

ENVIRONMENT

Land off Hillock Lane, Gresford,
Wrexham

Noise Impact Assessment

MCA2055

ENVIRONMENT

Land off Hillock Lane, Gresford,
Wrexham

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EXECUTIVE SUMMARY

BWB Consulting Ltd was appointed by Norris Jones Developments to undertake an environmental noise impact assessment to support an outline planning application for the first phase of a proposed residential development in Gresford, Wrexham comprising circa 109no. residential units (of which 28 will be affordable – equivalent to 25%).

A baseline noise survey was undertaken at the Site in November 2019. The survey, and subsequent assessment work, have been undertaken in accordance with current standards and guidance.

The noise impact assessment indicates that the Site is exposed to moderately low levels of noise, and therefore considered to provide an acceptable level of residential amenity to all future residents provided a commensurate level of protection is included in the design of the building façade.

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1. INTRODUCTION

Brief

- 1.1 BWB Consulting Ltd (hereafter 'BWB') have been commissioned by Norris Jones Developments Ltd to undertake an environmental noise impact assessment to support an outline planning application for the first phase of a proposed residential development in Gresford, Wrexham comprising circa 109no. residential units (of which 28 will be affordable – equivalent to 25%).
- 1.2 This report presents the existing noise levels affecting the Site, which have been used to determine the Site's suitability for the proposed use, having regard to relevant guidance on noise and the requirements of The Wrexham County Borough Council (WCBC). Where necessary, noise control measures required to protect the amenity/living conditions of future occupants of the Development due to noise have been identified.
- 1.3 This report is necessarily technical in nature, so to assist the reader, a glossary of acoustic terminology can be found in **Appendix A**.

Site Description

- 1.4 The application site comprises land totalling approx. 6.7134 hectares, located south of Gresford town centre, and north of Wrexham. The Site is centred on national grid reference 336045, 354522.
- 1.5 The Site is bound to the north by Hillock Lane, beyond which lies residential properties. Directly adjoining the site to the Western, Southern and Eastern aspects of the site are vacant farmland, presumed to be associated with Foxwood Cottage, which is accessed through Vicarage Lane, approx. 180m south of the proposed application site boundary.
- 1.6 **Figure 1.1** details the location of the proposed development.

Figure 1-1 - Site Location Plan

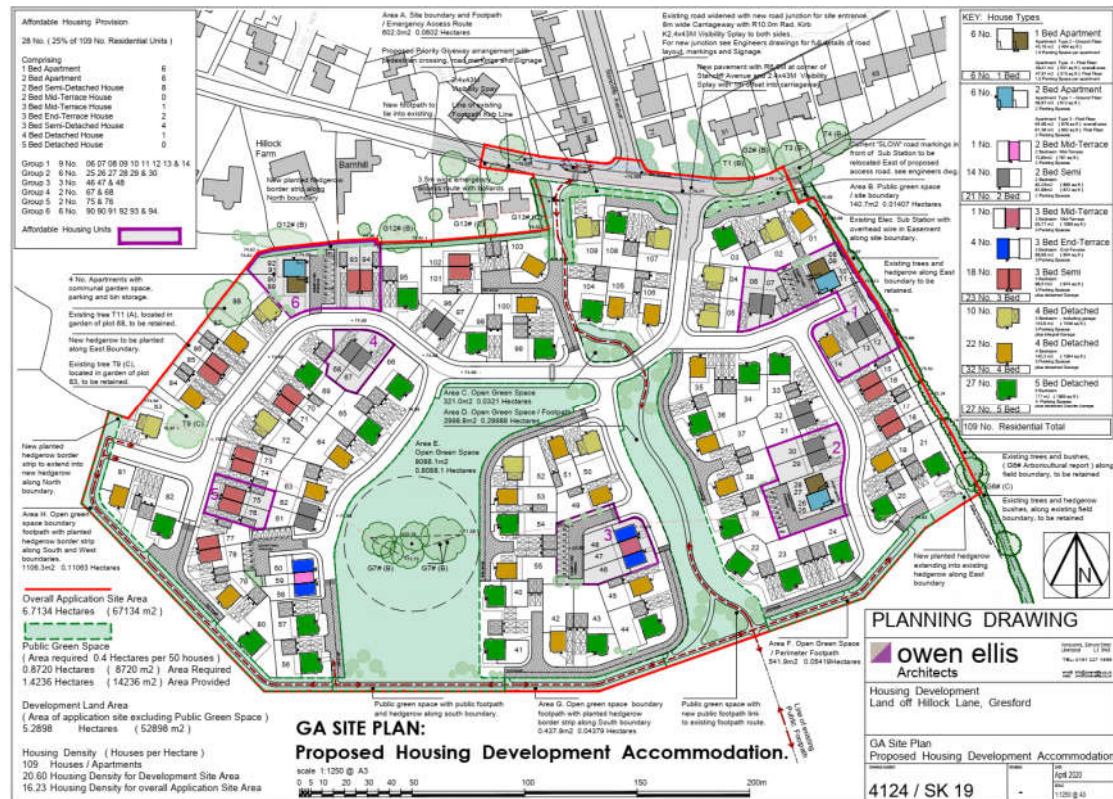


*Google Map Image with approximate red-line application site boundary.

Proposed Development

- 1.7 The Proposed residential development for 109no. residential units (of which 28 will be affordable – equivalent to 25%), associated highway and pedestrian access including improvements along Vicarage Lane, public open space, landscaping and infrastructure works.
- 1.8 **Figure 1.2** below shows the proposed site layout.

