

**Before Hearing Commissioners
at Palmerston North**

UNDER: the resource management Act 1991

IN THE MATTER OF: 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.**

Summary evidence of Jeremy David Neild on behalf of
AgResearch Ltd

Dated XX March 2019

SUMMARY EVIDENCE OF JEREMY NEILD

INTRODUCTION

- 1 My name is Jeremy Neild.
- 2 I prepared evidence dated 15 March 2019 for AgResearch Ltd in relation to the NZTA application for a designation associated with the **E AHU A TŪRANGA MANAWATŪ TARARUA HIGHWAY**
- 3 My qualification and experience are as outlined in that evidence.

SCOPE OF EVIDENCE

- 4 This evidence provides a summary of the main points of my evidence as filed, where I provide my expert opinion on the value of retaining the long-term phosphorus fertiliser and sheep grazing trials on Ballantrae Research Farm.

SUMMARY OF EVIDENCE

- 5 The long-term Trials at Ballantrae have significant value to the sheep and beef pastoral sector, to the New Zealand economy and society.
- 6 There are three sources of value as follows:
 - 6.1 The option values for the future;
 - 6.2 The significant investment over 40+ years gives The Trial a long data set, which provides great research value.
 - 6.3 Its location on land representative of much of the NZ pastoral dry-stock economy, and its internal sophistication, of farmlets with different compass aspects, slopes and fertiliser and grazing treatments. This make its findings immediately relevant to the large part of the NZ economy that relates to hill country Sheep and beef cattle farming.

Future Option Value

- 7 Long-term trials identify effects that cannot be observed or reliably interpreted in shorter term trials. They allow for more useful information to be discovered.

- 8 The database of this Trial site provides a springboard to study a range of emerging issues, many of which were not initially contemplated and which have been identified since the Trial sites were established in 1975. This identification of new research topics continues, with the most recent being studies that assist in understanding the effects of sustainable farm systems, nutrient losses to water, fertilizer contaminant build-up and climate change on and by agriculture.
- 9 We cannot predict all likely research streams, but this trial site provides the platform to study issues critical to agricultural production and its related export income, and its environmental effects.
- 10 It is very difficult to monetise the full value of this trial because it is likely to provide information for issues we are just becoming aware of, but that will grow in importance. I.e. the effect of seriously modifying the site by putting a road through it is a permanent and significant adverse effect. The future effect of this action is to significantly reduce New Zealand's capability to ask and answer questions about hill country pastoral farming.

National significance

- 11 The trial at Ballantrae is nationally unique. It is irreplaceable for the following reasons:
 - 11.1 It is a long-term trial, one of only two in New Zealand and of a handful internationally. To start a similar trial from scratch will set the country back 43 years, of data and trend analysis and is most unlikely to be contemplated given available research funding
 - 11.2 It is a multi-factorial farmlet trial involving grazing livestock. This trial design is unique in New Zealand and rare internationally.
 - 11.3 It is located on North Island hill country, crucially important to New Zealand's dry stock industry and becoming more so, as the flat and rolling land is used for other activities.

Long-term investment

- 12 The taxpayer has made a significant investment into the long-term trial and research since 1975. The benefits of this platform for research would be lost if the route choice remains that proposed in the NoR. It is estimated that the trial costs \$75-\$100,000 per annum to maintain. However, this would not include establishment costs or the costs of doing research and collecting the data etc

Dated: 29th March 2019

Jeremy Neild