Shared Regulatory Services

Cyngor Bwrdeistref Sirol Pen-y-bont ar Ogwr Bridgend County Borough Council

Cardiff Caerdydd

Vale of Glamorgan Bro Morgannwg

Developers Guide to Noise and Planning

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Glossary of Terms

Agent of Change	A developer who introduces a new land use is responsible for managing the impact of that new land use.
Ambient Noise	Noise in a given situation at a given time composed of all sound from all sources, near and far.
Background Noise	Ambient noise without the source noise. Typically measured as the LA90, T.
dB(A)	"A" weighted sound level, measured in deciBels. "A" weighted sound levels approximate to human responses to the loudness of sound.
Habitable Room	A room used for dwelling purposes but which is not solely a kitchen, utility room, bathroom, cellar or sanitary accommodation.
$L_{A90, T}$	The sound pressure level exceeded for 90% of the measurement period. Often referred to as the background noise level.
$L_{AMAX, T}$	The maximum recorded sound pressure level with the measurement period.
$L_{AEQ, T}$	The equivalent continuous "A" weighted sound pressure level. It is a single figure value that has the same acoustic energy as a fluctuating sound level over a given measurement period. Often used as a measurement of environmental noise.
$L_{A10, T}$	The sound pressure level exceeded for 10% of the measurement period. Often used over an 18 hour measurement period (06:00 – 00:00) as a measure of road traffic noise.
Local Planning Authority (LPA)	A local planning authority is the Local Authority that is empowered by law to exercise statutory town planning functions for a particular area. For the Shared Regulatory Services area the LPAs are Bridgend County Borough Council, Cardiff Council and the Vale of Glamorgan Council.

Noise	Unwanted sound.
Noise Climate	General description of existing noise levels in respect to a particular area.
Noise Generating Development	A development that has the potential to create a negative noise impact upon noise sensitive receptors/premises.
Noise Sensitive Receptor / Noise Sensitive Dwelling	Any dwelling, hotel, hostel, health building, educational establishment, place of worship or entertainment or any other facility or area of high amenity, which may be susceptible to noise.
Noise Source	Any item or activity that causes noise.
Rating Level	A noise level that includes a correction for the character of the noise when assessed by BS4142: 2014.
Soundscape	The acoustic environment as perceived or experienced and/or understood by a person or people, in context. (ISO Definition)
Tonality	Tonality is a feature of noise that has a particular tone. It is typically heard as a whine, screech or a whistle.

1.0 Introduction

1.1 Aim and Objectives

1.1.1 The aim of this document is to provide applicants with greater certainty when making a planning application where noise may be in issue.

1.1.2 In order to achieve this aim this document seeks to provide agents and consultants with advice on:

- When a Noise Impact Assessment may be required;
- What standards are to be applied; and
- What the acceptable noise levels will be.

1.1.3 This document seeks to apply current planning policy and apply a practical approach, but is an advice document only.

1.1.4 This document will not cover all potential options. Therefore, it is suggested that the applicant or their representatives have a Pre-Application discussion with the Local Planning Authority.

1.1.5 It is intended that this document is updated from time to time as understanding and policies develop.

1.2 Basic Principles

Good Acoustic Design

1.2.1 It has been said that "**Prevention is better than cure**"[1]. This is particularly true when it comes to dealing with noise where reducing noise levels at source can significantly reduce the cost of mitigation or even make an unviable project viable.

1.2.2 With this in mind applicants are recommended to consider the following questions when designing their schemes, listed in order or priority[2] [3]:

- Is it necessary for noise to be generated as part of the development?
  Can the noise source be made any quieter?
  Can the noise source be moved to a less disturbing location?
- Can the physical distance between the noise source and the noise sensitive receptor be increased to its maximum?

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[1] Desiderius Erasmus – 1466 – 1536

[2] Adapted from the Professional Practice Guidance on Planning and Noise – Supplementary Document 2 – Good Acoustic Design – Available at http://www.ioa.org.uk/sites/default/files/14720%20ProPG%20Supplementary%202.pdf

[3] These principles are equally applicable to construction noise or other temporary noise in addition to operational noise.

- Can existing structures or other land features be used to block the path of noise from noise sources to noise receptors?
- Can barriers be installed that block the path of noise from noise sources to noise receptors?
- Can the layout of the scheme be used to stop noise passing across the site;
- Can buildings be placed on the site in a way to protect noise sensitive rooms from excessive noise?
- Can the building envelope be used to reduce noise to acceptable levels inside the proposed buildings?

1.3 When is an Acoustic Report Needed?[4]

1.3.1 Acoustic reports[5] will be necessary if the proposed development is noise sensitive and is close to any existing noise source such as:

- Transportation, for example major roads, railways, airports or ports;
- Commercial premises;
- Industrial premises; or
- Culturally significant premises.

1.3.2 In addition, acoustic reports will be necessary if the proposed development is noise-creating and is located close to existing noise sensitive receptors or is close to existing noise-creating premises.

