Technical Memorandum

To:	Elite Onyx Properties (UK) SARL	**From:**	**SLR Consulting Limited**
cc:	Luke Fallon, Quod	**Date:**	12 October 2026
		Project No.	415.065813.00001

RE: Wrexham Industrial Estate, Bryn Lane – Noise Impact Assessment

1.0 Introduction

1.1 Background

This Technical Memorandum has been prepared to address comments received from the Public Protection Team in relation to planning application P/2026/0511.

Outline planning consent is being sought for the erection of additional floorspace to provide B2/B8 uses (the 'Proposed Development') on land to the east of Wrexham Industrial Estate, Bryn Lane (the 'Site').

Following submission of the outline planning application to Wrexham County Borough Council (WCBC), consultation comments were received from the Public Protection Team regarding noise and the potential impacts associated with the Proposed Development. The comments stated:

> *"Due to the presence of residential receptors near to the proposal I recommend a noise assessment accompany any planning application:*
>
> *A noise survey shall be carried out, and a detailed report of the survey findings submitted to, and approved in writing by, the Local Planning Authority. The noise survey shall determine noise levels for both Day (07:00– 23:00 hours) and Night (23:00 – 07:00 hours), having regard to Planning Policy Wales (PPW) Guidance, Technical Advice Note (TAN) 11 – Noise. The report of the noise survey findings shall include:*
>
> > *a) Noise levels arising from day / night time activities in the vicinity of the proposed development site and the impact upon the existing sensitive receptors, and*
> >
> > *b) A detailed scheme of noise insulation and / or attenuation measures so designed to safeguard the amenity of the existing nearby sensitive receptors.*
>
> *The measures as are approved shall be fully implemented prior to the first occupation / use of the development."*

This report has been prepared in response to the above comments and considers the potential noise impacts associated with the Proposed Development.

1.2 Site Location

The Site is located to the east of Wrexham Industrial Estate and extends to approximately 5 ha. The Site predominantly comprises existing areas of hardstanding, with areas of shrub and tree planting located within the eastern part of the Site.

The Site is bounded to the east by existing agricultural land, with residential properties located further east along the B5130. Existing industrial and commercial uses are located to the west and south of the Site.

Immediately to the north of the Site, planning consent was granted in July 2024 (planning application reference P/2023/0280) for the development of up to three B8 use warehouse units.

1.3 Proposed Development

The Proposed Development comprises up to 15,000sqm of employment development (use class B2/B8) in addition to ancillary offices, access, car parking, service yard areas and associated works.

It is understood that, given the outline nature of the application, matters relating to appearance, landscaping, layout and scale remain unconfirmed at this stage and would be addressed in detail at the reserved matters stage, following approval of the outline planning application.

Potential proposals currently under consideration include either the expansion of the adjacent warehouse to the west to create a contiguous building, or the development of a standalone building.

2.0 Relevant Policy, Standards and Guidance

2.1 Planning Policy Context

There are a number of policies at the national level that are relevant to the Proposed Development as listed below:

- Future Wales: The National Plan 2040 (2021)[1];
- Planning Policy Wales, Edition 12 (2024)[2]; and
- Technical Advice Note (TAN) 11: Noise (1997)[3].

Further details of these documents are included within **Appendix A**.

2.2 Local Planning Policy

The Wrexham Unitary Development Plan (1996 – 2001)[4] was adopted in 2005 and provides a framework for local decision making and development.

Policy GDP1 states in relation to noise and the Proposed Development:

> *"All new development should:-*
>
> *[…]*
>
> *f) Ensure the safety and amenity of the public and safeguard the environment from the adverse effects of pollution of water, land or air, hazards from industry and quarrying, and associated noise, odour or vibration arising from development."*

2.3 Standards and Guidance

The following standards presented below have been used whilst preparing the assessment:

- BS 7445-1:2003 Description and measurement of environmental noise[5] (BS 7445); and
- British Standard 4142:2014+A1:2019 Methods for rating and assessing industrial and commercial sound[6] (BS 4142).