Figure 1-2 – Proposed Site Layout



2. STANDARDS AND GUIDANCE

Welsh Government: Technical Advice Note (TAN) 11: Noise (1997)

- 2.1 Technical Advice Notes (TAN) 11¹ provides advice on how the planning system can be used to minimise the adverse impact of noise without placing unreasonable restrictions on development or adding unduly to the costs and administrative burdens of business. It outlines some of the main considerations which local planning authorities should consider in drawing-up development plan policies and when determining planning applications for development which will either generate noise or will be exposed to existing noise sources.
- 2.2 The note derives Noise Exposure Categories (NECs) to assist local planning authorities in their consideration of planning applications for residential development near transport related noise sources. There are four NECs A to D, as detailed in **Table 2.1** below.

Table 2.1: Noise Exposure Categories from TAN11

Noise Exposure Categories	
A	Noise need not be considered as a determining factor in granting planning permission, although the noise level at the high end of the category should not be regarded as desirable.
B	Noise should be taken into account when determining planning applications and, where appropriate, conditions imposed to ensure an adequate level of protection.
C	Planning permission should not normally be granted. Where it is considered that permission should be given, for example, because there are no alternative quieter sites available, conditions should be imposed to ensure a commensurate level of protection against noise.
D	Planning permission should normally be refused.

- 2.3 Recommended numerical values are assigned to the NEC categories in Annex A of TAN11, as detailed in **Table 2.2** below.

Table 2.2: Recommended Numerical Values for Noise Exposure Categories

Noise Levels ⁽¹⁾ corresponding to the Noise Exposure Categories for New Dwellings					
		L _{Aeq,T} dB			
Noise Source	Time Period	Noise Exposure Category			
		A	B	C	D
road traffic	0700-2300	<55	55-63	63-72	>72
	2300-0700 ⁽²⁾	<45	45-57	57-66	>66
rail traffic	0700-2300	<55	55-66	66-74	>74
	2300-0700 ⁽²⁾	<45	45-59	59-66	>66
air traffic ⁽³⁾	0700-2300	<57	57-66	66-72	>72
	2300-0700 ⁽²⁾	<48	48-57	57-66	>66
mixed sources ⁽⁴⁾	0700-2300	<55	55-63	63-72	>72
	2300-0700 ⁽²⁾	<45	45-57	57-66	>66

Notes ⁽¹⁾ **Noise levels:** the noise level(s) (L_{Aeq,T}) used when deciding the NEC of a site should be representatives of typical conditions.
⁽²⁾ **Night-time noise levels (2300-0700):** sites where individual noise events regularly exceed 82dB_{L_{Amax}} (S time weighting) several times in any hour should be treated as being in NEC C, regardless of the L_{Aeq,8H} (except where the L_{Aeq,8H}

¹ Welsh Government: Technical Advice Note (TAN) 11, Noise (1997)

Noise Levels ⁽¹⁾ corresponding to the Noise Exposure Categories for New Dwellings					
		L _{Aeq,T} dB			
Noise Source	Time Period	Noise Exposure Category			
		A	B	C	D
already puts the site in NEC D). ⁽³⁾ Aircraft noise: daytime values accord with the contour values adopted by the Department of Transport which relate to levels measured 1.2m above open ground. For the same amount of noise energy, contour values can be up to 2 dB(A) higher than those of other sources because of ground reflection effects. ⁽⁴⁾ Mixed sources: this refers to any combination of road, rail, air and industrial noise sources. The "mixed source" values are based on the lowest numerical values of the single source limits in the table. The "mixed source" NECs should only be used where no individual noise source is dominant. To check if any individual noise source is dominant (for the purposes of this assessment) the noise level from the individual sources should be determined and then combined by decibel addition (remembering first to subtract 2 dB(A) from any aircraft noise contour values). If the level of any one source then lies within 2 dB(A) of the calculated combined value, that source should be taken as the dominant one and the site assessed against the appropriate NEC for that source, rather than using the "mixed source" NECs. If the dominant source is industrial noise see paragraph B17 of Annex B. If the contribution of the individual noise sources to the overall noise level cannot be determined by measurement and/or calculation, then the overall measured level should be used and the site assessed against the NECs for "mixed sources".					

British Standard (BS) 8233:2014 & World Health Organisation (WHO): 1999

- 2.4 When considering the amenity of future occupants of the Development, the most relevant and credited guidance covering desirable levels of environmental noise for indoor and outdoor environments are the World Health Organisation (WHO), 1999 'Guidelines for Community Noise'² and British Standard (BS) 8233:2014 'Guidance on sound insulation and Noise Reduction for Buildings'³. These documents set out guideline internal and external noise limits which should be met by all residential developments to ensure the critical effects of noise on sleep, annoyance and speech interference are guarded against. A summary of the guideline advice presented within these documents and relevant to the proposed Development is provided In **Table 2.3**.

Table 2.3: Summary of Recommended Environmental Noise Levels; Residential Amenity

Organisation	Typical Situation	Noise Level	
		Daytime	Night-time
BS8233:2014	Living Room	35 dB L _{Aeq,16h}	-
	Dining Room	40 dB L _{Aeq,16h}	-
	Bedrooms	35 dB L _{Aeq,16h}	30 dB L _{Aeq,8h}
	Outdoor Living Areas	50-55 dB L _{Aeq,16h}	
WHO:1999	Indoor Living Areas	35 dB L _{Aeq,16h}	-
	Bedrooms	-	30 dB L _{Aeq,8h}
	Bedrooms	-	45dB L _{Amax} ¹
	Outdoor Living Areas	50-55 dB L _{Aeq,16h}	-

Notes: ¹ The WHO guidelines recommend that individual noise events (measured with F time-weighting) should be limited to/not normally exceed 45 dB L_{Amax}. The term 'normally' is typically interpreted as no more than 10-15 times a night.

