
APPENDIX 12.9 – AGREED OPERATIONAL NOISE CONDITIONS

Y Bryn - Proposed Operational Noise Conditions

- NC1 The rating level of noise immissions from the combined effects of the wind turbines permitted here (including the application of any tonal penalty) when determined in accordance with the attached Guidance Notes (to this condition), shall not exceed the values for the relevant integer wind speed set out in, or derived from, the tables attached to this condition at any dwelling which is lawfully existing or has planning permission at the date of this permission and:
- a) The wind farm operator shall continuously log power production, wind speed and wind direction, all in accordance with Guidance Note 1(d). These data shall be retained for a period of not less than 24 months. The wind farm operator shall provide this information in the format set out in Guidance Note 1(e) to the Local Planning Authority on its request, within 14 days of receipt in writing of such a request.
 - b) No electricity shall be exported until the wind farm operator has submitted to the Local Planning Authority for written approval a list of proposed independent consultants who may undertake compliance measurements in accordance with this condition. Amendments to the list of approved consultants shall be made only with the prior written approval of the Local Planning Authority.
 - c) Within 21 days from receipt of a written request from the Local Planning Authority following a complaint to it from an occupant of a dwelling alleging noise disturbance at that dwelling, the wind farm operator shall, at its expense, employ a consultant approved by the Local Planning Authority to assess the level of noise immissions from the wind farm at the complainant's dwelling in accordance with the procedures described in the attached Guidance Notes. The written request from the Local Planning Authority shall set out at least the date, time and location that the complaint relates to and any identified atmospheric conditions, including wind direction, and include a statement as to whether, in the opinion of the Local Planning Authority, the noise giving rise to the complaint contains or is likely to contain a tonal component.
 - d) The assessment of the rating level of noise immissions for comparison with the limits shall be undertaken in accordance with an assessment protocol that shall, prior to the commencement of any measurements, have been submitted to and approved in writing by the Local Planning Authority. The protocol shall include the proposed measurement location identified in accordance with the Guidance Notes where measurements for compliance checking purposes shall be undertaken and also the range of meteorological and operational conditions (which shall include the range of wind speeds, wind directions, power generation and times of day) to determine the assessment of rating level of noise immissions. The proposed range of conditions shall be those which prevailed during times when the complainant alleges there was disturbance due to noise, having regard to the written request of the Local Planning Authority under paragraph (c), and such others as the independent consultant considers likely to result in a breach of the noise limits.
 - e) Where a dwelling to which a complaint is related is not listed in the tables attached to these conditions, the wind farm operator shall submit to the Local Planning Authority for written approval proposed noise limits selected from those listed in the tables to be adopted at the complainant's dwelling for compliance checking purposes. The proposed noise limits shall be those limits selected from the Tables specified for a listed location which is the geographically nearest dwelling to the complainant's

dwelling, unless otherwise agreed with the Local Planning Authority due to differences in background noise from traffic or running water, or other location-specific factors, between the complaint related dwelling and the nearest dwelling.

- f) Special arrangements shall apply for testing compliance related to a complaint from a dwelling lying to the north of northing 194,000 and between eastings 281,000 and 285,000 when the Foel Trawsnant wind farm (consented under P2022/0517 or P2014/0825) is operational. The Local Planning Authority shall first ensure that Foel Trawsnant is operating within its consented limits, if necessary by requiring that the operator carries out compliance tests. Thereafter the declared apparent sound power level shall be measured on the 3 nearest of the turbines hereby permitted to the complaint location in line with the requirements of IEC 61400-11, *Wind turbines - Part 11: Acoustic noise measurement techniques* and IEC TS 61400-14 *Declaration of apparent sound power level and tonality values*. Compliance with the Y Bryn conditions is deemed to be achieved, in lieu of the requirements of paragraph (d), if the predicted rated noise levels at the complaint location, calculated using the average declared sound power level and tonality values over the 3 turbines measured, as applied to all of the turbines hereby permitted, in accordance with the methodology set out in the Institute of Acoustics document, *A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise* are below the limit values in the tables attached to this condition.
- g) The wind farm operator shall provide to the Local Planning Authority the independent consultant's assessment of the rating level of noise immissions undertaken in accordance with the Guidance Notes, or in line with paragraph (f) where this applies, within 2 months of the date of the written request of the Local Planning Authority for compliance measurements to be made under paragraph (c), unless the time limit is extended in writing by the Local Planning Authority. Unless otherwise agreed in writing by the Local Planning Authority, the assessment shall be accompanied by all data collected for the purposes of undertaking the compliance measurements, such data to be provided in the format set out in Guidance Note 1(e) of the Guidance Notes with the exception of audio data which shall be supplied in the format in which it is recorded. The instrumentation used to undertake the measurements shall be calibrated in accordance with Guidance Note 1(a) and certificates of calibration shall be submitted to the Local Planning Authority with the independent consultant's assessment of the rating level of noise immissions.
- h) Where a further assessment of the rating level of noise immissions from the wind farm is required pursuant to Guidance Note 4(c), the wind farm operator shall submit a copy of the further assessment within 21 days of submission of the independent consultant's assessment pursuant to paragraph (d) above unless the time limit has been extended in writing by the Local Planning Authority.

