

Report

Maes y Droell Quarry

Appendix 6.4: Acoustics Legislation, Policy and Guidance

For Stephenson Halliday Ltd

16 February 2026

Document Control

Project Title:	Maes y Droell Quarry
Project Number:	16314A-20
Client:	Stephenson Halliday Ltd
Principal Contact:	Richard Hunt (Planning Director)
Document Title:	Appendix 6.4: Acoustics Legislation, Policy and Guidance
Document Number:	16314A-20-R04-01
Prepared By:	Tom Everson (Principal Consultant)
Reviewed By:	Jon Sims (Technical Director)

Revision History

01	16/02/2026	Client Issue
-----------	------------	--------------



Logika Group is a trading name of Air Quality Consultants Limited (Companies House Registration No: 02814570), Noise Consultants Limited (Companies House Registration No: 10853764) and Logika Consultants Limited (Companies House Registration No: 12381912).

This document has been prepared based on the information provided by the client. Air Quality Consultants Ltd, Noise Consultants Ltd or Logika Consultants Ltd do not accept liability for any changes that may be required due to omissions in this information. Unless otherwise agreed, this document and all other Intellectual Property Rights remain the property of Air Quality Consultants Ltd, Noise Consultants Ltd and/or Logika Consultants Ltd. When issued in electronic format, Air Quality Consultants Ltd, Noise Consultants Ltd or Logika Consultants Ltd do not accept any responsibility for any unauthorised changes made by others.

The Logika Group all operate a formal Quality Management System, which is certified to ISO 9001:2015, a formal Environmental Management System, certified to ISO 14001:2015, and an IT system certified to Cyber Essentials Plus.

When printed by any of the three companies, this report will be on Evolve Office, 100% Recycled paper.

3rd Floor St Augustine's Court, 1 St. Augustine's Place, Bristol, BS1 4UD Tel: +44(0)117 974 1086
 24 Greville Street, Farringdon, London, EC1N 8SS Tel: +44(0)20 3873 4780
 First Floor, Patten House, Moulders Lane, Warrington WA1 2BA Tel: +44(0)1925 937 195
 8-9 Ship St, Brighton and Hove, Brighton BN1 1AD Tel: +44(0)20 3873 4780
 Avenue du Port, 86c Box 204, 1000 Bruxelles Tel: +44(0)20 3873 4780

Contents

1	Legislation	1
2	National Policy and Guidance	2
3	Local Planning Policy	5
4	Noise and Vibration Guidance	6

Tables

Table 4-1: IEMA Guidelines Generic Relationship between Magnitude, Sensitivity and Significance	6
Table 4-2: Subjective Method – Rating Level Corrections for Tonal and Impulsive Sounds	Error! Bookmark not defined.
Table 4-3: Source Specific Recommendations on Noise Exposures (External)	9
Table 4-4: Indoor Ambient Noise Levels for Residential Dwellings	9

No table of figures entries found.

Figures

No table of figures entries found.
No table of figures entries found.

1 Legislation

1.1 Control of Pollution Act 1974

- 1.1.1 The Control of Pollution Act (CoPA) provides Local Authorities with the power to control noise from construction sites and provides the definition of Best Practicable Means (BPM) to minimise noise (including vibration) from construction works.
- 1.1.2 Section 60 of the Act describes the circumstances under which a local authority may serve a notice on a construction site, requiring it to carry out the works in accordance with particular conditions.
- 1.1.3 Section 61 of the Act allows construction sites to seek prior consent for the works, by providing details of the works to be undertaken and the measures proposed to minimise noise resulting from the works.
- 1.1.4 In any proceedings for an offence under Section 60, construction sites can use the defence that the works were conducted in accordance with a consent given under Section 61.
- 1.1.5 The Act also provides the basis for defining codes of practice for minimising noise, in particular BS 5228:2009+A1:2014 '*Code of practice for noise and vibration control on construction and open sites, Part 1: Noise and Part 2: Vibration*'.

1.2 Environmental Protection Act 1990

- 1.2.1 The Environmental Protection Act (EPA) defines statutory nuisance due to noise and sets out the duty on local authorities to investigate and, where identified, take abatement action.
- 1.2.2 The Act provides the definition of Best Practicable Means (BPM) to minimise noise (including vibration), the basis for defence against noise abatement action taken by a local authority (section 80). The Act also provides for individuals to seek for abatement action to be taken by a magistrate's court against noise nuisance (section 82).

