

**BEFORE THE MANAWATU-WANGANUI REGIONAL COUNCIL**

*In the matter of*                      the Resource Management Act 1991

*and*

*In the matter of*                      Submissions and further submissions made by  
**TRUSTPOWER LIMITED & MERIDIAN  
ENERGY LIMITED** to the Manawatu-  
Wanganui Regional Council on the Proposed  
Horizons One Plan – Biodiversity Provisions.

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**SUPPLEMENTARY EVIDENCE OF STEPHEN FULLER**  
**Ecologist**

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**1 December 2008**

## 1 INTRODUCTION

- 1.1 My name is Stephen Fuller. I am a senior ecologist working for Boffa Miskell Limited and am based in its Wellington Office. I hold a Bachelor of Science in Zoology and Botany, and a Diploma of Applied Science in Ecology from Victoria University of Wellington.
- 1.2 I have worked as an ecologist for 23 years, including employment with the Department of Lands and Survey and DSIR when I conducted biological surveys of scenic reserves in the lower and central North Island. From 1992 to 1997 I ran my own ecological consultancy undertaking site inventories, restoration and management planning, research, and assessments of effects. From 1997 to 2002, I was the general manager of the Karori Wildlife Sanctuary, responsible for the planning and implementation of its restoration and development projects. I joined Boffa Miskell Limited in November 2002.
- 1.3 My professional memberships include the:
- *Environmental Institute of Australia & New Zealand; and*
  - *New Zealand Ecological Society.*
- 1.4 During my time practicing as an applied ecologist I have undertaken a wide range of ecological assessments across the North and South Islands. These assessments have ranged in scale from single property developments, through to moderate scale subdivisions, to major infrastructure projects. This work has involved biological and ecological surveys, descriptions of natural values, assessments of significance, and the evaluation of environmental effects on terrestrial, avian, and freshwater ecology.
- 1.5 My role often requires working collaboratively with urban planners, engineers, and landscape designers to integrate community services, physical works, and public open space with the protection of significant natural areas, rare and threatened flora and fauna, the creation of conservation corridors, and the sensitive treatment of stormwater. My work also often requires consideration of opportunities for mitigation, including site protection, management planning and restoration.

- 1.6 I have been involved in a number of privately initiated and Council adopted plan changes, typically related to new coastal settlements and rural lifestyle projects. Most recently I have been involved in the Paraparaumu Plan Change.
- 1.7 In 1993, while on contract to the Wellington Regional Council, I prepared two documents, "Wetlands of the Wellington Region" and "Inventory of Biological and Geological Sites in the Wellington Region".
- 1.8 More recently in 2007 and 2008 I was project leader for identification of coastal environment sites of regional significance for Greater Wellington Regional Council's Regional Policy Statement review. This project involved as a first step, development of criteria for identification of regionally significant landscape, heritage, ecological and geological sites.
- 1.9 I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court Practice Note and that I agree to comply with it. I confirm that I have considered all the material facts that I am aware of that might alter or detract from the opinions that I express. This evidence is entirely within my area of expertise.

## **2 Scope of evidence**

- 2.1 I have been involved in the proposed One Plan as a peer reviewer for Mr. Park. Like Mr. Park, I have experience both working within the Manawatu-Wanganui Region as well as undertaking ecological assessments under the proposed One Plan framework.
- 2.2 I did not attend any caucusing or any of the pre-hearing meetings on the biodiversity provisions. However, in my role of peer reviewer for TrustPower Limited and Meridian Energy Limited, I am familiar with the outcomes of those meetings, and with the documents referred to in the evidence of Mr. Park.
- 2.3 In my evidence I draw upon my experiences as a practicing ecologist who has conducted assessments of significance and assessments of effects under a variety of regulatory regimes.

