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Maelor Foods Ltd. Pickhill Lane, Wrexham LL13 0UE



Acoustic Impact Assessment:
Report on Post-Noise Mitigation Measures

25 June 2026

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Client:

Maelor Foods Ltd. Pickhill Lane Cross Lanes Wrexham LL13 0UE	Maelor FOODS

CONTENTS

		Page No.
	Summary	3
1.0	Introduction	5
2.0	Site Surveys	8
3.0	Survey Results	10
4.0	Planning Noise Condition	11
	Appendices	
1	Measurement Instrumentation	15
2	Noise Mitigation Scheme	16
3	Measurement Survey Results	20
4	Author Credentials (Abridged)	31
5	General Disclaimer	33
	Figures	
1.1	Location of Maelor Foods Ltd. LL13 0UE	5
2.1	Acoustic Survey Location	8
4.1	Marlbrook House 13 June 2026 L_{Aeq} Profile 00:41 to 01:42	12
4.2	Marlbrook House 13 June 2026 L_{Aeq} Profile 01:48 to 02:49	13
4.3	Marlbrook House 13 June 2026 L_{Aeq} Profile 01:47:26 to 01:51:58 (Zoom Analysis)	13
4.4	Marlbrook House 13 June 2026 L_{Aeq} Profile 02:16:50 to 02:16:50 (Zoom Analysis)	13
4.5	Marlbrook House 30 March 2026 L_{Aeq} Profile 11:04:42 to 12:04:42	14
4.6	Marlbrook House 30 March 2026 L_{Aeq} Profile 12:07:45 to 13:07:45	14

SUMMARY

s.1 Acoustic surveys have been undertaken to assess sound emissions generated by Maelor Foods' Wrexham plant following the introduction of extensive noise control measures. The measures have formed part of a major capital expenditure programme and are designed to mitigate impacts at neighbouring noise-sensitive premises, and meet condition no. 13 of the company's planning permission reference P/2022/0820, granted by Wrexham County Borough Council.

s.2 The planning condition stipulates sound level ('noise') limits for daytime and night-time, namely 07:00 to 23.00 and 23:00 to 07:00 respectively, using $L_{Aeq\ 1\ hour}$ and $L_{Aeq\ 15\ min}$ metrics. Field work thus comprised measurements and recording of free-field, broad-band sound levels along with contemporaneous notes of sound sources and events. Data is reported for specific periods within the time-frames.

s.3 The planning condition is however framed in such a manner that compliance cannot simply be established by direct measurements. This is on account of the nature and presence of residual ambient sounds originating from beyond the Maelor site, that persistently contribute to the soundscape, and the low-levels of sound stemming from the Maelor site.

s.4 Field work thus comprised measurement and recording of free-field, broad-band sound levels along with contemporaneous notes of sound sources and events.

s.5 It is has been determined that the planning condition is being met at the reference position for compliance, Marlbrook House, Pickhill Lane. This has been carried out by firstly considering L_{Aeq} levels that can be permitted so as not to allow for an increase in measured ambient sound levels when the site is operational, and when ambient sound levels are their lowest, given that during surveys the Maelor plant was invariably inaudible at Marlbrook House.

s.6 Profiles of measured ambient sound levels have thereafter been examined in terms of shorter duration L_{Aeq} periods to provide for refined granularity. In this sense, consideration of the lowest ambient sound levels, in the absence of immediate vehicle pass-bys (or other overtly dominant, non-Maelor site ambient sounds present), in turn provides for the lowest values permissible of contributing sound levels from Maelor Foods when it is inaudible.

s.7 Planning Condition Compliance Assessment Summary

	Planning Condition Limit, dB	Operational Site – Sound Levels, dB	Assessment
L_{Aeq} (1 hour) Daytime	43	≤ 33	Compliant
L_{Aeq} (15 min) Night-time	39	≤ 36	Compliant

s.8 It remains that a variety of vehicle movements along Pickhill Lane comprise the main components of the ambient sound; these fall beyond the Maelor Foods site and are not subject to controls via the planning condition.