2 National Policy and Guidance

2.1 Planning Policy Wales, Edition 12 (PPW, 2024)

- 2.1.1 Planning Policy Wales (PPW) sets out the land use planning policies of the Welsh Government. The document makes several references to the acoustic environment; of most relevance in this case are paragraphs 6.7.20 and 6.7.21, which fall under Section 6 'Distinctive and Natural Places – Air Quality and Soundscapes', stating that:

6.7.20 "Where sensitive developments need to be located close to existing transportation infrastructure for sustainable movement and access, they should be designed, as far as practicable, to limit harmful substances and noise levels within and around those developments both now and in the future. This may include employing the principles of good acoustic design and the inclusion of active travel or travel management measures as part of development proposals. Such development, however, should preferably be located away from existing sources of significant noise, which may include aircraft noise or roads, particularly new roads or those with programmed route improvements."

6.7.21 "Regard should be paid to current air quality and noise levels and the quality of the existing soundscape and account taken of any relevant local air quality action plan, noise action plan and/or local or regional air quality strategy as part of development strategies and proposals in development plans and before determining planning applications."

- 2.1.2 PPW, 2024 recognises that the adverse effects of noise impact on new residential development arising from transportation sources should be minimised and that good acoustic design principles should always be incorporated into the design and use of any new development.

2.2 Noise and Soundscape Plan 2023-2028 (NSP, 2023)

- 2.2.1 The Noise and Soundscape Plan (NSP) 2023-2028 is Wales's national strategy pm soundscapes, meaning the sound environment as perceived or experienced and/or understood by a person or people, in context.
- 2.2.2 The NSP considers acoustic design. Acoustic design is an approach to design relating to the sound environment, the principal technical objective of which is to protect people from the unwanted and/or harmful effects of noise. The proposed Welsh Government guidance takes a progressive step by also defining soundscape design. It describes this as a participatory, people-focused approach to design concerning both the acoustic environment and any physical or non-physical non-acoustic factors that may affect how people perceive and/or experience sound in a specific context.

2.3 Minerals Planning Policy (Wales)

- 2.3.1 Mineral Planning Policy Wales (MPPW) sets out the land use planning policy of the Welsh Government in relation to mineral extraction and related development in Wales, which includes all minerals and substances (including onshore oil, gas and coal bed methane) in, on or under land extracted either by underground or surface working.
- 2.3.2 MPPW is supplemented by Mineral Technical Advice Notes (MTANs).

2.4 Minerals Technical Advice Note (Wales) 1: Aggregates (MTAN1, 2004)

- 2.4.1 The Minerals Technical Advice Note (Wales) (MTAN1) sets out detailed advice on the mechanisms for delivering the policy for aggregates extraction by mineral planning authorities and the aggregates industry.
- 2.4.2 The overarching objective in planning for aggregates provision is:
- “to ensure supply is managed in a sustainable way so that the best balance between environmental, economic and social consideration is struck, while making sure that the environmental and amenity impacts of any necessary extraction are kept to a level that avoids causing demonstrable harm to interests of acknowledged importance”.*
- 2.4.3 Under sub section ‘Noise’, paragraph 85 outlines that where aggregates extraction and related operations occur close to areas that are sensitive to noise, particularly residential areas, noise impact must be minimised to acceptable levels. Paragraph 87 sets out the following:
- “the aggregates industry should aim to keep noise emissions at a level that reflects the highest possible environmental standards, taking all reasonable steps to achieve quieter working while having regard to the principles of BATNEEC – the best available technique not entailing excessive cost”.*
- 2.4.4 Reference to noise limits is made within paragraph 88 – noise limits should relate to the background noise levels, subject to a maximum daytime noise limit of 55 dB. It states that where background noise levels are less than 45dB, daytime (0700-1900hrs) noise limits should be defined as background noise levels plus 10dB. It also states:
- “During temporary or short-term operations, higher levels may be reasonable but should not exceed 67dB(A) for periods of up to 8 weeks in a year at specified noise sensitive properties.”*