1.3.3 Noise creating developments include, but are not limited to:

- Transportation, for example major roads, railways, airports or ports;
- Construction Sites that are large and/or expected to continue for many months;
- Industrial premises and any associated plant;
- Entertainment Premises and any associated plant, e.g. loud music, air conditioning units;
- Mineral extraction sites;
- Schools;
- Outdoor Sports and Recreation Facilities, including Multi-Use Games Areas (MUGAs), Clay Pigeon Shooting, Skate parks, model aircraft areas and off-road motorcycle sports.
- Waste sites;
- Wind Turbines.

[4] If there is any doubt about whether an acoustic report is necessary advice should be sought from a suitable expert or from the Local Planning Authority.

[5] See paragraph 1.4 for more details.

1.3.4 Acoustic reports will also be necessary if the development is within, or close to, a noise action planning priority area.[6]

1.4 Acoustic Reports

1.4.1 In some circumstances[7], the applicant will need to supply an acoustic report with their planning application. This section sets out what is expected from an acoustic report.

1.4.2 The acoustic report needs to be written by or signed off by a suitably qualified professional who should be a member of the Institute of Acoustics (MIOA) or a member of the Association of Noise Consultants (ANC)[8].

1.4.3 The acoustic report should include the following:

- Details of the proposed development, including details of its proximity to noise action planning priority areas, quiet areas, conservation areas, historic gardens, parks and landscapes;
- Details of the nearby land uses, in particular any noise sources such as local businesses or industrial units. These details should include type and times of work;
- Details of the equipment used in the assessment[9];
- Details of the methodology used, which should include reference to appropriate planning guidance, appropriate British Standards and to this document, where appropriate;
- Details of all the assumptions made;
- Details of the results of the assessment; and
- Details of any mitigation measures recommended that would render the noise impacts to be considered acceptable[10].

1.4.4 Where the impact of the noise may be significant and/or where the effectiveness of the mitigation may be less than certain monitoring may be required before completion to demonstrate that any recommended mitigation is working as intended[11].

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[6] Noise maps and noise action planning priority areas may be viewed at http://lle.gov.wales/map

[7] See section 1.3 above.

[8] Qualified Acousticians can be found at www.ioa.org.uk or at www.association-of-noise-consultants.co.uk/ .

[9] Should the assessment involve a noise survey the survey must be carried out by a Class 1 sound level meter as defined by BS EN 61672 – 1: 2003.

[10] Any recommended mitigation measures must be detailed on any drawings submitted to support an application in planning.

[11] The scope of any subsequent monitoring should be agreed in writing with the Local Planning Authority.

2.0 Industrial and Commercial Noise Sources

2.1 Scope

2.1.1 Any noise creating developments that are industrial and/or commercial in nature are likely to be bound by the scope of BS4142: 2014: Methods for Rating and Assessing Industrial and Commercial Sound. (See Annex 1 for examples of sites that have their own standards.)

2.2 Guidelines and Criteria

2.2.1 In line with the principles of Good Acoustic Design mentioned in paragraph 1.2.2 above the starting point for any development should be to minimise noise wherever possible.

2.2.2 If noise is an inevitable consequence of the development then a rating level of no more than 10dB below the background noise level should be applied in accordance with the principles of BS4142:2014.

2.2.3 Where background noise levels are very low (i.e. less than 30dB L_{A90}), or best available techniques are to be applied, as outlined, to mitigate the noise then a more permissive rating level may be applied on a case by case basis. Any movement from the default position of no more than 10dB below background noise level shall be subject to discussions with and approval by the Local Planning Authority (LPA).

2.3 Information required

2.3.1 As a general rule, if a development is likely to introduce a new noise source that may impact upon nearby noise sensitive receptors it is likely that a full acoustic report will need to be submitted with the application. Failure to do so may result in delays and/or risk refusal for insufficient information.

2.3.2 Having said that, there are some instances, for example small scale developments such as a single extraction system in an already noisy area, acoustic reports may not be necessary. In order to help the LPA to decide whether a full acoustic report is necessary it is recommended that the following information is provided before the application is submitted:

- The type of equipment to be installed;
- The proposed hour and days of operation of the site and the hours and days of operation of the noise making equipment;
- The Sound Power Level (LW) or the Sound Pressure Level (LP) at a specified distance, in deciBels (dB) of the noise making equipment (obtainable from the manufacturer's specifications);

- Details of where the equipment will be placed, including whether the equipment is to be inside or outside. This should be on a scale plan of 1:50;
- Details of any measures to be installed to reduce the noise impact upon neighbours[12]; and
- Details of any nearby noise sensitive receptors, including how far away they are.

2.3.3 Regardless of whether basic information or a full acoustic report is needed, it is very important that the data is robust and realistic.

2.4 Points to Consider

2.4.1 Where prediction and/or modelling methods are used to assess the likely impact of new industrial/commercial sources upon noise sensitive locations the methods should be discussed fully and any raw data, the uncertainty associated with the software, the calculations and any assumptions used should be explained clearly.