Table 1 – Noise Limits 2300-0700 (dB L_{A90}) (Foel Trawsnant Consent P2022/0517 Implemented)

Location	Standardised 10 metre-height Wind Speed (as defined in accordance with the attached Guidance Notes to the noise condition)											
	1	2	3	4	5	6	7	8	9	10	11	12
NML01	40.0	40.0	40.0	40.0	39.9	39.8	39.6	39.6	39.6	39.6	40.4	41.7
NML02	40.0	40.0	40.0	40.0	39.9	39.7	39.6	39.6	39.6	39.6	39.6	39.7
NML03	39.9	39.9	39.9	39.9	39.6	39.2	38.7	38.7	38.7	38.7	38.7	38.7
NML04	39.4	39.4	39.4	39.4	37.3	30.0	30.7	33.0	32.4	32.5	32.5	32.5
NML05	39.9	39.9	39.9	39.9	39.8	39.6	39.3	39.4	39.4	39.4	41.4	42.7
NML06	39.9	39.9	39.9	39.9	39.8	39.6	39.4	39.4	39.4	39.4	39.4	39.4
NML07	40.0	40.0	40.0	40.0	39.9	39.8	39.7	39.8	39.8	39.8	39.8	39.8
NML08	40.0	40.0	40.0	40.0	40.0	40.0	39.9	39.9	39.9	44.4	44.4	44.4
NML09	40.0	40.0	40.0	40.0	40.0	40.0	39.9	39.9	39.9	39.9	39.9	39.9
NML10	39.9	39.9	39.9	39.9	39.9	39.7	39.5	39.5	39.5	39.5	39.5	39.5
R1	39.7	39.7	39.7	39.7	39.0	37.7	35.8	36.1	36.1	37.7	40.8	43.5
R2	39.7	39.7	39.7	39.7	39.0	37.9	36.4	36.4	36.4	37.9	40.8	43.5
R3	39.8	39.8	39.8	39.8	39.4	38.6	37.5	37.8	37.8	37.8	38.9	42.0
R4	39.8	39.8	39.8	39.8	39.4	38.6	37.5	37.8	37.8	37.8	38.9	42.0
R5	39.6	39.6	39.6	39.6	38.5	34.4	30.3	33.8	37.6	40.2	42.5	44.7
R6	38.9	38.9	38.9	38.9	34.1	30.0	32.8	35.0	34.5	34.5	35.4	44.3
R7	54.0	54.0	54.0	54.0	54.1	54.4	54.9	55.8	57.0	58.6	60.6	62.9
R9	39.5	39.5	39.5	39.5	37.8	30.0	30.3	32.3	32.1	37.9	41.3	44.0
Gallt-y-cwm	40.0	40.0	40.0	40.0	40.0	39.9	39.9	39.9	39.9	39.9	39.9	39.9
Naid Yr Carw	40.0	40.0	40.0	40.0	39.9	39.8	39.8	39.8	39.8	39.8	39.8	39.8
Goytre Farm	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	44.4	44.4	44.4
Cwm Maelwg	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	44.4	44.4	44.4
Crugwyllt-fawr	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	44.4	44.4	44.4
Rhiwlas	40.0	40.0	40.0	40.0	39.9	39.8	39.7	39.7	39.7	39.7	40.4	41.7
Cwmcerwyn Farm	40.0	40.0	40.0	40.0	39.9	39.8	39.7	39.7	39.7	39.7	39.7	39.8
Cwmcerwyn	40.0	40.0	40.0	40.0	39.9	39.9	39.8	39.8	39.8	39.8	39.8	39.9
Tair Waun Farm	39.9	39.9	39.9	39.9	39.8	39.6	39.5	39.5	39.5	39.5	39.5	39.5
Kings Terrace	39.8	39.8	39.8	39.8	39.4	38.7	37.9	37.9	37.9	37.9	37.9	37.9
Tudor Estate	39.8	39.8	39.8	39.8	39.3	38.4	37.3	37.6	37.6	37.6	38.7	42.0
Heol-y-Gadarn	39.7	39.7	39.7	39.7	38.9	36.5	30.0	33.1	33.1	33.1	33.6	39.4
Cynonville	39.2	39.2	39.2	39.2	36.1	30.0	31.8	34.0	33.5	33.5	33.5	33.5
Bryn - Village Central	40.0	40.0	40.0	40.0	39.9	39.7	39.5	39.6	39.6	39.6	39.6	39.6
Heol Gelli Lenor	40.0	40.0	40.0	40.0	40.0	39.9	39.8	39.9	39.9	39.9	39.9	39.9
Fire Station	39.8	39.8	39.8	39.8	39.5	39.0	38.4	38.5	38.5	38.5	38.5	38.5