Further details of these documents are included within **Appendix A**.

1 Welsh Government (2021) Future Wales: The National Plan 2040. Cardiff: Welsh Government. Available at: https://www.gov.wales/future-wales-national-plan-2040-0.

2 Welsh Government (2024) Planning Policy Wales: Edition 12. Cardiff: Welsh Government.

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

4 Wrexham County Borough Council (2005) Wrexham Unitary Development Plan 1996–2011. Wrexham: Wrexham County Borough Council. Available at: https://www.wrexham.gov.uk/sites/default/files/2023-04/udp-statement.pdf

5 British Standards Institution (2003). BS 7445-1:2003 Description and measurement of environmental noise. BSI, London.

6 British Standards Institution (2019). BS 4142:2014+A1:2019 – Methods for rating and assessing industrial and commercial sound. London: BSI.

3.0 Assessment Methodology

3.1 LPA Consultation

A consultation was undertaken with WCBC by email on 25th September 2026 to seek agreement on the proposed assessment approach and methodology.

Whilst the comments received from the Public Protection Team, presented in **Section 1.1**, recommended that a detailed assessment and scheme of noise insulation and attenuation measures be undertaken, this level of detail cannot reasonably be provided at the outline application stage. Details relating to the final site layout, building fabric and external plant have yet to be confirmed and may be subject to change as the proposals are developed.

However, to demonstrate that noise has been appropriately considered and to address the first part of the Public Protection Team's comments, the consultation proposed that a suitable noise survey and supporting technical note be undertaken to establish appropriate operational noise limits for the proposed development.

A response was received from the Public Protection Officer at WCBC on 28th September 2026, confirming that there was no objection in principle to the proposed methodology. The response stated:

> *"Having reviewed the proposed approach, I have no objection in principle to the methodology outlined. I acknowledge that this is an outline application and that detailed information relating to building design, plant, operational activities and site layout is not yet available. The proposed baseline monitoring and the preparation of a technical note to establish appropriate operational noise limits is therefore a reasonable approach at this stage.*
>
> *Please ensure that the assessment is based on the nearest and most noise-sensitive residential receptors and that the monitoring data is representative of both daytime and night-time periods. The report should clearly explain how the recommended operational noise limits have been derived and demonstrate compliance with the relevant planning policy and BS 4142 assessment criteria.*
>
> *I would reserve the right to request further assessment and/or mitigation details at a later stage should the detailed proposals indicate the potential for adverse noise impacts at nearby residential properties. This is particularly relevant once the final layout, plant specification and operational characteristics of the development are known.*
>
> *Based on the information currently provided, I am satisfied for the proposed survey work to proceed."*

This technical memorandum has therefore been prepared in accordance with the assessment approach agreed with the Public Protection Officer.

3.2 Operational Noise Assessment Methodology

Annex B, Section B17. of TAN 11: Noise provides guidance on the assessment of noise from industrial and commercial developments. It states that:

> *"The likelihood of complaints about noise from industrial development can be assessed, where the Standard is appropriate, using guidance in BS 4142: 1990. Tonal or impulsive characteristics of the noise are likely to increase the scope for complaints and this is taken into account by the "rating level" defined in BS 4142. This "rating level" should be used when stipulating the level of noise that can be permitted. The likelihood of complaints is indicated by the difference between the noise from the new development (expressed in terms of the rating level) and the*



existing background noise. The Standard states that, 'A difference of around 10 dB or higher indicates that complaints are likely. A difference of around 5 dB is of marginal significance'. Since background noise levels vary throughout a 24 hour period it will usually be necessary to assess the acceptability of noise levels for separate periods (e.g. day and night) chosen to suit the hours of operation of the proposed development. Similar considerations apply to developments that will emit significant noise at the weekend as well as during the week. In addition, general guidance on acceptable noise levels within buildings can be found in BS 8233: 1987."

In line with the above, this report has set appropriate Rating Noise Levels at ESRs based on the guidance and methodology presented within BS 4142.

