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**STATEMENT OF EVIDENCE OF KEITH WILLIAM BRIDEN on behalf of DIRECTOR-GENERAL OF  
CONSERVATION  
DATED 4 September 2017**

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**Proposed Canterbury Regional Pest Management Plan 2017- 2037**

## INTRODUCTION

1. My full name is **Keith William Briden**.
2. I am a Technical Advisor at the National Office of the Department of Conservation (DOC), based in Christchurch.
3. I have a Bachelor of Forestry Science (Canterbury, 1981). I am a full member of the New Zealand Biosecurity Institute and the New Zealand Ecological Society.
4. I am a committee member on the New Zealand Wilding Conifer Management Group.
5. I have been DOC's key contact person for issues related to invasive environmental weeds for 17 years. My work has included:
  - a) Providing advice on wilding tree management;
  - b) Provision of technical advice into the "New Zealand Wilding Conifer Management Strategy 2015-2030";
  - c) Provision of technical advice to support a bid for new funding for wilding conifer control in budget 2016. That bid was successful, and resulted in \$16m of new funding being allocated for wilding conifer control over a 4-year period.
  - d) I am the DOC representative on the Ministry of Primary Industries' Operations Group that advise on where new funds will be allocated;
  - e) I was a peer reviewer of the recent "Mackenzie Wilding Conifer Management Strategy" prepared by Te Manahuna Consulting in 2016.
6. I am therefore familiar with pest management throughout New Zealand and in the particular wilding tree management.
7. In preparing this evidence I have read the Proposed Canterbury Regional Pest Management Plan and associated documents along with the subsequent Environment Canterbury Staff Report.
8. My evidence relates to the Director General's submission, with a focus on 3 key issues I wish to draw to the attention of the Hearing Panel, being:
  - a) Wallabies, in particular the application of the Good Neighbour rule, and
  - b) Wilding conifer management and control, and
  - c) Russell Lupin spread, impact, management and control.

## **BENNETT'S WALLABY**

9. I support the focus the proposed RPMP has on Wallaby control and the changes to the proposed control margins in the Staff Report.

10. The proposed 1 kilometre boundary distance for control is a more appropriate, realistic and implementable Good Neighbour Rule which in my view will address the issue of spread while not requiring unrealistic amounts of resources to be employed in dealing with this pest at the expense of managing other pests.

## **WILDING CONIFERS**

### **A NATIONAL PERSPECTIVE**

11. New Zealand has a serious and expanding problem with wilding conifers colonizing public and private land. Since the 1930's the area affected by wilding conifers has increased by 6% per year. Wilding conifers now affect 6% of the New Zealand land area and occupy 1.8 million hectares.

12. In 2016 the Government made additional funding available in the budget for the control of wilding tree species. Prior to that additional funding being allocated, it was predicted that 20% of the New Zealand land area would be affected by wilding trees within 20 years. The new budget funding is sufficient to slow the spread of wilding conifers, but more funding will be required to reverse it.

13. The economic impacts of wilding trees (on pastoral production, international nature-based tourism, indigenous biodiversity and loss of water availability for irrigation) have been estimated recently as affecting the New Zealand economy by \$1.2b over 20 years.

14. In Budget 2016 the seriousness of wilding conifer spread and its impacts on economic and cultural values was recognized: additional funding of \$16m over four years was allocated for treating large areas of lightly infested land to prevent those areas becoming medium and densely infested areas.

15. Treating wilding conifers early, in lightly infested areas, can cost around \$1 per hectare. Treating dense stands can typically cost \$2,000/ha for herbicide treatment and \$10,000/ha for chainsaw felling. The new funding announced in Budget 2016 is the first stage of what will need to be much larger funding programme.

### **DOC'S WILDING CONIFER MANAGEMENT PROGRAMMES**

16. DOC is the leading central government agency responsible for the conservation of New Zealand's natural and historic heritage. The control of wilding conifers and other tree weeds is necessary if the Department is to discharge its functions in accordance with its statutory requirements (under the Conservation Act 1987, National Parks Act 1980 and the Reserves Act 1977).

17. DOC manages around 8.5 million hectares of land - which is almost one third of New Zealand's land area. Accordingly, a wide range of ecosystems and native species affected by environmental weeds are managed by DOC. Wilding conifers are the most serious weed problem and approximately

one third of DOC's weed budget is spent controlling them. DOC's current expenditure on wilding conifer control is approximately \$3.5m per year.

18. DOC's primary reason for controlling wilding conifers is to protect conservation values. However, DOC's wilding tree control work also contributes to protecting landscape values, cultural and historic values, recreational activities and farmland; and it helps maintain water quantity and water quality.

**Proposed Wilding Conifer Management framework in the proposed Canterbury Regional Pest Management Plan.**

19. ECAN should be congratulated for both increasing the emphasis on wilding conifers in the latest Plan and engaging in the Ministry for Primary Industries (MPI) led wilding conifer National program and treating nine management units under the new funding and cost share arrangements. (Godley, Hakatere, Porters, Craigieburn, Amuri Lewis, Tekapo A, Tekapo B, and Ohau).

20. A number of submissions supported the proposed rules and asked for rule clarification or changes, in particular in relation to a Good Neighbour rule. I support the Staff report recommending this addition as this provides another valuable tool to assist halting the spread on wilding conifers.

**Pest Agent approach to Wilding Conifer**

21. I appreciate the complexity around the Biosecurity Act, RMA and the ability to declare organisms a pest agent. I understand MPI will be providing more analysis on this matter in the future, however at present my understanding is that the use of pest agent is the mechanism to deal with organisms that are both a pest and resource. Douglas fir is the most important wilding conifer that needs to be defined this way. It is the second most invasive conifer species ranked just below Contorta pine. Wildlands consultants ranking score for Contorta is a mean score of 41/100. For Douglas fir, it is 38/100. In comparison Radiata pine scores a 10/100.