² World Health Organisation (WHO) (1999); 'Guidelines for Community Noise', WHO, Geneva.

³ British Standards Institution (BSI) (2014); British Standard (BS) 8233 'Sound insulation and noise reduction for buildings', BSI.

- 2.5 When considering external amenity spaces such as gardens, balconies and terraces, the guidance provided in BS 8233 states:

“For traditional external areas that are used for amenity space, such as gardens or patios it is desirable that the external noise level does not exceed 50 dB $L_{Aeq,T}$, with an upper guideline value of 55 dB $L_{Aeq,T}$ which would be acceptable in noisier environments. However, it is also recognised that these guideline values are not achievable in all circumstances where development might be desirable. In higher noise areas, such as city centres or urban areas adjoining the strategic transport network, a compromise between elevated noise levels and other factors, such as the convenience of living in these locations or making efficient use of land resources to ensure development needs can be met, might be warranted. In such a situation, development should be designed to achieve the lowest practicable levels in these external amenity spaces, but should not be prohibited.

Other locations, such as balconies, roof gardens and terraces, are also important in residential buildings where normal external amenity space might be limited or not available, i.e. in flats, apartment blocks, etc. In these locations, specification of noise limits is not necessarily appropriate. Small balconies may be included for uses such as drying washing or growing pot plants, and noise limits should not be necessary for these uses. However, the general guidance on noise in amenity space is still appropriate for larger balconies, roof gardens and terraces, which might be intended to be used for relaxation. In high-noise areas, consideration should be given to protecting these areas by screening or building design to achieve the lowest practicable levels. Achieving levels of 55 dB $L_{Aeq,T}$ or less might not be possible at the outer edge of these areas, but should be achievable in some areas of the space.”

Consultation with Wrexham County Borough Council (WCBC)

- 2.6 Consultation was undertaken with WCBC by email on November 2019, seeking opinion on the specific requirement of a noise impact assessment and agreement on monitoring positions.
- 2.7 The email referred to the intention to revert to the relevant policy and guidance (TAN 11, BS 8233: 2014 and WHO: 1999) to achieve the relevant internal and external noise criteria.
- 2.8 A response was received from the Environmental Health Office (EHO), Toby Zorn, on November 2019 by email, a copy of which is presented on **Appendix B**, confirming the approach.

3. BASELINE NOISE SURVEY

Summary

- 3.1 A comprehensive environmental baseline noise survey was undertaken to establish and quantify the existing noise climate on, and within the vicinity of, the Site.
- 3.2 Long-term monitoring was carried out over a 24-hour period between Thursday 7th and Friday 8th November 2019 at two key long-term (LT) positions and two short-term (ST) positions illustrated as **Figure 3.1** and described below.

Figure 3-1 - Noise Monitoring Positions



SOURCE: Google Map with measurement locations as described in Table 3.1.

Table 3.1: Summary of Monitoring Results

Monitoring Location (Figure 3.1)	Description	Observations and Predominant Noise Sources
LT1	Free-field measurement taken 3.5m away from road (Hillock Lane) to the north of site. Meter approximately 1.5m above ground level (AGL). Extra height to avoid partial obstruction by hedges.	Local road traffic noise (Hillock Lane) was predominant source.
LT2	Free-field measurement taken 2m away from edge fencing of the southern site boundary. No obstructions or hedging. Meter approximately 1.2m AGL.	Local Road Traffic noise were predominant.
ST1	Free-field measurement taken 2m from edge fencing of field. Adjacent land contained livestock. Meter approximately 1.2m AGL.	Livestock and road noise were both predominant.
ST2	Free-field measurement taken 2m from edge fencing of field. Adjacent land contained livestock. Meter approximately 1.2m AGL.	

Measurement Equipment

- 3.3 The baseline noise survey was undertaken using the Class 1 specification noise measurement equipment detailed in **Table 3.2**. Equipment was calibrated using a portable calibrator immediately before and after the measurements with no significant drift in calibration observed.

Table 3.2: Noise monitoring equipment

Equipment	Make & Model	Serial Number	Calibration Due Date
Sound Level Meter	Svantek 971	72615	June 2020
Pre-Amplifier	Svantek SV18	72283	
Microphone	ACO Pacific 7052E	69463	
Sound Level Meter	SVAN 971	72616	June 2020
Pre-Amplifier	SVAN SV18	72297	
Microphone	ACO Pacific 7052E	69479	
Calibrator	Svantek SV33A	73421	August 2020

- 3.4 The sound level meters, pre-amplifiers and microphones were calibrated to traceable standards within the 24-months prior to the measurements. The portable calibrators were calibrated within the 12-months preceding the date of the survey. Calibration certificates can be provided upon request.

- 3.5 All noise measurements were taken with calibrated precision grade (Class 1) frequency (third-octave band) sound level meters to provide a detailed description of the prevailing environmental noise characteristics. The sound level meters were set to record over consecutive 5-minute periods the L_{eq} , L_{90} , L_{10} , and L_{max} noise indices in the A-weighting network over a $125ms^{-1}$ fast response time constant interval for the duration of each survey.

Meteorological Conditions

- 3.6 Weather conditions, whilst not actively measured during the survey period, were monitored remotely throughout. Overall, weather conditions were ideal for the measurement of noise, it being fine and dry, with just a light wind from variable directions ($<5ms^{-1}$) prevailing.