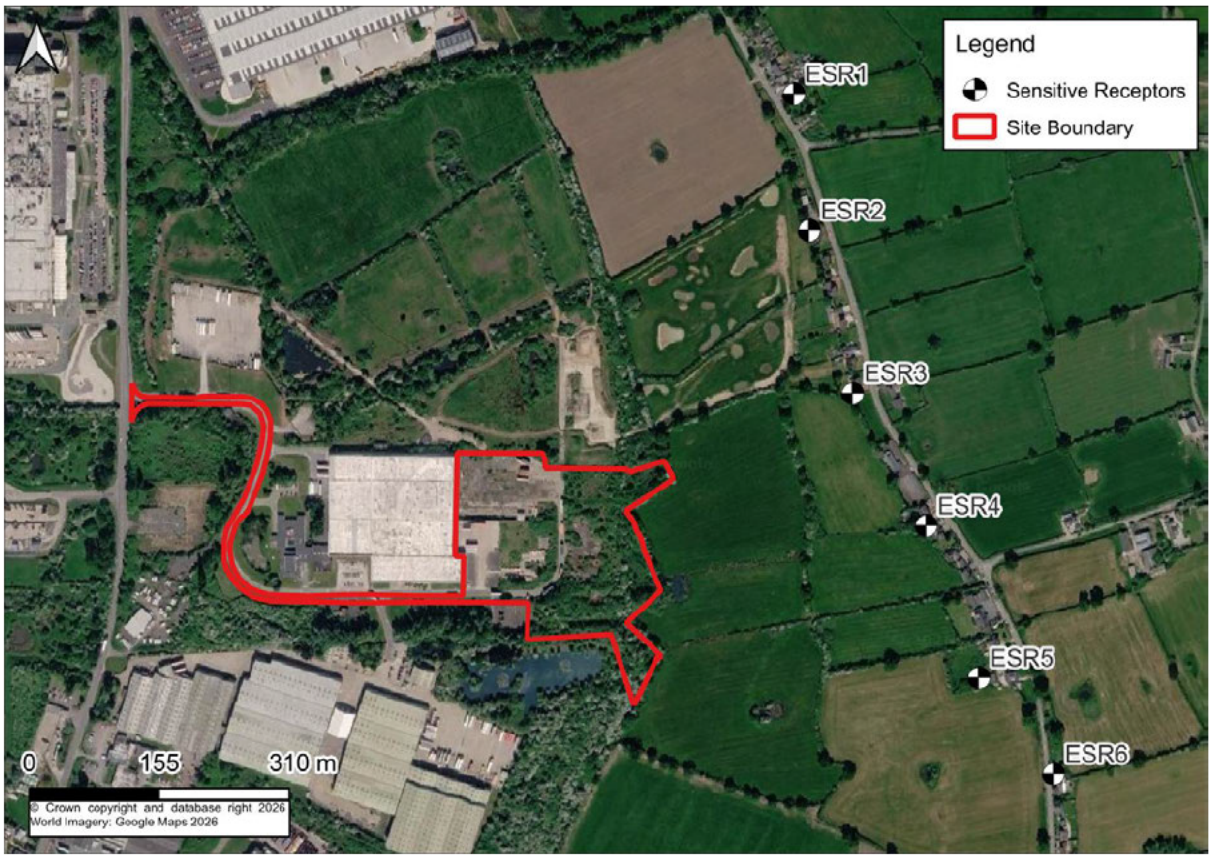
3.2.1 Existing Sensitive Receptors

The closest ESRs that have been selected are detailed in **Table A** and shown illustratively in **Figure A**. The ESRs most likely to be affected by noise from the Proposed Development have been chosen and subsequently assessed.

