

Appendix 14.3:

Noise Limit Sharing Principles between the Proposed Varied Development and Quantans Hill

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Noise Limit Sharing principles between Proposed Varied Development and Quantans Hill

Key principles:

In the Quantans Hill (QH) EIAR, a cumulative assessment was undertaken considering cumulative noise predictions against Total ETSU-R-97 Noise Limits (TNL) however there are no considerations of Site Specific Noise Limits (SSNL) for potential planning conditions **in the eventuality that both Shepherd's Rig (SR) and QH wind farms are built.**

As SR is a consented scheme with residential properties also near QH, it is suggested that if both SR and QH are built then a SSNL should apply to each scheme and be calculated by an appropriate sharing of the Total ETSU-R-97 noise limits. The SSNL for QH on its own when added together with the SSNL for SR on its own would equal the Total ETSU-R-97 noise limits. The exception to this, where the addition of the two SSNLs would be less than the TNL, is where the SSNL for SR is restricted from exceeding the noise limit that would apply to SR in isolation i.e. the greater of Background +5 dB or a fixed minimum limit of 35 dB during daytime periods.

Specific approach per property:

The suggested sharing is provided in the below Table.

Table explaining limit sharing between SR and QH per receptor

Group of Receptors	Suggested Noise Limit sharing	Relevant noise predictions and limits illustrations
Group 1 NALs 1-7 To the north, east and south east of SR, all relatively distant from QH (and Windy Rig)	Receptors are distant from QH and were not assessed as part of the QH EIAR. Suggested sharing: - QH does not need to be set a SSNL here - SR 0 dB below the TNL (given full TNL subject to site-specific daytime FML of 35 dB)	EIAR Appendix 14.2 - Graphic 2.1 & 2.7
Group 2 NALs 8&9 (1&2 Muirdrochwood). South of SR, south east of QH. Much closer to SR than QH.	QH maximum predictions ~26dB where in comparison the TNL is at least 40dB. Suggested sharing: - QH 10 dB below the TNL - SR 0 dB below the TNL (given full TNL subject to site-specific daytime FML of 35 dB)	EIAR Appendix 14.2 - Graphic 2.8 & 2.9
Group 3 NALs 10&11 (Marscalloch Cottage & Nether Loskie) South west of SR and south of QH. Equidistant to both SR and QH.	Predicted noise levels from SR and QH are similar. Suggested sharing: - QH 3 dB below the TNL - SR 3 dB below the TNL (subject to site-specific daytime FML of 35 dB)	EIAR Appendix 14.2 - Graphic 2.10 & 2.11
Group 4 NAL12 (Furmiston, FI with QH)	SR maximum predictions ~36dB where in comparison the TNL is 45dB due to Financial	EIAR Appendix 14.2 - Graphic 2.12

Group of Receptors	Suggested Noise Limit sharing	Relevant noise predictions and limits illustrations
South west of SR and south of QH. Closer to QH than SR.	Involvement (FI) with QH. Majority of the TNL can be given to QH. Suggested sharing: • QH 1 dB below the TNL • SR 7 dB below the TNL (subject to site-specific daytime FML of 35 dB)	
Group 5 NALs 13&14 (Marbrack Farm & Marbrack Cottage, FI with QH) In the middle of QH wind farm, west of SR.	SR maximum predictions are <35dB where in comparison the TNL is 45dB due to Financial Involvement(FI) with QH. All of the TNL can be given to QH. Suggested sharing: • QH 0 dB below the TNL (given full TNL) • SR 10 dB below the TNL	EIAR Appendix 14 .2 - Graphic 2.13 & 2.14