Table 2 – Noise Limits 0700-2300 (dB L_{A90}) (Foel Trawsnant Consent P2022/0517 Implemented)

Location	Standardised 10 metre-height Wind Speed (as defined in accordance with the attached Guidance Notes to the noise condition)											
	1	2	3	4	5	6	7	8	9	10	11	12
NML01	40.0	40.0	40.0	40.0	39.9	39.8	39.6	39.6	40.6	42.2	43.7	45.0
NML02	40.0	40.0	40.0	40.0	39.9	39.7	39.6	39.6	39.6	39.6	41.1	43.4
NML03	39.9	39.9	39.9	39.9	39.6	39.2	38.7	38.7	38.7	38.7	39.4	39.9
NML04	39.4	39.4	39.4	39.4	37.3	30.7	33.0	32.4	32.4	32.5	37.9	41.9
NML05	39.9	39.9	39.9	39.9	39.8	39.6	39.3	41.0	42.6	44.0	44.9	45.3
NML06	39.9	39.9	39.9	39.9	39.8	39.6	39.4	39.4	39.4	39.4	39.4	39.4
NML07	40.0	40.0	40.0	40.0	39.9	39.8	39.7	39.8	40.3	41.0	41.4	41.5
NML08	40.0	40.0	40.0	40.0	40.0	40.0	39.9	40.0	43.1	46.0	48.1	48.7
NML09	40.0	40.0	40.0	40.0	40.0	40.0	39.9	39.9	39.9	39.9	40.1	40.8
NML10	43.2	43.2	43.2	43.2	43.1	43.1	43.0	43.0	43.1	43.1	43.1	43.1
R1	39.8	39.8	39.8	39.8	39.7	39.3	38.8	39.5	40.1	40.5	40.9	41.2
R2	39.8	39.8	39.8	39.8	39.7	39.4	39.1	39.6	40.3	40.6	41.0	41.3
R3	39.8	39.8	39.8	39.8	39.4	38.6	37.5	37.8	37.8	39.8	41.9	44.2
R4	39.8	39.8	39.8	39.8	39.4	38.6	37.5	37.8	37.8	39.8	41.9	44.2
R5	39.6	39.6	39.6	39.6	38.5	34.8	30.8	35.2	37.9	40.2	42.2	44.0
R6	38.9	38.9	38.9	38.9	34.1	32.8	35.0	34.5	34.5	34.5	34.9	43.6
R7	53.6	53.6	53.6	53.6	54.1	54.7	55.4	56.4	57.3	58.2	58.9	59.5
R9	39.5	39.5	39.5	39.5	37.8	30.1	32.3	31.7	32.6	37.9	40.8	43.2
Gallt-y-cwm	40.0	40.0	40.0	40.0	40.0	39.9	39.9	39.9	40.4	41.1	41.5	41.6
Naid Yr Carw	40.0	40.0	40.0	40.0	39.9	39.8	39.8	39.8	40.3	41.0	41.4	41.5
Goytre Farm	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.1	43.1	46.0	48.1	48.7
Cwm Maelwg	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.1	43.1	46.0	48.1	48.7
Crugwyllt-fawr	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.1	43.1	46.0	48.1	48.7
Rhiwlas	40.0	40.0	40.0	40.0	39.9	39.8	39.7	39.7	40.6	42.2	43.7	45.0
Cwmcerwyn Farm	40.0	40.0	40.0	40.0	39.9	39.8	39.7	39.7	39.7	39.7	41.2	43.5
Cwmcerwyn	40.0	40.0	40.0	40.0	39.9	39.9	39.8	39.8	39.8	39.8	41.3	43.5
Tair Waun Farm	39.9	39.9	39.9	39.9	39.8	39.6	39.5	39.5	39.5	40.7	42.0	42.9
Kings Terrace	39.8	39.8	39.8	39.8	39.4	38.7	37.9	37.9	37.9	39.6	41.2	42.2
Tudor Estate	39.8	39.8	39.8	39.8	39.3	38.4	37.3	37.6	37.6	39.6	41.8	44.1
Heol-y-Gadarn	39.7	39.7	39.7	39.7	38.9	36.5	30.0	33.1	34.8	39.4	42.1	44.0
Cynonville	39.2	39.2	39.2	39.2	36.1	31.8	34.0	33.5	33.5	33.5	33.8	40.3
Bryn - Village Central	40.0	40.0	40.0	40.0	39.9	39.7	39.5	39.6	39.6	40.8	42.0	42.9
Heol Gelli Lenor	40.0	40.0	40.0	40.0	40.0	39.9	39.8	39.9	39.9	41.0	42.2	43.0
Fire Station	39.8	39.8	39.8	39.8	39.5	39.0	38.4	38.5	38.5	40.0	41.5	42.4

Table 3 – Noise Limits 2300-0700 (dB L_{A90}) (Foel Trawsnant Consent P2014/0825 Implemented)

