



APPENDIX 12-5

**CUMULATIVE
SCREENING FOR NOISE
ASSESSMENT**

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The list of cumulative wind farms which were considered in the selection of the study area selection extends to an approximate distance of 25 km, based on the set of wind farm developments in Chapter 2; though in terms of environmental noise, this list extends well beyond the range of potential cumulative impacts. The wind farms considered are listed below:

- Carrownagowan
- Lackeragh
- Fahybeg
- Ballycar
- Oatfield
- Vistakon single wind turbine
- Parteen single wind turbine

The Institute of Acoustics document *Good Practice Guide To The Application Of Etsu-R-97 For The Assessment And Rating Of Wind Turbine Noise* states, in section 2.2 in relation to the extent of the study area:

The 'study area' for background noise surveys (and noise assessment) should, as a minimum, be the area within which noise levels from the proposed, consented and existing wind turbine(s) may exceed 35 dB L_{A90} at up to 10 m/s wind speed. (Note: unless stated, in this document the wind speed reference for noise data is the 10 metre standardised wind speed, derived from the wind speed at turbine hub height as explained in Section 2.6).

If there were no other wind farms to be considered, the study area could be defined to be simply the 35 dB L_{A90} noise contour at maximum sound power level for the turbine, due to the proposed development only. The inclusion of other wind farms in the noise model has the potential to increase predicted noise levels to above 35dB L_{A90} at a wider set of noise-sensitive locations (NSLs). Theoretically, any predicted noise level above 25 dB L_{A90}, due to another wind farm in its own right, could cumulatively result in a noise level above 35 dB L_{A90} when considered in conjunction with the proposed development. This methodology is considered a robust means of selecting the zone of potential cumulative noise impact.

The approach here is to model the full set of potentially cumulative wind farms and predict 25 dB L_{A90} contours for each one. Where any 25 dB L_{A90} contour touches or overlaps the 35 dB L_{A90} contour from the proposed development, then that wind farm should be included in the cumulative assessment.

Figure 1 presents the 25 dB L_{A90} contours for each of the wind farms included in the screening exercise, along with the 35 dB contour for the Proposed Development. It can be seen that the Vistakon, Parteen and Ballycar are separated from the Knockshanvo 35 dB contour by at least 2 km.

In this instance, the Vistakon and Parteen single wind turbines have not been included in the noise assessment in the EIAR chapter. The Oatfield, Carrownagowan, Lackeragh, Fahybeg, Ballycar, have been included for completeness.

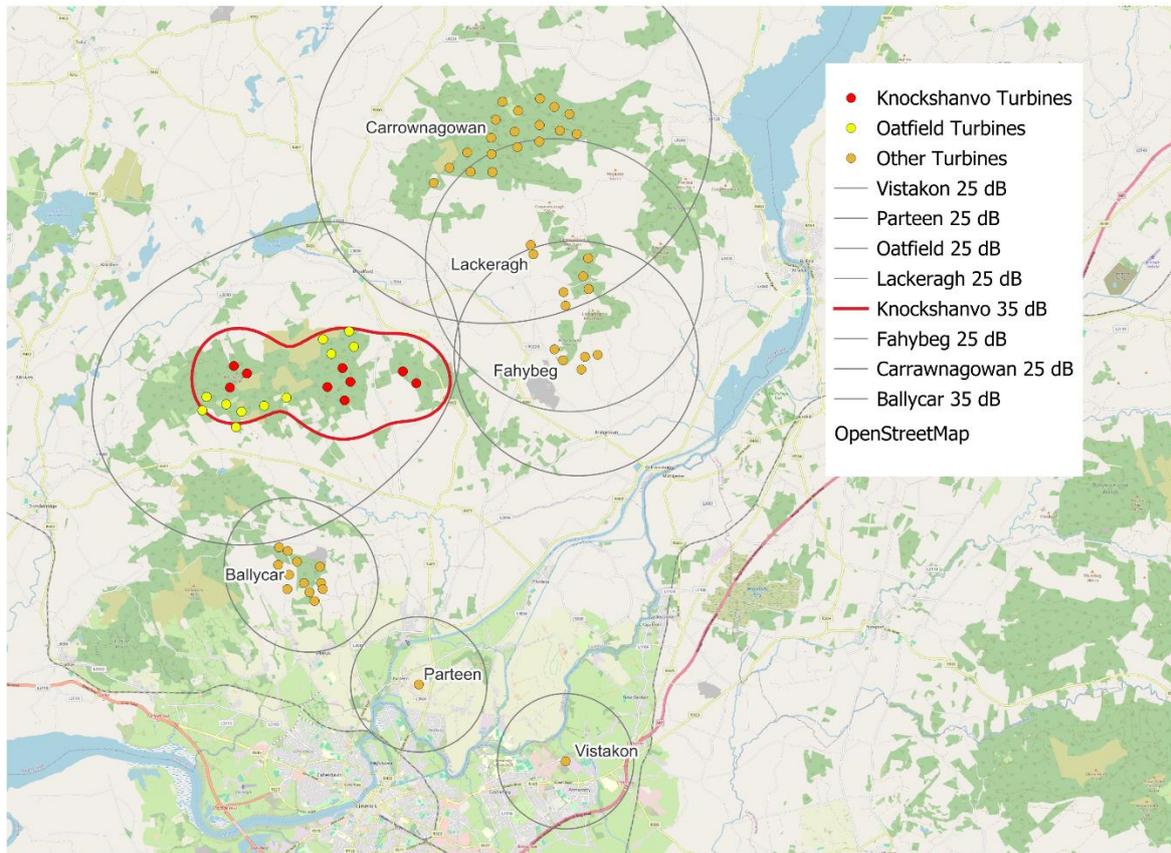


Figure 1: 35 dB LA₉₀ contour for the Proposed Development (in red) and 25 dB LA₉₀ contours from surrounding wind farms.