

## EVIDENCE IN CHIEF OF RACHEL MARIE KELLEHER - INDEX

	<b>Page</b>
<b>Introduction</b>	<b>2</b>
<b>Scope of evidence</b>	<b>2</b>
<b>Functions of the Department</b>	<b>3</b>
<b>Consultation and the Department's involvement in the application to date</b>	<b>4</b>
<b>The Department's approach towards sustainable energy proposals</b>	<b>5</b>
<b>Management of threatened species and their habitat</b>	<b>5</b>
<b>Offset mitigation</b>	<b>7</b>
<b>Recreation and tourism</b>	<b>9</b>
<b>Conclusions</b>	<b>10</b>
<b>References</b>	<b>10</b>

Before the Board of Inquiry  
Hauauru Ma Raki Wind Farm Proposal

---

*Under* the Resource Management Act 1991

*In the matter of* Resource consent applications by Contact Wind Limited relating to the Hauauru Ma Raki Wind Farm Proposal

*And*

*In the matter of* Notices of Requirement and a Resource Consent Application by Contact Energy Limited relating to the Hauauru Ma Raki Wind Farm Proposal

---

Statement of evidence in chief of **Rachel Marie Kelleher**

---

Dated: 27 March 2009

Date of hearing: 27 April 2009

---

Director-General of Conservation

18 – 32 Manners Street      Tel +64 4 471 0726  
P O Box 10-420                Fax +64 4 471 3170  
Wellington 6143

*Solicitors acting:* Shona Bradley/Jeremy Prebble/Alice Hunt

## **STATEMENT OF EVIDENCE IN CHIEF OF RACHEL MARIE KELLEHER**

### **INTRODUCTION**

- 1 My full name is **Rachel Marie Kelleher**.
- 2 I am employed as the Conservation Support Manager for the Waikato Conservancy of the Department of Conservation ("the Department"). I have held positions within the Department for over nine years. I was previously employed as a Freshwater Ecologist by Waikato Regional Council. In my current role as Conservation Support Manager I am responsible for leading a specialist team of technical and community relations staff to provide integrated advice and support to both the conservancy and key internal and external stakeholders.
- 3 I hold a Master of Science with Honours degree in Biological Sciences and a Bachelor of Science and Technology in Biological Sciences, both awarded by Waikato University. I am familiar with the proposal which is the subject of the resource consent applications and notices of requirement. I confirm that I have visited the site on more than one occasion.
- 4 Over the past ten years I have been directly involved in assessing and providing advice to the Department on a number of Resource Management Act applications, these have included:
  - Transit NZ, State Highway One Designations: Huntly and Ngaruawahia Bypasses;
  - WEL Networks, Te Uku Windfarm;
  - WEL Networks, Te Uku Windfarm Transmission Line Designation;
  - Perry's Aggregates Ltd Waingaro Quarry Extension; and
  - Council Stormwater and Wastewater Consent renewals.
- 5 I have read the Environment Court's Code of Conduct for Expert Witnesses, and I agree to comply with it. My qualifications as an expert are set out above. I confirm that the issues addressed in this brief of evidence are within my area of expertise.
- 6 I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

### **SCOPE OF EVIDENCE**

- 7 My evidence will deal with the following:
  - Functions of the Department;

- Consultation and the Department's involvement in the application to date;
- The Department's approach towards sustainable energy proposals;
- Management of threatened species and their habitat;
- Offset mitigation; and
- Recreation and tourism.

### **Functions of the Department of Conservation**

- 8 The Director-General of Conservation ("the Director-General") is the administrative head of the Department. The functions of the Department are set out in Section 6 of the Conservation Act 1987. They include, relevantly:
- (a) To manage for conservation purposes, all land, and all other natural and historic resources, for the time being held under this Act, and all other land and natural and historic resources whose owner agrees with the Minister that they should be managed by the Department;
  - (ab) To preserve so far as is practicable all indigenous freshwater fisheries, and protect recreational freshwater fisheries and freshwater fish habitats;
  - (b) To advocate the conservation of natural and historic resources generally;
  - (c) To promote the benefits to present and future generations of—
    - (i) The conservation of natural and historic resources generally and the natural and historic resources of New Zealand in particular; ...and
  - (e) To the extent that the use of any natural or historic resource for recreation or tourism is not inconsistent with its conservation, to foster the use of natural and historic resources for recreation, and to allow their use for tourism:
- 9 In addition to the functions set out in the Conservation Act, the Department has responsibility for the protection and control of wildlife and birds as set out in the Wildlife Act 1953. Certain wildlife is not protected under the Act; however a number of species that the Department considers at risk by this proposal are classified as "absolutely protected" under the Act.
- 10 Section 53 of the Wildlife Act enables applicants to apply for authorisation to take or kill wildlife for certain purposes. This authorisation is delegated to the Director-General and is separate and distinct from resource consents granted by consent authorities under the Resource Management Act 1991.
- 11 It is likely that the applicant will need to obtain wildlife permits for various activities associated with the HMR project.