Location	Standardised 10 metre-height Wind Speed (as defined in accordance with the attached Guidance Notes to the noise condition)											
	1	2	3	4	5	6	7	8	9	10	11	12
NML01	39.9	39.9	39.9	39.9	39.7	39.5	39.3	39.2	39.2	39.2	40.1	41.4
NML02	39.9	39.9	39.9	39.9	39.7	39.4	39.2	39.1	39.1	39.1	39.1	39.2
NML03	39.7	39.7	39.7	39.7	39.2	38.2	37.6	37.2	37.2	37.2	37.2	37.2
NML04	38.6	38.6	38.6	38.6	36.0	30.0	30.7	33.0	32.4	32.5	32.5	32.5
NML05	39.8	39.8	39.8	39.8	39.6	39.1	38.8	38.7	38.7	38.7	41.0	42.4
NML06	39.9	39.9	39.9	39.9	39.7	39.3	39.1	39.0	39.0	39.0	39.0	39.0
NML07	39.9	39.9	39.9	39.9	39.7	39.5	39.3	39.2	39.2	39.2	39.2	39.2
NML08	40.0	40.0	40.0	40.0	40.0	39.9	39.9	39.9	39.9	44.4	44.4	44.4
NML09	40.0	40.0	40.0	40.0	40.0	39.9	39.9	39.9	39.9	39.9	39.9	39.9
NML10	39.9	39.9	39.9	39.9	39.7	39.4	39.2	39.1	39.1	39.1	39.1	39.1
R1	39.1	39.1	39.1	39.1	37.7	32.7	30.0	30.0	30.0	30.7	38.0	42.2
R2	38.9	38.9	38.9	38.9	36.9	30.0	30.0	30.0	30.0	30.7	35.2	41.4
R3	39.5	39.5	39.5	39.5	38.7	36.9	35.5	34.4	34.4	34.4	36.5	41.0
R4	39.4	39.4	39.4	39.4	38.5	36.3	34.4	32.7	32.7	32.7	35.6	40.7
R5	39.0	39.0	39.0	39.0	37.2	30.0	30.3	31.1	34.4	38.7	41.7	44.2
R6	37.9	37.9	37.9	37.9	31.1	30.0	32.8	35.0	34.5	34.5	38.5	44.8
R7	53.9	53.9	53.9	53.9	54.1	54.5	55.0	55.9	57.0	58.6	60.6	62.9
R9	38.6	38.6	38.6	38.6	36.0	30.0	30.3	32.3	32.1	35.9	40.5	43.6
Gallt-y-cwm	40.0	40.0	40.0	40.0	39.9	39.9	39.8	39.8	39.8	39.8	39.8	39.8
Naid Yr Carw	39.9	39.9	39.9	39.9	39.7	39.4	39.3	39.2	39.2	39.2	39.2	39.2
Goytre Farm	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	44.4	44.4	44.4
Cwm Maelwg	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	44.4	44.4	44.4
Crugwyllt-fawr	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	44.4	44.4	44.4
Rhiwlas	39.9	39.9	39.9	39.9	39.8	39.6	39.5	39.5	39.5	39.5	40.3	41.6
Cwmcerwyn Farm	39.9	39.9	39.9	39.9	39.8	39.5	39.4	39.3	39.3	39.3	39.3	39.4
Cwmcerwyn	39.9	39.9	39.9	39.9	39.9	39.7	39.7	39.6	39.6	39.6	39.6	39.7
Tair Waun Farm	39.8	39.8	39.8	39.8	39.6	39.2	39.0	38.9	38.9	38.9	38.9	38.9
Kings Terrace	39.3	39.3	39.3	39.3	38.3	35.7	33.1	30.4	30.4	30.4	30.4	30.4
Tudor Estate	39.4	39.4	39.4	39.4	38.6	36.7	35.1	33.8	33.8	33.8	36.2	40.9
Heol-y-Gadarn	39.1	39.1	39.1	39.1	37.8	33.1	30.0	30.0	30.0	30.0	30.1	37.3
Cynonville	38.3	38.3	38.3	38.3	34.1	30.0	31.8	34.0	33.5	33.5	33.5	33.5
Bryn - Village Central	39.9	39.9	39.9	39.9	39.7	39.4	39.3	39.2	39.2	39.2	39.2	39.2
Heol Gelli Lenor	40.0	40.0	40.0	40.0	39.9	39.8	39.7	39.7	39.7	39.7	39.7	39.7
Fire Station	39.5	39.5	39.5	39.5	38.8	37.2	36.0	35.1	35.1	35.1	35.1	35.1

Table 4 – Noise Limits 0700-2300 (dB L_{A90}) (Foel Trawsnant Consent P2022/0517 Implemented)

