



A specialist energy consultancy

Wind farm noise Expert  
Witness services

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## Wind farm noise Expert Witness services

TNEI is an independent specialist energy consultancy providing technical, strategic, environmental and consenting advice to organisations operating within the conventional and renewable energy sectors.

We offer specialist noise assessments and advice on a wide range of projects - from initial desktop studies and baseline surveys through to detailed assessments, planning submissions, compliance monitoring and support for appeals and Public Inquiries.

TNEI's Environment & Engineering team is proficient in a range of acoustic disciplines with specialist knowledge of wind farm noise, having assessed a variety of schemes ranging in size from a single turbine to large scale developments of more than 300MW. TNEI has undertaken noise monitoring, modelling and assessment of more than 4 GW of onshore wind energy projects.

Our large team has undertaken over 200 full ETSU-R-97 noise assessments and several hundred smaller assessments, as well as preparing evidence for more than 35 Public Inquiries for wind farm proposals. For all inquiries TNEI has been involved in, all noise issues have been resolved to the satisfaction to the appointed Inspector / Reporter.

Wind farm projects are often subject to high levels of scrutiny by Planning Authorities and third parties and due to the high profile of proposed developments it is increasingly common for projects to end up at Public Inquiry. TNEI provide robust technical services to ensure that our assessments are defensible throughout the planning process and at Public Inquiry, if and when required.

In addition to supporting our own assessments, TNEI's expertise has also been sought at the Public Inquiry stage to review and update noise assessments for a number of projects that have been undertaken by a third party consultant.

Using an extensive range of in-house equipment, including sound level meters and rain gauges, we can support multiple concurrent projects at any one time and ensures that we are expertly placed to meet your noise and acoustic requirements. The use of TNEI's smart monitoring equipment also enables our team to download survey data on a daily basis and provide clients with live updates on survey results.

## TNEI has undertaken noise monitoring, modelling and assessment on more than 4 GW of onshore wind energy projects.

## Case studies

**Service:** Technical support and Expert Witness services  
**Client:** Creggan Wind Farm Limited

TNEI acted on behalf of Creggan Wind Farm, providing technical support and expert witness services at a joint public inquiry for an 18 turbine S36 application on the Kintyre Peninsula (WIN-130-1). The initial brief was to review the noise assessment work undertaken by others, including consideration of the limits proposed by Argyll and Bute Council (ABC).

TNEI determined that the limits suggested by ABC would potentially result in restrictions for one development, and unnecessary headroom for another. TNEI was then commissioned to validate the previous background surveys, prepare revised cumulative modelling to account for the existing Bein an Turic scheme and proposed Auchdadaie scheme and derive suitably apportioned noise limits that conform with the Institute of Acoustics document 'A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise' (IOA GPG). Some additional background noise monitoring was undertaken along with extensive data analysis to establish the total ETSU-R-97 noise limits.

Additional modelling for a variety of alternative candidate turbines was completed and used to apportion limits equitably between all schemes, the final details of which were negotiated with ABC and the other developer during the inquiry.

**Service:** Operational noise assessment and Environmental Statement review  
**Client:** Wind Prospect Developments Ltd

TNEI was commissioned to undertake a review of the operational noise assessment report and Environmental Statement prepared by another consultancy, relating to a 27 turbine scheme known as Braemore in the Highlands.

TNEI assessed all documents and monitoring data, visited each monitoring location and then completed the review, highlighting some shortcomings and limitations. The client then revised the scheme to 18 turbines and requested the update of the noise assessment by TNEI, including providing supplementary noise monitoring. All aspects of the revised assessment, including data collection, analysis, derivation of noise limits and candidate turbine noise predictions, were undertaken in accordance with ETSU-R-97 and the IOA GPG, with the report issued as Supplementary Environmental Information. The assessment included detailed mode management matrices to enable conformance with the noise limits.

A further detailed cumulative assessment was undertaken, in consultation with the Highland Council (HC). Despite this work, agreement could not be reached on the applicable night time noise limit, the noise margin to be allowed between the predicted and consented turbine limits for two adjacent existing schemes at Achany and Rosehall, and the appropriate cumulative noise limit for all wind farms. The HC refused consent and all these issues were fully discussed during the subsequent Public Inquiry, the outcome of which is awaited.

## Key contacts

**James Mackay**  
Director of Environment & Engineering



James has a detailed knowledge of wind farm acoustics and is at the forefront in the development of wind farm acoustic assessment practices in the UK. He was involved in the drafting and review of the Institute of Acoustics document 'A good practice guide to the application of ETSU-R-97 for the assessment and rating of wind turbine noise'; (IOA GPG) and is an author of one of the GPG supplementary guidance notes. He regularly presents papers on wind farm acoustics at UK and international conferences and provides advice to bodies such as the Irish Wind Energy Association (IWEA) and the Scottish Government Energy Consents Unit (ECU).

Whilst at TNEI, James has been involved with more than 200 ETSU-R-97 wind farm noise assessments and several hundred assessments of smaller single turbine schemes. In addition to baseline noise assessments, James also has experience of wind turbine compliance testing, complaints investigations and Planning Appeals.

James holds the Diploma in Acoustics and Noise Control, is a full Member of the Institute of Acoustics.

**Jim Singleton**  
Team Manager (Environment & Engineering), Principal Technical Consultant



Jim is involved in the measurement, prediction and assessment of all types of community and environmental noise. He has acquired a broad experience of environmental noise prediction, measurement and assessment across a range of sectors, with specific expertise in noise from energy generation and energy infrastructure developments.

Jim has been involved with the practical assessment of multiple wind farm projects across the UK, together with numerous smaller wind turbine assessments and applications. He has given evidence at hearings and provided written representations for a number of development types, including residential and industrial developments. He is involved in the assessment of environmental noise for both planning and environmental permit applications, as well as compliance monitoring and the noise management of operational developments.

Jim has 13 years' experience working on noise projects across the UK and abroad and previously lectured in acoustics for 6 years. He is a full Member of the Institute of Acoustics (IOA), holds a first-class BSc (Hons) and the IOA Diploma in Acoustics and Noise Control.

## Get in touch

For more information about our noise Expert Witness services, please contact James or Jim.; [james.mackay@tneigroup.com](mailto:james.mackay@tneigroup.com), +44 (0)191 211 1414. [jim.singleton@tneigroup.com](mailto:jim.singleton@tneigroup.com), +44 (0) 141 428 3186.



## Contact

We are a specialist, independent company. That's why we can offer a flexible, personal service and help our clients quickly and efficiently, without all the big corporate distractions.

But most of all, we love to solve problems.

For more information about who we are and what we do, please contact: [info@tneigroup.com](mailto:info@tneigroup.com)

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