2.5 Minerals Planning Guidance: The Control of Noise at Surface Mineral Workings (MPG11, 1993)

- 2.5.1 MPG11 provides advice on how the planning system can be used to keep noise emissions from surface mineral workings within environmentally acceptable limits without imposing unreasonable burdens on minerals operators.
- 2.5.2 The aims of MPG11 are outlined below:
- 1) recommend the use of a model for the prediction of the likely level of noise emissions from a proposed mineral development;
 - 2) recommend a method for setting noise limits for mineral sites which can be incorporated into planning conditions. The method should take account of the environmental and operational features peculiar to each mineral site and should also be straightforward to monitor;
 - 3) provide advice on how the noise levels from surface mineral sites can be most effectively monitored and on remedial steps which should be taken, to ensure that local communities are not subjected to noise emissions above acceptable levels; and
 - 4) discuss a number of noise control practises which can be made the subject of planning conditions and/or incorporated into good practise by the mineral operator.

- 2.5.3 Paragraphs 31 – 42 of the guidance make reference to recommended noise limits for noise from minerals sites. However, these were superseded by the MTAN1 when it was introduced in 2004.

2.6 Technical Advice Note (Wales) 11, Noise (TAN11, 1997)

- 2.6.1 This Technical Advice Note (TAN) provides guidance for local planning authorities and noise professionals in the preparation and evaluation of noise impact assessments (NIA). It does not offer prescriptive guidance on noise assessment, nor should it be considered as being exhaustive in extent.

- 2.6.2 With regard to Noise Generating Development, TAN11 states the following:

“8. Local planning authorities must ensure that noise generating development does not cause an unacceptable degree of disturbance. They should also bear in mind that if subsequent intensification or change of use results in greater intrusion, consideration should be given to the use of appropriate conditions.

9. Noise characteristics and levels can vary substantially according to their source and the type of activity involved. In the case of industrial development, for example, the character of the noise should be taken into account as well as its level. Sudden impulses, irregular noise or noise which contains a distinguishable continuous tone will require special consideration. In addition to noise from aircraft landing and taking off, noise from aerodromes is likely to result from engine testing as well as ground movements. The impact of noise from sport, recreation and entertainment will depend to a large extent on frequency of use and the design of facilities. Advice on assessing noise and on factors to consider in relation to the major noise sources including roads, railways, airports, industrial and recreational noise and their measurement is given in Annex B.”

3 Local Planning Policy

3.1 Denbighshire County Council

3.1.1 The Site is located within the administrative boundary of Denbighshire County Council.

Denbighshire Local Plan 2006 to 2021 (Adopted June 2013)

3.1.2 The Denbighshire Country Council local plan document includes the following policies in respect of noise which are relevant to the Proposed Development:

- Policy RD 1 - Sustainable development and good standard design states "Development proposals will be supported within development boundaries provided that all the following criteria are met... vi) Does not unacceptably affect the amenity of local residents, other land and property users or characteristics of the locality by virtue of increased activity, disturbance, **noise**, dust, fumes, litter, drainage, light pollution etc., and provides satisfactory amenity standards itself".
- Policy PSE 17 - Future mineral extraction states "Applications that accord with the above criteria will be permitted provided that all the following criteria are met: a. An appropriate buffer is included, within which no mineral working or sensitive development will be allowed; and b. Suitable access and transport routes are identified; and c. Final reinstatement of public rights of way should be close to their original alignment with intermediate reinstatements where possible; and d. **Noise** is kept to an acceptable level".

4 Noise and Vibration Guidance

4.1 Institute of Environmental Management and Assessment (IEMA) Guidelines for Environmental Noise Impact Assessment 2014

- 4.1.1 The IEMA Guidelines provide key principles and methodological guidance on environmental noise impact assessment and how to effectively integrate noise impacts into the consenting process of all types and scale of development.
- 4.1.2 The IEMA Guidelines provide a table for the generic relationship between noise impact (magnitude) and the sensitivity of a receptor including the evaluation of significance. **Table 4-1** provides a reproduction of the IEMA Guidelines table.