Measurement Results

- 3.7 The full results of the baseline environmental noise surveys are displayed graphically in time-history format in **Appendix C**, whilst a summary of multiple daytime (07:00 to 23:00 hour) and night-time (23:00 to 07:00 hour) measured noise levels of the survey period are provided in **Table 3.3**.

Table 3.3: Summary of Monitoring Results

Monitoring Location (Figure 3.1)	Period	Duration	$L_{Aeq,T}$ dB		$L_{A90,T}$ dB		$L_{AFmax,T}$ dB	
			Range	Ave ¹	Range	Ave ²	Range	90th %tile ³
LT1	Day	16-hrs	47 - 55	52	36 - 48	40	68 - 81	70
	Night	8-hrs	38 - 51	45	33 - 43	36	42 - 84	52
LT2	Day	16-hrs	42 - 48	46	40 - 46	41	53 - 71	60
	Night	8-hrs	37 - 46	42	31 - 44	36	42 - 84	47
ST1	Day	1-hr	44 - 45	45	42 - 44	43	51 - 57	56
ST2	Day	1-hr	44 - 48	46	43 - 45	43	50 - 58	58

Notes:

¹ Logarithmic average over the day-night survey periods;

² Arithmetic average over the day-night survey periods;

³ The 90th percentile L_{AFmax} value is presented and considered representative of typical L_{AFmax} levels experienced. All figures are rounded to the nearest whole decibel.

4. NOISE ASSESSMENT

- 4.1 The assessment of site suitability for residential development in accordance with TAN11 should be undertaken based on typical conditions (see note 1 of **Table 3.1**), therefore the daytime and night-time L_{Aeq} measurements have been averaged to determine typical daytime and night-time noise levels at Measurement Locations 1 to 4, as detailed in **Table 4.1** below. The table also includes the corresponding NECs.

Table 4.1: Typical L_{Aeq} noise levels at Measurement Locations

Measurement Location	Period	$L_{Aeq,T}$	NEC
1	Daytime (07:00 – 23:00)	52	A
	Night-time (23:00 – 07:00)	45	A
2	Daytime (07:00 – 23:00)	46	A
	Night-time (23:00 – 07:00)	42	A
3	Daytime (13:15 – 14:15)	45	A
4	Daytime (13:25 – 14:25)	46	A

- 4.2 From **Table 5.1** it can be seen that the site falls into NEC A, the guidance from TAN11 regarding NEC A is as follows:

“Noise need not be considered as a determining factor in granting planning permission, although the noise level at the high end of the category should not be regarded as desirable.”

- 4.3 It is therefore considered that noise need not be a determining factor in granting planning permission for the residential development.
- 4.4 To support this, a three (3)-dimensional CADNA-A® noise model, which uses the methodology laid out in ISO 9613-2⁴, was produced taking account of the key prevailing noise source affecting the Site, namely road traffic noise from Hillock Lane and Vicarage Lane to the south beyond existing residential housing. The output of the noise model was calibrated using the results of the baseline noise survey summarised in **Table 3.2**.
- 4.5 An assessment of residential amenity has been undertaken based on development Site massing drawing, illustrated in **Figure 1.2**, provided by the Architects masterplan drawing (Reference No. “4124_SK19 GA Proposed Site Plan. Accommodation 2020.06.08 PLANNING”) informed by the daytime and night-time contour plots illustrated in **Figures 4.1 and 4.2** respectively together with analysis of the survey data.
- 4.6 Other assumptions and considerations used in the model include, surfaces absorption characteristics have been set as $\alpha = 0.05$, dwellings heighted drawn as 7m, with grid set to 1.5m, and 2 number of orders for reflection.

⁴ BS EN ISO 9613-2 - Attenuation of sound during propagation outdoors -- Part 2: General method of calculation, GB

Figure 4-1 - Daytime Noise Contour Plot ($L_{Aeq,16hr}$)

