

BOARD OF INQUIRY

HAUĀURU MĀ 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 in respect of the Hauāuru mā raki Wind Farm Proposal

And

In the matter of notices of requirement and a resource consent application by Contact Energy Limited for transmission infrastructure related to the Hauāuru mā raki Wind Farm Proposal

**REBUTTAL EVIDENCE OF GAVIN CRAIG LISTER
RESPONDING TO THE EVIDENCE OF STEPHEN BROWN**

Counsel Instructed:
Trevor Robinson
Wellington

Tel 64-4-472 1755. Fax 64-4-472 1766. PO Box 8018 Wellington
trobinson@xtra.co.nz

Solicitor Acting:
H Rosemary Dixon
Contact Energy Limited

Telephone 64-4-462 1284. PO Box 10742, Wellington
rosemary.dixon@contact-energy.co.nz

Introduction

1. My name is Gavin Craig Lister. I am a landscape architect with Isthmus Group Ltd based in Auckland.
2. I refer the Board of Inquiry to the statement of my qualifications and experience in my evidence in chief. I reaffirm my commitment to comply with the code of conduct for expert witnesses in the Environment Court.
3. The purpose of this brief of evidence is to respond to the evidence of Stephen Brown.

Accuracy of Photomontage

4. Mr Brown (paragraph 37-38) maintains that additional turbines would be visible beyond the middle-ground ridge in the photomontage of the Wind Farm prepared for the Walters (Mr Brown's annexure 9) and beyond the photo-frame to the left of the photomontage.
5. I checked the photomontage in response to this evidence and discovered a substantial error had been made. The Walter house falls outside the area for which we had detailed contours. This was overlooked when the wire frame model was generated and an incorrect elevation was assigned by the computer model to the house, placing it considerably lower than it is in reality.
6. A corrected photomontage is attached to this brief of rebuttal evidence (**Exhibit GCL 64 a-d**) extending over two A3 sheets to illustrate a wider panorama that captures all the C Group turbines, except C1-4 which may be visible above the pine plantation to the right of the photoframe, and Group D and the northern turbines of Group E. Those turbines furthest away at the southern end of the Wind Farm would still fall outside the photo-frame. I have arranged to visit the Walter property later this week and, subject to having suitable weather conditions, I will prepare a further updated photomontage extending the view further to the north-west and south-west.
7. As well as under-representing the numbers of turbines that would be visible, the previous photomontage also over-represented the size of the nearest turbines by approximately 20% and located them incorrectly relative to the landform.

Degree of Visual Effects on Walter Property

8. Mr Brown (paragraphs 9 and 44) maintains there will be "*quite exceptional effects*" on the Walter property because of the combination of proximity and numbers of visible turbines.
"it is quite unusual to find a situation in which some 16 turbines would totally dominate the middle distance of key views from a residential property, with another 140 odd, more distant turbines in a 'supporting role'.(paragraph 44).
9. I agree the Wind Farm will have an adverse visual amenity effect on the Walters' property. I consider it falls into the 'moderate' category based on distance and the range of other

factors that influence prominence (including house orientation, numbers of turbines, elevation, degree of complexity in intervening landscape), but I accept it would be in the upper part of this range between 'moderate' and 'high'.

10. The House Inventory Appendix I lists the estimated level as 'low' which is clearly incorrect.
11. However, the effect would not be 'extreme'. I agree the main effect will result from the nearest Group C turbines on or behind the middle-ground ridge 3km away. These will clearly be the most prominent, although a little less prominent than represented in the earlier photomontage. The remaining turbines will increase the arc of the view occupied by wind turbines, add to the 'visual clutter' of number of turbines visible, but they will be part of the background beyond the most prominent Group C turbines.
12. The degree of effect is not proportional to the numbers of turbines visible. The ZVI analysis indicates that some 151 turbines might be theoretically visible from the Walters' house. However, this includes turbines for which only the blade tips might be visible, turbines more than 30km away, and takes no account of screening by vegetation.
13. While I agree there will be adverse effects on the Walter property, it is incorrect to single the property out as an exceptional case. The township of Ashurst near Palmerston North, has outlooks to large numbers of turbines in elevated locations the nearest of which is approximately 2km away. The nearest house to the Awhitu Wind Farm (which is consented but not constructed) will have views of some 18 turbines (albeit smaller turbines) from a distance of less than 1km, and other houses have similar outlooks from less than 2km.