**Impact of NES. (The National Standard for Plantation Forestry).**

22. The officers report implies that ECAN is limited by introduction of the NES as it creates unnecessary duplication.

23. Firstly, the NES does not cover existing plantings, amenity or shelter trees. It is these existing seed sources causing the spread. In the last decade the area of New Zealand forest plantation has remained static. If there are any new commercial forest plantings during the plan duration these will be covered by the NES and as such duplication between controls from the NES and RPMP is insignificant.

24. Spread from existing plantations shelter and amenity trees is exacerbating wilding conifer spread and needs a solution.

25. It will be difficult to meet the plan objective of progressive containment, in my opinion, unless all seed sources, those originating from coning wilding conifer and those originating from coning planted trees, are covered by plan rules.

**Funding for control of Wilding Conifers from Beneficiaries**

26. The Biosecurity Act requires an analysis of exacerbators and beneficiaries in relation to pest spread and control, along with an allocation of costs.

27. The analysis of costs and benefits completed by ECAN showed water extractors were 50% of the benefit of wilding conifer control. ECAN noted DOC's submission point:

*“These matters have been previously considered in previous RPMSs and dismissed due to practical limitations in implementing such a proposal. For water users, the correlation between water use and the benefits of wilding control is dependent on variables such as the levels of infestation and how the water is being used. For hydro-generators, local government rates are problematic as a means of gathering revenue as the area of land owned by the generators is relatively small and not proportional to benefits derived from water use compared with other uses such as irrigation”.*

28. There are 4 points to make;

1. Since “previous consideration’ the Canterbury wilding conifer problem is better understood and now recognised as far more serious. The recent Mackenzie Wilding Conifer Management Strategy indicates current funding at @\$2m a year. To fix the wilding conifer problem around \$4m a year needs to be spent. The longer there is a funding shortfall the worse the spread will become and the more expensive it will be. The new MPI led funding will help but does not cover the level of the shortfall in funding. Cumulative to that situation, MPI funding will not be available in the longer term with ongoing maintenance costs being met by occupiers, ratepayers, exacerbators and beneficiaries.

2. Impacts of wilding conifers on water yield are now better understood along with the economic value and benefit of water.

NIWA and Landcare Research studies show that if 535,000 ha of the Mackenzie Basin became infested with wilding conifers the water yield would be reduced by just over 50 cumecs from the Waitaki river. This is a significant amount of water.

3. National Policy Direction and guidance material. These are new and specify requirements for analysis of costs and benefits, identification of exacerbators’ and beneficiaries, and, allocation of costs. Wilding conifer control protects water catchments and maintains water yield in water sensitive catchments. Water extractors are significant beneficiaries and should contribute more funds. Extracting funds from water extractors will help meet the funding shortfall and improve the probability of meeting the plan objective.

4. ECAN, in my opinion, should signal an intent to seek fair contributions from water users to fund a beneficiary component of wilding conifer control. I appreciate the complexity and sensitivity of this topic and DOC is willing to assist further with this thinking if requested.

## **Lupins**

29. Mr Nelsons evidence (DOC Senior Ranger, Twizel) outlines his observations and experience of the control, spread and threats of wild Russell Lupins to high value ecological sites. His experience and the work he is carrying out is also being replicated (to a slightly lesser degree in terms of dollars and resources) across the mid and upper catchments of braided rivers and high-country basins throughout Canterbury – Appendix 1 Map refers.

30. In addition to the Mackenzie Basin programme, a number of Government and community groups are actively working on lupin control in the upper Rangitata, Rakaia, Waimakariri, Waiau and Clarence Rivers.

31. To effectively control wild lupins, I consider they need to be included in the RPMP under a sustained control programme that precludes establishment in those parts of the region where it does not exist and requires control elsewhere within defined parameters.

32. Appendix 1 contains maps of current control areas (by DOC), known distribution and proposed Exclusion Areas (based on threat of spread and known ecological values). The Ecan staff report expresses a desire to receive this information to assist the Panel with its deliberations.

33. Evidence from other submitters is consistent around pest agent and the need for 3 objectives- Exclusion area, sustained control area (or a large site) where lupins are required to be planted certain distances from waterways. Reducing seed entering waterways by 95% would make control achievable and less expensive. Third area where lupins are widespread already is a 10 m good neighbour rule. 10m would be consistent with the gorse and broom rule.

34. These controls correlate directly with the map information provided and the decision sought in the DOC submission:

Exclusion Area – this is the areas where there are currently known lupin infestations, however given the ecological values the areas contain the focus here should eventually be on elimination. Using the pest agent status, elimination of wild Russell Lupins within 200 meters of large braided river margins, 50 meters of smaller waterways' and 10 metres of farm water courses will significantly limit spread and over time work toward elimination within these areas.

## **CONCLUSION**

35. In general I support the majority of the RPMP provisions and approach and have focussed my attention to the key areas I believe the Panel should consider further.

36. Wilding Conifers and other invasive tree species are an increasing and intractable problem in many parts of the region. Left unchecked, they have the potential to significantly alter the landscape, which would eventually be transformed from tussock grasslands to exotic forest.

37. Significant effort and expense is being incurred to control wilding tree species. Those efforts are more likely to be successful if all the resources that are potentially available can be brought to bear on the issues.

38. Wild Russell Lupins are also an increasing problem and their inclusion in the RPMP will enable further tools to be used to halt and managing the impacts the community is observing them having, on braided rivers.

Keith William Briden  
4 September 2017

## Appendix 1



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LupinEvidence.pdf