

Jennifer Price

Bryn Power Ltd
Gelliargwellt Farm
Gelligaer Road
Hengoed
CF82 8FY

16/10/2025

Our Ref: 6821/L1

Dear Jen,

Re: Bryn AD Facility Extension, Hengoed

We understand that NRW has provided comments on the noise impact assessment undertaken for the extension to the AD facility. These comments are set out below in bold, with our responses below each point.

Initial observations:

Regarding the current background used in the submitted NIA, MID 4142 is explicit that whole site noise should be excluded from the measured residual noise. Where this is not possible a surrogate measurement may be used. If the applicant wishes to use a background level from a previously conducted survey (i.e. 2010 as proposed in the submitted Noise Impact Assessment), they should:

- **Provide sufficiently robust reasons why they are unable to undertake a new survey in accordance with the requirements of BS EN 4142:2014 + A1:2019 and the MID which should address in full any restrictions that prevent a shutdown of site-specific noise sources/activities and/or the inability to carry out a survey at a suitable surrogate location.**

As mentioned above, whole site noise (AD Facility) should be excluded from the background noise survey. Given the processing at the site, it is understood that shutting down all plant is not feasible for any prolonged length of time for safety reasons.

Finding surrogate measurement positions is likely to be difficult given the distance of receptors from site and attempting to get far enough away so as to not have any influence from the AD plant. Surrogate positions would likely be so far away that they would not be representative, or if closer, would be affected by AD plant.

The site is a complex site with numerous uses, some of which are historic and form part of the background sound levels (i.e. quarry, farm activities etc.).

- **Confirm that the historic noise survey used in the submitted report was carried out in accordance with the requirements of BS 4142:1997 and the resulting background (LA90) did not include contributions from any sources currently associated with the existing and proposed site.**

The historic noise survey was carried out in line with BS 4142:1997. The resultant background sound levels did not include any contributions from the AD facility (as it was not built at the time). See further information below.

- **Include a review of the historic noise survey to ensure that any identified “off-site” activities or sources that are no longer present did not unduly contribute to the background sound level (e.g. differences in traffic volume between the present and the historic survey, any nearby construction activities, on or offsite sources and activities captured in the historic survey etc.).**

The following was set out discussing the environmental noise survey in the initial AD facility planning noise assessment report in 2015 (prior to the extension).

4.0 Environmental Noise Surveys

In order to set environmental noise limits it is first necessary to define the existing ambient and background noise climate at the agreed noise sensitive premises (NSPs).

Environmental noise surveys have been carried out to confirm baseline noise values during previous applications at the site. Caerphilly CBC Environmental Health have confirmed it acceptable to use background noise data from previous surveys in this assessment.

The following section therefore discusses the methodology and results of previous surveys undertaken at the site.

4.1 Procedure

Continuous noise monitoring was carried out from 1230hrs on 20th April 2010 until the following day to determine the existing background noise levels. Data including L_{max} , L_{eq} and L_{90} was logged at consecutive 5-min periods over the monitoring periods.

The following measurement positions were used, shown on Site Plan 3781/SP2.

- | | |
|------------|---|
| Position A | On boundary fence of Green Acres residential property, in line with garden boundary, approximately 1.2 - 1.5m above local ground level. |
| Position B | On boundary hedge in field adjacent to residents at Claerwen Housing Estate, north east of the site, approximately 1.2 - 1.5m above local ground level - selected to give a representation of existing background noise levels at residents on Claerwen Housing Estate. |
| Position C | On boundary hedge of Llanciach Isaf farm land, south west of the site, approximately 1.2 - 1.5m above local ground level. |

Construction noise from a local school site on Claerwen Housing Estate prevented measurements from being taken at closer proximity. Position B is, therefore, deemed an accurate representation of background noise climate for these residents.

3781/SP2 - Site Plan Showing Continuous Monitoring Positions



4.2 Equipment Used

The following equipment was used:

Larson Davis 824 Sound Level Meter	(Type 1)	Position A
Rion NL32 Sound Level Meter	(Type 1)	Position B
Larson Davis 820 Sound Level Meter	(Type 1)	Position C
Windshields		
Norsonic Acoustic Calibrator Type 1251		

The measurement systems were calibrated before and after the surveys, no variation occurred.

4.3 Weather Conditions

Weather conditions were sunny and dry throughout the monitoring period with no significant winds.

4.4 Results

Results of continuous monitoring at positions A, B and C are shown in time history graphs 3781/TH1, 3781/TH2 and 3781/TH3 respectively.

