

MILLER GOODALL
ACOUSTICS AND AIR QUALITY

NOISE ASSESSMENT

on behalf of

HARWORTH ESTATES INVESTMENTS LTD

for the site at

ERLAS PARK, WREXHAM

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Summary

A noise assessment was undertaken to assess the impact of noise on the proposed residential development at Erlas Park, Wrexham.

The assessment has presented the results of a daytime and night-time noise survey and compared these to the TAN11 technical guidance. The outcome of the comparison was that the site was predominantly NEC A in the daytime with the west of the site considered as NEC B.

The prevailing road traffic noise levels necessitate mitigation measures to minimise noise impact in external amenity spaces (i.e. private rear gardens) and internal spaces of residential development to the western boundary of the site. It is recommended that measures to mitigate noise are secured via a suitable planning condition.

Noise from Wrexham Container Storage is not considered to be significant.

Noise generated by Wrexham Rugby Club may require future consideration and a full assessment of the Rugby Club noise impact can be undertaken at the reserved matters stage to provide quantifiable mitigation requirements. This can be secured by an appropriate planning condition.

Based on the assessment, noise is not considered a constraint to residential development at the site, as acceptable noise levels are capable of being achieved by mitigation. These measures can be secured through a suitably worded planning condition and additional information can be provided once further technical design works have been carried out.

Pre-application feedback from Wrexham County Borough Council has been considered. In summary, it is considered that the points raised can be dealt with at the reserved matters stage when further details of the proposed development have been designed and fixed.

Record of changes

Prepared By: Michael Rickard MIOA **Reviewed By:** Will Wright MIOA

Signed:		**Signed:**	
Date:	7 March 2024	**Date:**	7 March 2024

Version	Date	Change	Initials
1	7 March 2024	First issue	MR
2	27 March 2024	Minor changes. Updated Figure A1.2.	DE
3	8 May 2024	Pre-application feedback added. Minor amendments.	DE
4	17 January 2025	Updated redline boundary and masterplan	DE
5	14 February 2025	Updated description of development	DE

Contents

Summary 1

Contents 3

1 Introduction 4

2 Site Description 5

3 Proposed Development 6

4 Policy Context 7

4.1 Planning Policy Wales – February 2024 7

5 Acoustic Standards and Guidance 8

5.1 Planning Guidance (Wales), TAN11 - Noise 8

5.2 BS 8233:2014 Guidance on Sound Insulation and Noise Reduction for Buildings 9

5.3 World Health Organisation (WHO) Guidelines for Community Noise 1999 10

6 Noise Survey 12

6.2 2022 Baseline Noise Monitoring 12

6.3 2024 Baseline Noise Monitoring 13

6.4 Baseline Monitoring Results 15

7 Impact of Existing Noise Sources on the Development 18

7.1 Technical Advice Note 11: Noise 18

8 Wrexham Container Storage 20

9 Wrexham Rugby Club 21

10 Pre-Application Feedback 22

11 Conclusions 25

APPENDICES 27

Appendix 1: Site Red Line Boundary, Strategic Masterplan and Noise Measurement Positions 29

Glossary of Terms 34

1 Introduction

1.1 Miller Goodall Ltd has, on behalf of Harworth Estates Investments Ltd, undertaken a noise assessment to assess the impact of environmental noise on an outline proposed residential development at Erlas Park, Wrexham. The site falls within the administrative boundary of Wrexham County Borough Council (WCBC).

2 Site Description

2.1 The site is located at Erlas Park, Wrexham. The site red line boundary is shown in Figure A1.1 Appendix 1. The site is located approximately 1.8km from the centre of Wrexham to the east of the town centre.

2.2 The site is currently made up of agricultural land and sports pitches. Surrounding the site to the north and west are existing residential properties as well as the Morgan Llywd school. The Erlas Centre and Walled Garden are located along the northern boundary of the site in the north east corner of the site. Wrexham Rugby Club is located approximately 80 m to the north of the site.

2.3 To the east of the development site is open agricultural land. To the south is an existing farmhouse and Wrexham Container Storage (a self-storage business) that we understand permits 24/7 access. The Wrexham Industrial Estate is located to the south of the site.

2.4 The existing soundscape across the site can be characterised as being dominated by local and distant road traffic. There were no other sources of environmental noise noted that were more dominant. The western extents next to Cefn Road are the louder due to local road traffic. The northern, southern, central and eastern areas being predominantly quiet in character.

