



Acoustics Environment

11 October 2024

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CASSIDY & ASHTON

10 Hunters Walk

Canal Street

Chester CH1 4EB

For the attention of: Mr Guy Evans - Director

Dear Mr Evans,

Maelor Foods Ltd. Pickhill Lane, Wrexham LL13 0UE

Re. Noise Impact Assessment – Additional Considerations on Background Sound Levels

I write further to our meeting on 3rd inst. with officers of Wrexham Borough Council concerning Maelor Foods' planning application ref. P/2022/0820.

As I understand matters, the council presently retains a position of requiring additional clarification/information in respect of Background Sound Levels. In discussion it was clarified by Mr Graham Aveyard (Public Protection, Wrexham BC) that concern's remained in regard to survey position 'Site A', known as Marlbrook House, Pickhill Lane.

In light of this, it was duly agreed that I would re-evaluate night-time measurement data acquired for *Noise Impact Assessment: Night-time HGV movements on Pickhill Lane* (Council ref. 'Report B') in context of *Updated Noise Impact Assessment*, 29 January 2024 (Council ref. 'Report A') to assist in providing assurance and to redress any uncertainties on their part.

I have since had an opportunity to firstly consider the night-time data for 14-15 June, 23.00 to 07.00 hours.

In line with BS 4142, you will perhaps recall that I referenced the middle of the night can be distinctly different (and potentially of lesser importance)



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compared to the start or end of the night-time period for sleep purposes. With this in mind, I have examined the 1-second data sets for periods 23.00 to midnight, 23.00 to 01.00, 06.00 to 07.00, and 05.00 to 07.00 as modal averages for monitoring at Site A. This yields:

	L_{AF90}, dB	(Site operational)
	Background	
	Sound Level	
Mode 23.00 - 00.00	35	
Mode 23.00 - 01.00	36	
Mode 06.00 - 7.00	43	
Mode 05.00 - 7.00	42	

As you can see, the respective periods for the start and end of the night show good correlation either for 1 or 2 hour periods. No doubt the end of night-time leading up to the on-set of daytime is elevated as the environment becomes busier, e.g. build-up of road traffic in particular.

In 'Report A' we produced Background Sound Levels adjusted to represent the start/end of the night-time, with the Maelor site closed. For measurement times between 23.00 to 01.00 when the Maelor site was operational, the Background Sound Level is L_{AF90} , 35 dB, which accords with the 23.00 to 01.00 analyses from 14-15 June '23.

Previous to our engagement by Maelor Foods, Environoise Ltd. reported a Background Noise Level for Site A of L_{AF90} , 32 dB. In examining the whole night-time period for 14-15 June, the mode average is also 32 dB.

For measurement surveys carried out on 29 – 30 September 2023, the Background Sound Level for measurements between 00.00 and 01.00 is L_{AF90} , 35 dB, and on 2 October 2023 between 06.00 and 07.00 L_{AF90} , 44 dB, with the Maelor site operational.



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It is offered that Background Sound Levels for the end of the night-time period as stand-alone values be discounted for noise rating purposes, as they would not suitably represent earlier phases of the night.

For the purposes of BS 4142 the rating assessment necessarily has to consider the impact of proposed changes based on the present operational conditions. Night-time Background Sound Levels as low as 32 dB(A) are used for the whole period (which was also determined for the site shutdown and so in the absence of HGV movements) and 35 dB(A) when considering the start/end periods which equate to values that were attained when the Maelor site was closed. This is considered to be a justified approach and omits consideration solely of the end of the night-time period.

It is apt I highlight that in considering mitigation measures, a highly conservative approach was applied to the attenuation afforded by acoustic silencing/shrouding using the minimal perceptible change approach of -3 dB. This supports the comment that numerical ratings generally over-predict the actual extent of impacts and the mitigation measures are hence designed to improve on the present noise climate. It is proposed that whilst a contingency for a perimeter acoustic barrier is retained, the need ought logically be evaluated once all other mitigation measures are completed.

I trust this offers suitable re-assurance of the adequacy of the noise impact assessment as accepted by NRW, such that any concerns or objections on the part of public protection can be negated.

Regards,

Electronic

Director

Acoustics & Environmental Consultant