Location	Standardised 10 metre-height Wind Speed (as defined in accordance with the attached Guidance Notes to the noise condition)											
	1	2	3	4	5	6	7	8	9	10	11	12
NML01	39.9	39.9	39.9	39.9	39.7	39.5	39.3	39.2	40.3	42.0	43.5	44.9
NML02	39.9	39.9	39.9	39.9	39.7	39.4	39.2	39.1	39.1	39.1	40.8	43.2
NML03	39.7	39.7	39.7	39.7	39.2	38.2	37.6	37.2	37.2	37.2	38.1	38.8
NML04	38.6	38.6	38.6	38.6	36.0	30.7	33.0	32.4	32.4	32.5	38.5	42.1
NML05	39.8	39.8	39.8	39.8	39.6	39.1	38.8	40.5	42.3	43.7	44.7	45.2
NML06	39.9	39.9	39.9	39.9	39.7	39.3	39.1	39.0	39.0	39.0	39.0	39.0
NML07	39.9	39.9	39.9	39.9	39.7	39.5	39.3	39.2	39.8	40.6	41.1	41.2
NML08	40.0	40.0	40.0	40.0	40.0	39.9	39.9	40.0	43.0	46.0	48.1	48.7
NML09	40.0	40.0	40.0	40.0	40.0	39.9	39.9	39.9	39.9	39.9	40.1	40.8
NML10	43.1	43.1	43.1	43.1	43.1	42.9	42.8	42.8	42.9	42.9	42.9	42.9
R1	39.2	39.2	39.2	39.2	38.7	36.5	35.5	35.2	36.8	37.4	38.3	38.8
R2	39.0	39.0	39.0	39.0	38.0	33.7	31.4	31.7	32.5	34.0	35.7	36.6
R3	39.5	39.5	39.5	39.5	38.7	36.9	35.5	34.4	34.4	38.0	40.9	43.6
R4	39.4	39.4	39.4	39.4	38.5	36.3	34.4	32.7	32.7	37.3	40.6	43.4
R5	39.0	39.0	39.0	39.0	37.2	30.1	30.8	31.4	34.9	38.7	41.3	43.4
R6	37.9	37.9	37.9	37.9	31.1	32.8	35.0	34.5	34.5	34.5	38.0	44.3
R7	53.6	53.6	53.6	53.6	54.1	54.7	55.6	56.4	57.4	58.2	58.9	59.6
R9	38.6	38.6	38.6	38.6	36.0	30.1	32.3	31.7	32.2	35.9	40.0	42.7
Gallt-y-cwm	40.0	40.0	40.0	40.0	39.9	39.9	39.8	39.8	40.3	41.1	41.5	41.6
Naid Yr Carw	39.9	39.9	39.9	39.9	39.7	39.4	39.3	39.2	39.8	40.6	41.0	41.2
Goytre Farm	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.1	43.1	46.0	48.1	48.7
Cwm Maelwg	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.1	43.1	46.0	48.1	48.7
Crugwyllt-fawr	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.1	43.1	46.0	48.1	48.7
Rhiwlas	39.9	39.9	39.9	39.9	39.8	39.6	39.5	39.5	40.5	42.1	43.6	44.9
Cwmcerwyn Farm	39.9	39.9	39.9	39.9	39.8	39.5	39.4	39.3	39.3	39.3	40.9	43.3
Cwmcerwyn	39.9	39.9	39.9	39.9	39.9	39.7	39.7	39.6	39.6	39.6	41.1	43.4
Tair Waun Farm	39.8	39.8	39.8	39.8	39.6	39.2	39.0	38.9	38.9	40.2	41.7	42.6
Kings Terrace	39.3	39.3	39.3	39.3	38.3	35.7	33.1	30.4	30.4	36.0	39.1	40.6
Tudor Estate	39.4	39.4	39.4	39.4	38.6	36.7	35.1	33.8	33.8	37.7	40.8	43.5
Heol-y-Gadarn	39.1	39.1	39.1	39.1	37.8	33.1	30.0	30.0	30.4	37.3	41.1	43.4
Cynonville	38.3	38.3	38.3	38.3	34.1	31.8	34.0	33.5	33.5	33.5	34.9	40.9
Bryn - Village Central	39.9	39.9	39.9	39.9	39.7	39.4	39.3	39.2	39.2	40.5	41.8	42.7
Heol Gelli Lenor	40.0	40.0	40.0	40.0	39.9	39.8	39.7	39.7	39.7	40.9	42.1	43.0
Fire Station	39.8	39.8	39.8	39.8	39.5	39.0	38.4	38.5	38.5	40.0	41.5	42.4

Table 5 – Noise Limits 2300-0700 (dB L_{A90}) (Foel Trawsnant Consents P2022/0517 or P2014/0825 Not Implemented)

