



CONSULTANTS IN ENGINEERING,  
ENVIRONMENTAL SCIENCE & PLANNING

# Environmental Noise



**EXPERIENCED & QUALIFIED NOISE EXPERTS**

**Fehily Timoney (FT)** is a leading consultancy in the environmental noise arena and has in-house, experienced and suitably qualified noise experts, who undertake the noise impact assessments and noise measurements for environmental projects in accordance with Irish, UK or EU standards and guidance.

**FT's** team of noise experts are recognised for their experience in dealing with all types of noise assessments.

CENTRES OF EXCELLENCE COMPRISE OF A WIDE RANGE OF SPECIALIST CAPABILITIES INCLUDING:  
ENERGY & PLANNING | INFRASTRUCTURE | WASTE & RESOURCE MANAGEMENT | URBAN DEVELOPMENT

# TRANSPORTATION



**FT** have significant experience in assessing transportation schemes including, road, rail, airports and ancillary developments to road schemes such as motorway service areas. **FT** are at the forefront of road acoustics contributing to a suite of standards on noise barrier performance and guidance documents.

**FT's** Acoustics team has extensive experience in the provision of specialist studies including noise and vibration for various multi-disciplinary projects including numerous road schemes. **FT** has a proven track record in noise and vibration assessments of transport schemes, from the feasibility stage, through to constraints study, route selection, preliminary design, detailed design, construction and handover.

**FT** have experience undertaking in situ testing of noise barriers in accordance with EN1793-5 and EN1793-6.

Main Background Photo:  
Galway Wind Park



## Key Services:

- Baseline and Compliance Measurements
- Constraints Studies and Route Selection
- In-situ Noise Barrier Testing
- Mitigation Design including Design and Specification of Noise Barriers
- Noise Impact Assessments
- Noise Nuisance Investigation
- Transportation Noise Modelling





**FT's** noise team are leading experts in noise impact assessments, site layout development and curtailment strategies for a range of energy projects including wind farms and solar farms and have a proven track record in this area.

We undertake noise impact assessments for all stages of a project, including construction, operation and decommission. We can design suitable mitigation measures to ensure that guideline limits are met at all sensitive receptors.

Our in-house specialist team can design mitigation measures to meet conditioned noise limits. We have developed our own **bespoke modelling tool** for **optimizing energy output** whilst complying with conditioned **noise limits**, which has proved very effective for our wind energy clients. **FT** use the latest software to predicted noise emissions from your development and have the capability to develop bespoke proprietary code for directional analysis and curtailment optimisation.

## Key Services:

- Amplitude Modulation and Tonal Noise Measurements
- Background Measurements
- Construction Noise Modelling
- Compliance and Operational Measurements
- Curtailment Analysis
- Noise Impact Assessment
- Operational Noise Modelling







**FT** is a leading consultancy in the environmental noise arena and has in-house, experienced and suitably qualified noise experts, who undertake the noise impact assessments and noise measurements for all of our environmental projects in accordance with Irish, UK or EU standards and guidance. Our team has recognised expertise in this area and has a detailed understanding of the nuances of noise assessments for all manner of environment related projects.

**FT** has prepared multiple noise impact assessments for a range of projects. We undertake noise impact assessments for all stages of a project, including both construction and operational noise in addition to cumulative assessments and design suitable mitigation measures to ensure that guideline limits are met at all sensitive receptors.

**FT** can provide all your noise modelling requirements including modelling road, rail, industrial, construction noise sources as well as modeling and designing mitigation measures where necessary.

## Key Services:

- Baseline Noise Surveys
- Construction Noise Modelling
- Construction Noise Monitoring
- EPA licence compliance monitoring
- Noise Impact Assessment
- Noise Nuisance Investigation
- Operational Noise Modelling
- Preparation of Guidance Notes, Training and Studies





## PROJECT PROFILES

### IN-SITU TESTING OF NOISE BARRIERS ON THE IRISH ROAD NETWORK

Transport Infrastructure Ireland (TII) appointed **FT** to undertake in situ testing of 20 noise barriers on the Irish road network. The barriers tested were a mix of standard reflective and absorptive. Sound insulation performance was measured in accordance with EN 1793-6:2018 for all barriers. In addition, sound reflection performance was measured in accordance with EN 1793-5:2016 for the absorptive barriers. Testing was undertaken to measure the acoustic performance of the noise barriers and to ensure that the barriers meet the long term durability requirements.



### WIND FARM NOISE ASSESSMENT & CURTAILMENT STRATEGY

**FT** have undertaken several noise impact assessments. Background noise measurements and operational noise measurements were undertaken as part of these assessments. In some instances, the operational noise levels were above the conditioned noise limits and curtailment was required to meet the noise limits. In those instances, **FT** developed a curtailment strategy to meet the noise limits whilst maximising energy output.

### DETAILED DESIGN DUNKETTLE INTERCHANGE UPGRADE & N4 COLLOONEY TO CASTLEBALDWIN

**FT** were responsible for the preparation of traffic noise models as part of the detailed design. This involved the predicting traffic noise from the two road schemes using the Calculation of Road Traffic Noise (CRTN). The output from the noise model was calibrated against the baseline noise measurements. These measurements were undertaken under the supervision of **FT**. Once the noise model was validated, the output from the noise model was assessed against the TII's Guidelines for the treatment of Noise and Vibration in National Road Schemes (October 2004) guidelines. In some instances, noise levels were above the threshold for mitigation, mitigation measures were designed and incorporated to satisfy TII's design goal. The mitigation measures included installation of low noise road surfaces and noise barriers.



## SERVICES PROVIDED

**FT** can provide all your noise survey and assessment requirements in accordance with Irish, UK or EU guidelines and standards. Whatever industry you're in, **FT** can provide you with the assistance you require.

Some of the key noise services offered by **FT** include:

- Noise Impact Assessments
- Baseline Noise Surveys
- Construction Noise Modelling
- Transportation Noise Modelling
- Operational Noise Modelling
- Construction Noise Measurements and Compliance
- Noise Nuisance Investigation
- Preparation of Guidance Notes, Training and Studies
- Occupational Noise Measurements
- Licence Applications and Compliance Measurements



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