3 Proposed Development

3.1 The proposal is for a residential development for the construction of up to 900 residential dwellings with associated infrastructure (playing fields, open space and SUDs attenuation) with all matters reserved except for detailed means of primary highway access.

4 Policy Context

4.1 Planning Policy Wales – February 2024

4.1.1 The Planning Policy Wales (PPW[1]) discusses noise in chapter 6.7 'Air Quality and Soundscape'. According to PPW, "*the key planning policy principle is to consider the effects which proposed developments may have on air or soundscape quality and the effects which existing air or soundscape quality may have on proposed developments*". To achieve this, 'good design' may have to be followed "*for example setting back buildings from roads to avoid canyon effects and using best practice in terms of acoustic design to ensure the appropriate and intended acoustic environment of completed developments".*

[1] Planning Policy Wales, Edition 7, Welsh Government – July 2014

5 Acoustic Standards and Guidance

5.1 Planning Guidance (Wales), TAN11 - Noise[2]

5.1.1 TAN 11 (Wales) 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.*'

5.1.2 For noise sensitive developments, Paragraph 10 states:

> *"Local planning authorities should consider whether proposals for new noise-sensitive development would be incompatible with existing activities, taking into account the likely level of noise exposure at the time of the application and any increase that may reasonably be expected in the foreseeable future. Such development should not normally be permitted in areas which are, or are expected to become, subject to unacceptably high levels of noise and should not normally be permitted where high levels of noise will continue throughout the night."*

5.1.3 The TAN11 guidance provides specific Noise Exposure Categories (NECs) for proposed Residential Developments which aim to assist local planning authorities (LPAs) to determine the suitability of areas for development. With regard to noise sensitive developments, the guidance suggests that LPAs should consider the compatibility of existing activities taking into account the noise exposure at the time of the application and any foreseeable increase in levels in the future. Development should not normally be allowed in areas which are exposed to unacceptably high levels of noise, particularly where these levels continue throughout the night.

5.1.4 The guidance provides specific advice on methods for mitigation of noise levels which may be proportionate and reasonable, including options which contains solutions for:

- Engineering
- Layout
- Administrative options

5.1.5 The TAN11 guidance puts a potential residential site that are exposed to transportation noise into daytime (07:00 – 23:00) and night-time (23:00 – 07:00) period Noise Exposure Categories (NEC's)

[2] Planning Guidance (Wales), Technical Advice Note (Wales) TAN11 – Noise –1997.

which affect the likelihood of planning permission being approved. The proposed development site is affected by road traffic noise, hence the 'Road Traffic Noise Sources' levels have been used for this assessment as presented in Table 1.

Table 1: Recommended NECs for New Dwellings Near Existing Road Traffic Noise Sources, TAN 11

Noise Exposure Category (NEC)	Noise Levels Corresponding to The Noise Exposure Categories For New Dwellings $L_{Aeq,T}$ dB for Road Traffic Noise Sources		
	Daytime $L_{Aeq, 0700-2300}$	***Night-time*** $L_{Aeq, 2300-0700}$[3]	**Guidance**
A	< 55	< 45	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	55 - 63	45 - 57	Noise should be taken into account when determining planning applications and, where appropriate, conditions imposed to ensure an adequate level of protection.
C	63 - 72	57 - 66	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	> 72	> 66	Planning permission should normally be refused.

5.1.6 The Welsh Government has committed to a detailed review of Technical Advice Note 11, which will be replaced with new guidance addressing air quality and soundscape. The draft plan aligns noise and soundscape policy in Wales and encourages greater integration between noise and air quality management activities by public bodies.

5.2 BS 8233:2014 Guidance on Sound Insulation and Noise Reduction for Buildings

5.2.1 This standard provides recommended guideline values for internal noise levels within dwellings which are similar in scope to guideline values contained within the World Health Organisation

[3] Night-time noise levels (23.00 - 07.00): sites where individual noise events regularly exceed 82 dB L_{Amax} (Slow time weighting) several times in any hour should be treated as being in NEC C, regardless of the $L_{Aeq,8h}$ (unless already NEC D).

(WHO) document, Guidelines for Community Noise (1999)[4]. These guideline noise levels are shown in Table 2, below.