The following existing daytime activities were taking place about the wider Gelliargwellt Farm site which may have affected the noise climate around the proposed AD Facility during the continuous monitoring:

- Farm Activities, including:
 - a 180hp tractor + mixing wagon, and telehandler which operate between 0600hrs and 1000hrs;
 - telehandler and tractor + Bobcat scraper, which operate from 0700hrs; and
 - Milking machines: which operate 0400-0800hrs, 1300-1700hrs and 2000-0000hrs.
- Quarry Activities – which operated from 0700hrs to 1730hrs. During the measurement period however the quarry shut down between 1300hrs and 1400hrs.
- IVC Facility: which operated continuously (24/7/365) in terms of the composting process itself, although the receipt/export of material took place between 0730 – 1800 hours Monday to Friday and 0730 – 1300 hours on Saturday.

The existing Material Recycling Facility (MRF) was operating during the survey period, although it shut down between 1300hrs and 1330hrs, the same time as the farm lunch break. Additional background measurements have, therefore, been carried out to assess baseline background conditions without the existing Material Recycling Facility and quarry in order to provide a robust assessment given that these operations did not enjoy the benefit of permanent consents at the time of the previous survey although the MRF was subsequently approved to operate on a permanent basis in 2013.

4.5 Repeat Survey

Procedure

Additional background noise check measurements have been carried out to assess baseline background conditions without the existing MRF and quarry in order to provide a robust assessment. These were carried out at Positions A, B & C on 23rd November 2010, between 1330hrs and 1430hrs, indicated to be the periods with the lowest L_{90} levels recorded during our continuous monitoring and hence assessed as representative.

Background measurements were taken with the existing MRF and quarry excluded, with the Farm and IVC both operating normally given that they are established permanent activities at the site, although since the survey was carried out, the MRF and AD have been approved on a permanent basis.

Equipment Used

The following equipment was used:

Larson Davis 824 Sound Level Meter	(Type 1)	Positions A & B
Norsonic 118 Sound Level Meter	(Type 1)	Position C
Windshields		
Norsonic Acoustic Calibrator Type 1251		

Measurement systems were calibrated before and after the surveys, no variation occurred.

Weather Conditions

Weather conditions were dry throughout the monitoring period with no significant winds.

Results

Ambient noise levels were generally controlled by road traffic noise from Gelligaer Road, with pass-bys from refuse trucks and HGVs accessing the site significant at Positions A & B. Background noise levels appeared to be controlled by farm activities, as well as distant road traffic noise.

3781/T1 – Background Noise Check Measurements

Time	Position A		Position B		Position C	
	L _{Aeq} (dB)	L _{A90} (dB)	L _{Aeq} (dB)	L _{A90} (dB)	L _{Aeq} (dB)	L _{A90} (dB)
1335-1340hrs	-	-	-	-	51.7	42.7
1340-1345hrs	-	-	-	-	47.4	43.6
1345-1350hrs	-	-	-	-	48.9	43.7
1350-1355hrs	-	-	50.5	45.4	45.6	40.3
1355-1400hrs	-	-	46.1	43.4	45.3	41.6
1400-1405hrs	-	-	46.4	44.4	47.6	41.7
1405-1410hrs	-	-	-	-	44.8	40.6
1410-1415hrs	-	-	-	-	45.5	41.4
1415-1420hrs	59.6	44.1	-	-	45.9	40.4
1420-1425hrs	55.6	40.6	-	-	45.6	41.1
1425-1430hrs	54.9	39.9	-	-	48.3	39.7

5.0 Environmental Noise Criteria

BS 4142 uses background noise levels (L_{A90}) as a basis for assessing noise impact at residential receivers. Most of the activities at the proposed ADF run during the daytime however some plant runs continuously throughout the day and night.

Typical lowest $L_{A90,1hr}$ background noise levels are quoted between 0730 and 1800hrs as these are the current daytime operating hours. Typical lowest $L_{A90,1hr}$ night-time background noise levels are quoted between 2300 and 0700hrs to cover any plant running during the night.

Results from the additional background noise check measurements were marginally higher than results from the original continuous noise survey, indicating that the quarry and MRF were not controlling the noise at the NSPs during the original survey. Therefore, the lower daytime noise levels from the continuous noise survey have been used as the basis for proposing noise limits in order to provide a robust assessment (it should be noted however that the MRF was approved to operate on a permanent basis in 2013).

Note: Daytime noise levels used exclude the lunchtime period of 1300hrs to 1400hrs, as this period is not considered to be representative of the typical daytime noise climate.

