

Environmental Impact Assessment (EIA) considerations

Acoustics

Operation and construction acoustic assessments and prediction are undertaken in accordance with the relevant standards, current assessment methodologies and best practice as determined by the regulatory bodies, which include Midlothian Council, the Scottish Government and the UK Institute of Acoustics.

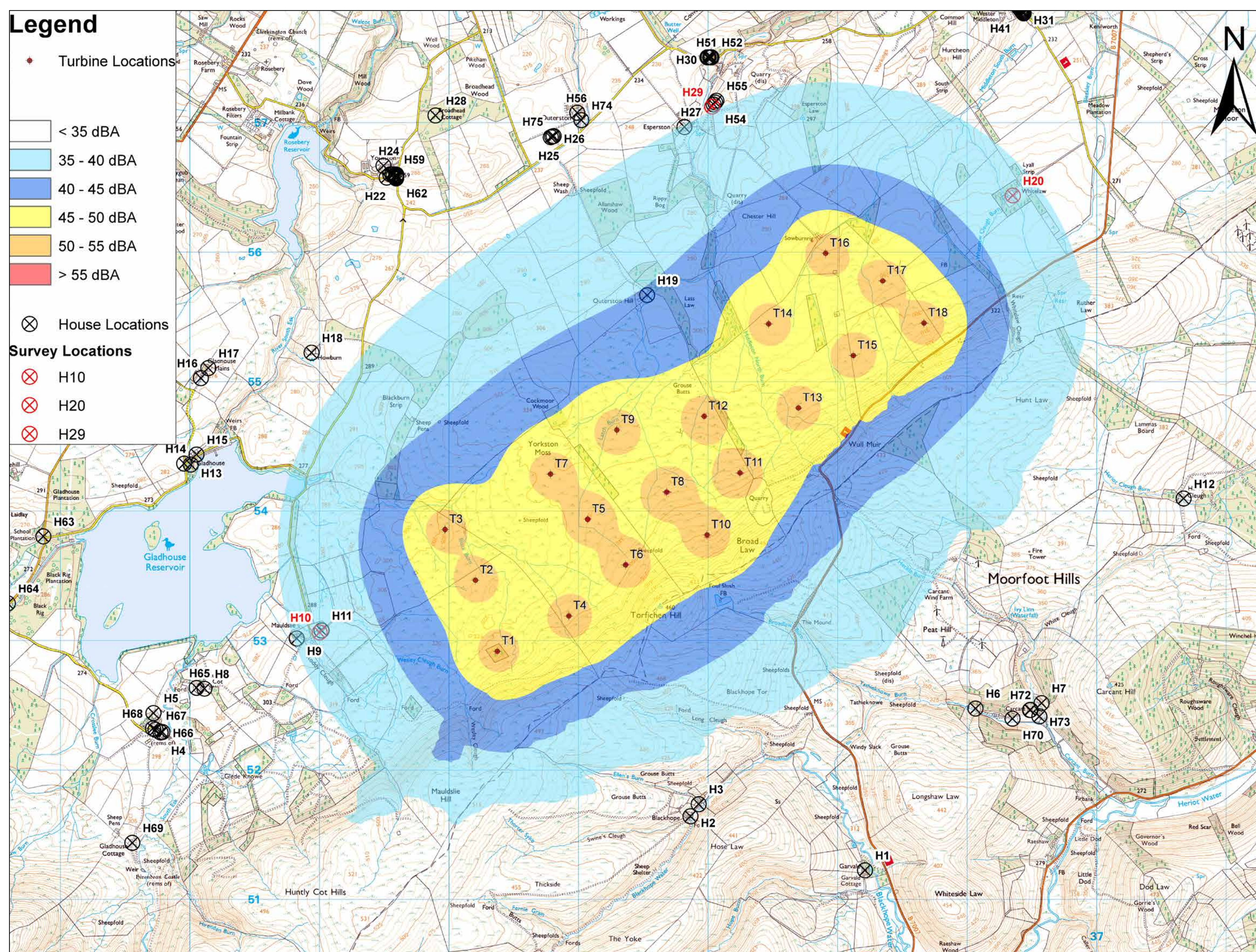
In consultation with Midlothian Council, we have undertaken a background sound survey at a number of locations around the site to measure the existing background sound levels. The results of the background sound survey are being analysed by our acoustics team and will inform the setting of the sound immission limits for the operation of the wind farm. These limits will be agreed with the local authority, and the proposal will be required to comply with these strict noise limits set within planning conditions.

The acoustic impact of the wind farm will be modelled and the output of this modelled work will be presented in the Acoustic Chapter of the extensive Environmental Impact Assessment Report (EIAR) which will accompany the planning application.

The Acoustic Chapter of the EIAR will demonstrate that RES has considered all appropriate measures in the design, construction, and operation phases to minimise the acoustic impact of the wind farm.



Predicted preliminary acoustic footprint map



Shadow flicker

Shadow flicker is a phenomenon where, under certain circumstances of geographical position and time of day, the sun may pass behind the rotors of a wind turbine and cast a shadow over neighbouring properties. When the blades rotate, the shadow flicks on and off. It only occurs inside buildings where the flicker appears through a narrow window opening.

Shadow flicker can be predicted, modelled and mitigated using specialised software. The Torfichen Wind Farm proposal is being designed to minimise any potential for shadow flicker.

Shadow flicker monitoring software which can shut down certain wind turbines at particular times of the day, or in certain weather conditions, where a shadow flicker effect may result can also be utilised. This shadow flicker modelling work will be presented in the EIAR which will accompany the planning application.