Table 2: BS 8233: 2014 Guideline Indoor Ambient Noise Levels for Dwellings

Location	Activity	Daytime 07:00 to 23:00	Night-time 23:00 to 07:00
Living Room	Resting	35 dB $L_{Aeq,16hr}$	-
Dining room/area	Dining	40 dB $L_{Aeq,16hr}$	-
Bedroom	Sleeping (daytime resting)	35 dB $L_{Aeq,16hr}$	30 dB $L_{Aeq,8hr}$

5.2.2 BS 8233:2014 advises that:

> *"regular individual noise events…can cause sleep disturbance. A guideline value may be set in terms of SEL[5] or $L_{Amax,F}$ depending on the character and number of events per night. Sporadic noise events could require separate values".*

5.2.3 BS 8233:2014 adopts guideline external noise values provided in WHO for external amenity areas such as gardens and patios. The standard states that it is "desirable" that the external noise does not exceed 50 dB $L_{Aeq,T}$ with an upper guideline value of 55 dB $L_{Aeq,T}$ whilst recognising that development in higher noise areas such as urban areas or those close to the transport network may require a compromise between elevated noise levels and other factors that determine if development in such areas is warranted. In such circumstances, the development should be designed to achieve the lowest practicable noise levels in external amenity areas.

5.3 World Health Organisation (WHO) Guidelines for Community Noise 1999

5.3.1 The WHO Guidelines 1999 recommends that to avoid sleep disturbance, indoor night-time guideline noise values of 30 dB L_{Aeq} for continuous noise and 45 dB L_{AFmax} for individual noise events should be applicable. It is to be noted that the WHO Night Noise Guidelines for Europe 2009[6] makes reference to research that indicates sleep disturbance from noise events at indoor levels as low as

[4] World Health Organisation Guidelines for Community Noise, 1999

[5] Sound exposure level or L_{AE}

[6] WHO Night Noise Guidelines for Europe 2009

42 dB L_{AFmax}. The number of individual noise events should also be taken into account and the WHO guidelines suggest that indoor noise levels from such events should not exceed approximately 45 dB L_{AFmax} more than 10 – 15 times per night.

5.3.2 The WHO document recommends that steady, continuous noise levels should not exceed 55 dB L_{Aeq} on balconies, terraces and outdoor living areas. It goes on to state that to protect the majority of individuals from moderate annoyance, external noise levels should not exceed 50 dB L_{Aeq}.

6 Noise Survey

6.1 Baseline noise monitoring was undertaken in 2022 and 2024. Short-term attended measurements were undertaken in 2022 and long-term unattended measurements were undertaken in 2024.

6.2 2022 Baseline Noise Monitoring

6.2.1 Noise measurements were undertaken at 8 locations across the site in accordance with BS 7445-1: 2003[7] by James Sharpe AMIOA and Reid Malster AMIOA of Miller Goodall Ltd. The calibration of the sound level meters were checked before and after measurements with negligible deviation (<0.1 dB) noted. Details of the equipment used are shown in Table 3, below.

6.2.2 Measurement locations are shown in Figure A1.2 in Appendix 1. Measurements were taken during a daytime and night-time weekday period.

Table 3: 2022 Noise Monitoring Equipment

Equipment Description	Type Number	Manufacturer	Serial No.	Date Calibrated	Calibration Certification Number
MP1 – MP4 (Daytime) and MP1 & MP8 (Night-time)					
Class 1, Integrating Real Time 1/3 Octave Sound Analyser	NOR 140	Norsonic	1407510	15/12/2021	05552/1
Microphone	NOR 1225	Norsonic	384687	15/12/2021	
Class 1 Calibrator[8]	NOR 1251	Norsonic	34123	1/9/21	5409/1
MP5 – MP8 (Daytime)					
Class 1, Integrating Real Time 1/3 Octave Sound Analyser	NOR 140	Norsonic	1406017	3/11/21	05520/1
Microphone	NOR 1225	Norsonic	358159	3/11/21	
Field Calibrator	Type 4231	Brüel & Kjær	2478249	20/07/2020	04743/1

[7] BS 7445-1: 2003 Description and measurement of environmental noise - Part 1: Guide to quantities and procedures

[8] IEC 60942 (2003) Electroacoustics – Sound calibrators

6.2.3 Three non-consecutive fifteen-minute sample measurements were undertaken at MP1-MP8 during the daytime survey. The arithmetic average $L_{A10,15min}$ has been used to calculate the daytime $L_{Aeq,16hr}$ using the '*shortened measurement procedure*' of CRTN sound levels, which have then been compared against the NEC categories in TAN 11.

