BOARD OF INQUIRY

HAUAURU MA RAKI WIND FARM PROPOSAL

In the matter of	The Resource Management Act 1991
And	
In the matter of	Resource consent applications by Contact Wind Limited to the Waikato Regional Council in respect of the Hauāuru mā raki Wind Farm Proposal
And	
In the matter of	A resource consent application by Contact Energy Limited to the Waikato Regional Council in respect of transmission infrastructure related to the Hauāuru mā raki Wind Farm Proposal

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BRIEF OF EVIDENCE IN CHIEF OF ANDREW GRANT BLACKIE

Introduction

1. My name is Andrew Grant Blackie and I hold a degree of Bachelor of Agricultural Science (in soil science and soil and water management) and a New Zealand Soil and Water Conservation Certificate. I have over 20 years of experience in land management issues and am a member of the New Zealand Association of Resource Management.

2. I am employed by the Waikato Regional Council (Environment Waikato) as the Programme Manager for the Forestry and Minerals Programme of the Resource Use Group. I have been employed by Environment Waikato for the past 18 years and in my current role, I maintain an overview of compliance and consent related issues pertaining to all forestry, mining and large scale earthworks activities within Environment Waikato's region.

3. In regard to large scale earthworks sites within the Waikato region my responsibilities at Environment Waikato have included;
    a. consent processing, including acting as an Environment Court witness in relation to appeals against Council decisions,
    b. compliance monitoring and enforcement actions, and,
    c. being the primary Council witness in several prosecutions.

4. During 2002 I was instrumental in the production of an in-house manual entitled "Erosion & Sediment Control – Guidelines for Soil Disturbing Activities" (Waikato Regional Council, 2003), this being the primary document within the Waikato region specifying the relevant standards for design and construction of erosion and sediment control measures.

5. I regularly provide training in relation to Environment Waikato's requirements for erosion and sediment controls for earthworks and lead an internal "Earthworks Project" team for the purpose of promoting best practice for erosion and sediment control within the Waikato region and nationally.

6. During 2007 and 2008 I was closely involved in the consenting and appeal resolution process for the Te Uku Wind Farm (near Raglan), involving 28 turbine sites.

7. Since early 2007 I have maintained an overview of the Hauāuru mā raki project (HMR) as it relates to Environment Waikato's functions, including close liaison with Environment Waikato's technical team (who assessed the proposed activities), the Franklin and Waikato District Councils and the applicant's agents regarding the proposal, further information requirements and proffered conditions of consent.

8. I confirm that I have read the 'Code of Conduct for Expert Witnesses' contained in the Environment Court Consolidated Practice Note 2006. My evidence has been prepared in compliance with that Code in the same way as if giving evidence in the Environment Court. In particular, unless I state otherwise, this evidence is within my sphere of expertise and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

Scope of Evidence

9. The Board expressed some concerns within a letter (dated 16 December 2008) to the Councils regarding the use of the "management plan" type of conditions proffered by the applicant and advised that appropriate standards to be met by the proposed "management plans" need to be appropriately specified.

10. I have prepared my evidence in response to this concern, within the scope of my expertise and the matters relating to the HMR project that are within Environment Waikato's jurisdiction. There is significant potential for effects relating to the discharge of sediment from the extensive earthworks proposed for the HMR project and accordingly I will cover the following matters in relation to resource consent applications made to the Waikato Regional Council;

    a. The development and implementation of Environment Waikato's "Earthworks Project",

b. The application and implementation of management plan conditions of consent relating to erosion and sediment controls on earthworks, and,

c. The applicant's proffered conditions in relation to erosion and sediment controls.

Environment Waikato's "Earthworks Project"

11. During the late 1990 - early 2000s large scale infrastructure improvements to the state highways and a massive increase in the scale of subdivision earthworks (particularly within the north Hamilton area) highlighted that appropriate standards for large earthworks sites were not being complied with and increasingly the gap between local standards and those applied within other regions (eg Auckland) were becoming increasingly obvious.

12. In response to the scale and nature of developments occurring, the higher standards required by the then Proposed Waikato Regional Plan and the need for improved technical information on which to base a compliance regime, Environment Waikato developed its own "Erosion & Sediment Control – Guidelines for Soil Disturbing Activities" in 2003, updated recently in January 2009. Since 2003, these guidelines have been used extensively as the basis for achieving compliance with earthworks related consent requirements and promoting best practice.