## Consultation

- 12 I first became aware of the Hauauru Ma Raki Wind Farm proposal in July 2007 at a meeting held with the Applicant's representatives Wayne Mills, Al Yates and their consulting ecologist Gerry Kessels. At this meeting I was accompanied by a Departmental planner and fauna ecologist.
- 13 Following this meeting, I attended a site visit on August 2007 along with staff from the District and Regional Councils to look at key aspects of the proposal. At the time of this site visit the total turbine numbers, locations and the designation route were not confirmed.
- 14 The Waikato Conservator formally conveyed to the Applicant by letter in August 2007 the Department's broad areas of concern in relation to the impacts of this proposal. At this time these were noted as:
  - I. Interaction of the proposed windfarm with avifauna and bats;
  - II. Potential effects of the windfarm on indigenous vegetation;
  - III. Potential effects of the windfarm on natural character and landscape values within the coastal environment;
  - IV. Potential effects of the windfarm on archaeological sites; and
  - V. Potential effects of the windfarm on water quality.
- 15 Since this initial communication the Department has corresponded and met with the Applicant on a number of occasions to discuss the Department's concerns and to try where possible to address these concerns. This has included three meetings in March, May and June 2008 where the Department made available experts, including external shorebird experts, to assist in discussions.
- 16 Meetings with the Applicant in January and February 2009 have focused specifically on reviewing and providing suggested changes to the Applicant's proposed consent conditions which could address the Department's concerns. Progress has been made as a result of these meetings on some matters, but the Department still has a number of outstanding concerns in relation to this proposal which will be addressed in specific detail by the Departmental experts. The remaining areas of concern broadly relate to:
  - I. Interaction of the proposed windfarm with avifauna (including bats);
  - II. Potential effects of the windfarm on indigenous vegetation; and
  - III. Potential effects of the windfarm on water quality and freshwater habitats.

- 17 The Department acknowledges that the Applicant has been obliging in facilitating site visits to areas of interest for Departmental experts.

### **Department of Conservation Involvement in Other Sustainable Energy proposals**

- 18 The Department accepts the general need for and benefits of renewable energy generation options, and does indeed support renewable energy proposals where adverse effects can be appropriately avoided, remedied or mitigated. Some examples of proposals for renewable energy where the Department has been involved and not opposed include:
- Arnold River Hydro: TrustPower's 46 Megawatt scheme. Issues of concern with regard to conservation values were resolved by constructive negotiation of consent conditions enabling the Department to support the scheme subject to conditions as proposed by the applicant.
  - Taumatotara - Ventus Energy (NZ) Ltd - 22 turbines/  
Taumatamaire (aka Awakino) - Ventus Energy (NZ) Ltd - 32 turbines. The Department's concerns were addressed during consultation with the applicant with appropriate conditions agreed prior to hearing.
  - Te Uku Windfarm - WEL Networks Ltd – 28 turbines. Issues of concern were addressed through the development of a memorandum of understanding (MOU) detailing monitoring requirements and agreed consent conditions with the applicant which were tabled at the hearing.
  - Mighty River Power – Renewal of consents for operation of eight lakes and nine dams associated with the Waikato River. Issues of concern were resolved prior to hearing by the development of a MOU between Mighty River Power and Ecological Interest Groups, of which the Department was a key member.
- 19 All renewable energy applications need to be considered in light of their own particular circumstances and the Department's position determined accordingly. The decision to submit in conditional opposition to this application has been made following careful consideration, in light of substantive expert assessment of the effects of the proposal. These effects and the adequacy of the proposed mitigation is described in more detail as part of the Department's expert evidence.

### **Management of threatened species and their habitat**

- 20 In Mr Kessels evidence (Para 144) he comments that the main constraint and uncertainty with regard to assessing effects of windfarms on New Zealand fauna to date is that there are very few operational turbines in place in the wide array of ecosystems found

within this country. He also states there is currently no long term or scientifically robust data for any New Zealand species to draw upon. He further comments that there are no data available with regard to migratory flight paths and no research being carried out by central government to address this lack of knowledge, despite the threatened status of several species.

