

Mott MacDonald has developed considerable noise expertise through the successful delivery of a wide range of UK and international projects. We offer a broad range of specialist skills, from advising independently as acoustic consultants to functioning as part of an integrated multi-disciplinary team. Our consultants can provide ad hoc assistance on small projects in addition to bespoke and ongoing advice for major projects across a range of sectors including energy, industry, transportation, water, and buildings.



Noise consultancy services

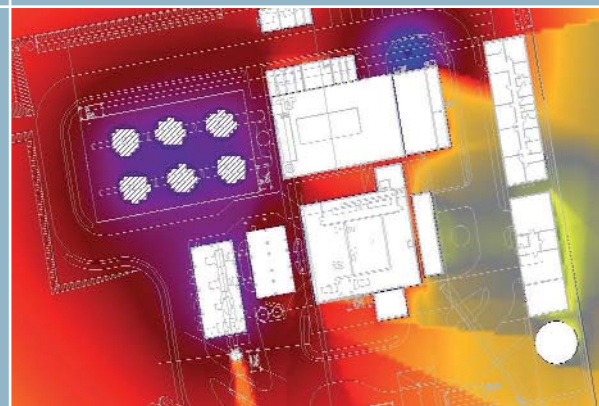
Our services

Our range of services include:

- Prediction and assessment of environmental and industrial noise
- Noise control and mitigation advice
- Regulatory and planning advice
- Guidance for schools, hospitals, retail and residential developments
- Noise mapping of large industrial sites or urban areas
- Construction noise and vibration assessment
- On-site noise and vibration monitoring
- Site commission testing
- Workplace noise assessment
- Neighbourhood noise investigation

We understand the sensitivity of noise issues, having developed considerable experience through consultations with site owners and operators, developers, manufacturers, local authorities and regulatory agencies. Our well developed understanding of the measurement, analysis, prediction and control of noise means we can provide valuable assistance throughout the entire life-cycle of a project, from project concept, planning, detailed design and engineering, construction, commissioning, operation and maintenance, upgrading and decommissioning.

Our familiarity with measurement instrumentation and predictive software enable us to deliver accurate analysis and assessment of our projects. We use high-end computer assisted mathematical models with powerful import capability to calculate noise impacts in accordance with national and international guidelines. Our model is capable of incorporating numerous complex variables and can produce an array of coloured noise contour maps or 3D simulations. Site specific conditions such as source variables, local population centres, topography, ground and atmospheric absorption, building structures, and meteorological conditions are included in the calculation.

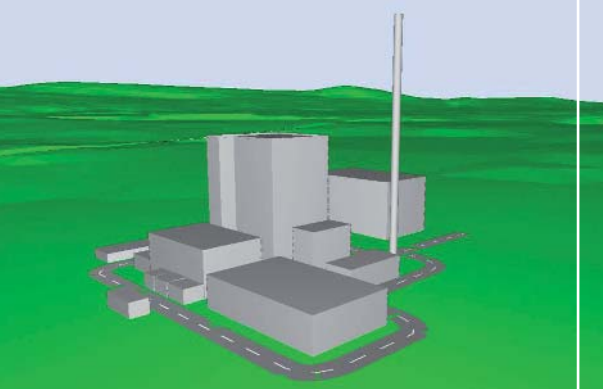




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 Mott
MacDonald

Our track record

A summary of some of our most recent projects in this field include:

▪ Steven's Croft Biomass Power Plant, Lockerbie, UK

We performed computational 3D noise emissions modelling of the operational phase of a 44 MWe biomass power plant. The modelling incorporated all aspects of the plant and associated fuel processing facility and was simulated using site specific topography and meteorological data. Close liaison with SEPA and the local authority was key to the success of the project.

▪ Siadar Wave Energy Project, Isle of Lewis, UK

A noise impact assessment of a 4 MWe wave energy project determined the likely impact of construction and operational noise on the local environment. A baseline assessment was carried out at a number of key sensitive receptors in the vicinity of the project, following liaison with planning and environmental health officials from the local authority. Noise emissions contour plots from the construction and operational phases were modelled using specialist software.

▪ Overhead and Underground Transmission Line Project, UK

An assessment of the potential impact arising through the construction of several new transmission lines over approximately 50 km was carried out and incorporated the effects associated with the construction of new substations. Each transmission line was assessed both in isolation of other components of the project and as part of a cumulative assessment of all transmission line construction activity. Further unrelated major projects in the vicinity were also incorporated into the cumulative assessment. Transportation and construction noise was modelled over detailed terrain covering approximately 500 km².

▪ Renfrewshire Schools Partnership, Paisley, UK

As technical advisor for PPP school projects, our role involved the witnessing, assessment and reporting of full acoustic testing of structure and classrooms, including sound transmission loss and reverberation times. The tests were performed at several new schools to ensure compliance with client and local authority requirements.

▪ Link Road, Cornwall, UK

A proposed road traffic scheme was assessed using the Web-TAG methodology incorporating the use of the Design Manual for Roads and Bridges. The potential for noise impact on the local community as a result of various proposed routes was determined through comparison with existing, do-something and do-nothing scenarios.

▪ Ras Abu Fontas A1 Power and Desalination Plant, Doha, Qatar

A baseline monitoring survey was undertaken in order to acquire data at several receptors in the vicinity of the plant prior to the installation of steam generation and capture technology, and operation of a new multi-stage flash desalination plant. Modelling and assessment of construction and operational noise impacts was carried out in accordance with World Bank guidelines.

▪ Fujairah (F2) Power and Desalination Plant, United Arab Emirates

An assessment of the potential impact of a new power and desalination plant in close proximity to two existing power plants was completed. The assessment of the new plant was undertaken in the context of a complicated pre-existing noise environment due to existing noise sources and complex local terrain. Work included environment agency liaison, baseline surveying, modelling and assessment of construction and operational impacts, and report writing.