6.2.4 The night-time surveys concentrated on MP1 and MP8 which were identified as the noisiest two positions in the daytime survey. Two fifteen-minute samples were measured at MP1 and one fifteen-minute measurement at MP8. Additional measurements were attempted at MP8 but delays incurred on site at the time of the survey limited the night-time measurement periods.

6.2.5 Weather conditions during the survey were cool, dry and with wind speeds <5ms^{-1} and were considered suitable for the survey.

6.3 2024 Baseline Noise Monitoring

6.3.1 Noise measurements were undertaken at locations MP9 and MP10 as indicated on Figure A1.2, in accordance with BS 7445-1: 2003 by Dan Emery of Miller Goodall Ltd. The calibration of the sound level meter was checked before and after measurements with negligible deviation (<0.1 dB). Details of the equipment used are shown in Table 4 below.

Table 4: 2024 Noise monitoring equipment

Equipment Description	Type Number	Manufacturer	Serial No.	Date Calibrated	Calibration Certification Number
Class 1[9,10] Integrating Real Time 1/3 Octave Sound Analyser	NTi XL2-TA	NTi Audio	A2A-11111-E0	16/10/2023	05451/1
Pre-amplifier	Nti MA220	NTi Audio	6908	16/10/2023	05451/1
Microphone	NTi MC230A	NTi Audio	A14423	16/10/2023	05451/1
Outdoor microphone housing	NTi WP30	NTi Audio	N/A	13/09/2023	N/A
Class 1[11,12] Integrating Real Time 1/3 Octave Sound Analyser	NTi XL2-TA	NTi Audio	A2A-15860-E0	27/02/2023	06143/1
Pre-amplifier	NTi MA220	NTi Audio	8102	27/02/2023	06143/1
Microphone	NTi MC230A	NTi Audio	A16445	27/02/2023	06143/1
Outdoor microphone housing	NTi WP30	NTi Audio	NA	NA	NA
Class 1 Calibrator[13]	CAL 200	Larson Davies	14154	10/10/2022	05964/1

6.3.2 Weather conditions were determined both at the start and on completion of the survey. Whilst winds were greater than 5 ms^{-1} at the beginning of the survey period, historical weather data indicates that the wind dropped to below 5ms-1 by approximately 15:30 hours and remained below 5ms-1 for the remainder of Friday 26 January. Wind speeds rose back to approximately 7 ms-1 during some periods of Saturday and Sunday, but had dropped to approximately 2ms^{-1} in the early hours of Monday 29 January. The weather remained dry during the survey.

6.3.3 Measurements were undertaken over a 72 hour period between Friday and Monday to capture full 16 hour daytime and 72 hour night-time periods over both weekdays and weekend days. Measurements were made under free-field conditions at a height of 1.4 m and 1.6 m above local ground level for measurement positions MP9 and MP10 respectively.

[9] IEC 61672-1 (2002) Electroacoustics – Sound level meters Part 1: Specifications

[10] IEC 61260 (1995) Electroacoustics – Octave-band and fractional-octave-band filters

[11] IEC 61672-1 (2002) Electroacoustics – Sound level meters Part 1: Specifications

[12] IEC 61260 (1995) Electroacoustics – Octave-band and fractional-octave-band filters

[13] IEC 60942 (2003) Electroacoustics – Sound calibrators

6.3.4 The measurement locations are detailed below and indicated on Appendix 1 Figure A1.2.

- MP9 approximately 10 m from Cefn Road.
- MP10 approximately 90 m from the southern boundary of land associated with Clwb Rygi Wrexham.

6.3.5 The main noise source at MP9 was road traffic along Cefn Road. The main noise sources at MP10 were distant road traffic, birdsong, occasional pedestrians on footpath along the club boundary.