Table A - Existing Noise Sensitive Receptor Locations

Receptor Reference	Reference Address	Receptor Use	Grid Coordinates		Bearing and Distance from Site Boundary
			Easting	Northing	
ESR1	Marshley Farm, Bowling Bank, LL13 9RN	Residential	339764	350616	460m north-east
ESR2	Barn Cottage, Bowling Bank, LL13 9RN	Residential	339795	350458	320m north-east
ESR3	Hillview, Bowling Bank, LL13 9RN	Residential	339842	350276	240m east
ESR4	The Willows, Bowling Bank, LL13 9RN	Residential	339921	350112	305m east
ESR5	School Farm, Bowling Bank, LL13 9RL	Residential	340016	349923	410m east
ESR6	Gate House Farm, Bowling Bank, LL13 9RL	Residential	340077	349795	495m east

Figure A - Existing Noise Sensitive Receptors



3.2.2 BS 4142 Assessment Methodology

BS 4142:2014 provides guidance on assessing the impacts of a new or existing sound source by comparing the operational sound level (rating level) with the sound level that is present without development (background sound level) i.e., the existing acoustic environment.

The appropriate reference time interval for assessing a sound source is dependent upon when it operates i.e., during the daytime or night-time. BS 4142 determines the reference time interval as 1 hour during the day (07:00 – 23:00) and 15 minutes during the night-time (23:00 – 07:00).

A penalty should be applied to the specific sound level if a tone, impulse or other characteristic occurs or is expected to be present. The following penalties in **Table B** are considered in addition to the specific noise level to form the rating level with penalties being added arithmetically to create a total penalty correction.

Table B - Operational Noise – BS 4142 Subjective Character Corrections

Acoustic Feature	Correction (dB)	Comments
Tonality	+2	Where the tonality is just perceptible
	+4	Where the tonality is clearly perceptible
	+6	Where the tonality is highly perceptible
Impulsivity	+3	Where the impulsivity is just perceptible
	+6	Where the impulsivity is clearly perceptible
	+9	Where the impulsivity is highly perceptible
Intermittency	+3	Where the intermittency is distinctive against the acoustic environment

Acoustic Feature	Correction (dB)	Comments
Other sound characteristics	+3	Where a sound exhibits characteristics that are neither tonal nor impulsive, though it is distinctive

The assessment is based on the following potential results as shown in **Table C**.

Table C - Operational Noise – BS 4142 Assessment Criteria

Assessment Outcome	Impact Level
Rating level from site operations of around +10 dB or more above the existing L_{A90} background sound level	An indication of significant adverse impact, depending on the context. Noise levels should be mitigated and reduced to a minimum.
Rating level from site operations of around +5 dB above the existing L_{A90} background sound level	An indication of an adverse impact, depending on the context. Where required, noise levels should be mitigated and reduced to a minimum.
Rating level from site operations of between +1 and +4dB above the existing L_{A90} background sound level	An indication that the specific noise source is less likely to have an adverse or significant adverse impact depending on context. No specific measures required.
Rating level from site operations does not exceed the existing L_{A90} background sound level	An indication of a specific sound source having a low impact. No specific measures required.

3.2.3 Planning Policy

To determine the impact in accordance with planning policy, Table 1 from Annex A of TAN 11: Noise has been used to determine thresholds to describe the effect level regarding noise and its relationship to guidance documents. **Table D** presents the relationship with planning policy.

Table D – TAN 11 NEC Threshold of Effect level

TAN 11 Noise Exposure Category	BS 4142 Operational Noise Level Criteria	Action
A	Low impact: Rating level from site operations does not exceed the existing L_{A90} background sound level	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	Less likely to have adverse impact: Rating level from site operations of between +1 and +4dB above the existing L_{A90} background sound level	Noise should be taken into account when determining planning applications and, where appropriate, conditions imposed to ensure an adequate level of protection.
C	Adverse impact: Rating level from site operations of around +5 dB above the existing LA90 background sound level	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.

TAN 11 Noise Exposure Category	BS 4142 Operational Noise Level Criteria	Action
D	Significant adverse impact: Rating level from site operations of around +10 dB or more above the existing L_{A90} background sound level	Planning permission should normally be refused.

4.0 Baseline Conditions

4.1 Noise Survey

SLR carried out unattended and attended noise surveys between Wednesday 30th September 2026 and Monday 5th October 2026 at locations representative of the Proposed Development and ESRs.