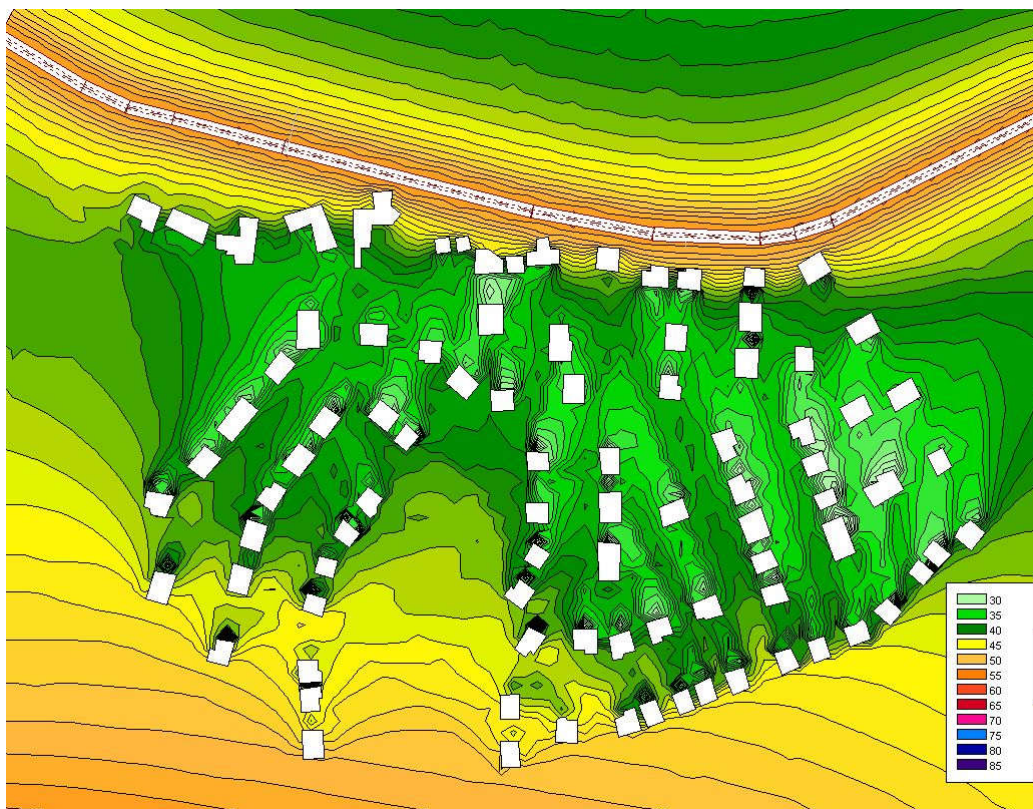
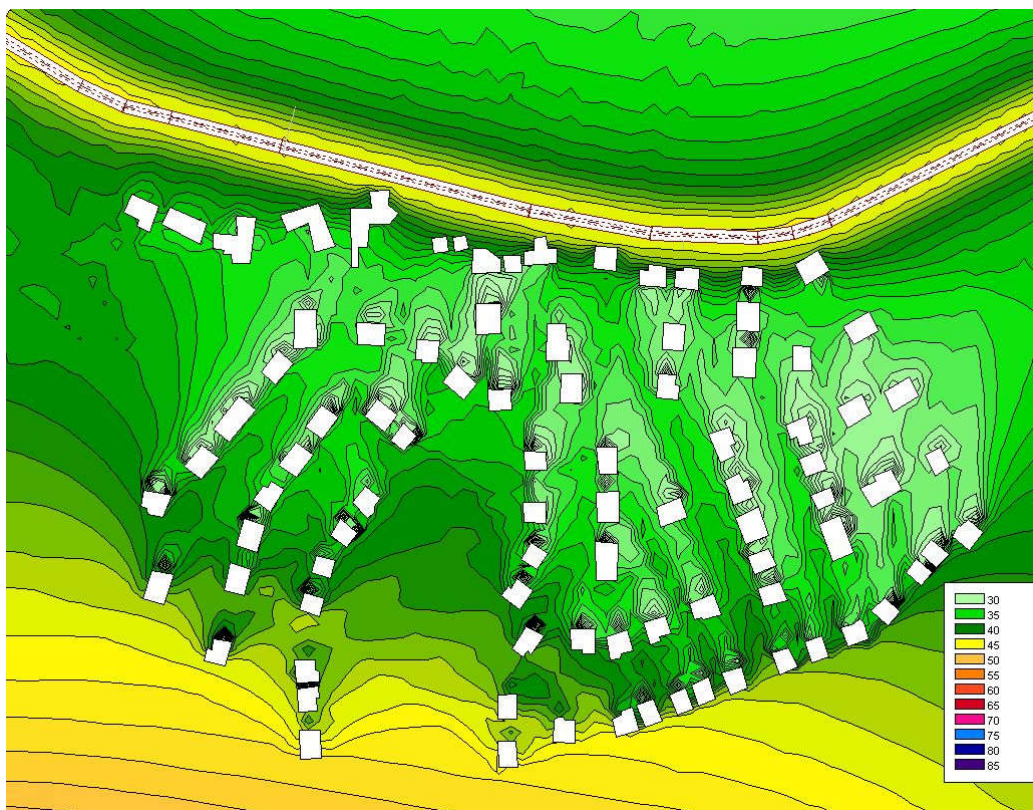


Figure 4-2 - Night-time Noise Contour Plot ($L_{Aeq,8hr}$)



- 4.7 Given the noise levels identified across the Site, acoustic attenuation measures are needed to reduce the exposure of future residential occupants to the effects of noise levels (e.g. annoyance, interference with communication).
- 4.8 Notwithstanding the guidance from TAN11 regarding NEC A, the predicted façade L_{Amax} night-time noise levels at the worst affected residential facades which are orientated, and closest towards the main noise source (i.e. road traffic on Hillock Lane) has been identified as the limiting factor.
-

5. MITIGATION

- 5.1 The degree of external environmental noise break-in depends on the acoustic performance of all elements of the façade, but it is generally determined by the components providing the least airborne sound resistance, the glazing; especially when residents open windows to provide natural background or rapid ventilation.
- 5.2 The predicted façade noise levels at the worst affected residential facades which are orientated, and closest towards the main noise source (i.e. road traffic on Hillock Lane) are presented as **Table 5.1**. As mentioned, it is the L_{Amax} night-time criteria which is the limiting factor determining the required minimum sound insulation of the glazing. Should bedrooms not be located on this northern façade facing Hillock Lane then the recommended specification would reduce to approximately $\geq 29\text{dB } R_w+C_{tr}$ (e.g. Standard Thermal double-glazed system; 4/12/4mm laminated). All other aspects of the facades oriented away from the main noise sources would require a less stringent glazing package to achieve the design criteria.