6.4 Baseline Monitoring Results

Table 5: Noise Monitoring Results

Location	Date	Period	Start Time hr:mm	Elapsed Time (hh:mm:ss)	$L_{Aeq,T}$ dB	L_{AFmax} *1. dB	$L_{A10,T}$ *2. dB	$L_{A90,T}$ *3. dB	$L_{Aeq,T}$ dB
MP1	20/01/2022	Daytime	10:20	00:15:00	52	63	56	44	53
			12:35	00:15:00	53	65	56	46	
			14:40	00:15:00	53	63	56	45	
MP1	02/02/2022	Night-time	05:30	00:15:00	51	62	55	39	51
			06:40	00:15:00	52	62	56	41	
MP2	20/01/2022	Daytime	10:50	00:15:00	50	68	52	40	49
			13:00	00:15:00	48	64	52	37	
			15:10	00:15:00	48	62	51	42	
MP3	20/01/2022	Daytime	11:25	00:15:00	43	56	44	39	45
			13:30	00:15:00	45	60	47	41	
			15:40	00:15:00	46	71	47	41	
MP4	20/01/2022	Daytime	11:55	00:15:00	43	53	45	40	45
			14:00	00:15:00	46	60	48	42	
			16:05	00:15:00	45	53	47	44	
MP5	20/01/2022	Daytime	10:40	00:15:00	45	63	47	42	43
			12:35	00:15:00	41	52	43	38	
			14:40	00:15:00	43	53	44	40	
MP6	20/01/2022	Daytime	11:05	00:15:00	40	55	41	37	42
			13:00	00:15:00	40	57	40	36	
			15:05	00:15:00	44	61	43	38	
MP7	20/01/2022	Daytime	11:40	00:15:00	42	59	43	39	43
			13:30	00:15:00	43	56	45	40	
			15:35	00:15:00	43	65	45	42	
MP8	20/01/2022	Daytime	12:05	00:15:00	59	72	63	42	59
			13:55	00:15:00	60	74	64	44	
			16:00	00:15:00	60	70	64	46	
MP8	02/02/2022	Night-time	06:10	00:15:00	66	85	71	40	66

Location	Date	Period	Start Time hr:mm	Elapsed Time (hh:mm:ss)	$L_{Aeq,T}$ dB	L_{AFmax} *1. dB	$L_{A10,T}$ *2. dB	$L_{A90,T}$ *3. dB	$L_{Aeq,T}$ dB
MP9	26/01/2024 / 29/01/24*3.	Daytime	14:30 / 07:00*4.	08:30:00 / 07:30:00*4.	62	n/a	66	46	62
MP9	26/01/2024 to 27/01/2024	Night-time	23:00	08:00:00	52	76	-	30	52
MP9	27/01/2024	Daytime	07:00	16:00:00	60	n/a	-	43	60
MP9	27/01/2024 to 28/01/2024	Night-time	23:00	08:00:00	53	75	-	31	53
MP9	28/01/2024	Daytime	07:00	16:00:00	59	n/a	-	42	59
MP9	28/01/2024 to 29/01/2024	Night-time	23:00	08:00:00	55	75	-	28	55
MP10	26/01/2024 / 29/01/24*3.	Daytime	12:30 / 07:00*4.	10:30:00 / 05:30:00*4.	46	n/a	-	42	46
MP10	26/01/2024 to 27/01/2024	Night-time	23:00	08:00:00	37	50	-	33	37
MP10	27/01/2024	Daytime	07:00	16:00:00	45	n/a	-	38	45

Location	Date	Period	Start Time hr:mm	Elapsed Time (hh:mm:ss)	$L_{Aeq,T}$ dB	L_{AFmax} *1. dB	$L_{A10,T}$ *2. dB	$L_{A90,T}$ *3. dB	$L_{Aeq,T}$ dB
MP10	27/01/2024 to 28/01/2024	Night-time	23:00	08:00:00	41	57	-	35	41
MP10	28/01/2024	Daytime	07:00	16:00:00	42	n/a	-	40	42
MP10	28/01/2024 to 29/01/2024	Night-time	23:00	08:00:00	39	55	-	30	39

*1. The values presented for night-time L_{AFmax} associated with unattended measurements are the 10th highest $L_{AFmax,T}$ recorded during the 8hr night-time period, measured with a period T of 2 minutes.

*2. The value presented for unattended weekday measurement at MP9 is the 18 hour L_{10}, $L_{AF10,18hour}$, between 06:00 hrs and 00:00 hrs.

