut through the station.

10. Evidence on: the national economic and environmental value of the research station and the long-term fertiliser and grazing study; the need for stability of the site parameters if trend assessments are to be valid; and the effects of the road on the station's physical parameters are provided by Dr Alec Mackay, Dr Brent Clothier, Mr Neild and Dr

Henderson. This evidence in aggregate provide a comprehensive explanation of why AgResearch reaches the conclusion that the only feasible option is avoidance of the presently favoured route (Northern route 3). Of the routes proposed any of the southern routes (Option 4) would avoid effects. Using Northern route 1 would minimise effects. Some further modifications to this route could further reduce effects on the continued functioning of the Ballantrae LTE.

11. I identify why AgResearch believes consultation to date by NZTA and its agents has not lead to a comprehensive understanding of the value or risks to the site.

**EXECUTIVE SUMMARY**

12. My analysis of the approach used by NZTA and its agents identifies these issues:

    a. Inadequate recognition of the Ballantrae research station and the long-term fertiliser and grazing study as a physical resource of national importance that would be irrevocably affected by the current proposed route.
    b. Lack of understanding of the Ballantrae LTE's functional requirements i.e. that changes to the physical site, not just to the area of the long term experiment, would render the long-term fertiliser and grazing study inoperable.
    c. Inadequately focussed consultation to discover or respond to points 1&2

13. Inadequate understanding of the role of the Ballantrae Research Station and specifically the long-term fertiliser and grazing study meant that the functional requirements of the Ballantrae long term experiment were not appropriately considered or assessed against the RMA or the RPS.

**EVIDENCE**

**RMA assessment of the Ballantrae long term experiment v the proposed route**

14. RMA s171(1)(b) requires the determining authorities to consider the effects on the environment of allowing the requirement, having particular regard to whether adequate consideration has been given to alternative sites, routes or methods of undertaking the work.

15. In my opinion this particular regard would require a thorough understanding of the value of any site that may be affected, and the physical characteristics of that site that may need to be protected. NZTA's first on-site discussion of the road proposal was 26 October 2017. At this discussion the effects of a road cutting were discussed as they applied to the functioning of the overall farm, and to the long term experiment. At that meeting with the NZTA engineers, Brian DeVantier, Farm Systems and Environment, from AgResearch Grasslands explained the significance, importance and uniqueness of the long term experiment, its history and the important role it played in developing Overseer for North Island Hill Country farms, among other things. That it would be impossible to replicate the 43 years of historical record was also discussed. His impression at that time was that they seemed to consider that the area of Ballantrae taken up by the experiment fell into the category of 'other items of major significance'.

16. AgResearch certainly considers the Ballantrae long term experiment (Ballantrae LTE) to be of major significance. In their view, and in the view of the fertiliser industry and its research agencies, and the view of the NZ drystock industry and associated researchers it is a site of national significance.

17. Assessing the Ballantrae LTE firstly against the RMA purpose, set out in section 5:

> (1) The purpose of this Act is to promote the sustainable management of natural and physical resources.
> (2) In this Act, *sustainable management* means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while—

18. A logical part of promoting sustainable management, especially in the context of a nation for which agriculture is a significant part of the economy, is understanding what sustainable agricultural management is. The effects of fertiliser and grazing and differing fertiliser regimes and animal stocking rates are very relevant to that understanding.

> (a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and

19. The purpose of the Ballantrae Hill Country Research Station is to improve New Zealand's knowledge on how and whether current hill country farming fertiliser and grazing practices sustain or otherwise the potential of natural and physical resources.

> (b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and

20. The Ballantrae LTE, a long-run fertiliser and grazing trial established in 1975, provides insights not only into the positive effects of fertiliser and grazing on production, but also how these capacities are affected by different regimes, the effect on the physical and biology of the soils, the effects of impurities in fertilisers and what long-term effect both of those may have on the long run life-supporting capacity of the soil resource.

> (c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.

21. Fertiliser and grazing affects soil and soil biological processes. The data collected at this nationally significant site will allow questions to be posed and answers found on the effects of fertiliser composition and regimes, and to grazing practice so that if modifications to practices are necessary to avoid remedy or mitigate effects of applying fertiliser and of grazing, these can be done on a soundly derived basis.

22. The quality of the baseline data from this trial site means that other topical research questions can be posed, for example those that contribute to the understanding the long-term impacts of climate change which is exceedingly important to the agricultural sector and wider New Zealand economy. This broader research capability would appear to be a section 7 consideration for which section 7(b) and 7(i) would be relevant.

**Matters of national importance and national significance**

23. There is no other site in hill country (which is the landscape mainly used for drystock farming in New Zealand) that replicates this research function.