### **3 Ecological sustainability**

- 3.1 As outlined in the original evidence of Mr. Park, assessments of ecological significance under the RMA have traditionally taken into account criteria based around representativeness, rarity, distinctiveness, ecological context and sustainability (Norton & Roper-Lindsay, 2004). However, there are no nationally adopted criteria for assessing ecological significance.
- 3.2 As outlined by Ms. Maseyk's statement and supplementary evidence, the use of ecological sustainability as a factor in determining the significance of a site has continued to be debated by ecological practitioners (Walker et al, 2008; Norton & Roper-Lindsay, 2008). Nonetheless, like Mr. Park, I consider that in the RMA context sustainability is an important criterion for assessing a site's significance and the potential effects of an activity on the values that make a site significant.
- 3.3 Ms. Maseyk, in her supplementary evidence, considers that for a site to be "working normally" places an overly high threshold on the assessment of significance given the highly modified and fragmented nature of much of the Region's remaining indigenous biodiversity [para 61]. The reason that sustainability is important to us as practitioners is because it allows a different level of consideration for those sites that have declined past a point where their ecological processes are no longer intact and require high levels of management intervention for those significant values to be restored or retained.
- 3.4 In the case of the proposed One Plan, it is even more important as Schedule E criteria for identification of rare, threatened or at risk sites captures forest sites as small as 0.5 ha or in some situations as small as 0.1 ha (Table E.2.). It is well known that for many types of forest, remnants this size will not have a viable core and their long term sustainability will be in question.
- 3.5 By way of example, I was recently required to conduct an assessment for a small subdivision in Wellington which involved 2.3 ha of remnant swamp forest. Twenty years earlier this forest would have been considered regionally significant. Today over 40% is heavily infested with vine weeds leading to canopy collapse. Attempts to remove weeds had led to even greater canopy die-back as weakened trees were exposed to wind, frost, and desiccation. My assessment concluded that three quarters of the site

could not be saved and that without intervention the entire forest would be lost within a further 20 years. Current condition and long-term sustainability were key factors in my assessment of significance in combination with representativeness, rarity, and context. The poor condition ultimately affected my final significance rating for the site. However, I also concluded that with immediate intervention a quarter of the remaining forest, a little over 0.5 ha, could be saved, and if properly buffered by a further 0.5 ha of planting, it would be just large enough to be sustainable in the long term. Consideration of condition and sustainability in this case was used both to acknowledge irrevocable loss, and recognise an opportunity for long term protection and management.

- 3.6 Another example I have recently been involved in involved a debate over protection of several hectares of raised bog in pasture. The bog contained a wide diversity of native moss and turf plants, a number of which were locally rare. Council required that this wetland be retired from grazing and fenced as mitigation for vegetation clearance elsewhere on a site. I argued that this bog only existed because of historic land use and the current grazing regime. In my opinion attempts to "protect" the site by excluding grazing animals, would affect the long term sustainability of the site, and would therefore be detrimental to its ongoing significance. Unfortunately the applicant agreed to fence the site. A year later the turf vegetation has been entirely replaced by a dense sward of rank exotic grasses.
- 3.7 Accordingly, in terms of the applicability of Policy 12-7 to assess effects under the RMA, I consider condition and ecological sustainability are fundamental attributes of a site and must be considered as part of assessing the significance of a site and the significance of potential effects. This approach is also recognised by Norton & Roper Lindsay 2004.
- 3.8 Similar to the comments of Mr. Park in his discussion on representativeness, I believe Policy 12-7 is deficient because it does not allow for the condition of a site to be taken into account when determining significance (this includes considerations such as whether its ecological processes are largely intact). I consider this severely limits the ability of an ecologist employed to assess the significance and potential effects on a site, to assess a sites actual status and ecological value, or rather limits the scope for Council to consider the ecologists findings.

3.9 In summary, it is my opinion that ecological sustainability is an important assessment criterion in the context of Policy 12.7. I therefore recommend the addition of the following criteria to the amended Policy 12-7:

<u>Criteria</u>	<u>Explanation</u>
<u>Ecological Sustainability</u>	<u>Key ecological processes remain viable or still influence the site; and</u> <u>Key ecosystems within the site are known to be or are likely to be resilient to existing or potential threats under some realistic level of management activity</u>

Stephen Fuller,  
Senior Ecologist, Boffa Miskell  
1 December 2008