*3. For the 16 hour and 8 hour measurements at MP9 and MP10, the $L_{A,90}$ has been calculated using the histogram method with a time base, T, of 15 minutes. The value presented is the most commonly occurring $L_{A90,15min}$ value for the 16 hour or 8 hour period, respectively.

*4. Measurements recorded on Friday afternoon and Monday morning have been concatenated to represent a 24 hour weekday period.

7 Impact of Existing Noise Sources on the Development

7.1 Technical Advice Note 11: Noise

7.1.1 Table 6 below provides an assessment against TAN11 categories using the survey data in Tables 4 and 5 above.

Table 6: TAN 11 Assessment

Measurement Location	Daytime $L_{Aeq,T}$ dB	Daytime NEC Category (road traffic sources)	Night-time $L_{Aeq,T}$ dB	Night-time NEC Category (road traffic sources)
MP1	52.6	A	51.3	B
MP2	48.5	A	-	-
MP5	41.6	A	-	-
MP6	38.6	A	-	-
MP7	41.3	A	-	-
MP8	60.6	B	66.2	D
MP9	61.7	B	55.4	B
MP10	45.8	A	41.3	A

7.1.2 Based on the comparison with the TAN 11 criteria for the daytime, the majority of the site falls within NEC A, with only the western boundary around MP8 and MP9 falling into NEC B.

7.1.3 For the night-time, areas of the site close to MP1 fall into NEC B, with MP8 falling into NEC D. However it should be noted that the NEC at MP8 is based on a 15-minute spot measurement during rush hour.

7.1.4 MP9 data was obtained at a close position to MP8 and was taken in the more recent 2024 survey. MP9 is based on full 16 hour daytime and 8 hour night-time measurements, and so can be seen to supersede the previous MP8 data as being more representative of the typical daytime and night time noise levels. For the MP9 NEC categorisation in Table 6, the worst-case (loudest) single day and night-time $L_{Aeq,T}$ from across weekday and weekend measurements are presented.

7.1.5 It is considered that the majority of the site falls into NEC A for daytime and night time, while the western boundary of the site, adjacent to Cefn Road, falls under NEC category B for the daytime and night time.

7.1.6 Based on the advice in TAN 11 noise should be taken into account when determining the application and, where appropriate, conditions imposed to ensure an adequate level of protection for areas within NEC B.

7.1.7 Internal noise levels at the development can be achieved via design of mitigation at the detailed design stage, including suitable specifications for glazing and ventilation.

7.1.8 External sound levels cannot be assessed robustly at this stage as no site layouts have been provided. However, we would recommend that the development plans consider the following detailing arrangements.

- Gardens used for external amenity to be screened from traffic on Cefn Road by facing the dwelling onto the road. Side areas that are exposed should be shielded by standalone garages or 1.8-2.4m high imperforate closed boarded timber fencing that achieves a minimum surface mass of 10kg/m^2.

7.1.9 It is recommended once a layout is finalised that the external noise levels be modelled across the site to optimise screening from the layout and to determine the location and height of any barriers needed to reduce sound levels in external amenity areas to an acceptable level.

7.1.10 In summary, based on the assessment against the TAN 11 criteria the site is considered suitable for residential development, but the prevailing road traffic noise levels necessitate mitigation measures to minimise noise impact in external amenity spaces (i.e. private rear gardens) and internal spaces of residential development to the western boundary of the site. It is recommended that measures to mitigate noise are secured via a suitable planning condition.

8 Wrexham Container Storage

8.1 No activity was observed at the container storage premises during any of the 2022 and 2024 surveys and noise associated with the containers is unlikely to be significant.

9 Wrexham Rugby Club

9.1 Wrexham Rugby Club was not observed to be holding any events or rugby matches during the survey, however, it is reasonable to assume that practice sessions and rugby matches will occur on the rugby pitch during daytime hours.

9.2 We are informed by our client that the Chairman of Wrexham Rugby Club has stated that on average, across the year, there is one evening event and one weekend daytime event each month. Private functions (e.g. bingo nights, christenings, birthday parties etc.) in the clubhouse are mostly bookings by club members but aren't restrictive and the club organises member functions e.g. presentation nights.

9.3 The license for the clubhouse allows for live music and recorded music from 10:00 – 00:00 hours Sunday to Thursday and 10:00 – 00:30 hours Friday and Saturday, Thursdays and Mondays of bank holiday weekends, and Christmas Eve. On New Year's Eve this extends to 10:00 – 02:00.

