

ADDENDUM TO AIR QUALITY ASSESSMENT TO SUPPORT A PROPOSAL TO INSTALL A THIRD CHP UNIT AT BRYN POWER LIMITED, GELLIARGWELT FARM, GELLIGAER, HENGOED, CF82 8FY NOVEMBER 2025

1. Introduction

Environmental Visage Limited (Envisage) prepared a detailed air quality assessment to support a proposal by Bryn Power Limited to install a third CHP unit at Gelliargwellt Farm in Hengoed. The assessment, Issue 3, dated February 2025 was submitted to Natural Resources Wales (NRW) for their consideration.

On review, NRW noted that the results of the short-term assessment for NO_x as NO₂ at the ecological receptors was missing from the report. This short addendum has therefore been prepared to provide that data and should be considered alongside the full report.

2. Short-Term (Daily) NO_x Contributions at Ecological Receptors

The short-term, daily process contributions of NO_x as NO₂ were modelled and the results are compared against the short-term critical level of 75 µg m⁻³ for ecological sites, in the table below. The maximum returned (100th percentile) daily result from modelling five years' worth of meteorological conditions is reported for each receptor.

Receptor No.	Maximum Daily PC of NO _x as NO ₂ (µg m ⁻³)	PC as % of Critical Level
17	0.632	0.84 %
18	7.384	9.84 %
19	4.744	6.33 %
20	3.396	4.53 %
21	11.100	14.80 %
22	14.647	19.53 %
23	22.436	29.91 %
24	26.197	34.93 %
25	3.834	5.11 %
26	2.599	3.46 %
27	1.868	2.49 %
28	2.555	3.41 %
29	2.701	3.60 %
30	1.962	2.62 %
31	4.597	6.13 %
32	2.788	3.72 %

3. Discussion

Of the sixteen ecological receptors, the maximum predicted process contribution at twelve equated to less than 10 % of the daily critical level, and are immediately screened as insignificant. The remaining four receptors, (Numbers 21 to 24) are all situated within locally designated sites of importance for nature conservation (SINCs) neighbouring the farm, and contributions here equate to between approximately 15 and 35 % of the critical level. However, when assessing local nature sites, guidance stipulates that if the process contributions are less than 100 % of the relevant environmental standard for protected conservation areas, then they require no further assessment. This is the case here and therefore, the short-term contribution of NO_x as NO₂ to all sensitive ecological receptors in the vicinity of Gelliargwellt Farm in Hengoed, is screened.