

Wind Farm Noise Assessments

AWN Consulting is a multi-disciplinary engineering consultancy with offices in Dublin and Cork. Its acoustics team is the largest and most experienced of its kind in Ireland.

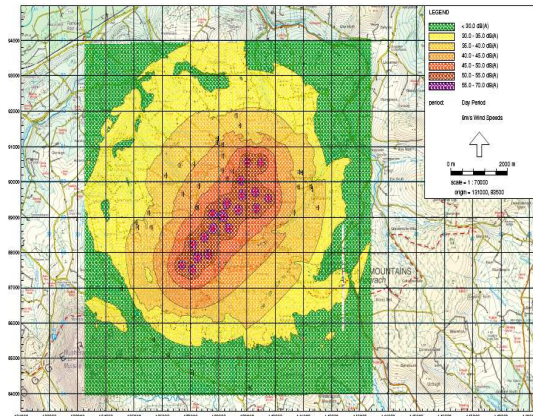
AWN Consulting offers specialist services in relation to noise prediction assessments and measurement surveys for wind farm developments.

Noise Impact Assessments

Planning applications for wind farm developments typically require provision of an Environmental Impact Assessment. One of the requirements of such an assessment is to conduct a comprehensive evaluation of potential wind farm noise impact on the surrounding environment. AWN Consulting has conducted numerous noise impact assessments for wind farms throughout Ireland and the UK.



A wind farm noise impact assessment is carried out by firstly conducting a baseline noise survey in full accordance with *ISO 1996: 2007: Acoustics – Description and Measurement of Environmental Noise* in order to quantify the existing ambient noise environment in the vicinity of the development. A noise model is then constructed through the use of Brüel & Kjær *Predictor* software which predicts wind farm sound emission levels and plots them in the form of a noise map of the surrounding environment.



The noise map can then be easily compared with the results of the baseline noise survey to determine compliance with criteria contained in the *Guidelines for Planning Authorities June 2006 – Wind Energy Development Guidelines*.

Noise Emission Surveys

Noise emission surveys are typically carried out for wind farm developments to ensure protection from noise disturbance complaints. Measurements are conducted that confirm whether aerodynamic noise due to blade turbulence and mechanical noise from generators and gearboxes are within the *Wind Energy Development Guidelines* as well as compliant with all planning condition noise requirements.