9.4 Based on the available strategic masterplan at the time of undertaking this assessment, the closest proposed dwelling is located approximately 80m south of the existing clubhouse proper, and approximately 50m southeast of the nearest edge of the rugby pitch.

9.5 Noise generated by Wrexham Rugby Club may therefore require consideration. Examples of feasible mitigation measures that may suitably attenuate noise from the rugby club include but are not limited to; consideration for dwelling and garden orientations, effective acoustic fences around gardens and barriers along the northern boundary of the site, and enhanced glazing and ventilation specifications. A full assessment of the potential impact of noise from the Rugby Club can be undertaken at the reserved matters stage to provide quantifiable mitigation requirements, and this can be secured by an appropriate planning condition.

10 Pre-Application Feedback

10.1 A pre-planning consultation was undertaken with WCBC, who offered the following feedback[14] regarding a previous version of this noise assessment:

1) *Part of the site has been identified as falling within NEC B of TAN 11. Noise mitigation will therefore be required for houses in this area so as to achieve the internal levels as described in BS8233 and the WHO guidelines. A scheme to limit the sound pressure levels in the external amenity areas to 50 dB LAeq should also be included during the design phase, which I note there is a proposed mitigation in the acoustic report for. Should this be the preferred method of mitigation confirmation will be required it can achieve the desired sound pressure levels.*

2) *The noise report has identified the rugby club as a potential noise source that requires further consideration. A robust consideration of this should be included along with any suitable mitigation scheme so as to achieve the limits as discussed in point 1 above. It is advised to take into account the provisions of any premises licence that the club may hold.*

3) [Not applicable][15]

4) [Not applicable][16]

5) *The statements in the report relating to MP8 & 9 are accepted though confirmation should be provided that the identified commercial premises in the vicinity of MP9 has ceased trading or noise from activities from this site will need incorporating into the report along with suitable mitigation.*

6) *For construction activities I will be recommending a construction hours noise condition of:*

> *All works in relation to the implementation of this permission, including deliveries to and /or leaving the site, should be undertaken only between the hours of 07.30 to 18.00 Monday to Friday, 08.00 to 14.00 on a Saturday, and at no time on a Sunday or a Bank Holiday. Outside these times, any works which are audible beyond the site boundary have the potential to cause unreasonable disturbance to neighbouring premises.*

[14] Email from Paul Campini of WCBC to Justin Paul of J10 Planning, dated 02 May 2024.

[15] Reference to a wastewater treatment works (WwTW) is not applicable. Reference to a WwTW was an error in the previous version of this noise assessment.

[16] Reference to a primary school is not applicable. Reference to a primary school related to a previous masterplan, which has now been superseded.

The applicant is advised that the Council has the option to control construction noise by serving a Control of Pollution Act 1974, Section 60 Notice where deemed necessary, and failure to comply with such a Notice can result in prosecution.

The applicant is further advised that any complaints received relating to noise of any type from the development may also be investigated using the Council's Standardised Procedure for Dealing with Noise Nuisance Complaints. This is done under the Statutory Nuisance provisions provided within the Environmental Protection Act 1990, and legal action may be taken where appropriate.

The applicant must adhere to the times given above wherever possible. If, however, there are urgent or unavoidable circumstances requiring work outside of the specified times, permission to proceed may be sought by contacting Environmental Health & Housing Standards at healthandhousing@wrexham.gov.uk or 01978 292040. Please use the same contact details for any other enquiries regarding construction / demolition site noise.

7) *If piling is required for any part of the construction it is advised that the LPA be contacted prior to commencing this so as to agree a suitable scheme.*

10.2 The feedback has been considered and we offer the following responses to the above items:

1) Regarding road traffic noise impacting proposed residential parcels identified as falling into the NEC B category of TAN 11. This is an outline application. The report indicates that the proposed dwellings can meet the proposed criteria. However, as the layout is not yet fixed, this matter will be dealt with in detail at the reserved matters stage, once the exact position and orientation of each plot is established.
2) Regarding the potential noise impact of Wrexham Rugby Club on proposed residential parcels. This is an outline application. The position, orientation and design of dwellings adjacent to the rugby club is not yet fixed. A robust consideration of this potential noise source will be provided at the reserved matters stage. This will inform the mitigation to be provided to any nearby noise sensitive receptor, including the location and orientation of dwellings.
3) Not applicable.
4) Not applicable.
5) Regarding commercial premises in the vicinity of MP9. This is an outline application; the position, orientation and design of dwellings in the vicinity of MP9 is not yet fixed. A detailed assessment of noise from any commercial/industrial noise sources in the vicinity of MP9 will be completed at the reserved matters stage.
6) No response. This is considered to be typical construction practice.