Location	Standardised 10 metre-height Wind Speed (as defined in accordance with the attached Guidance Notes to the noise condition)											
	1	2	3	4	5	6	7	8	9	10	11	12
NML01	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.7	41.9
NML02	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.1
NML03	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
NML04	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.1	42.2
NML05	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.8	43.0
NML06	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
NML07	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
NML08	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	44.4	44.4	44.4
NML09	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
NML10	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
R1	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.7	42.5	44.5
R2	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.7	42.5	44.5
R3	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.7	43.0
R4	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.7	43.0
R5	40.0	40.0	40.0	40.0	40.0	40.0	40.3	41.1	42.1	43.2	44.5	46.0
R6	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.0	42.9	45.0	47.4
R7	53.7	53.7	53.7	54.0	54.3	54.8	55.4	56.2	57.3	58.8	60.7	63.0
R9	40.0	40.0	40.0	40.0	40.0	40.0	40.3	41.1	42.1	43.2	44.5	46.0
Gallt-y-cwm	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
Naid Yr Carw	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
Goytre Farm	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	44.4	44.4	44.4
Cwm Maelwg	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	44.4	44.4	44.4
Crugwyllt-fawr	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	44.4	44.4	44.4
Rhiwlas	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.7	41.9
Cwmcerwyn Farm	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.1
Cwmcerwyn	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.1
Tair Waun Farm	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
Kings Terrace	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
Tudor Estate	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.7	43.0
Heol-y-Gadarn	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.1	42.2
Cynonville	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.1	42.2
Bryn - Village Central	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
Heol Gelli Lenor	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
Fire Station	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0

Table 6 – Noise Limits 0700-2300 (dB L_{A90}) (Foel Trawsnant Consents P2022/0517 or P2014/0825 Not Implemented)

Location	Standardised 10 metre-height Wind Speed (as defined in accordance with the attached Guidance Notes to the noise condition)											
	1	2	3	4	5	6	7	8	9	10	11	12
NML01	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.9	42.4	43.8	45.1
NML02	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.4	43.6
NML03	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.5	40.9
NML04	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.4	42.2	43.8	45.2
NML05	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.4	42.9	44.2	45.1	45.5
NML06	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
NML07	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.5	41.2	41.6	41.7
NML08	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.1	43.1	46.0	48.1	48.7
NML09	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.2	40.9
NML10	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.3	43.3	43.3	43.3
R1	40.0	40.0	40.0	40.1	40.6	41.0	41.4	41.7	42.1	42.3	42.6	42.8
R2	40.0	40.0	40.0	40.1	40.6	41.0	41.4	41.7	42.1	42.3	42.6	42.8
R3	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.3	42.9	44.8
R4	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.3	42.9	44.8
R5	40.0	40.0	40.0	40.0	40.0	40.1	40.7	41.4	42.2	43.2	44.3	45.5
R6	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.2	42.9	44.9	47.1
R7	53.1	53.1	53.1	53.7	54.3	55.0	55.9	56.7	57.6	58.4	59.1	59.7
R9	40.0	40.0	40.0	40.0	40.0	40.1	40.7	41.4	42.2	43.2	44.3	45.5
Gallt-y-cwm	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.5	41.2	41.6	41.7
Naid Yr Carw	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.5	41.2	41.6	41.7
Goytre Farm	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.1	43.1	46.0	48.1	48.7
Cwm Maelwg	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.1	43.1	46.0	48.1	48.7
Crugwyllt-fawr	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.1	43.1	46.0	48.1	48.7
Rhiwlas	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.9	42.4	43.8	45.1
Cwmcerwyn Farm	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.4	43.6
Cwmcerwyn	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.4	43.6
Tair Waun Farm	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.1	42.3	43.1
Kings Terrace	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.1	42.3	43.1
Tudor Estate	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.3	42.9	44.8
Heol-y-Gadarn	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.4	42.2	43.8	45.2
Cynonville	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.4	42.2	43.8	45.2
Bryn - Village Central	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.1	42.3	43.1
Heol Gelli Lenor	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.1	42.3	43.1
Fire Station	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.1	42.3	43.1

Table 7: Coordinate locations of the dwellings listed in Tables 1 to 6

ID	Location	Easting	Northing
NML01	Highland Heights	283345	190161
NML02	The Pines	283967	191030
NML03	Garn Wen	284670	192439
NML04	Tycanol	282322	194981
NML05	Bryn - North Side	281914	192389
NML06	Bryn - Station Terrace	281964	191858
NML07	Penrhiw Bungalow	280787	191529
NML08	Hafod	280160	189850
NML09	Lluest-wen	284251	189036
NML10	Maesteg Community Hospital	284496	191604
R1	Tonnau Dafydd	284994	193601
R2	Pen-y-lan	284781	193054
R3	Sunnyview	285331	194626
R4	Griffiths Terrace / Teras Griffiths	285213	194602
R5	Hendre Owen Farm (FI FT)	283612	195568
R6	Ty'n-y-pant Farm (FI FT)	282515	195007
R7	Nant yr Hwyaidd Farm	282737	195073
R9	Neuadd-wen	283168	195414
Gallt-y-cwm	Gallt-y-cwm	280330	191129
Naid Yr Carw	Naid Yr Carw	280777	191424
Goytre Farm	Goytre Farm	278878	189645
Cwm Maelwg	Cwm Maelwg	280553	187184
Crugwyllt-fawr	Crugwyllt-fawr	279815	187074
Rhiwlas	Rhiwlas	283907	190209
Cwmcerwyn Farm	Cwmcerwyn Farm	283900	190823
Cwmcerwyn	Cwmcerwyn Cottages	284016	190596
Tair Waun Farm	Tair Waun Farm	284349	191642
Kings Terrace	Kings Terrace	284867	192908
Tudor Estate	Tudor Estate	285230	194118
Heol-y-Gadarn	Heol -y-Gadarn Duffryn	284028	195607
Cynonville	Cynonville	282618	195180
Bryn - Village Central	Bryn – Village Central Location	281465	192377
Heol Gelli Lenor	Heol Gelli Lenor Maesteg	284692	190359
Fire Station	Fire Station Maesteg	285389	193343

