R9000 Acoustic Data Summary

Quiet operation is a key advantage of the R9000 wind turbine.

ETSU-R-97 [1] recommends the use of thresholds between 35 and 40dB to decide how far wind turbines should be sited from occupied buildings/homes, where 35dB can be used for any site without considering background noise, and 40dB will be usable for most sites. Higher thresholds can be used when supported by site background noise measurements.

The distances that result for R9000 turbines are shown in the following table.

Number of Turbines	35dB distance	37dB distance	40dB distance
1 x R9000	134m	107m	77m
2 x R9000	187m	150m	107m
3 x R9000	227m	182m	131m

All sound pressure levels are $L_{A,90,}$ based on a wind speed of 10m/s at 10m height.

Acoustic Data Context

The table below provides noise levels for common situations to help contextualise this guidance [2].

Sound	Sound Level
Cars/vehicles close by	80 - 100 dB
Normal conversation	60dB
Whisper in an ear	30dB

[1] ETSU-R-97 Assessment and rating of noise from wind farms.
[2] SCENIHR

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