13. Large scale earthworks sites concerning projects of limited duration, such as the HMR project, involve very large volumes and areas of soil disturbance. These sites are typically rapidly changing and can have highly variable systems, practices and personnel. For these types of sites Environment Waikato has moved to contracted site monitoring using a small number of dedicated erosion and sediment control specialists. During the construction period, large earthworks sites are typically inspected on a 1 or 2 weekly basis.

14. Actions being undertaken by Environment Waikato to improve environmental performance in the earthworks area include;

    a) Establishment of an internal “Earthworks Project Team” with specialised roles relating to all consenting, monitoring and enforcement activities for medium to large scale earthworks related projects.

    b) The requirement for detailed and site specific “Erosion and Sediment Control Plans” during the consenting phase of a project followed by updated “Erosion and Sediment Control Plans” post-granting of consents to take into account actual consent requirements and detailed design information, as it becomes available.

    c) Promotion of best practice for erosion and sediment controls on earthworks through;
        - Review of consent conditions relating to earthworks and sediment control,
        - Promotion of the “Erosion and Sediment Control” guidelines (including broad distribution of these guidelines to external parties, access via Environment Waikato’s website and reference within consent conditions), and,
        - Provision of training to staff, territorial authorities, external consultants and contractors.

15. Over time, Environment Waikato’s focus on earthworks has moved from a relatively simplistic “end of pipe” discharge sampling approach to a more complex and responsive mix of approaches, promoting best management practices, requiring detailed erosion and sediment control plans, compliance with specific guidelines, targeted information material and an increased use of the enforcement tools available.

16. In my opinion, Environment Waikato has developed and implemented a very effective consenting, compliance monitoring and enforcement regime for large scale earthworks projects and has established a system within which appropriate management plan consent conditions can effectively operate to achieve the

desired environmental outcomes with respect to erosion and sediment control of earthworks sites.

Management Plan Consent Conditions

17. I have read Mr Daysh's evidence (para 52-59) with reference to the use of "management plan" conditions and concur with his comments in regard to matters within Environment Waikato's jurisdiction. Additional comments are provided as follows.

18. Suggested conditions relating to Environment Waikato consents as proffered by the applicant and as modified and attached to Mr Dawson's evidence in chief would require the provisions of a number of management plans[1]. Unless otherwise stated all of the references I make to consent conditions are those attached to Mr Dawson's evidence in chief.

19. By way of example, the standards to be met by the proposed "Erosion and Sediment Control Plan" are specified in three primary ways;

    a. All erosion and sediment control measures (eg silt retention ponds, decanting earth bunds, diversion bunds, silt fences etc) are required to be designed, constructed and maintained in accordance with the specifications set out in detail within Environment Waikato's "Erosion and Sediment Control - Guidelines for Soil Disturbing Activities" (Technical Report No. 2009/02- dated January 2009) – refer Schedule One General Condition 25.

    b. All discharges from earthworks are required to not exceed a specific discharge standard with respect to maximum levels of suspended

[1] WRC117912 (Wind farm and associated earthworks) and WRC117913 (Whitford quarry and associated earthworks), Schedule One;

i) General Conditions 9 – 12 (Earthworks Design and Management Plans),

ii) General Condition 24-27, 39-49 (Erosion and Sediment Control Plan),

iii) General Condition 52 – 55 (Spill Prevention and Response Plan).

sediment discharged from earthworks sites (refer Schedule One General Condition 23) with monthly and rainfall related monitoring of suspended sediments and turbidity of 6 named streams and other receiving waters (refer Schedule One General Conditions 28 and 29b).

c. Chemical treatment of sediment retention ponds or other structures, if required, would need to be managed in accordance with the specifications set out within the Auckland Regional Council's Technical Publication 90 “Flocculation Guidelines - June 2004” (refer Schedule One General Condition 38).

20. In addition, it is proposed that an additional condition be added to those proffered by the applicant, requiring that all erosion and sediment control structures be certified as being constructed in accordance with the approved designs (ie as contained within the approved “Erosion and Sediment Control Plan” for that location - refer Schedule One General Condition 41).

