Agreement for
Conditional Acceptance of Background Noise Monitoring

Date:.....

To: .....

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From the property owner: .....

Property address: .....

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We understand that you wish to complete a Background Noise Survey at our property and that the survey results will form the basis of operational wind farm noise targets for our property. Furthermore, the Background noise results can be used in compliance checking after the wind farm is operational.

Recently it has been identified in court proceedings that noise data 'filtering' has been applied by acousticians employed by wind farm operators to noise compliance measurements at other recently constructed wind farms in Victoria that were not applied to pre-construction (background) noise monitoring. 'Filters' applied include the removal of rain-affected data, high wind at the microphone, and removal of wind data for specific directions (that were used in background measurements).

If such 'filtering' is to be applied to future compliance noise measurements it would also be a requirement to similarly filter the Background noise survey results, otherwise, the noise level targets would be set artificially too high.

Additional "noise filtering" in the assessment stage has been the use of summer periods (high background levels due to cicadas) and ignoring cooler months of the year that experience lower background levels. Noting that the wind monitoring data is normally over more than 12 months of data, for post-construction monitoring it would be necessary to compare like with like (i.e., pre-construction and post-construction monitoring should occur in similar seasons – or to be ethically correct to have multiple sets of monitoring for different seasons of the year).

A background noise assessment requires background noise levels versus corresponding hub height wind speed measurements to be plotted into a scatter chart.

At the planning stage, the wind is obtained from an anemometer on a wind mast (i.e., before turbines are built) and the background level is at residential receiver locations. When the wind farm is built the average wind speed data must be taken as the averaged wind across the entire wind farm. This can be obtained by averaging the anemometers on top of the nacelle of each turbine. The background level is to be obtained at the same residential receiver locations used in the planning stage and compared with the averaged hub height wind from all the anemometers on the nacelles.

The correct measurement and analysis of background noise at our property versus the wind at the turbines is thus very important to the correct assessment of our acoustic amenity.

In the interest of transparency and to ensure that we can independently check the background noise survey results we wish to impose the following ***Conditions***, which are to be accepted in writing by an authorised representative of your organisation, prior to allowing any noise survey work on our property.

Conditions

1) The same noise monitoring equipment proposed to be used in future compliance testing will be used in the Background noise survey and that the setup and type of data collected (and filtering process) will be identical.
2) Wind farm wind speed data must be taken as the average wind across the entire wind farm and obtained by averaging the anemometers on top of the nacelle of each turbine. The background level is to be obtained at the same residential receiver locations used in the planning stage with an anemometer at microphone height (as per the original background level testing).
3) The monitoring location on our property is to be 10m from our residence, on the wind farm side of the residence, and not located in proximity to trees or bushes. A second wind anemometer is to be located in the general area of the monitoring microphone at the Bureau of Meteorology required height of 10m.
4) We will be provided with all sound level data recorded by the sound level measurement equipment in both raw and processed form covering the survey period which may include any audio recordings. Audio recordings should be dated and time-stamped. The processed form will be an unlocked (no security applied) Excel spreadsheet showing:
    a. the LA90 sound levels with an adjoining column(s) showing the date and start time of the recording and additional columns showing the actual wind speed and wind direction recorded by both anemometers. The data will include additional columns identifying the corrections used to adjust for hub height wind speed if the wind farm anemometer used is at a different height to the proposed hub height.
    b. The spreadsheet must also provide the averaged wind speed of all turbines for the entire wind farm (except where a wind farm involves separate sections the spreadsheet will identify the average wind speed per section and averaged wind direction for each section of the wind farm).
    c. the periods affected by rain and any other data removed due to known extraneous effects (basis of exclusion to be identified).
    d. The scatter charts produced by your “noise” consultants.
5) Raw noise and wind data will be of the form downloaded directly from the sound level meter devices used and from the anemometers at our site that will include at least 10-minute average wind speed and direction corresponding to the 10-minute noise samples (start time of each sample to be shown). The hub height wind data is to be in accordance with condition 4 ii. and show the start time of each 10-minute sample.
6) The data will be provided on a memory stick formatted such that it can be read on a Windows or Macintosh computer in a verifiable format (e.g. Excel format) and be delivered to us less than 30 days after the completion of the survey.

If the Conditions above are accepted, please provide written confirmation referencing this letter, after which we can arrange for a suitable time to commence the survey and the fee for access to our property to undertake such monitoring.

Signed by
Property Owner .....

Signed by
Wind Farm Company .....

Signed by
Witness 1 - Property Owner’s Solicitor.....

Signed by
Witness 2 - Property Owner’s Independent witness.....