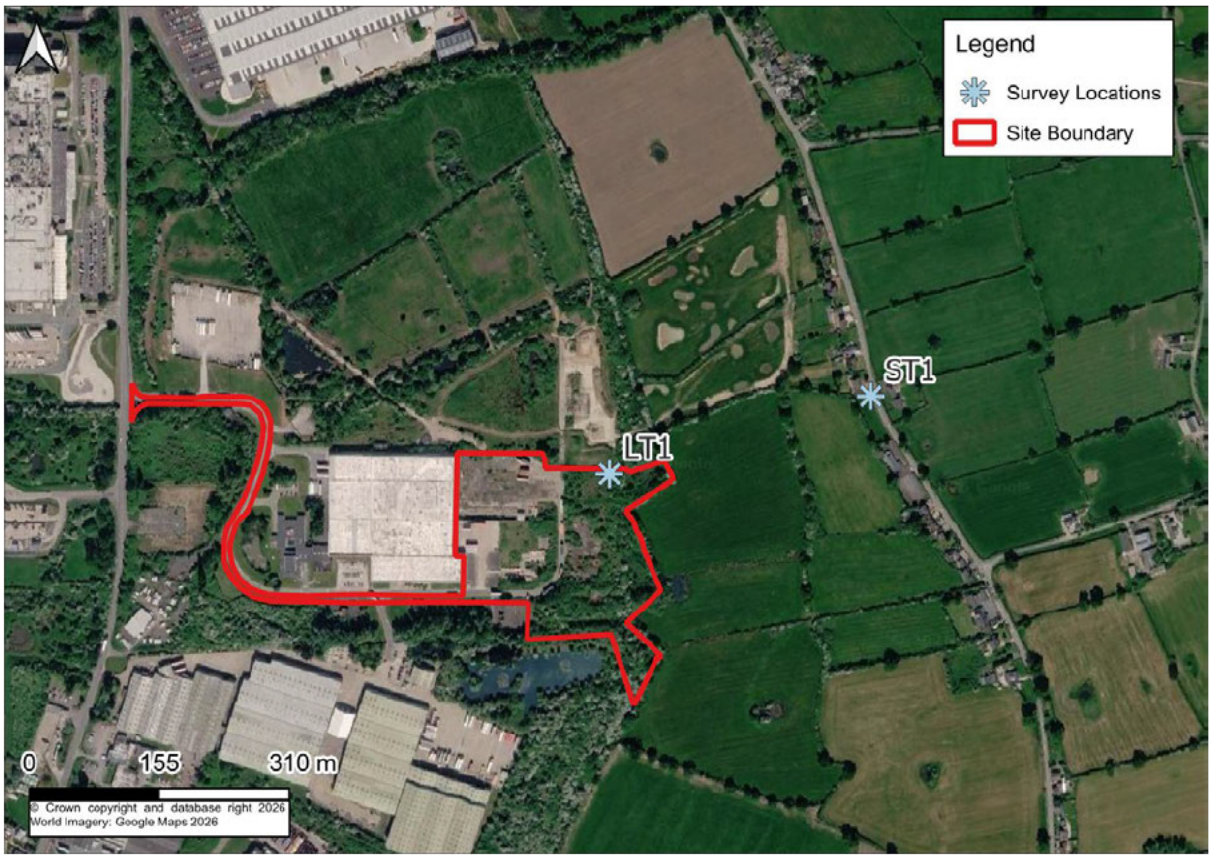
Weather conditions were monitored throughout the survey period. Conditions were dry for the majority of the measurement period, with wind speeds below 5m/s^{-1}. Periods during which intermittent rainfall was recorded have been removed from the dataset and excluded from the analysis.

Table E summarises the monitoring location with **Figure B** presenting it illustratively.