Table 4-1: IEMA Guidelines Generic Relationship between Magnitude, Sensitivity and Significance

Magnitude (nature of impact)	Description of effect (on a specific sensitive receptor)	Significance
Negligible	No discernible effect on receptor	Not Significant
Slight	Receptor perception = non-intrusive Noise impact can be heard, but does not cause any change in behaviour or attitude, for example turning up the volume of the television, speaking more loudly, closing windows. Can slightly affect the character of the area but not such that there is a perceived change in the quality of life.	 Less likely to be significant (greater justification needed based on impact magnitude and receptor sensitivity – to justify a significant effect)
Moderate	Receptor perception = intrusive Noise impact can be heard and causes small changes in behaviour and/or attitude, for example turning up the volume of television, speaking more loudly, closing windows. Potential for non-awakening sleep disturbance. Affects the character of the area such that there is a perceived change in the quality of life.	
Substantial	Receptor perception = disruptive Causes a material change in behaviour and/or attitude for example avoiding certain activities during periods of intrusion. Potential for sleep disturbance resulting in difficulty getting sleep, premature awakening and difficulty getting back to sleep. Quality of life diminished due to change in character of the area.	
Severe	Receptor perception = Physically Harmful Significant changes in behaviour and/or an inability to mitigate effect of noise leading to psychological stress or physiological effects, e.g. regular sleep deprivation/awakening; loss of appetite; significant, medically definable harm, e.g. auditory and non-auditory.	Significant

4.2 BS 7445-1: 2003 Description and measurement of environmental noise. Guide to quantities and procedures

- 4.2.1 BS 7445-1 defines the basic quantities to be used for the description of noise in community environments and describes basic procedures for the determination of these quantities.
- 4.2.2 The baseline noise measurement surveys were carried out in general accordance with the procedures set out in this British Standard.

4.3 BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites: Part 1 – Noise

- 4.3.1 Part 1 of BS 5228 relates to the potential effects of existing noise sensitive human receptors as a result of noise arising from construction activities. This includes mobile construction vehicles travelling on on-site haul roads.
- 4.3.2 BS 5228-1 sets out methodologies for predicting noise levels from construction and related activities. Data on sound levels is provided within the standard for a wide variety of site activities and mobile equipment used on construction and open sites. Practical guidance on noise management and control are also provided in the standard.
- 4.3.3 It also sets out a variety of example methodologies for determining potentially significant effects on existing noise sensitive human receptors as a result of noise arising from construction activities in Annex E. Adverse effect levels for construction noise have been derived from these example methodologies as described below.

The ABC Method

- 4.3.4 The ABC method necessitates that ambient sound levels in the absence of construction noise are measured at noise sensitive receptors or are otherwise predicted or estimated. The determination of a significant effect needs to consider other project-specific factors such as the number of receptors affected and the duration of the impact.
- 4.3.5 The ABC method promotes the use of different criteria for different time periods:
 - Daytime: Monday to Friday (0700 to 1900 hrs) and Saturday (0700 to 1300 hrs)
 - Evenings and weekends: Monday to Friday (1900 to 2300 hrs), Saturday (1300 to 2300 hrs) and Sunday (0700 to 2300 hrs)
 - Night-time: All days (2300 to 0700 hrs).
- 4.3.6 On a like-for-like basis, the evenings and weekends criteria are 10 dB more onerous than the daytime criteria, and the night-time criteria a further 10 dB more onerous. The lowest potential significance thresholds in relation to construction site noise are:
 - 65 dB $L_{Aeq,T}$ for daytime
 - 55 dB $L_{Aeq,T}$ for evenings and weekends
 - 45 dB $L_{Aeq,T}$ for night-time
- 4.3.7 These threshold values are commonly assumed to represent the LOAEL.
- 4.3.8 The highest potential significance thresholds in relation to site noise are:

- 75 dB $L_{Aeq,T}$ for daytime
- 65 dB $L_{Aeq,T}$ for evenings and weekends
- 55 dB $L_{Aeq,T}$ for night-time

4.3.9 These threshold values are often considered to represent the SOAEL. Additionally, if the ambient sound level is higher than the above values, then a potential significant effect is indicated if the total $L_{Aeq,T}$ noise level for the period increases by more than 3 dB due to site noise, i.e. the site noise level is equal to or in excess of the ambient sound level.

4.4 World Health Organization Community Noise Guidelines, 1999

- 4.4.1 The WHO Guidelines for Community Noise (GCN) provide guidelines based on scientific knowledge about the health impacts of community noise. They are partially superseded by the WHO Environmental Noise Guidelines for the European Region, 2018. However, the guideline values for internal noise and maximum noise levels from regular noise events remain relevant.
- 4.4.2 The CNG identifies a daytime, external, free-field noise level of 50 dB $L_{Aeq,16hr}$ as representing the onset of moderate community annoyance. It also identifies an external, free-field noise level of 55 dB $L_{Aeq,16hr}$ as representing the onset of serious community annoyance.
- 4.4.3 The internal noise guidelines inform the guidance in BS 8233: 2014 Guidance on sound insulation and noise reduction for buildings and the Professional Practice guidance on Planning and Noise: New Residential Development (ProPG, 2017).