The following are based on typical background L_{A90} levels measured during the quietest hour of the day;

Position A: (Green Acres, Top Hill Farm)	$L_{A90,1hr}$ (1440-1540hrs) = 39.0dB
Position B: (Claerwen Estate)	$L_{A90,1hr}$ (0955-1055hrs) = 41.0dB
Position C: (Llancaiach Isaf Farm)	$L_{A90,1hr}$ (1155-1255hrs) = 36.5dB

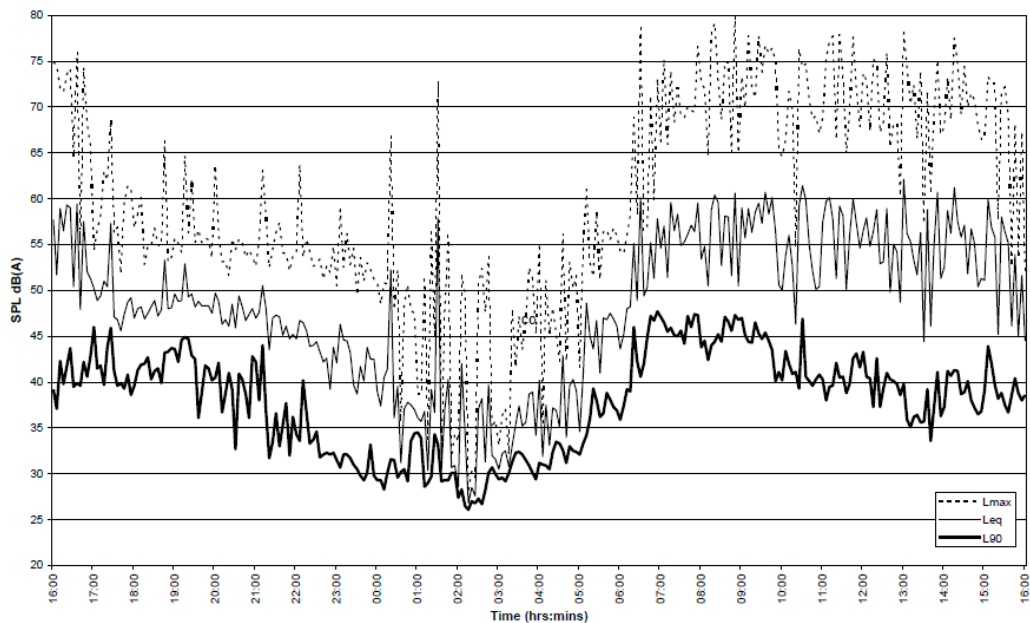
The following are based on typical background L_{A90} levels measured during the quietest hour of the night;

Position A: (Green Acres, Top Hill Farm)	$L_{A90,1hr}$ (0145-0245hrs) = 28.0dB
Position B: (Claerwen Estate)	$L_{A90,1hr}$ (0000-0100hrs) = 24.0dB
Position C: (Llancaiach Isaf Farm)	$L_{A90,1hr}$ (0015-0115hrs) = 25.5dB

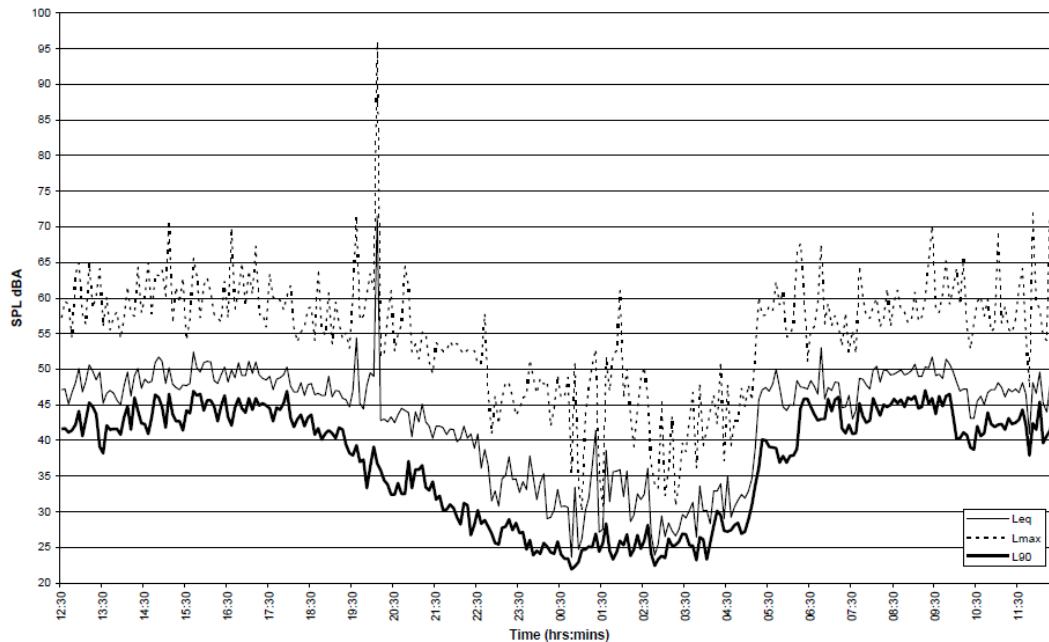
Environmental noise criteria are proposed at 5dB above the existing background, in line with limits put forward for the previous application for the AD facility - plant rating level ($L_{Ar,Tr}$) minus background (L_{A90}). This effectively means designing L_{Aeq} to the measured background L_{A90} .