Table E - Noise and Vibration Monitoring Locations

Monitoring Location	Attended / Unattended	Start Date & Time (hh:mm)	End Date & Time (hh:mm)	Description
LT1	Unattended	14:30 30/09/2026	12:00 05/10/2026	Upon setup and collection existing noise from Wrexham Industrial Estate, including reversing alarms, impact noise and operational plant, were the dominant noise source. Occasional trees rustling was audible.
ST1	Attended	00:50 01/10/2026	01:50 01/10/2026	Reversing beepers, impact noise and plant noise were audible from the existing Wrexham Industrial Estate throughout the measurement. No vehicle pass-bys were noted on the B5130.
		11:05 01/10/2026	12:05 01/10/2026	Frequent vehicle pass-bys were noted on the B5130. Noise from the existing Wrexham Industrial Estate was audible throughout the measurement period, with intermittent aircraft pass-bys overhead and birdsong also audible.

Figure B - Noise and Vibration Monitoring Locations



The sound level meters were calibrated to a reference level of 94 dB at 1 kHz both before, and on completion of, the noise survey. No significant drift in calibration was measured during the survey.

The noise measurements were made using Class 1, integrating sound level meters. The microphones were mounted vertically on a tripod approximately 1.5 m above the ground and more than 3.5 m from any other reflecting surfaces.

4.1.1 Summary of Noise Monitoring Results

A-weighted L_{eq}, L_{90} and maximum noise levels were measured to comply with the requirements of BS 4142.

The noise levels measured during the noise survey have been divided into daytime (between 07:00-23:00 hours) and night-time (between 23:00-07:00 hours) periods.

The results of the long-term unattended noise survey at LT1 are presented in **Table F** below.

Table F - Measured Noise Levels at LT1

	Background Sound Level, dB $L_{A90,T}$		Residual Sound Level, dB $L_{Aeq,T}$		Maximum Sound Level, dB L_{AFmax}	
	Day	Night	Day	Night	Day	Night
Range	28 - 46	29 - 48	34 - 56	32 - 50	43 - 81	42 - 67
25th %ile	36	36	40	39	55	49
Median	39	39	43	42	58	51
75th %ile	41	42	45	44	62	55
Arithmetic Avg	39	38	43	41	58	52

	Background Sound Level, dB $L_{A90,T}$		Residual Sound Level, dB $L_{Aeq,T}$		Maximum Sound Level, dB L_{AFmax}	
	Day	Night	Day	Night	Day	Night
Log Avg	-	-	44	43	-	-
Modal Value	39	36	-	-	-	-

The results of short term attended noise survey at ST1 are presented in **Table G** below.

Table G - Measured Noise Levels at ST1

Measurement Location	Time Period	Background Sound Level, dB $L_{A90,T}$		Residual Sound Level, dB $L_{Aeq,T}$		Maximum Sound Level, dB L_{AFmax}
		Range	Modal	Range	Logarithmic Average	Range
ST1	Daytime	39 - 56	42	42 - 73	62	47 - 90
	Night-time	34 - 40	38	34 - 42	39	37 - 61

5.0 Operational Noise Limits

5.1.1 Determination of Background Sound Levels

Section 8 of BS 4142 provides guidance on the selection of background sound levels to be used in the assessment of operational noise. BS 4142 states that the background sound levels should be representative of the period being assessed (i.e. daytime or night-time periods).

The modal background sound levels measured as part of the baseline noise survey have been used to inform the assessment. It is considered that the modal value represents the typical background noise level.

As the measured background sound levels are very similar, LT1 has been used to inform the determination of Rating Noise Level limits at the receptors, as it provides a more extensive and robust dataset. The representative background sound levels for ESRs are summarised in **Table H**.

Table H - Determination of Background Sound Levels

Receptor Reference	Measurement Location	Time Period	Modal Background Sound Level, dB $L_{A90,T}$
ESR1, ESR2, ESR3, ESR4, ESR5 and ESR6	LT1	Daytime (between 07:00-23:00 hours)	39
		Nighttime (between 23:00-07:00 hours)	36

5.1.2 Determination of Operational Rating Noise Level Limits

At the time of writing, plans, plant items, plant locations and noise emission data is not confirmed. Therefore, operational Rating Noise Level limits have been set in accordance with guidance presented in BS 4142 and TAN 11: Noise that the Proposed Development should operate in accordance with.