1.0 INTRODUCTION

1.1 This report has been prepared on the instruction of Maelor Foods Ltd. as an initial acoustic assessment, following the implementation of extensive acoustic control measures at the company's poultry processing site at Pickhill Lane, Cross Lanes, Wrexham. The site location is shown in Figure 1.1. mitigation measures are summarised in Appendix 2.

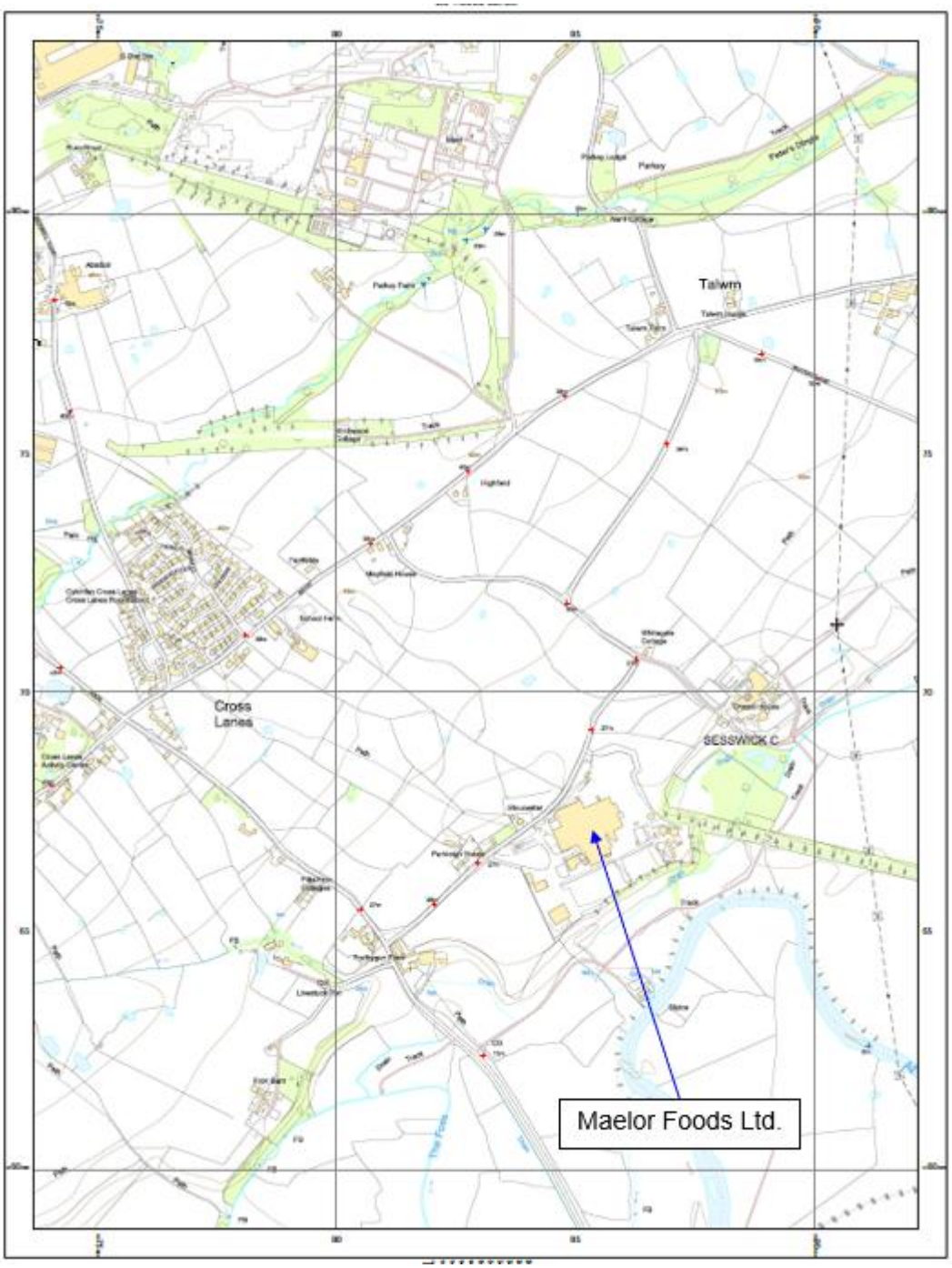


Figure 1.1 Location of Maelor Foods Ltd. LL13 0UE

1.2 The report has direct relevance in respect to planning application P/2022/0820 (Wrexham

County Borough Council), granted for the purpose of doubling production capacity at the site.