Nature of Visual Effects on Walters' Property

14. In paragraphs 42 and 43 Mr Brown describes the nature of the effect on the landscape outlook from the Walter's property:

"...(the wind turbines) would appreciably erode the integrity of Te Umukaraka Bush. It would emerge as a much more fragmented entity and would be rendered entirely subservient to the wholly man-made, in some respects industrial, profile of the new wind farm..." (paragraph 42)

"...(the wind turbines) would have a profound impact on the relative naturalness of the landscape visible from the Walter property, its overall composition and rural character." (paragraph 43)
15. The turbines will be behind the bush as it appears from the Walter's property and it will not therefore appear fragmented by the Wind Farm.
16. The turbines become major elements in the landscape but they will not render the landscape subservient. In terms of a figure/ground analysis, the turbines will become 'figures' against the 'ground' of the underlying landscape.
17. I agree the Wind Farm will affect the naturalness and rural character of the outlook from the Walters house. Such types of effect are inherent with any wind farm. I identify those

effects in paragraph 78 of my evidence in chief and provide reasons why I consider the landscape is appropriate for a wind farm and why the effects on landscape amenity will be acceptable.

District Plan Criteria

18. In paragraph 35 Mr Brown quotes section 23.9.1.2 of the District Plan which sets out criteria against which to assess electricity generation proposals. He concludes that the proposal would not satisfy these criteria:

“It is clear that the location / layout, height, design and external appearance of both the proposed turbines and transmission corridor would very significantly 'detract from the amenity of dwellings on neighbouring properties' and would also compromise 'major ridgelines' in the Wairamarama area”. (paragraph 50)

19. No wind farm is likely to meet such criteria. It is difficult to envisage a location in New Zealand suitable for a wind farm where there would not be some visual amenity effects on neighbouring properties. Similarly wind turbines in a New Zealand context are likely to be either on elevated hills or on the west coast. While the ridge on which the Group C turbines are proposed is a “major ridgeline” in terms of the outlook from the Walter Property, in a wider context, it is one of series of ridgelines forming the west Waikato Hill Country. There are more significant ridges to the east followed by Wairamarama Onewhero Road, and to the north behind the escarpment south of the Waikato River.

Transmission Line

20. In paragraph 45 Mr Brown states that the effect of the Wind Farm on the Walter property will be compounded by the transmission line through the property. He describes a situation in which the line runs across the outlook from the house at relatively close proximity.

“...the line would run across the main slopes of a valley wall (Annexures 4A, 4B, 10A & 10B) that faces directly towards the Walter's residence - north of Wairamarama Onewhero Rd - with up to 6 towers clearly visible within 500-600m of the house.”

21. I acknowledge there are cumulative effects arising from both the Wind Farm and transmission line. However the degree of effects of the transmission line will be less than assessed by Mr Brown for several reasons:
- (a) The distance of the line from the house is greater than stated by Mr Brown. The nearest towers to the house (Tower 21 & 22) will be approximately 850m and 860m respectively to the south-east (I understand also that they will be screened by trees as discussed in the following paragraph). The four towers to the south and south-west of the house (Towers 20-17) will be approximately 980m -1.9km away.
 - (b) There is tree planting around the house in the direction of the nearest part of the line. While I have not visited the property, my colleague Kent Lundberg, who took

the photograph that formed the basis for a photomontage prepared for the Walters, attached to this rebuttal evidence as Exhibit GCL 65 a & b.¹ informs me that in order to get a clear view for the photo, he selected a viewpoint beyond trees south of the house. This was because views from the garden area were obscured by the vegetation. However, I understand from Mr Brown's evidence that there may be views from upstairs rooms. As discussed above, I have arranged to visit the Walter property later this week in order to better assess effects from the property.