Note to Table 7: The geographical coordinate references are provided for the purpose of identifying the general location of dwellings to which a given set of noise limits applies.

Note:

For the purposes of this condition, a “dwelling” is a building within Use Class C3 & C4 of the Town and Country Planning (Use Classes) Order 1987 which lawfully exists or had planning permission at the date of this consent.

Reason: To protect the amenity of the area.

Guidance Notes for Noise Condition NC1

These notes are to be read with and form part of the noise condition. They further explain the condition and specify the methods to be employed in the assessment of complaints about noise immissions from the wind farm. The rating level at each integer wind speed is the arithmetic sum of the wind farm noise level as determined from the best-fit curve described in Guidance Note 2 of these Guidance Notes and any tonal penalty applied in accordance with Guidance Note 3. Reference to ETSU-R-97 refers to the publication entitled “The Assessment and Rating of Noise from Wind Farms” (1997) published by the Energy Technology Support Unit (ETSU) for the Department of Trade and Industry (DTI).

Guidance Note 1

(a) Values of the $L_{A90,10 \text{ minute}}$ noise statistic should be measured at the complainant's property, using a sound level meter of EN 60651/BS EN 60804 Type 1, or BS EN 61672 Class 1 quality (or the equivalent UK adopted standard in force at the time of the measurements) set to measure using the 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 should be calibrated in accordance with the procedure specified in BS 4142: 1997 (or the equivalent UK adopted standard in force at the time of the measurements). Measurements shall be undertaken in such a manner to enable a tonal penalty to be applied in accordance with Guidance Note 3.

(b) The microphone should be mounted at 1.2 – 1.5 metres above ground level, fitted with a two-layer windshield or suitable equivalent approved in writing by 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 metres away from the building facade or any reflecting surface except the ground at the approved measurement location. In the event that the consent of the complainant for access to his or her dwelling to undertake compliance measurements is withheld, the wind farm operator shall submit for the written approval of the Local Planning Authority details of the proposed alternative representative measurement location prior to the commencement of measurements and the measurements shall be undertaken at the approved alternative representative measurement location.

(c) The $L_{A90,10 \text{ minute}}$ measurements should be synchronised with measurements of the 10-minute arithmetic mean wind and operational data logged in accordance with Guidance Note 1(d), including the power generation data from the turbine control systems of the wind farm.

(d) To enable compliance with the conditions to be evaluated, the wind farm operator shall continuously log arithmetic mean wind speed in metres per second and wind direction in degrees from north at hub height for each turbine, and at any on site meteorological mast(s), if available, together with the arithmetic mean power generated by each turbine, all in successive 10-minute periods. All 10 minute arithmetic average mean wind speed data measured 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 metre height wind speed data, as determined from whichever source is agreed in writing with the Local Planning Authority as being most appropriate to the noise compliance measurements being undertaken, which is correlated with the noise measurements determined as valid in accordance with Guidance Note 2, such correlation to be undertaken in the manner described in Guidance Note 2. All 10-minute periods shall commence on the hour and in 10- minute increments thereafter.

(e) Data provided to the Local Planning Authority in accordance with the noise condition shall be provided in comma separated values in electronic format.

(f) A data logging rain gauge shall be installed in the course of the assessment of the levels of noise immissions. The gauge shall record over successive 10-minute periods synchronised with the periods of data recorded in accordance with Note 1(d).

Guidance Note 2

(a) The noise measurements shall be made so as to provide not less than 20 valid data points as defined in Guidance Note 2 (b)

(b) Valid data points are those measured in the conditions specified in the agreed written protocol under paragraph (d) of the noise condition, but excluding any periods of rainfall measured in the vicinity of the sound level meter. 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 Guidance Note 1.

