

11 November 2008

Project No. 087813441

Mr Matt Russell  
NZ Windfarms Ltd  
PO Box 13-321  
Christchurch

## PEER REVIEW OF ASSESSMENT OF NOISE EFFECTS – PROPOSED WINDFARM, MT STUART

Dear Mr Russell

### Introduction

NZ Windfarms Ltd proposes to construct and operate a wind farm on a 15 ha site, located on the ridgeline of Mount Stuart, Manuka Creek, South Otago, approximately 16 km due west of the township of Milton. Up to nine turbines are proposed as part of the Mount Stuart Wind Farm development. Together the turbines will have a maximum installed capacity of approximately 6MW.

An Assessment of Noise Effects report relating to the application has been prepared by NZ Windfarms Ltd (issued 4 November 2008). Golder Associates (NZ) Ltd has been commissioned by NZ Windfarms Ltd to carry out a peer review of the assessment report. The purpose of this review is to verify the findings of the report and to ensure that it addresses all relevant acoustic issues.

This report is issued subject to the limitations set out in Attachment 1.

### Peer Review Comments

The NZ Windfarms Ltd report entitled *Proposed Wind Farm at Mount Stuart Assessment of Noise Effects*, issued to us on 20 October 2008 has been reviewed in association with the following documents:

- *Vestas 660 kW Variable Slip Wind Turbine, V47-660 kW and V47-660/200 kW, Item no: 943111.R4, dated 02-05-00* – The Vestas V47-660 kW wind turbine specification;
- *New Zealand Standard NZS 6808:1998 Acoustics – The Assessment and Measurement of Sound from Wind Turbine Generators*; and
- *MS Turbine sound Level.xls* – Spreadsheet containing NZ Windfarms Ltd calculations.

Our key comments in regard to the report are as follows:

We would agree with the conclusions of your report, based on the turbine manufacturer's noise specification and acknowledging that the manufacturer's specification states that an analysis of the noise from the V47-660 kW turbine within a distance of 75 m has not indicated any clearly identifiable impulsive or tonal components. However, we would note that the presence of any special audible characteristics from the turbines would incur a 5 dB penalty under NZS 6808:1998. This standard references an objective method to determine whether a sound exhibits a tonal character and as such confirmation from the manufacturer of any selected turbine should be sought to ensure that this is met.



Yours Sincerely

**GOLDER ASSOCIATES (NZ) LTD**



Sean Flaherty  
Acoustics Specialist

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Principal Acoustics Specialist

Attachments: Report Limitations

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