1.3 Planning permission P/2022/0820 condition no.13 states:

> "*The operational noise level from the operational site shall not exceed the following:*
>
> *a) 43 dB LAeq (1 hour) (free field), for any period of one hour at a position on the boundary of the property Marlbrook House, Pickhill Lane (Site A as shown in figure 2.4 of the Supplementary Noise Assessment: Environment Permit EPR/AB2591ZQ Application for Variation, Issue 1.1 dated 27 October 2023) between the hours of 07:00 – 23:00 hrs on any day; and*
>
> b) *39 dB LAeq (15 min) (free field), for any period of fifteen minutes at a position on the boundary of the property Marlbrook House, Pickhill Lane (Site A as shown in figure 2.4 of the Supplementary Noise Assessment: Environment Permit EPR/AB2591ZQ Application for Variation, Issue 1.1 dated 27 October 2023) between the hours of 23:00–07:00 hrs on any day*."

1.4 Whilst the boundary of Marlbrook House is not solely confined to the Pickhill Lane frontage, a default measurement position has been used at the frontage of the property, using the driveway curtilage/verge with Pickhill Lane. This serves to reflect impacts upon the residence, the Pickhill Lane boundary representing the closest boundary to Maelor Foods.

1.5 Previous documents - as listed below - have historic relevance to way of reported information:

i. Noise Impact Assessment: Night-time HGV movements on Pickhill Lane. (Acoustics Environment 26 June 2024 Report to Wrexham Borough Council in support of Planning Application P/2022/0820). '**REPORT 1**'

ii. Appendices to Noise Impact Assessment: Night-time HGV movements on Pickhill Lane. (Acoustics Environment 26 June 2024 Report to Wrexham Borough Council in support of Planning Application P/2022/0820). '**REPORT 1A**'

iii. Letter to Cassidy & Ashton (Architects, Planners, Surveyors & Construction Advisers) Noise Impact Assessment – Additional Considerations on Background Sound Levels (Acoustics Environment 11 October 2024). '**LETTER 1**'

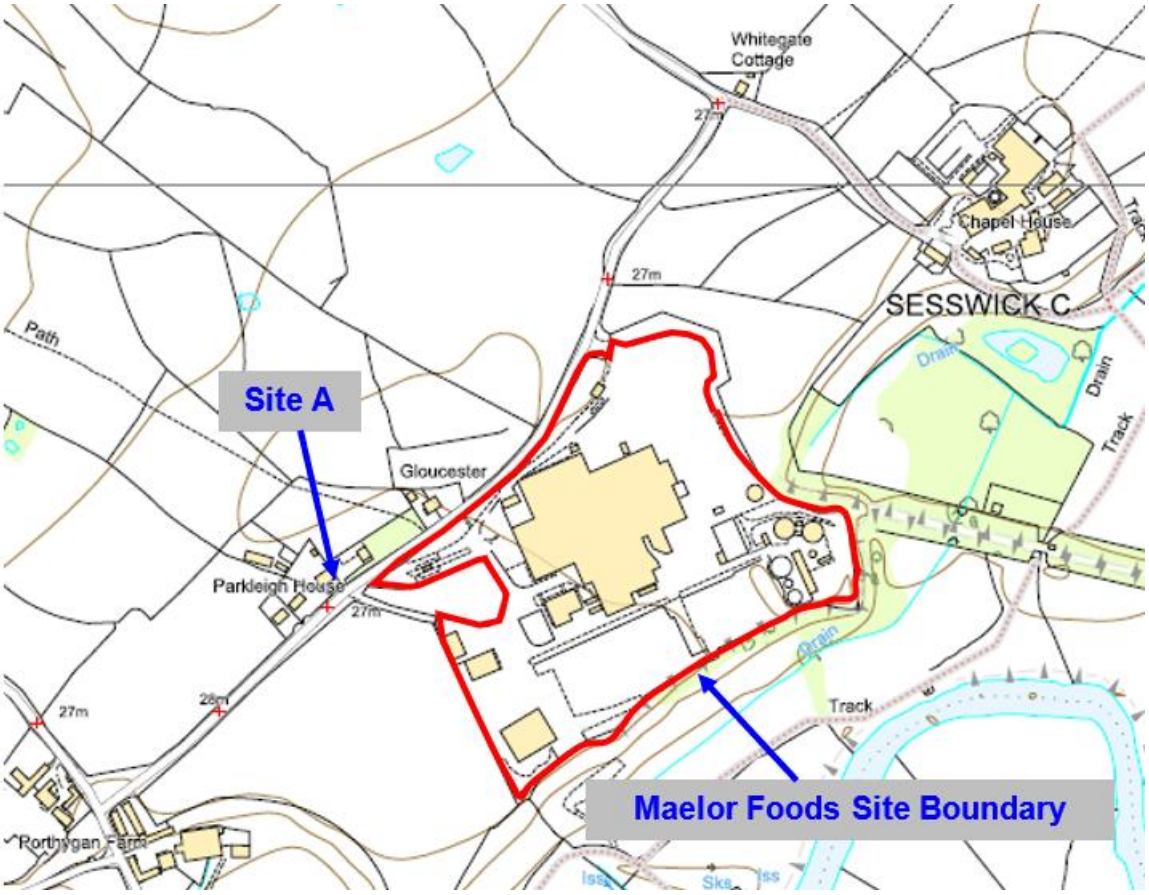
iv. Letter to Cassidy & Ashton (Architects, Planners, Surveyors & Construction Advisers) Noise Impact Assessment – Additional Considerations on Background Sound Levels (Acoustics Environment 20 October 2024).). '**LETTER 2**'