- 21 With over 2000 species currently considered threatened throughout New Zealand, the management of these species presents a huge challenge. The Department aims to secure threatened species from extinction and, in particular, reduce the risk of extinction for those species that are being actively managed.
- 22 The management of threatened species generally focuses on slowing down the initial rate of decline for populations and, in the longer term, reversing that decline.
- 23 Securing threatened New Zealand species is part of the Department's contribution to the New Zealand Biodiversity Strategy. Species are preserved for their own sake, for their role in indigenous ecosystems, to meet public expectations and to help maintain options for species management into the future.
- 24 In the last two years, the Department carried out a large number of active species conservation programmes to help protect threatened species (Hitchmough, R. 2007) These programmes resulted in:
  - Improved security for one or more populations of 157 'acutely threatened' species or subspecies;
  - Improved security for one or more populations of 58 'chronically threatened' species or subspecies;
  - Improved security for one or more populations of 23 'at risk' species or subspecies;
  - Improved understanding of the status and threats for 195 'acutely threatened' species or subspecies through survey monitoring and research;
  - Improved understanding of the status and threats for 67 'chronically threatened' species or subspecies through survey monitoring and research; and
  - Improved understanding of status and threats for 29 'at risk' species or subspecies through survey monitoring and research.
- 25 In addition to these species specific programmes, general habitat for a wide range of species was enhanced as a result of over 1,066,570 hectares of land controlled for possums, 683,298 hectares of land controlled for deer and 2,363,720 hectares of land controlled for goats.
- 26 The Department has a number of work programmes in place specific to species of interest potentially at threat as a result of this

application. In the Waikato, the Department is undertaking population and habitat protection by way of predator control at Waipapa and Pikiariki for long-tailed and short-tailed bats and has an ongoing monitoring programme in place at Waipapa supporting research to better understand bat populations and inform appropriate management.

- 27 With respect to resident and migratory shorebirds in the Waikato the Department is undertaking significant NZ dotterel work on the Coromandel Peninsula and west coast beaches of the Waikato involving predator control, nest monitoring, nest protection, monitoring of breeding success and advocacy with local communities.
- 28 Migratory shore bird work within the Waikato includes the provision of support to the New Zealand Ornithological Society with west coast harbour census counts and to shorebird work carried out by the Miranda Naturalists Trust.
- 29 Work on species such as wrybill and South Island Pied Oystercatchers is generally carried out in New Zealand where breeding occurs with the focus being on improving breeding success and our understanding around how this is best achieved. The O Tu Wharekai programme, directed primarily at the protection of wrybill in the Rangitata River Catchment, Canterbury, is a good example of this.
- 30 Despite all the work the Department is carrying out for the benefit of New Zealand's threatened species, I agree with Mr Kessels that there is an absence of information relating specifically to the effects of windfarms on New Zealand avifauna species, leaving much to be drawn from overseas examples. For this reason the Department has retained Dr Steven Percival as one of its experts.
- 31 Dr Percival has expansive knowledge of the impact of windfarms on avifauna in the United Kingdom and has drawn on this expertise in preparing his evidence on the proposal's likely impact on migratory and resident shorebirds.

#### **Off-set mitigation**

- 32 The Department regularly engages in the management of effects of development on conservation values. This is approached in a number of ways both with applicants for resource consents and with Councils in the development and review of their statutory plans.
- 33 With applicants this can include working with them from the outset of a project to ensure project plans and consent conditions meet the outcomes of both parties; working through formal Resource Management Act processes and in some instances development of memorandums of understanding in parallel with a formal Resource Management Act process.

- 34 With Councils, the Department generally takes an approach of working with them through the provision of planning and technical expertise to assist them in achieving their responsibilities, particularly as they relate to protection of biodiversity values as required by the Resource Management Act. This particularly relates to the development of appropriate plan provisions.
- 35 For example, the Department has provided comment and submitted on proposed vegetation clearance provisions in the Proposed Waikato District Plan, seeking to ensure that vegetation is assessed for significant flora and fauna values prior to any clearance occurring.
- 36 In most instances the Department will seek to work with an applicant to avoid impacts on conservation interests. In my experience where this cannot be achieved preference has been to mitigate any adverse effects that may occur on site following a general principal of "no net loss" to conservation values. This principal encompasses not just the size of habitat effected but ensuring "like for like" quality of habitat and species that occupy those habitats. At times on-site mitigation is not possible and off-set mitigation is considered.
- 37 I outline below two examples of specific Waikato development applications with similar effects to those proposed in this application with which I have been involved.
- I. Perry Aggregates Ltd Waingaro Quarry extension: This application sought to extend an existing aggregate quarry into approximately 6.5ha of mature native forest on private land adjacent to the Hakarimata Scenic Reserve. Some conditions of consent which were agreed to prior to the hearing with the applicant and were included in the final consent conditions required:
    - Preparation of a peer reviewed Vegetation and Fauna Management Plan to ensure the planned vegetation removal is carried out in such a manner to ensure least damage and disruption to the existing ecosystem and that appropriate methodologies and monitoring are in place to ensure mitigation measures are being effective;
    - The consent holder to facilitate the enhancement of at least 80 hectares of vegetation within the scenic reserve through the implementation of a predator control programme focused on possums, rats and other species where necessary. The selection of this area is required to have particular attention on "like for like" mitigation;
    - Monitoring programmes for herpetofauna, birds, bats and invertebrates within the (minimum 80ha) enhancement area. This includes population trend monitoring and predator control outcome monitoring; and

