Technical Appendix 11.7: Suggested Planning Conditions: Noise

11.96 If the wind farm is successful in its application for planning permission any resulting decision notice would likely contain appropriately worded noise conditions, written so as to be in accordance with Planning Policy PPS 1[44].

11.97 Such conditions would provide a degree of protection to nearby residents under planning law. To that end, presented below are a set of relevant, precise and enforceable conditions that RES suggest may be considered as appropriate. The form of condition wording suggested has been adopted at many sites throughout the United Kingdom. Any final conditions attached to the proposal would be according to the discretion of the decision maker.

11.98 The proposed noise limits are those as detailed in **Table 11.19** and **Table 11.20** of the main chapter, which are also replicated in **Table 1** and **Table 2** of this technical appendix.

[44] Department for the Environment, Northern Ireland "PPS 1: General Principles", March 1998

1. The level of noise immissions from the combined effects of the wind turbines (including the application of any tonal penalty) when calculated in accordance with the attached Guidance Notes, shall not exceed the values set out in the attached Table 1 and Table 2 (as appropriate). Noise limits for applicable properties which lawfully exist or have planning permission for construction at the date of this consent but are not listed in the Table 3 attached shall be those of the physically closest location listed in Table 3 unless otherwise agreed with the Local Planning Authority. The coordinate locations to be used in determining the location of each of the properties listed in Table 1 and Table 2 shall be those listed in Table 3.

2. Within 21 days from the receipt of a written request from the Local Planning Authority and following a complaint to the Local Planning Authority from the occupant of a dwelling which lawfully exists or has planning permission at the date of this consent, the wind farm operator shall, at the wind farm operators expense, employ an independent consultant approved by the Local Planning Authority to assess the level of noise immissions from the wind farm at the complainant's property following the procedures described in the attached Guidance Notes.

3. The wind farm operator shall provide to the Local Planning Authority the independent consultant's assessment and conclusions regarding the said noise complaint, including all raw data upon which those assessments and conclusions are based. Such information shall be provided within 2 months of the date of the written request of the Local Planning Authority, with an additional 3 weeks allowed should further investigation pursuant to Guidance Note 4 be required, unless otherwise extended in writing by the Local Planning Authority.

4. Wind speed, wind direction and power generation data shall be continuously logged and provided to the Local Planning Authority at its request and in accordance with the attached Guidance Notes within 14 days of such request. Such data shall be retained for a period of not less than 24 months.

5. No development shall commence until there has been submitted to the Local Planning Authority details of a nominated representative for the development to act as a point of contact for local residents (in connection with conditions 1 - 4) together with the arrangements for notifying and approving any subsequent change in the nominated representative. The nominated representative shall have responsibility for liaison with the Local Planning Authority in connection with any noise complaints made during the construction, operation and decommissioning of the wind farm.

SCHEDULE OF NOISE GUIDANCE NOTES

These notes form part of conditions 1-5. They further explain these conditions and specify the methods to be deployed in the assessment of complaints about noise immissions from the wind farm.

Reference to ETSU-R-97 refers to the publication entitled "The Assessment and Rating of Noise from Wind Farm" (1997) published by the Energy Technology Support unit (ETSU) for the Department of Trade and Industry (DTI).

NOTE 1

a) Values of the $L_{A90,10min}$ noise statistic shall be measured at the complainant's property using a sound level meter of EN 60651/BS EN 60804 Type 1, or EN 61672 Class 1 quality (or the replacement thereof) set to measure using a fast time weighted response as specified in BS EN 60651/BS EN 60804 or BS EN 61672-1 (or the equivalent UK adopted standard in force at the time of the measurements). This shall be calibrated in accordance with the procedure specified in BS 4142: 1997 (or the replacement thereof). These measurements shall be made in such a way that the requirements of Note 3 shall also be satisfied.

b) The microphone should be mounted at 1.2 - 1.5 m above ground level, fitted with a two layer windshield (or suitable alternative approved in writing from the Local Planning Authority), and placed outside the complainant's dwelling. Measurements should be made in "free-field" conditions. To achieve this, the microphone should be placed at least 3.5 m away from the building facade or any reflecting surface except the ground at a location agreed with the Local Planning Authority.

c) The $L_{A90,10min}$ measurements shall be synchronised with measurements of the 10-minute arithmetic mean wind speed and with operational data, including power generation information for each wind turbine, from the turbine control systems of the wind farm.

d) The wind farm operator shall continuously log arithmetic mean wind speed and arithmetic mean wind direction data in 10 minute periods on the wind farm site to enable compliance with the conditions to be evaluated. The mean wind speed at hub height shall be 'standardised' to a reference height of 10 metres as described in ETSU-R-97 at page 120 using a reference roughness length of 0.05 metres. It is this standardised 10 m height wind speed data which is correlated with the noise measurements of Note 2(a) in the manner described in Note 2(c).