To avoid adverse impacts at ESRs, BS 4142 and TAN 11: Noise recommend that operational noise should be less than 5dB above the representative background sound level. In accordance with BS 4142, this is an indication that operational noise is less likely to have an adverse impact, corresponding to Category B in the context of TAN 11 policy.

The Rating Noise Level Limits for each ESR are presented within **Table I**. The combined noise level from operational noise sources associated with the Proposed Development, including plant and loading and unloading activities, should not exceed the Rating Noise Level Limits at ESRs.

Table I – Rating Noise Levels

Receptor Reference	Time Period	Rating Noise Level Limit $L_{Ar,Tr}$ dB
ESR1, ESR2, ESR3, ESR4, ESR5 and ESR6	Daytime (between 07:00-23:00 hours)	44
	Nighttime (between 23:00-07:00 hours)	41

6.0 Design Recommendations and Future Assessment

Once detailed information regarding the Proposed Development becomes available, such as final site layout, building fabric and external plant, a detailed operational noise assessment should be undertaken to verify that the Rating Noise Level limits established in **Table I** can be achieved at the identified ESRs.

The assessment should consider the combined contribution of noise sources associated with the Proposed Development, taking account of any applicable acoustic feature corrections in accordance with BS 4142. Where the assessment identifies potential exceedances of the limits, appropriate mitigation measures should be incorporated into the design.

The following recommendations should be considered during the detailed design of the Proposed Development to minimise operational noise emissions and ensure, as far as practicable, that the Rating Noise Level limits can be achieved. Incorporating appropriate noise control measures at the design stage may reduce the need for additional noise mitigation.

- Where practicable, plant and equipment should be selected with the lowest achievable sound power levels.
- External plant should be located and orientated to minimise noise propagation towards ESRs, particularly those located to the east of the Site. Separation distances should be maximised where practicable, taking advantage of screening provided by buildings and other structures.
- Service yards, loading bays and other external operational areas should be positioned where buildings provide maximum acoustic screening to nearby receptors.
- Where necessary, acoustic mitigation measures should be incorporated into the design. Such measures may include acoustic enclosures, attenuated ventilation openings, silencers, acoustic barriers and screening structures.
- Buildings should be used strategically to provide acoustic screening between operational activities and nearby noise-sensitive receptors wherever practicable.

7.0 Conclusion

This Noise Technical Memorandum has been prepared in response to consultation comments received from the Public Protection Team relating to planning application P/2026/0511 for the erection of additional floorspace to provide B2/B8 uses on land to the east of Wrexham Industrial Estate, Bryn Lane.

Baseline noise monitoring has been undertaken to characterise the existing acoustic environment at representative ESRs. Details relating to the final site layout, building design, plant specification and operational activities have yet to be confirmed and, therefore, a detailed operational noise assessment cannot reasonably be undertaken at this stage. Accordingly, operational noise limits have been established based on the results of the baseline noise survey to define the noise criteria that the Proposed Development should achieve.

In order to avoid adverse impacts in accordance with guidance presented within BS 4142, operational Rating Noise Level limits of 44 dB $L_{Ar,Tr}$ during the daytime period and 41 dB $L_{Ar,Tr}$ during the night-time period have been established for ESRs. These limits correspond to Category B in the context of TAN 11: Noise policy, indicating that noise should be taken into account in the determination of planning applications and, where appropriate, planning conditions imposed to ensure an adequate level of protection.

Once detailed information regarding the Proposed Development becomes available, a detailed operational noise assessment should be undertaken to demonstrate that these limits can be achieved.

Subject to compliance with the operational Rating Noise Level limits established within this report, and the incorporation of good acoustic design principles during the detailed design stage, the Proposed Development is not expected to result in adverse operational noise effects at nearby residential receptors.