v. Technical Note. Noise Impact Assessments – Updated and Additional Information. Maelor Foods Ltd. Pickhill Lane, Wrexham LL13 0UE. Planning Application P/2022/0820 Wrexham County Borough Council. '**REPORT 2**'

1.6 At the outset it is assumed that the reader of this report is familiar with all acoustic terminology, references and data metrics used herein.

2.0 SITE SURVEYS

2.1 The free-field survey position has due regard to previous assessments, used for the purposes of Report 2 onwards. Figure 2.1 depicts.



Key:

Site A Marlbrook House, Pickhill Lane

Figure 2.1 Acoustic Survey Location

Survey Dates

2.2 <u>Site A: Marlbrook House, Pickhill Lane 2026</u>

23 March Daytime

30 March Daytime

17 April Evening

19 April Night-time

20 April Night-time

12 June Night-time

13 June Night-time

2.3 Site surveys were carried out to provide data within periods designated for daytime 0.7.00 – 23.00 and night-time 23.00 – 07.00. Details of individual surveys, including instrument field calibrations and weather conditions are set out in Appendix 2.

2.4 The planning condition does not stipulate methods to determine compliance with limits, specifications of instrumentation to be used, free-field microphone height to be applied, scope of prevailing weather conditions, traceable reference calibration of instrumentation or other protocols. To this end, these have been drawn from British Standard BS 4142:2014+A1:2019 '*Methods for rating and assessing industrial and commercial sound*.'

3.0 Survey Results

Site A: Marlbrook House, Pickhill Lane

3.1 Details of results are reported in Appendix 2. These represent ambient sound levels as $L_{Aeq,T}$. The following is a synopsis:

Site A: Marlbrook House

Daytime $L_{Aeq,\ 1\ hour}$ 54 to 59 dB (Maelor plant inaudible)

Night-time $L_{Aeq,\ 15\ min}$ 41 to 48 dB (processing at Maelor plant suspended – no HGV movements)

Night-time $L_{Aeq,\ 15\ min}$ 50 to 54 dB (Maelor plant generally inaudible)

4. PLANNING NOISE CONDITION

4.1 During daytime and night-time Maelor Foods plant operations have routinely been observed as inaudible at Marlbrook House, and at worst, just audible for brief periods. It has been observed (as qualified by audio recordings and measurements) that road traffic comprises the dominant sounds s, giving rise to the highest sound levels by a considerable margin as vehicles pass-by in close proximity to the frontage of the property. Key components of soundscape essentially comprises local and distant traffic; periodic aircraft flyovers; distant continuous broad-band and tonal sounds; bird song and calls; and occasional low-level, audible s intermittent sounds that can be discerned from the Maelor site. It is evident that the package of noise control measures have reduced the impact of site noise.