NOTE 2

a) The noise measurements shall be made so as to provide not less than 20 valid data points as defined in Note 2 paragraph (b). Such measurements shall provide valid data points for the range of wind speeds, wind directions, times of day and power generation requested by the Local Planning Authority. In specifying such conditions, the Local Planning Authority shall have regard to those conditions which were most likely to have prevailed during times when the complainant alleges there was disturbance due to noise.

b) Valid data points are those that remain after all periods during rainfall have been excluded. Rainfall shall be assessed by use of a rain gauge that shall log the occurrence of rainfall in each 10-minute period concurrent with the measurement periods set out in Note 1(c) and is situated in the vicinity of the sound level meter.

c) Data points considered valid in accordance with Note 2(b) shall be plotted against the corresponding wind speed value determined in accordance with Note 1(d). A least squares, "best fit" curve of second order shall be fitted to the data. In the event that this is a poor fit to the data, a higher (maximum 4th) order polynomial or data binning

can be used. The noise level at each integer speed shall be derived from this best-fit curve, or the relevant data bin, as appropriate.

NOTE 3

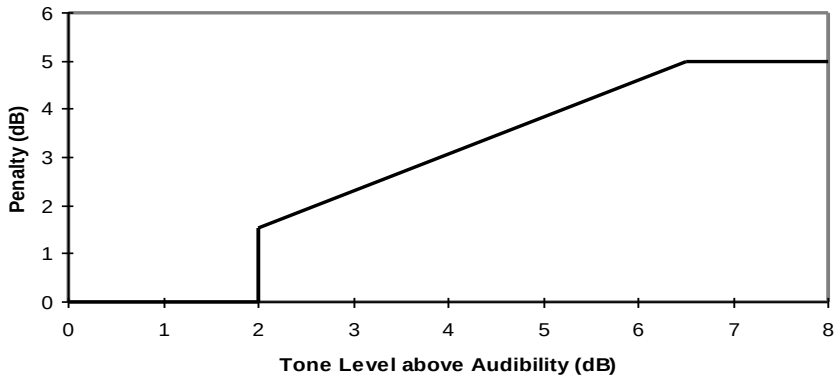
Where, in the opinion of the Local Planning Authority, noise immissions at the location or locations where assessment measurements are being undertaken contain a tonal component, the following rating procedure shall be used.

a) For each 10-minute interval for which $L_{A90,10min}$ data have been obtained as provided for in Notes 1 and 2, a tonal assessment shall be performed on noise immissions during 2-minutes of each 10-minute period. The 2-minute periods shall be regularly spaced at 10-minute intervals provided that uninterrupted clean data are available. Where clean data are not available, the first available uninterrupted clean 2 minute period out of the affected overall 10 minute period shall be selected. Any such deviations from standard procedure, as described in Section 2.1 on pages 104-109 of ETSU-R-97, shall be reported.

b) For each of the 2-minute samples the margin above or below the audibility criterion of the tone level difference, ΔL_{tm} (Delta L_{tm}), shall be calculated by comparison with the audibility criterion, given in Section 2.1 on pages 104-109 of ETSU-R-97.

c) The arithmetic average margin above audibility shall be calculated for each wind speed bin where data is available, each bin being 1 metre per second wide and centred on integer wind speeds. For samples for which the tones were below the audibility criterion or no tone was identified, a value of zero audibility shall be substituted.

d) The tonal penalty shall be derived from the margin above audibility of the tone according to the figure below. The rating level at each wind speed shall be calculated as the arithmetic sum of the wind farm noise level, as determined from the best-fit curve described in Note 2, and the penalty for tonal noise.



NOTE 4

If the wind farm noise level (including the application of any tonal penalty as per Note 3) is above the limit set out in the conditions, measurements of the influence of background noise shall be made to determine whether or not there is a breach of condition. This may be achieved by repeating the steps in Notes 1 & 2 with the wind farm switched off in order to determine the background noise, L_3, at the assessed wind speed. The wind farm noise at this wind speed, L_1, is then calculated as follows, where L_2 is the measured wind farm noise level at the assessed wind speed with turbines running but without the addition of any tonal penalty:

$$L_1 = 10 \log\left[10^{L_2/10} - 10^{L_3/10} \right]$$

The wind farm noise level is re-calculated by adding the tonal penalty (if any) to the wind farm noise.

Noise Limits Relating to Condition 1

Table 1: The dB $L_{A90,10min}$ Wind Farm Noise Level Between 23:00 and 07:00 hours

Property ID	Reference Wind Speed, Standardised v_{10} (ms^{-1})											
	1	2	3	4	5	6	7	8	9	10	11	12
H2	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H3	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H4	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H5	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H8	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H12	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H13	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H14	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H15	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
H16	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H17	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
H18	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H19	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H20	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H21	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H22	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H23	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H24	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H25	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H26	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H27	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H28	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H29	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H30	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H33	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H34	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H35	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H36	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H37	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H38	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H39	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H41	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H42	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H43	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H44	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0