Table 5.1: Indicative Noise Control Measures (Glazing performances)

Block	Façade Noise Levels [dB]			Minimum Required SRI [R _w + C _{tr}]	Example Glazing Configuration (or equal and approved)
	Day (L _{Aeq} 16h)	Night (L _{Aeq} 8h)	Night (typical L _{AFMax})		
First row of residential properties facing directly onto Hillock Lane	59	42	81	33	Double glazing (e.g. 6/16 Argon/6.8mm Pilkington Optiphon)

- 5.3 The method of ventilation adopted for the proposed development will also be important in terms of achieving the required internal noise levels. At this location the prevailing night-time noise levels indicate that an acoustically attenuated passive (Trickle) ventilation system with a minimum performance rating of 35 dB $D_{ne,w}+C_{tr}$ (e.g. Acoustically attenuated passive vent (Axia Vent solution)) should be sufficient for building facades. It should be noted that other alternative vent solutions would be adequate, subject to them achieving the same or greater performance. Though, it is considered that the above mitigation options would ensure that a suitable level of residential amenity is provided for all future residents.
- 5.4 With respect to external amenity areas, the daytime noise contour plot indicates that the Site is predicted to be exposed to noise levels which satisfy the WHO recommended level of $\leq 55\text{dB } L_{Aeq,16h}$.

6. CONCLUSIONS

6.1 This noise impact assessment has been undertaken by BWB Consulting Ltd on behalf of Norris Jones Developments in support of the proposed residential development comprising circa 109no. residential units (of which 28 will be affordable – equivalent to 25%) in Gresford, Wrexham. The findings of our study lead us to be satisfied that:

- Noise monitoring results confirm the western area of the Site to be exposed to low levels of noise during the daytime and night-time periods, commensurate of the Site's rural location.
- A noise model has been produced using the proposed Development Site massing drawing, illustrated in **Figure 1.2**. This was provided by the Architects masterplan drawing (Document No. "4124_SK19 GA Proposed Site Plan. Accommodation 2020.06.08 PLANNG") and was utilised by BWB to predict the levels of noise which are experienced across the Development Site.
- This study has shown that to achieve the internal noise level design criteria within habitable room spaces of the development, on the most noise exposed façade (northern aspect of the site), it will be necessary to provide a double glazed package providing a performance rating of ≥ 33 dB R_w+C_{tr} sound insulation. Should bedrooms not be located on this northern façade facing Hillock Lane then the recommended specification would reduce to approximately ≥ 29 dB R_w+C_{tr} . Similarly, the prevailing night-time noise levels indicate that an acoustically attenuated passive (Trickle) ventilation system with a minimum performance rating of 35 dB $D_{ne,w}$ should be sufficient for building facades.
- With respect to external amenity areas, the daytime noise contour plot indicates that the Site is predicted to be exposed to noise levels which satisfy the WHO recommended level of ≤ 55 dB $L_{Aeq,16h}$.

6.2 In summary, the Site has been shown to provide an acceptable level of residential amenity to all future residents provided a commensurate level of protection is included in the design of the building façade.

APPENDICES

APPENDIX A: Glossary of Terms

Noise

Noise is defined as unwanted sound. Human ears are able to respond to sound in the frequency range 20 Hz (deep bass) to 20,000 Hz (high treble) and over the audible range of 0 dB (the threshold of perception) to 140 dB (the threshold of pain). The ear does not respond equally to different frequencies of the same magnitude but is more responsive to mid-frequencies than to lower or higher frequencies. To quantify noise in a manner that approximates the response of the human ear, a weighting mechanism is used. This reduces the importance of lower and higher frequencies, in a similar manner to the human ear.

Furthermore, the perception of noise may be determined by several other factors, which may not necessarily be acoustic. In general, the impact of noise depends upon its level, the margin by which it exceeds the background level, its character and its variation over a given period of time. In some cases, the time of day and other acoustic features such as tonality or impulsiveness may be important, as may the disposition of the affected individual. Any assessment of noise should give due consideration to all of these factors when assessing the significance of a noise source.

The most widely used weighting mechanism that best corresponds to the response of the human ear is the 'A'-weighting scale. This is widely used for environmental noise measurement, and the levels are denoted as dB(A) or L_{Aeq} , L_{A90} etc., according to the parameter being measured.

The decibel scale is logarithmic rather than linear, and hence a 3 dB increase in sound level represents a doubling of the sound energy present. Judgement of sound is subjective, but as a general guide a 10 dB(A) increase can be taken to represent a doubling of loudness, whilst an increase in the order of 3 dB(A) is generally regarded as the minimum difference needed to perceive a change under normal listening conditions.

Acoustic Terminology

Term	Description
dB (decibel)	The scale on which sound pressure level is expressed. Sound pressure level is defined as 20 times the logarithm of the ratio between the root-mean-square pressure of the sound field and a reference pressure (2×10^{-5} Pa).
dB(A)	A-weighted decibel. This is a measure of the overall level of sound across the audible spectrum with a frequency weighting (i.e. 'A' - weighting) to compensate for the varying sensitivity of the human ear to sound at different frequencies.
$L_{Aeq,T}$	L_{Aeq} is defined as the notional steady sound level which, over a stated period of time (T), would contain the same amount of acoustical energy as the A - weighted fluctuating sound measured over that period.
L_{Amax}	L_{Amax} is the maximum A - weighted sound pressure level recorded over the period stated. L_{Amax} is sometimes used in assessing environmental noise where occasional loud noises occur, which may have little effect on the overall L_{eq} noise level but will still affect the noise environment. Unless described otherwise, it is measured using the 'fast' sound level meter response.
L_{10} and L_{90}	If a non-steady noise is to be described it is necessary to know both its level and the degree of fluctuation. The L_n indices are used for this purpose, and the term refers to the level exceeded for n% of the time. Hence L_{10} is the level exceeded for 10% of the time, and the L_{90} is the level exceeded for 90% of the time.
Free-field Level	A sound field determined at a point away from reflective surfaces other than the ground with no significant contributions due to sound from other reflective surfaces. Generally, as measured outside and away from buildings.
Façade Level	A sound field determined at a distance of 1m in front of a large sound reflecting object such as a building façade.