21. Historically, the use of “management plan” conditions have been commonly used within Environment Waikato region in relation to large scale land disturbance activities (including earthworks, forestry and river maintenance activities) where it has been appropriate to deal with matters of detail in the months (or sometimes years) after the consents were granted when the site specific information is available.

22. My experience has confirmed that management plans are an effective and efficient way of managing the potential effects of soil erosion and sediment discharges during the construction phase of large projects.

23. The Board has also expressed some concerns in relation to the “consent envelope” approach being proposed by the applicant, identified within the plans attached to Mr Daysh’s evidence in chief as the “Turbine Consent Areas”.

24. The applicant seeks a similar, although typically less constrained, approach in relation to earthworks. For a "worst case" example, Plan 30[2] depicts the "Earthworks Consent Area" sought for parts of turbine blocks "G" and "H", although it is noted that these plans are identified as indicative and subject to final design.

25. The "Earthworks Consent Area" sought for turbine block "G" includes large areas where no earthworks are currently proposed. The "Earthworks Consent Area" sought for the adjacent turbine block "H" are significantly more constrained and relate much more closely to the locations of proposed roading, lay down areas, turbine platforms and fill sites.

26. I am unaware of the criteria used by the applicant to determine the proposed "Earthworks Consent Area" sought or the reasons for the large variation in "Earthworks Consent Area" sought between turbine blocks.

27. Notwithstanding those comments, the level of earthworks required relate to the proposed roading, lay down areas, turbine platforms and fill sites, which are depicted on the plans and variation in the location of those activities within the larger "Earthworks Consent Area" is not anticipated to significantly alter the nature of potential effects relating to earthworks and sediment control. The requirement for "Earthworks Design and Management Plans" and "Erosion and Sediment Control Plans" as proposed allows for the inclusion of final design and earthworks location information to, among other aspects, optimise the environmental outcomes sought by those Plans.

Proffered conditions in relation to erosion and sediment controls

28. I have read the conditions relating to erosion and sediment control proffered by the applicant. With the suggested Environment Waikato amendments (as attached to Mr Dawson's evidence in chief), these conditions reflect a relatively standard set of conditions that are commonly imposed on resource consents granted by the Environment Waikato relating to large scale earthworks projects.

[2] Plan 30 from Exhibit SGD2, as attached to Mr Daysh's Evidence in Chief

29. In my opinion, these conditions are appropriate for the proposed activity and if complied with would result in erosion and sediment controls being implemented in accordance with best practice.

30. Of particular note are the Schedule One General Conditions 14, 15 and 16[3] which relate to stabilisation and restriction of construction works during the winter period of 1 May to 1 September, typically a period of very wet ground conditions. An increase in erosion and sediment mobilisation on exposed areas is expected during this winter period and if not carefully controlled can result in a significant increase in the effects of sediment discharge on receiving environments. The wet ground conditions at this time of year can also make it difficult, and sometimes impossible, to undertake maintenance of existing control devices or repair damage that may occur.

31. Environment Waikato has been restricting winter earthworks via consent conditions for several years now in order to reduce the potential for sediment discharges during winter. The general approach to construction works during this period is typically that higher risk areas (being large and/or steep areas and areas in close proximity to watercourses) will be completed and stabilised prior to the winter earthworks period. Many well managed sites usually request and receive approvals to undertake construction works in lower risk areas over the winter period, typically including earthworks on smaller areas of lower gradient land, well removed from streams.

Summary of Conclusions

32. While construction of the HMR project in its entirety would be a large earthworks project, each block of turbine sites and associated roading can be considered as a discrete earthworks site. When considered in this way, each discrete block of turbine sites comprises an earthworks site that is not larger or more significant that numerous sites Environment Waikato has previously authorised under consenting regimes similar to that proffered by the applicant for this project.

[3] Schedule One General Conditions attach to Resource Consents WRC117912, 117922, 117923, 117927 and118074.

13. Within the context of Environment Waikato's approach to consenting, compliance monitoring and enforcement regime applied to large scale earthworks projects (ie within Environment Waikato's "Earthworks Project" as discussed above) and in my experience, the type of management plan conditions proffered by the applicant (and subject to the proposed amendments attached to Mr Dawson's evidence in chief) have been effective in managing the potential effects of sediment discharges from large scale earthworks projects, similar to the proposed HMR project.

ANDREW GRANT BLACKIE

27 March 2009