Property ID	Reference Wind Speed, Standardised v_{10} (ms^{-1})											
	1	2	3	4	5	6	7	8	9	10	11	12
H45	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H46	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.2	46.2	49.5
H47	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.3	46.4
H48	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H49	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.3	46.4
H53	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.3	46.4
H54	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.3	46.4
H56	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.3	46.4
H57	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.3	46.4
H58	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H61	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.3	46.4
H63	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H64	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H65	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H67	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H70	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H71	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H72	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H75	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	47.3	50.0
H77	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.6	47.3	50.0
H78	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
H79	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.6	47.3	50.0
H80	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.6	47.3	50.0
H81	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	47.3	50.0
H82	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	47.3	50.0
H83	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	46.4
H84	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.3	46.4
H85	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.3	46.4
H86	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.3	46.4
H87	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.3	46.4
H88	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.3	46.4
H89	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.3	46.4

Table 2: The dB $L_{A90,10min}$ Wind Farm Noise Level at All Other Times

Property ID	Reference Wind Speed, Standardised v_{10} (ms^{-1})											
	1	2	3	4	5	6	7	8	9	10	11	12
H2	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
H3	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
H4	40.0	40.0	40.0	40.0	40.0	40.1	40.2	40.2	40.2	40.2	40.2	40.2
H5	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
H8	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
H12	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
H13	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
H14	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
H15	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.1
H16	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
H17	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.1
H18	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
H19	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
H20	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.8	45.1
H21	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
H22	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
H23	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.8	45.1
H24	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.8	45.1
H25	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
H26	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.8	45.1
H27	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
H28	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.8	45.1
H29	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
H30	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
H33	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.8	45.1
H34	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.8	45.1
H35	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
H36	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.8	45.1
H37	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
H38	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.8	45.1
H39	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.8	45.1
H41	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.8	45.1
H42	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
H43	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.8	45.1
H44	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.8	45.1
H45	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.8	45.1
H46	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.3	43.3	45.3	47.4

Property ID	Reference Wind Speed, Standardised v_{10} (ms^{-1})											
	1	2	3	4	5	6	7	8	9	10	11	12
H47	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.3	43.4	45.5	47.6
H48	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
H49	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.3	43.4	45.5	47.6
H53	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.3	43.4	45.5	47.6
H54	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.3	43.4	45.5	47.6
H56	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.3	43.4	45.5	47.6
H57	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.3	43.4	45.5	47.6
H58	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
H61	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.3	43.4	45.5	47.6
H63	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.8	45.1
H64	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.8	45.1
H65	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.8	45.1
H67	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.8	45.1
H70	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.8	45.1
H71	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.8	45.1
H72	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.8	45.1
H75	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	46.2	49.4	52.4
H77	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.2	43.1	46.2	49.4	52.4
H78	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.8	45.1
H79	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.2	43.1	46.2	49.4	52.4
H80	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.2	43.1	46.2	49.4	52.4
H81	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	46.2	49.4	52.4
H82	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	46.2	49.4	52.4
H83	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.5	47.6
H84	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.3	43.4	45.5	47.6
H85	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.3	43.4	45.5	47.6
H86	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.3	43.4	45.5	47.6
H87	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.3	43.4	45.5	47.6
H88	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.3	43.4	45.5	47.6
H89	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.3	43.4	45.5	47.6

Coordinate Locations of Properties

The geographical co-ordinate references are provided for the purpose of identifying the general location of dwellings to which a given set of noise limits applies.

Table 3: Coordinate Locations of the Applicable Properties

Property ID	Co-ordinates (Irish National Grid, EPSG 29902)	
	X (m)	Y (m)
H2	250179	393471
H3	250301	393235
H4	250711	393527
H5	250201	393093
H8	248478	395030
H12	248517	395757
H13	248569	395816
H14	248606	396239
H15	249107	396255
H16	248583	396142
H17	249119	396408
H18	248658	396436
H19	248703	396550
H20	249250	396649
H21	248769	396756
H22	248785	396806
H23	249361	396884
H24	249392	397001
H25	248854	397017
H26	249405	397078
H27	248909	397114
H28	249401	397170
H29	248937	397187
H30	248948	397355
H33	249550	397378
H34	249527	397383
H35	248974	397391
H36	249629	397439
H37	249023	397451
H38	249651	397460
H39	249644	397476
H41	249650	397489
H42	249043	397492

Property ID	Co-ordinates (Irish National Grid, EPSG 29902)	
	X (m)	Y (m)
H43	249695	397547
H44	249730	397624
H45	249687	397646
H46	252364	397658
H47	251059	397769
H48	249233	397781
H49	250871	397892
H53	252346	398019
H54	253018	398105
H56	251685	398072
H57	253092	398218
H58	249513	398225
H61	250728	397879
H63	249216	395310
H64	249075	395419
H65	249057	395574
H67	249180	395670
H70	249159	395733
H71	249084	395794
H72	249196	395854
H75	250918	396584
H77	251029	396844
H78	249494	397039
H79	251393	397046
H80	251399	397076
H81	250983	397140
H82	250940	397150
H83	250412	397415
H84	250601	397496
H85	250592	397562
H86	250879	397716
H87	250950	397690
H88	251910	397904
H89	251415	397859