7) No response. This is considered to be typical construction practice.

11 Conclusions

11.1 A noise assessment was undertaken to assess the impact of noise on the proposed residential development at Erlas Park, Wrexham.

11.2 The assessment has presented the results of a daytime and night-time noise survey and compared these to the TAN11 technical guidance. The outcome of the comparison was that the site was predominantly NEC A in the daytime with the west of the site considered as NEC B.

11.3 The prevailing road traffic noise levels necessitate mitigation measures to minimise noise impact in external amenity spaces (i.e. private rear gardens) and internal spaces of residential development to the western boundary of the site. It is recommended that measures to mitigate noise are secured via a suitable planning condition.

11.4 Noise from Wrexham Container Storage is not considered to be significant.

11.5 Noise generated by Wrexham Rugby Club may require future consideration. Qualitative examples of feasible mitigation measures that may suitably attenuate noise from the rugby club have been outlined.

11.6 Based on the assessment, noise is not considered a constraint to residential development at the site, as acceptable noise levels are capable of being achieved across the site by way of a combination of appropriate glazing, background ventilation and screening from layout and barriers where necessary. These measures can be secured through a suitably worded planning condition and additional information can be provided once further technical design works have been carried out.

11.7 Pre-application feedback from WCBC has been considered and responses have been set out. In summary, it is considered that the points raised can be dealt with at the reserved matters stage when further details of the proposed development have been designed and fixed. This can be secured by suitably worded planning conditions.

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APPENDICES

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Appendix 1: Site Red Line Boundary, Strategic Masterplan and Noise Measurement Positions

Figure A1.1: Site Red Boundary Plan



Figure A1.2: Illustrative Masterplan and Noise Monitoring Positions


MP2
BRYN ESTYN ROAD
Wrexham Rugby Clubhouse
MP10
MP1
MP5
MP7
Ysgol Morgan Lllwyd School
CEFN ROAD
MP6
Wrexham Container Storage
MP8
MP9
Llwyn Knottia Farm

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Glossary of Terms

Decibel (dB) The unit used to quantify sound pressure levels; it is derived from the logarithm of the ratio between the value of a quantity and a reference value. It is used to describe the level of many different quantities. For sound pressure level the reference quantity is 20 μPa, the threshold of normal hearing is in the region of 0 dB, and 140 dB is the threshold of pain. A change of 1 dB is usually only perceptible under controlled conditions.

dB L_A Decibels measured on a sound level meter incorporating a frequency weighting (A weighting) which differentiates between sounds of different frequency (pitch) in a similar way to the human ear. Measurements in dB L_A broadly agree with an individual's assessment of loudness. A change of 3 dB L_A is the minimum perceptible under normal conditions, and a change of 10 dB L_A corresponds roughly to halving or doubling the loudness of a sound. The background noise level in a living room may be about 30 dB L_A; normal conversation about 60 dB L_A at 1 meter; heavy road traffic about 80 dB L_A at 10 meters; the level near a pneumatic drill about 100 dB L_A.

$L_{A90,T}$ The A weighted noise level exceeded for 90% of the specified measurement period (T). In BS 4142: 2014+A1:2019 it is used to define background noise level.

$L_{Aeq,T}$ The equivalent continuous sound level. The sound level of a notionally steady sound having the same energy as a fluctuating sound over a specified measurement period (T). $L_{Aeq,T}$ is used to describe many types of noise and can be measured directly with an integrating sound level meter.

L_{Amax} The highest A weighted noise level recorded during the time period. It is usually used to describe the highest noise level that occurred during the event.

$L_{A10(18\ hour)}$ Often referred to as the UK road traffic noise index, this is the arithmetic average of the values of L_{A10} hourly for each of the 18 one hour periods between 06:00 and 00:00.


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