24. A long-run fertiliser and sheep grazing trial, one of only two remaining in the country, is rare and distinctive. It cannot be replicated. Because it is an exceedingly uncommon feature it does not readily fit the categories for section 6 that characterise Matters of

National Importance, although it would be appropriate to characterise the site in that way. The subsection of section 6 that comes nearest to describing the reason this site is so important would be 6(f) historic heritage, as this does contemplate a resource that has been formed directly as a result of human input. However there are no criteria that specifically lead to or directly assist in assessing the historic or future scientific worth of a long-run agricultural trial site, or the great value of the baseline that this provides for a range of future scientific enquiry. The site owners did not think to have it designated. They did not recognise the potential need to do so - evident in hindsight - due to the threat that has now materialised. The situation is therefore that a resource of national significance has no category for assessment of its value and no explicit protection.

25. To assist in interpreting RMA section 6 Matters of National Importance most regional policy statements include criteria, generally as appendices. The number of criteria sets that address aspects of section 6 varies between RPS's. Horizons OnePlan does not include any for s6(f) historic heritage, thus giving no regional or district plan any guidance, nor a requiring authority. Although the OnePlan provides no such guidance, there are other RPS's[1] that identify criteria for assessing historic heritage that could give some guidance on the national importance of scientific heritage such as that provided by the Ballantrae LTE:

> **Scientific Qualities**
> Information
> 5.20 The potential for the place or area to contribute information about an historic figure, event, phase or activity.
>
> Potential – Scientific Research
> 5.21 The degree to which the place or area may contribute further information and the importance of the data involved, its rarity, quality or representativeness.

26. Horizons One Plan RPS has policy to recognise the effects of infrastructure on matters of national importance at policy 3-3. The RPS also identifies the effect of new infrastructure on existing infrastructure in policy 3-1. This Notice of Requirement (NoR) has considered the list of other relevant infrastructure identified in policy 3-1 in so far as how they are affected by the need to provide for roading infrastructure. For policy 3-3

[1] https://staging.boprc.govt.nz/media/541214/operative-rps-1-october-2014_appendix-f.pdf

the NoR has also gone through the standard section 6 matters such as natural character and indigenous biodiversity. Unfortunately, when confronted with the oddity of a nationally significant nationally significant long-term fertiliser and grazing study located with a research station, given that it does not easily fit the standard section 6 assessment process, there has been no further consideration of how it may be appropriately assessed. Thus there has been no thorough consideration of the effects of the proposed infrastructure project on an "out of spec" resource of national importance. In my opinion it would have been appropriate that the analysis of the matters of national importance carried out for policy 3-3 to have considered the competing merits of two nationally important projects – the road and the research station. Instead it has only recognised the merits of one.

27. As noted in the section 42A report [paragraph 629] Policy 3-3 provides further direction on the management of adverse effects arising from the establishment, operation, maintenance and upgrading of new infrastructure or physical resources of regional or national importance. This includes allowing minor effects, provided that more than minor adverse effects are avoided, remedied or mitigated, taking into account need, functional, operational and technical constraints, whether there are any reasonably practicable alternative locations and designs, and whether any more than minor adverse effects that cannot be adequately avoided, remedied or mitigated by services or works can be appropriately offset.

**Effects on sites of national significance**

28. It is my opinion that the effects on the Ballantrae LTE do not lend themselves to remedy or mitigation. In this regard the consideration of alternative sites to avoid the Ballantrae LTE, a nationally important research station, is close to absent in the NZTA evidence suite. In the evidence of Ms McLeod for NZTA I can find little reference to Ballantrae[2]. The mitigations proposed by Dr Horne and Mr Morton were only developed in March 2019[3] i.e. two weeks ago. They are therefore a post-decision retrofit and do not constitute a genuine attempt to consult, based on a thorough understanding of the

[2] paragraphs 62, 65d, 101e, 191-194 and 223-226
[3] Paragraphs 191-194

effects of their proposal at the time NZTA were doing their multi criteria analysis. Until March 2019 NZTA had no expertise on the subject of land-based long-term trials, thus the discussions AgResearch had with them pre and post the decision on Option 3 was absent of expertise on NZTA's part. In my opinion it is very difficult to engage in meaningful consultation when there is an incomplete understanding of what the resource is. The proposed mitigations are set out in proposed condition T3[4], again, these do not reflect an informed understanding of the effects of a road on the site. The planning evidence does not in any way refer to the national importance of the site. This insufficiency of attention has been noted in the section 42A report at paragraph 589.

29. The consideration of alternative routes in Mr Whaley's evidence fails to identify the biophysical effects on Ballantrae of a road cutting passing through it, as does the evidence of Dr Horne and Mr Morton. This means that proposed measures to mitigate do not address the core reason that mitigation is not appropriate.