(c) For those data points considered valid in accordance with Guidance Note 2(b), values of the $L_{A90,10 \text{ minute}}$ noise measurements and corresponding values of the 10- minute standardised ten metre height wind speed, as derived from the site measured wind speed source(s) agreed in writing with the Local Planning Authority in accordance with Guidance Note 1(d), shall be plotted on an XY chart with noise level on the Y-axis and the standardised mean wind speed on the X-axis. A least squares, “best fit” curve of an order deemed appropriate by the independent consultant (but which may not be higher than a fourth order) should be fitted to the data points and define the wind farm noise level at each integer speed.

Guidance Note 3

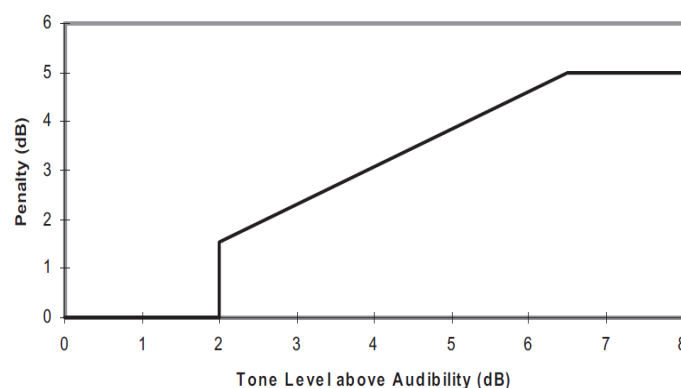
(a) Where, in accordance with the approved assessment protocol under paragraph (d) of the noise condition, noise immissions at the location or locations where compliance measurements are being undertaken contain or are likely to contain a tonal component, a tonal penalty is to be calculated and applied using the following rating procedure.

(b) For each 10 minute interval for which $L_{A90,10 \text{ minute}}$ data have been determined as valid in accordance with Guidance Note 2 a tonal assessment shall be performed on noise immissions during 2 minutes of each 10 minute period. The 2 minute periods should be spaced at 10 minute intervals provided that uninterrupted uncorrupted data are available (“the standard procedure”). Where uncorrupted 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 the standard procedure, as described in Section 2.1 on pages 104-109 of ETSU-R-97, shall be reported.

(c) For each of the 2 minute samples the tone level above or below audibility shall be calculated by comparison with the audibility criterion given in Section 2.1 on pages 104-109 of ETSU-R-97.

(d) The average tone level above audibility shall be calculated for each wind speed bin, each bin being 1 metre per second wide and centred on integer wind speeds. Samples for which the tones were below the audibility criterion or no tone was identified, a value of zero audibility shall be substituted.

(e) The tonal penalty for each wind speed bin is derived from the margin above audibility of the tone according to the figure below.



Guidance Note 4

(a) If a tonal penalty is to be applied in accordance with Guidance Note 3 the rating level of the turbine noise at each wind speed is the arithmetic sum of the measured noise level as determined from the best fit curve described in Guidance Note 2 and the penalty for tonal noise as derived in accordance with Guidance Note 3 at each integer wind speed within the range specified by the Local Planning Authority in its written protocol under paragraph (d) of the noise condition.

(b) If no tonal penalty is to be applied then the rating level of the turbine noise at each wind speed is equal to the measured noise level as determined from the best fit curve described in Guidance Note 2.

(c) In the event that the rating level is above the limit(s) set out in the Tables attached to the noise conditions or the noise limits for a complainant's dwelling approved in accordance with paragraph (e) of the noise condition, the independent consultant shall undertake a further assessment of the rating level to correct for background noise so that the rating level relates to wind turbine noise immission only.

(d) The wind farm operator shall ensure that all necessary wind turbines in the development are turned off for such period as the independent consultant requires to undertake any further noise measurements required under Guidance Note 4(c). If the number of turbines to be turned off are less than the total number of turbines on the site then this shall be agreed in advance with the Local Planning Authority.

(e) To this end, the steps in Guidance Note 2 shall be repeated with the required number of turbines shut-down in accordance with Guidance Note 4(d) in order to determine the background noise (L_3) at each integer wind speed within the range requested by the Local Planning Authority in its written request under paragraph (c) and the approved protocol under paragraph (d) of the noise condition.

(f) The wind farm noise (L_1) at this speed shall then be calculated as follows where L_2 is the measured level with turbines running but without the addition of any tonal penalty:

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

(g) The rating level shall be re-calculated by adding arithmetically the tonal penalty (if any is applied in accordance with Note 3) to the derived wind farm noise L_1 at that integer wind speed.

(h) If the rating level after adjustment for background noise contribution and adjustment for tonal penalty (if required in accordance with Guidance Note 3 above) at any integer wind speed lies at or below the values set out in the Tables attached to the conditions or at or below the noise limits approved by the Local Planning Authority for a complainant's dwelling in accordance with paragraph (e) of the noise condition then no further action is necessary. If the rating level at any integer wind speed exceeds the values set out in the Tables attached to the conditions or the noise limits approved by the Local Planning Authority for a complainant's dwelling in accordance with paragraph (e) of the noise condition then the development fails to comply with the conditions.