4.2 Key components of the soundscape essentially encompass local and distant traffic; periodic aircraft flyovers; distant continuous broad-band and tonal sounds from further afield (non-Maelor Foods); bird song and calls; and occasional low-level, audible intermittent sound that at times may momentarily be discerned from the Maelor site.

4.3 Addressing the planning condition sound (noise) level limit, there are very obvious difficulties due to vehicles passing immediately in front of Marlbrook House, and the fact that the Maelor plant is largely inaudible at the frontage. To accommodate this, it can firstly be evaluated by having regard to the lowest reported survey L_{Aeq} values during which times the site was adjudged inaudible.

4.4 As the starting baseline, an indication of maximum allowable site sound levels can be calculated on the accepted basis that, for broad-band sounds, a difference of 10 dB or more between two sound levels (in practical terms) renders the lower value of no consequence to the combined total sound level.

4.5 Using this approach, from the measured data sound levels from the operational site can in principle be no greater than ambient sound level (Maelor site inaudible) – 10 dB = maximum permitted sound level:

Daytime $L_{Aeq\ 1\ hour}$ 54 dB – 10 dB = L_{Aeq} 44 dB
Night-time $L_{Aeq\ 15\ min}$ 43 dB – 10 dB = L_{Aeq} 33 dB

Night-time

4.6 For night-time the value has been taken when normal poultry processing and production is in progress. A night-time survey was also carried out for comparative purposes during a period when production/poultry

processing was suspended, and no Maelor Foods-related HGV movements were taking place. L_{Aeq} values in this instance ranged 38 to 51 dB. Measurements were still affected by vehicles travelling along Pickhill Lane along with other extraneous sound sources, as reported.

4.7 Considering night-time, for , the effects of traffic on Pickhill Lane can be readily illustrated using shorter duration L_{Aeq} profiles over measurement periods. Vehicle pass-bys are very obviously recognisable by their gradual on-set of increasing sound levels reaching a maximum value, which then decays.

4.8 Figures 4.1 and 4.2 show the extent of maximum sound levels and events for the passage of vehicles in very close proximity to the curtilage of the property boundary/roadside verge and in-turn the measurement position at which the planning condition applies.

4.9 In the absence of traffic, discrete sub-periods of measurement data have been analysed and it is apparent that underlying ambient night-time L_{Aeq} values when the Maelor plant is operational fall below the planning condition limit, L_{Aeq} 39 dB. Figures 4.3 and 4.4 provide examples for which the L_{Aeq} periods concerned will also include non-Maelor ambient sounds that serve to elevate the measured values. Notwithstanding, L_{Aeq} values range 27.7 to 36.2 dB, supporting the principal of the approach set out in 4.5.