APPENDIX B: Consultation

Dawit Abraham

From: Toby Zorn <Toby.Zorn@wrexham.gov.uk>
Sent: 05 November 2019 17:07
To: Dawit Abraham
Robert Johnston
RE: Environmental Noise Policy Request



Hello Dawit

I can confirm that Wrexham CBC would reference Technical Advice Note (Wales) 11 to assess the suitability of a planning application for residential housing development, but the criteria referenced below are also suitable guidelines with regards to conducting a noise survey. However outdoor amenity/living areas should not exceed 50 dB LAeq (trigger level for moderate annoyance).

Should you wish to discuss this matter further please don't hesitate to contact me.

Best regards

Toby Zorn
Swyddog Arbenigol (Iechyd yr Amgylchedd a Tai)
Specialist Officer (Environmental Health and Housing Standards)

☎ 01978 297 426 / 07800 688 705
📍 Cyngor Bwrdeistref Sirol Wrecsam, 16 Stryt yr Arglwydd, Wrecsam LL11 1LG
📍 Wrexham County Borough Council, 16 Lord Street, Wrexham LL11 1LG
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Mae'n bosib y bydd y wybodaeth a gasglwyd gennyf yn cael ei rannu gydag adrannau neu sefydliadau eraill er mwyn i ni allu darparu gwasanaeth i chi. Mae rhagor o fanylion ar gael ar yr adran Hysbysiad Preifatrwydd ar wefan y Cyngor

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From: Dawit Abraham [<mailto:Dawit.Abraham@bwbconsulting.com>]
Sent: 04 November 2019 16:28
To: contact-us
Subject: Environmental Noise Policy Request

Afternoon,

Could you please advise us on Wrexham City Council's internal noise policy criteria for planning purposes for new developments. The project proposal is to develop the proposed site for residential use.

Our intention is to conduct a noise survey at on a vacant land off Hillock Lane, Gresford, which is situated within the Wrexham City Council authority, and refer to the following relevant policy and guidance (NPPF, BS 8233: 2014 and WHO: 1999) to achieve the relevant internal noise criteria.

WHO Guidelines for Community Noise 1999 and BS 8233:2014 – ‘Guidance on Sound Insulation and Noise Reduction for Buildings’, stipulate the following:

- o 35 dB LAeq-16hr noise limit during Day and Evening periods for internal living areas,
- o 30 dB LAeq-8hr noise limit during Night-time period (23:00 – 7:00) in bedroom areas,
- o 45 dB LAFmax should not be exceeded on more than 15 occasions over the 8hr (23:00 – 7:00) night time period in bedroom areas, and
- o 55 dB LAeq should not be exceeded within outdoor amenity/living spaces, within the spirit of WHO.

Please find attached a site map illustrating the application site boundary (approximated), as well as potential monitoring locations for your approval.

Please can you confirm whether Wrexham City Council are in agreement with the above criteria to which design control measures should achieve.

Best Regards,

Dawit Abraham

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APPENDIX C: Time History Graphs