30. An assessment of other reports that NZTA relies upon also identify that the Ballantrae LTE receives very little attention. The Environmental and Cultural Design Framework October 2018 (ECDF) does not recognise the research station at all. There are headings in this report which would seem relevant, but it appears the writers were not alert to the possibility that there was a one-off matter of national significance within the proposed road route. Ballantrae's status as a Research Station, with long-term nationally significant experiment is not mentioned, thus its needs are not addressed. The ECDF advises that an intensive consultation process has been undertaken with the community and key stakeholders:

> This has involved **communicating** on a regular basis and seeking opportunities for dialogue and **information sharing**. To date, public open days have been held in Woodville, Ashhurst, Dannevirke, Pahiatua and Palmerston North. Other locations, in particular for regional connectivity consultation, can be considered as the Project continues to **engage with key stakeholders** and the public. Meetings and workshops involving key stakeholders include three district councils and Horizons regional council as well as government departments such as Department of Conservation (DOC) and Land Information New Zealand (LINZ), the Te Āpiti Governance Group and the Accessing Central New Zealand strategy group.

[4] Paragraphs 223-226

31. I note two matters in respect to this extract from the ECDF. Firstly communicating and information sharing is not the same as consulting[5,6] and secondly AgResearch is not listed as one of the key stakeholders consulted.

32. The ECDF[7] is required to consider minimising disruption to the natural landscape and its drainage patterns[8]. The context is for ecological reasons, however in this instance it is also crucially important for research reasons. Of the list of considerations, these seem relevant to the protection of the functioning of the research station: Designing for the environmental and cultural context, Integrating transport and landuse, Design to reduce disruption to natural landscapes, vegetation and biodiversity, Context sensitive and place based approach, Understand the physical conditions and Facilitate community engagement and a collaborative approach.

**Proposed mitigation**

33. The only permanent effect identified by NZTA is as a result of severance or disruption to *access* to properties, as a result of the Project. This is considered a neutral effect as alternative access will be provided, and improvements to access on Saddle Road. NZTA does not recognise that the proposed route will have the permanent effect of ending a nationally significant trial site. NZTA proposes conditions (T3) to mitigate the effects of the route on the research site. These have been developed only on the basis of effects on the surface of the site. This reduction in site area will have significant effects on the statistical viability of future research from the site and is covered in the evidence of Dr Henderson and Dr Mackay. The conditions at T3 have not considered the effects that a change in the site hydrology will have, as a result of a wide, deep cut through the middle of it. The proposed conditions are thus inadequate to mitigate the adverse effects that will arise.

[5] *Wellington International Airport Ltd v Air NZ* [1991] 1 NZLR 671 (Court of Appeal)
[6] https://www.mfe.govt.nz/publications/rma/5-how-consultation-may-be-conducted

[7] Bridging the Gap: NZ Transport Agency Urban Design Guidelines (2013).
[8] 2.2.3Landscape and Natural Features: Integrating Infrastructure N3 and N5 and 2.2.4Environmental Health: Design with Nature E1

**Questions from the Section 42A report**

34. The section 42A report identifies[9] that insufficient recognition of the worth of the Ballantrae LTE meant inadequate consultation (i.e. that the NZTA consultation effort was not in keeping with the importance or effect). It notes[10] that the Ballantrae research station was not specifically identified in the RPS policy 3-1 as a physical resource of regional or national importance, from which other activities are to be avoided as far as reasonably practicable. It also notes[11] that NZTA has not recognised there will be permanent irreversible effects on the Ballantrae LTE.

35. The section 42A report puts the onus on the submitter to characterise the effect of the proposal on the research station[12]. My understanding is that usually the onus would be on the applicant. It does not seek further information from the applicant in the section 92 request.

**Questions from the panel**

36. The Hearing Panel, in its third memorandum, has poised a number of questions to NZTA on the effects of the proposed route on the Ballantrae LTE. Counsel for NZTA has advised who responds to these in a witness identification memorandum of 11 March 2019, listing Dalzell, McLeod, Whalley, Wickman, and Linzey. However their responses are somewhat circular. Dalzell refers us to Horne, Morton and McLeod. McLeod refers us to Horne, Morton and Dalzell. Linzey refers us to Morton. Whalley refers us to Wickman. Wickman refers us to Whalley. As a result I have been unable to glean much on NZTA's most recent thinking with respect to protecting the Ballantrae site.

**CONCLUSION**

37. I consider that the analysis carried out by NZTA on the effects of their recently identified preferred route for the Manawatu-Tararua highway on the Ballantrae research station and the long-term nationally fertiliser and grazing study located on the Station do not

[9] in paragraph 621
[10] in paragraph 627-628
[11] In pargraph 639
[12] at paragraph 654

adequately identify this nationally significant research station to fully consider or address the effects of a road cutting on it. This inadequate consideration has meant that the route choice process was missing important information, resulting in the route choice expressed in the outline plan being one that will render this nationally significant research station inoperable.

Dated 15th March 2019

Christine Bridget Robson