Appendix A – Graphs, Tables and Diagrams

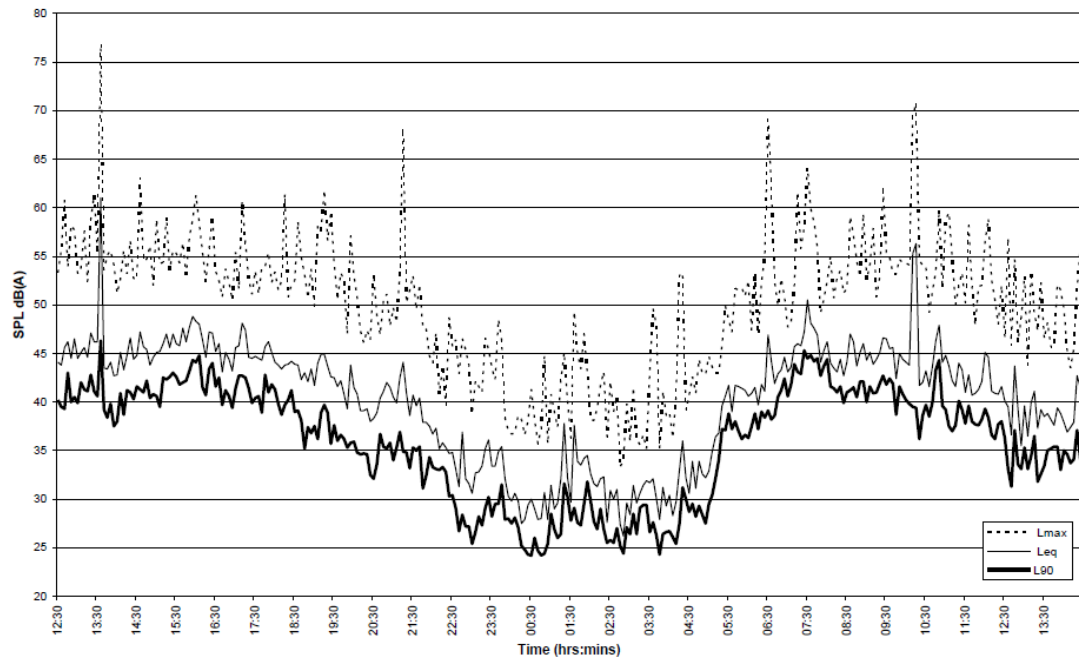
3781/TH1 - Time History Position A



3781/TH2 - Time History Position B



3781/TH3 - Time History Position C



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*** While an assessment of night-time impacts may be considered a worse case where all operating sources and activities that contribute to impacts at receptors are identical to those operating during the daytime period, we would expect the applicant to justify this approach, confirming that all sound sources and activities included in the modelled nighttime scenario are identical to worst case daytime operation (e.g. processes active at the same level/load, intensity and or frequency of events etc.) including on-site traffic movements.**

The plant operates continuously 24/7 and therefore it is understood that processing noise is the same day and night – therefore night-time is more critical when background noise levels are lower.

In the initial AD facility noise assessment in 2015, refuse vehicles accessing the site were not modelled as it was understood that vehicle movements would not materially increase compared to the operations at the IVCF building for which permanent planning consent existed. Therefore there were no changes to vehicles accessing this area of the site.

The NIA was submitted before the proposal to increase the throughput of waste. Therefore please also consider in your response the potential increase of daytime noise as a result of an increase in on-site traffic movements.

We have been provided with the following information:

Total existing vehicle movements of 16 per day which over an 8hr day, a robust assessment would allow for 4no in a 1hour daytime assessment period.

We are advised this would increase to a total 20 per day which over an 8hr day would still allow for 4no in a 1hour daytime assessment period.

The additional vehicle movements associated with the increase of throughput of waste are not therefore likely to increase in a worst 1hr daytime assessment and therefore the focus on the critical night-time assessment is still valid in our opinion.

I trust the above responses provide clarification, however if you wish to discuss further, please do not hesitate to contact our office.

Regards,

A handwritten signature in black ink, appearing to read 'M. Townsend', with a long horizontal flourish extending to the right.

Meirion Townsend

BSc(Hons) MIOA | Director

Hunter Acoustics