- The requirement to enhance a minimum area of 80ha of vegetation is more than ten-fold the 6.5ha of forest to be removed as a result of the proposal. This increase reflects the maturity of the forest being removed and that protection of existing trees would not replace this loss. It also ensures that mitigation will realistically benefit those species including forest birds, herpetofauna, invertebrates and bats potentially displaced through the loss of this habitat.

II. WEL Networks Te Uku Windfarm: Sought the establishment of a 28 turbine windfarm on private land. The final staff report for the consenting authorities noted the MOU between the Department and the applicant. Some of the requirements of the consent and MOU are:

- Population monitoring for NZ falcon and long-tailed bats both pre- and post- windfarm construction;
- Strike monitoring for all fauna (birds and bats) for the first three years of operation;
- Specific mitigation to enhance bat populations over an area of approximately 250ha within Pirongia Forest Park comparable to the size of the windfarm area;
- Specific mitigation to enhance NZ falcon populations in the Waikato; and
- Further mitigation if the results of strike monitoring indicate the windfarm is having an impact on birds.

38 In respect of the HMR proposal, it is my view based on recent development proposals the Department has been involved with which have had similar potential effects on conservation values, that the mitigation outlined in Mr Tonks' evidence and incorporated into draft consent conditions outlined in Mr Daysh's evidence are inadequate to address the Department's outstanding concerns.

39 The Department's expert witnesses provide further evidence as to why they consider the proposed measures for avoiding, remedying or mitigating potential adverse effects of the project are inadequate.

### **Recreation and Tourism**

40 The Department is responsible for fostering recreation opportunities on the lands and waters it manages. There is no public conservation land directly involved in this application and the proposal does not impact on existing recreational opportunities managed by the Department.

41 It is stated in Mr Tonks' evidence (Para 20 & 21) that the construction of the windfarm may open up opportunities for the establishment of some form of coastal access

- 42 Provision of access to the coastal marine area is consistent with the New Zealand Coastal Policy Statement 1994. The policy also recognises that some restrictions to access may be necessary to ensure that biodiversity, historic and cultural values are protected.
- 43 In the event that consents are granted, the Department would welcome involvement in the establishment of any new public access along the west coast of the windfarm area, particularly in advising on the types of restrictions necessary to protect coastal values.

## **CONCLUSIONS**

- 44 The functions of the Department include the responsibility to protect wildlife, in particular species which are absolutely protected under the Wildlife Act and to advocate for the protection of their habitats. This responsibility extends to freshwater fisheries and their habitats.
- 45 The application as it stands poses risks to protected species including freshwater fisheries and their habitats.
- 46 Although the Department has reached some agreement with the Applicant to resolve some of its minor concerns, there remain a number of outstanding significant matters that are unresolved in respect of the Departments concerns. A key area of remaining concern relates to potential impacts on migratory shorebirds, as the Department's experts consider that there is a risk of significant adverse effects on key species of concern, and there is no certainty that the adverse effects can be appropriately addressed.
- 47 The mitigation being proposed by the applicant is inadequate to meet these concerns.
- 48 If the Board is minded to grant the approvals sought by the applicant, the Department seeks that appropriate measures be factored into the proposal to ensure that these concerns are addressed. The Department's experts have included preliminary comments on conditions in their evidence, and these are collated in the evidence of the Department's expert planning witness Ms Cockerell. The Department is happy to continue discussions with the applicant on this basis.

**Rachel Marie Kelleher**  
**27/3/09**

## **References**

Hitchmough, R., Bull, L., Cromarty, P. 20075. "New Zealand Threat Classification System lists" (2005), Science and Technical Publishing, Department of Conservation, New Zealand.