4.5 World Health Organization Night Noise Guidelines for Europe, 2009

- 4.5.1 The WHO Night Noise Guidelines for Europe (NNG) sets out a LOAEL for night-time noise of 40 dB $L_{night,outside}$ (free-field). An interim target is also set of 55 dB $L_{night,outside}$ (free-field).
- 4.5.2 The NNG LOAEL is typically considered to represent the LOAEL for transportation noise. The interim target is typically considered to represent the SOAEL for transportation noise.

4.6 World Health Organization Environmental Noise Guidelines for the European Region, 2018

- 4.6.1 This document presents the recommendations of the World Health Organization in relation to long-term noise exposure from transportation sources, including road traffic, railway and aircraft noise. The guidelines partially supersede the WHO GCN and complement the WHO NNG.
- 4.6.2 The critical health outcomes investigated in the document are presented below including the noise metrics most closely correlated to them:
- Cardiovascular disease – L_{den} , $L_{Aeq,16h}$, $L_{Aeq,24h}$
 - Effects on sleep – $L_{Aeq,8h}$, L_{Amax} and SEL
 - Annoyance – L_{den} , L_{dn} and $L_{Aeq,24h}$
 - Cognitive impairment in children - L_{den} , L_{Aeq} , L_{Amax} and SEL
 - Wellbeing - $L_{Aeq,16h}$ and $L_{Aeq,8h}$

- 4.6.3 The guidelines go on to provide source-specific recommendations and noise exposure response functions (ERFs) in terms of the L_{den} and L_{night} metrics. **Table 4-2** presents the recommendations relating to the onset of health effects.

Table 4-2: Source Specific Recommendations on Noise Exposures (External)

Source	Average Noise Exposure (L_{den})	Night Noise Exposure (L_{night})
Road traffic noise	Below 53 dB - strongly recommended	Below 45 dB - strongly recommended
Railway noise	Below 54 dB - strongly recommended	Below 44 dB - strongly recommended
Aircraft noise	Below 45 dB - strongly recommended	Below 40 dB - strongly recommended

- 4.6.4 Importantly, the guideline values advised above are aspirational and in focussing on health, do not consider the wider socioeconomic aspects of transportation noise.

4.7 British Standard 8233:2014 'Guidance on Sound Insulation and Noise Reduction for Buildings'

- 4.7.1 BS 8233:2014 provides guidance for the control of noise in and around buildings. It is applicable to the design of new buildings, or refurbished buildings undergoing a change of use.

- 4.7.2 BS 8233:2014 provides noise guidance for buildings of different uses, however in respect to dwellings and habitable residential spaces, Table 4 of BS 8233:2014 provides guideline values that it is desirable not to exceed during daytime and night-time periods. These guideline values are reproduced in **Table 4-3** and:

- Apply to noise "without character" that excludes features such as "a distinguishable, discrete and continuous tone...irregular enough to attract attention, or has strong low-frequency content, in which case lower noise limits might be appropriate";
- Apply to overall noise levels (i.e. the sum of all noise);
- Include normal diurnal fluctuations in external noise (shorter time periods may otherwise be used);
- Do not have to be achieved in all circumstances (such as seasonal / occasional events); and,
- Excludes noise from new mechanical ventilation equipment.

Table 4-3: Indoor Ambient Noise Levels for Residential Dwellings

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

External Amenity

- 4.7.3 With respect to external amenity spaces, BS 8233:2014 states that “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”.
- 4.7.4 BS 8233:2014 also states that it will not always be possible to achieve these guideline values for all circumstances where development may be desirable, and that development in higher noise areas, such as urban areas adjoining the strategic transport network or city centres, may warrant a compromise between elevated noise levels and other factors (for example the convenience of living in these locations). In these situations, BS 8233:2014 states that “*development should be designed to achieve the lowest practicable levels in these external amenity spaces, but should not be prohibited*”. This approach is also advocated in PPG-N.



London • Bristol • Warrington • Leeds • Brighton • Brussels