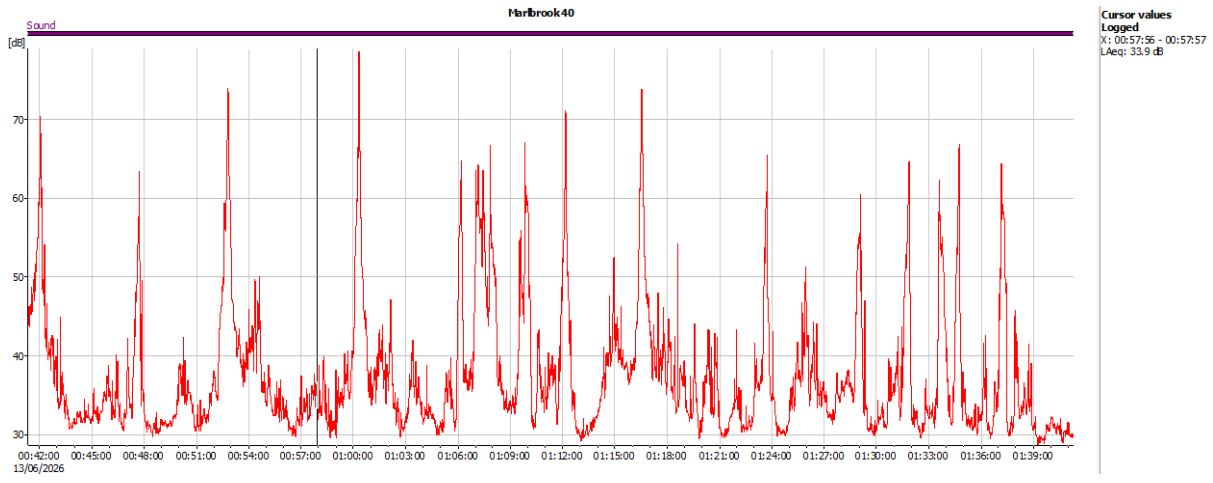


Figure 4.1
Marlbrook House 13 June 2026 L_{Aeq} Profile 00:41 to 01:42

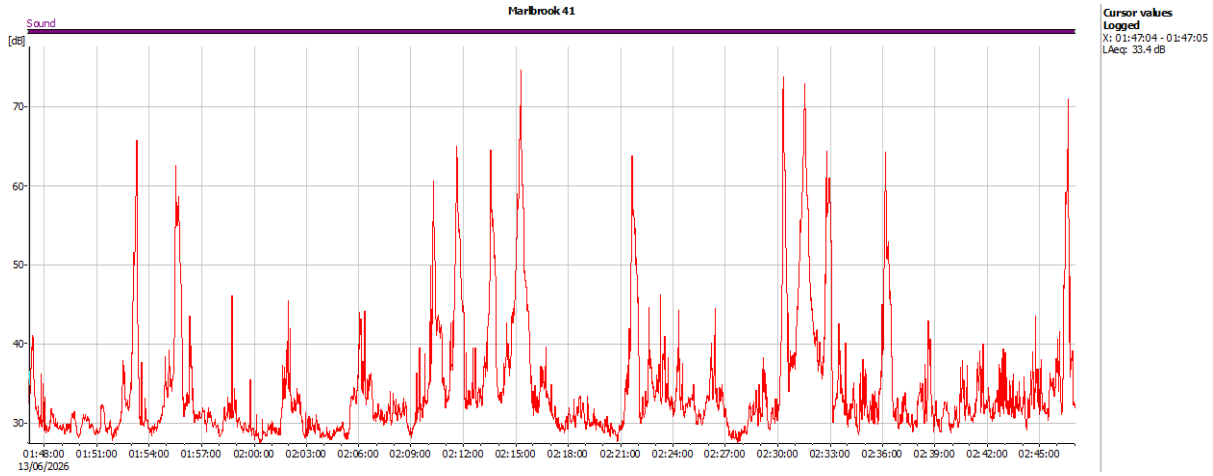


Figure 4.2
Marlbrook House 13 June 2026 L_{Aeq} Profile 01:48 to 02:49

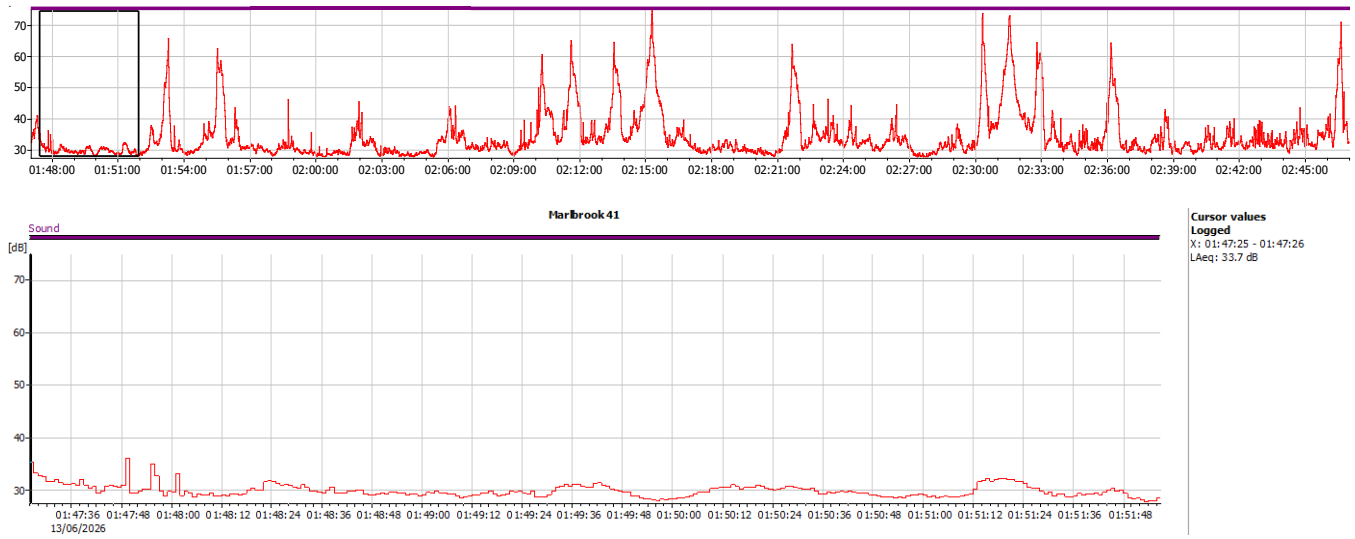


Figure 4.3
Marlbrook House 13 June 2026 L_{Aeq} Profile 01:47:26 to 01:51:58 (Zoom Analysis)

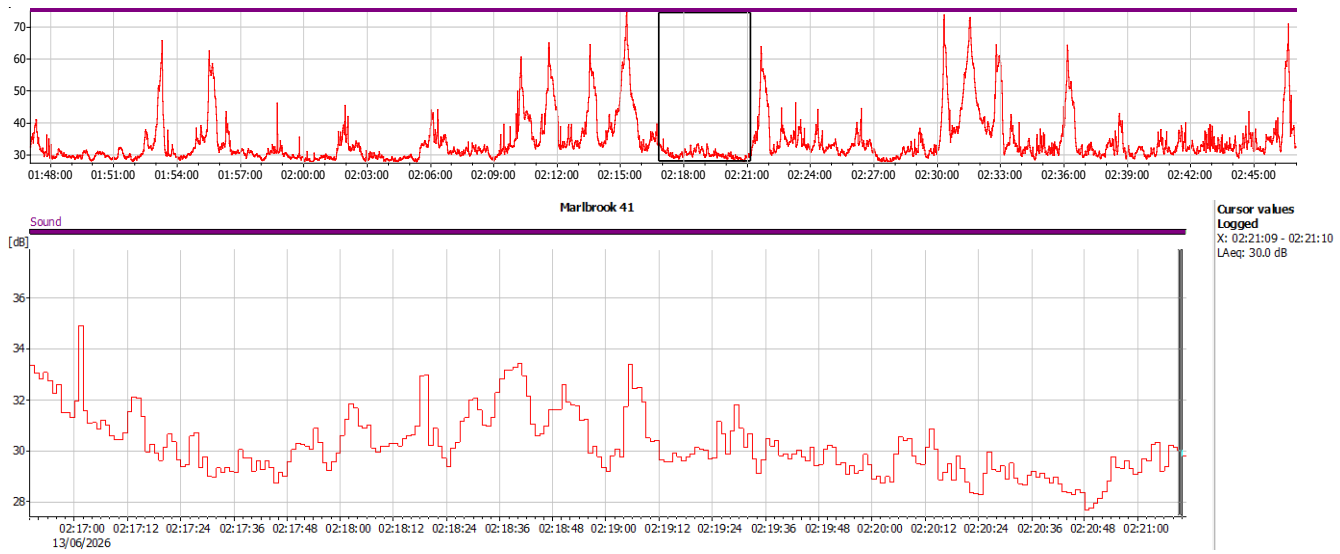


Figure 4.4
Marlbrook House 13 June 2026 L_{Aeq} Profile 02:16:50 to 02:21:12 (Zoom Analysis)

Daytime

4.10 This equally applies to daytime sound levels at Marlbrook House, where it has been repeatedly observed the Maelor plant is inaudible. In the absence of immediate traffic on Pickhill Lane, ambient L_{Aeq} levels consistently fall to as low as 43 dB, indicating noise emission contributions from the operational plant are materially below this. Figures 4.5 and 4.6 illustrate. Using the approach as set out in 4.7, compliance with the planning condition is similarly demonstrated.