- (c) Mr Brown does not discuss factors that would reduce the potential prominence of the line: the lower elevation of the line in relation to the house, the fact it will be seen against (i.e. "back-clothed") the landscape backdrop of the hill, and the scale of the valley in relation to the line.

'Alternative Alignment'

22. Mr Brown refers to an 'alternative alignment' across an adjoining property. This alignment was suggested by the Walters following purchase by Contact Energy Ltd of the adjoining property, but it does not form part of the Notice of Requirement. While the alternative proposed by the Walters will, in my view, be acceptable from a landscape perspective, the alignment in the Notice of Requirement is preferable. The alternative alignment would result in towers being visible on the skyline in views from the Walter property. Mr Brown in paragraph 46 appears to reach the same conclusion.

Alternative to Alignment through Te Umukaraka Bush

23. Mr Brown (paragraph 47) emphasises what he claims will be substantial effects of the transmission line on Te Umukaraka Bush and recommends an alternative route (paragraph 53, 2nd bullet) along the Kaawa Valley:

"Yet, it appears inevitable that the transmission corridor, including construction and maintenance tracks, would cut a clearly visible swathe through that part of the Bush directly abutting, and exposed to, the Walter property." (paragraph 47).

24. As described in the evidence of Mr Kessels (paragraph 125), the actual effect will be significantly less than Mr Brown claims. The conductors will be strung above the bush, using higher towers, and limited felling of individual trees to provide sufficient clearance. All but one of the proposed tower locations are on or adjacent to areas of remnant pasture which tend to follow ridges, providing tower locations and access. The remaining tower (Tower 13) is located within the middle of a bush area, but is located in a previously cleared area. Mr Kessels also suggests using a pole structure lifted in by helicopter as a means of further limiting clearance.
25. During the route selection process a route was initially investigated along the Kaawa Valley. On further investigation I recommended the alignment included in the Notice of Requirement because of its lower visibility. I did so on the understanding the line could be constructed with relatively minor clearance of bush. I walked or rode a quad bike along

¹ The photomontages from the Walters' property were previously labeled with different exhibit numbers which Stephen Brown refers to in his evidence. At the time I completed my main rebuttal evidence no evidence had been received in relation to the Walters' property so the numbering was re-allocated.

most of the alignment through this area in conjunction with Mr Kessels and Ms Yorke prior to reaching that conclusion. This exercise included selecting individual tower locations in order to minimise effects on the bush.

Landscape Appraisal

26. In paragraphs 27 - 30 Mr Brown claims the Umukaraka bush “*might well be considered an Outstanding Natural Landscape or Feature*” (paragraph 27, 1st bullet). In paragraph 51 Mr Brown refers to the bush area as “*arguably outstanding.*”

“Although largely a cut-over stand of remnant forest, it now displays sufficient wealth of canopy species, visual cohesion and physical integrity to stand apart from the great bulk of its farmland surrounds.” (paragraph 27)

27. I agree the bush area has relatively high landscape quality because it is a reasonably large area of cut-over and regenerating bush and because it has a picturesque escarpment backdrop. It therefore warrants particular attention in terms of s7(c) and s7(g) of the RMA. However the reasons given by Mr Brown do not make it ‘outstanding’. It would rank moderately-high for natural science qualities (it is a mosaic of cut-over bush, regenerating bush and shrub-land, and remnant pasture); the fault-line escarpment means it has moderately-high expressiveness (i.e. geomorphology) value; and the bush and escarpment have moderately-high aesthetic quality. These reasons are insufficient to conclude that the area is ‘eminent, conspicuous, particularly because of excellence’, particularly taking into account the relatively low prominence or visibility of most of the area and the fact it is unlikely the area has recognition amongst the wider community.

G C Lister