8.0 Closure

The assessment has required a suitable level of technical ability and has been undertaken by a Suitably Qualified Person (SQP). An individual with all the following credentials has been considered a SQP for this assessment:

- Has a minimum of three years' verifiable experience (within the last five years) of providing noise impact assessments in planning. Such experience has clearly demonstrated a practical understanding of factors affecting acoustics in relation to the proposed development use and in the built environment in general, including acting in an advisory capacity to provide recommendations and design advice in planning, and;
- Holds a recognised acoustic qualification and membership of an appropriate professional body. The primary professional body for acoustics in the UK is the Institute of Acoustics.

This assessment has been led and managed by a SQP as defined above.

Where some elements of the assessment (e.g. measurements) have been carried out by an acoustician who does not meet the requirements above, this has been undertaken with the direct guidance and supervision of a SQP who has reviewed, agreed and overseen the measurement methodology and any results obtained.

The SQP confirms that the relevant measurements and calculations:

- Represent good industry practice in accordance with available guidance.
- Are appropriate given the development being assessed and scope of works proposed.
- Avoid invalid, biased and exaggerated claims.

The checker and author of this document confirm that they both comply with the definition of a SQP defined in this Section.

Regards,

SLR Consulting Limited



Chloe Glenn, AMIOA
Associate Acoustics Consultant



Paul Bentley, MIOA
Technical Director

Appendix A – Policy Standards & Guidance

Table A1: National planning policy relevant to the noise assessment

Policy	Context
Future Wales: The National Plan 2040 (2021)	Future Wales: The National Plan 2040 is the national development framework for Wales and establishes the strategic direction for development to 2040. In relation to noise, it identifies the importance of reducing exposure to noise pollution and improving soundscapes, where practicable and feasible, when planning new development and infrastructure. The long-term effects of existing and predicted noise levels on people, communities and the environment should be considered, with exposure to pollution minimised. These principles are relevant to the proposed development in ensuring that operational noise is appropriately considered during the design and planning process.
Planning Policy Wales, Edition 12 (2024)	Planning Policy Wales (PPW) sets out the Welsh Government's land use planning policies and provides the national policy framework for determining planning applications. It identifies appropriate soundscapes as a component of sustainable placemaking and emphasises the importance of considering the effects of noise on health and well-being. Development should be located and designed to minimise noise impacts, taking account of the surrounding environment and the potential effects on existing noise-sensitive receptors. Where adverse impacts are identified, appropriate measures should be incorporated to avoid, minimise or mitigate them. This assessment therefore considers the existing noise environment and establishes Rating Noise Level limits to inform the detailed design of the proposed development.
Technical Advice Note (TAN) 11: Noise (1997)	Technical Advice Note 11: Noise provides guidance on the use of the planning system to minimise the adverse effects of noise without imposing unreasonable restrictions on development. It addresses both noise-generating developments and noise-sensitive developments exposed to existing noise sources, highlighting the importance of considering noise impacts when determining planning applications. The guidance also discusses mitigation measures, noise exposure categories for residential development and the use of planning conditions to control noise. In the context of the proposed development, this assessment establishes Rating Noise Level limits at the identified existing sensitive receptors and provides recommendations for detailed design and further assessment to ensure that operational noise impacts are appropriately controlled.

Table A2: Guidance relevant to the noise assessment

Guidance document	Summary
BS 7445-1:2003 “Description and measurement of environmental noise” (BS 7445)	Presents guidance and procedures of the measurement of noise.
British Standard 4142:2014 Methods for rating and assessing industrial and commercial sound (BS 4142) .	BS 4142:2014+A1:2019 *Methods for rating and assessing industrial and commercial sound* is used to rate and assess sound of an industrial nature including, but not limited to, assessing sound from proposed, new, modified, or additional sources of industrial sound, and sound at proposed new dwellings. It contains guidance on the monitoring and assessment of industrial and commercial sound sources (including fixed installations comprising

Guidance document	Summary
	mechanical and electrical plant and equipment) affecting sensitive receptors.