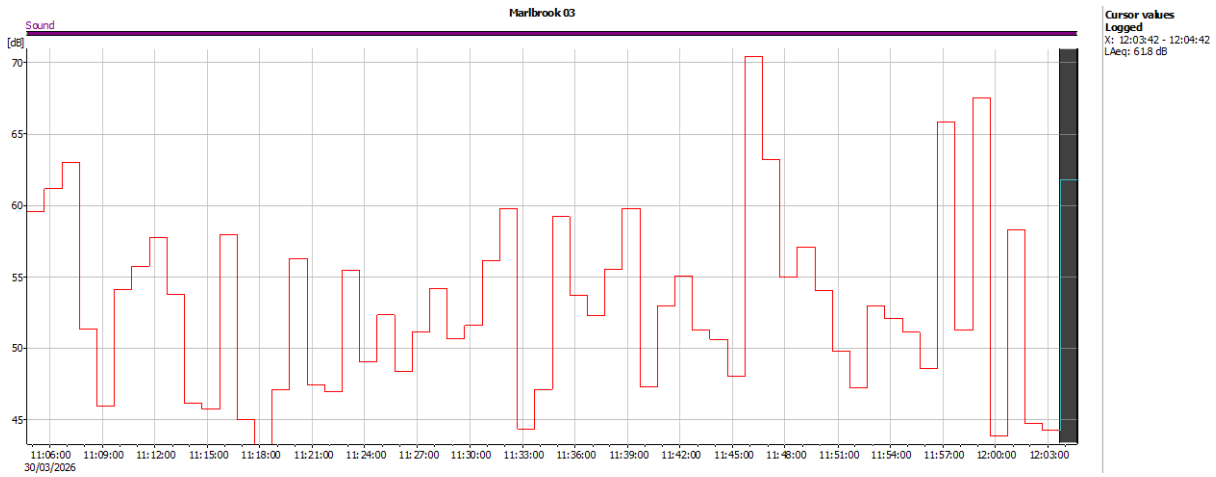


Figure 4.5
Marlbrook House 30 March 2026 L_{Aeq} Profile 11:04:42 to 12:04:42

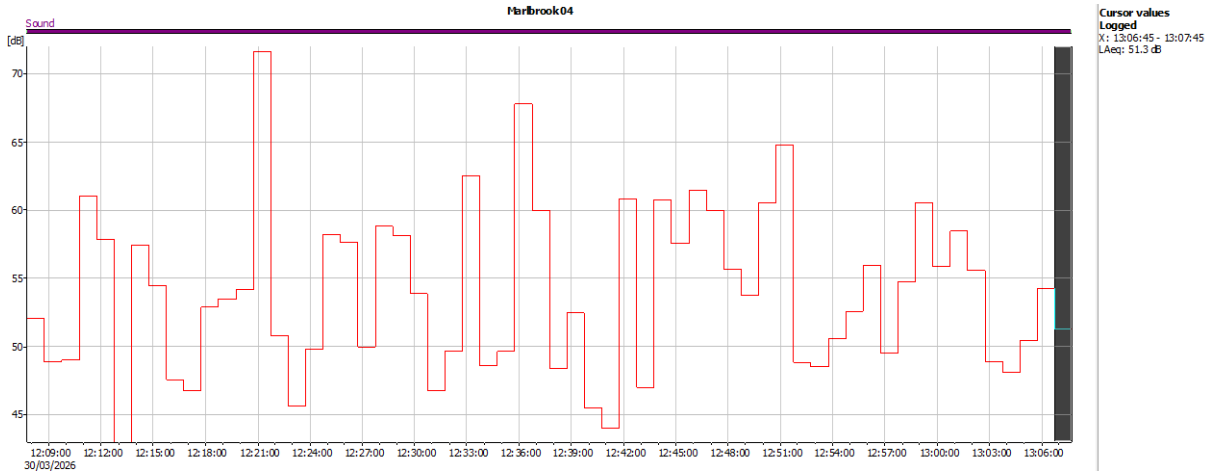


Figure 4.6
Marlbrook House 30 March 2026 L_{Aeq} Profile 12:07:45 to 13:07:45