Figure C1: Results from Position 1

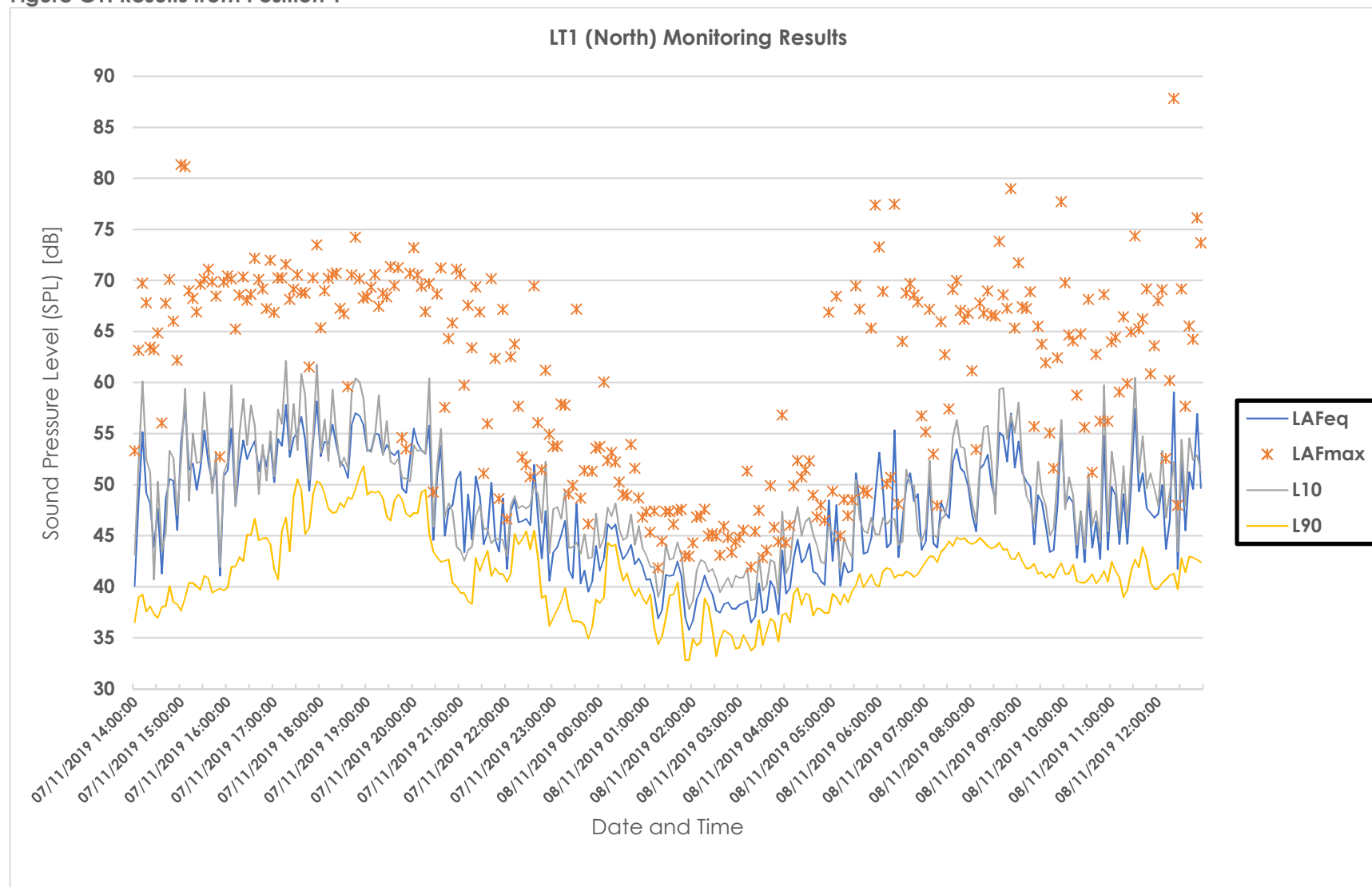
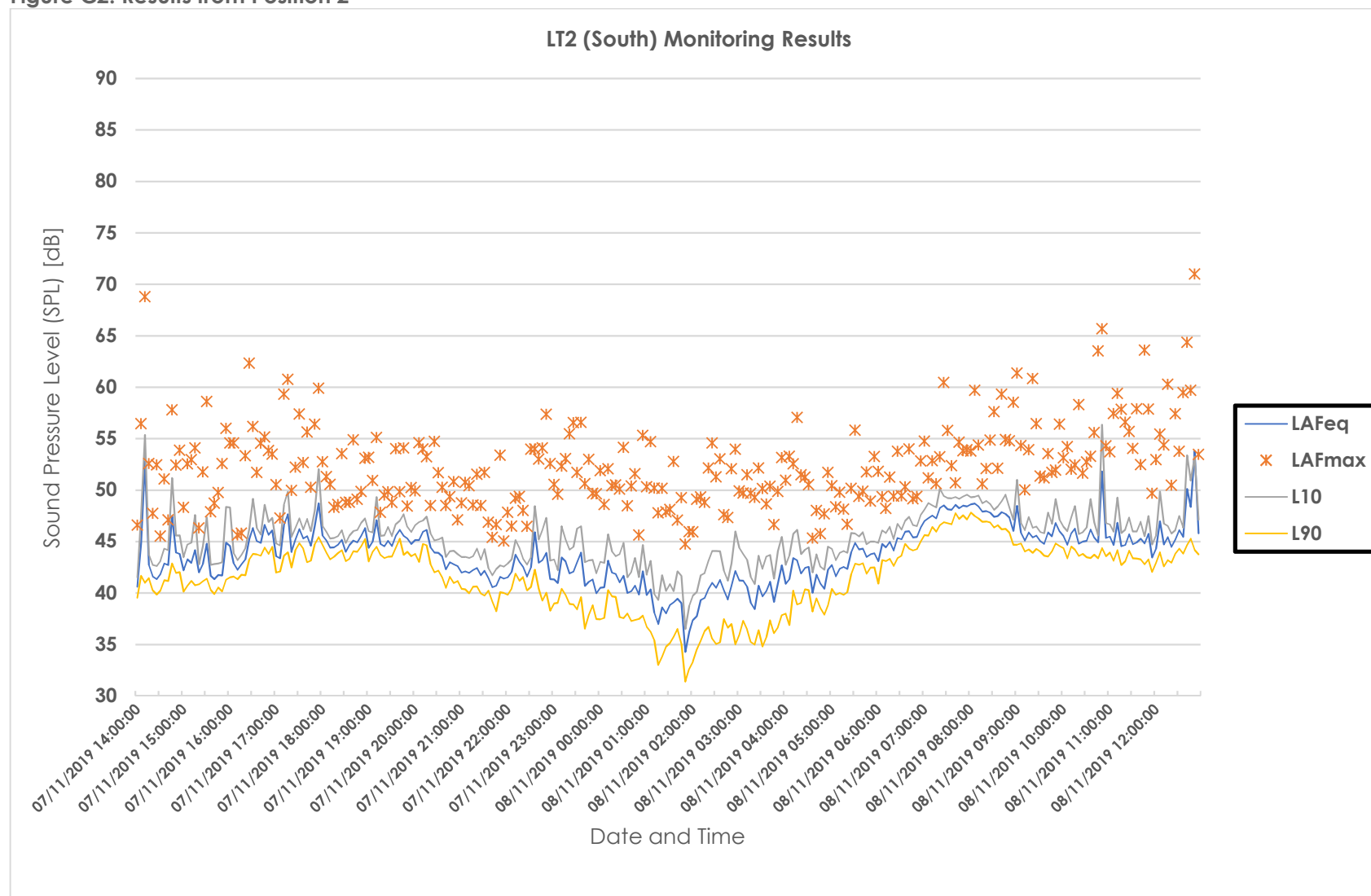


Figure C2: Results from Position 2





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