2.4.2 When predictions and/or modelling methods are used in a full acoustic report, the results should make it clear if the results are noise levels or rating levels and be presented so that the untreated and the mitigated results are shown.

2.4.3 When predictions and/or modelling methods are used in full acoustic reports, receptors used for the modelling should correspond to the background monitoring locations. If they do not the reason why should be clearly stated.

2.4.4 When undertaking an assessment in accordance with BS4142: 2014 it is expected that a detailed understanding of the site is reported, that includes operating hours, a complete consideration of the noisy operations at the site and the feature characteristics of those noisy operations. Uncertainty should also be considered and factored into the results.

3.0 Entertainment Premises

3.1 Scope

3.1.1 Any noise from premises used for public entertainment including clubs, pubs, bars, restaurants, private members clubs and other recreational uses such as wedding venues and conference centres.

[12] If suggested measures to reduce the noise impact upon neighbours is likely to be of marginal benefit or likely to be extensive in extent or cost it is strongly advised that a full acoustic report is carried out, as described in section 1.4 above.

3.1.2 Most premises of this type will also require a Premises Licence. It is recommended that the applicant approach the Licensing Authority as early as possible to ensure that the proposed final use of the premises complies with the local Licensing policy.

3.1.3 It should be noted that the Planning and Licensing regimes have the potential for overlap, but Licensing committees are not bound by decisions made by Planning committees and vice versa.

3.1.4 As a result, it is the responsibility of the applicant to ensure the premises complies with both sets of rules so that, for example, the premises are not operating outside of their permitted hours in either Planning or Licensing systems, which may lead to enforcement action.

3.2 Design Criteria

3.2.1 People living next to places of entertainment have a right to enjoy reasonable standards of amenity. As a result, the LPA must be satisfied that the applicant has considered the issue of noise appropriately.

3.2.2 It is likely that a full acoustic report will be required to accompany an application for these types of premises. Failure to do so may delay validation of the application and/or risk refusal for insufficient information.

3.2.3 The level of detail required by a full acoustic report may vary dependent upon the nature of the proposed use and the proximity to existing noise sensitive premises. As a result, early consultation with the LPA is strongly recommended.

3.2.4 In order to be able to satisfy the LPA that the development is acceptable the applicant should be able to demonstrate, prior to determination, that the following criteria can be achieved:

- Where regular use of the proposed premises is planned, any amplified sound (including music and speech) should be as close to inaudible as possible within any nearby noise sensitive premises with one or more windows open;
- Any other noise sources associated with the premises, such as patron noise, should also be as close to inaudible as possible inside residential properties;
- If a full acoustic report demonstrates that inaudibility is not achievable, even after the introduction of design features such as acoustic lobbies, the development may be considered acceptable if the hours of operation or frequency of use of the premises are limited to reduce the impact upon nearby noise sensitive receptors.

3.3 Points to Consider

3.3.1 It is expected that premises will be designed and constructed with sufficient sound insulation so as to achieve inaudibly at nearby dwellings. The louder the proposed music the more robust the sound insulation will need to be.

3.3.2 If it is not possible to improve the sound insulation to the required level the use of electronic devices such as noise limiters may be acceptable as a way of controlling the source of the noise in exceptional circumstances.

3.3.3 In situations where the proposed development is structurally connected to noise sensitive receptors particular attention should be given to structure borne noise and vibration and any mitigation that may be required to prevent their transmission must be clearly stated.[13]

3.3.4 Noise breakout through doors and windows may require them to be kept closed while the premises in operation. As a result, alternative forms of ventilation may need to be considered along with the introduction of an acoustic lobby. These details must be submitted for approval with the application.

3.3.5 External seating areas and smoking areas will need to be considered in relation to their proximity to noise sensitive receptors. Limiting the hours of use of these areas may be necessary if the potential noise cannot be controlled by other means.

3.3.6 Noise from patrons arriving and dispersing from the premises will need to be considered, especially when this is likely to occur late at night. Factors affecting this noise should include congregating spaces, smoking shelters and the proximity of taxi ranks.

3.3.7 Details of how and when ancillary activities, such as deliveries, waste collections and bottle recycling are to be carried out should be highlighted together with their expected hours of operation and an assessment of their likely impact upon nearby noise sensitive receptor.

3.3.8 Should it be necessary to restrict the hours of operation of any activity within the premises it may be necessary to formalise these arrangements in a Noise Management Plan, which should be submitted to and approved by the LPA prior to determination.

3.3.9 The location and use of kitchen extraction systems, air conditioning units and refrigeration plant will need to be considered and designed in accordance with the requirements of Section 2 above. The final details of these systems should be submitted for approval with the application.

[13] It is very likely that this level of mitigation is to be more onerous than the requirements of Part E of the Building Regulations.

4.0 Sports and Recreation

4.1 Scope

4.1.1 Any noise from sport or leisure activities that take place including clay target shooting, off road motorcycle sports, model aircraft, multi-use game areas, laser-tag premises, paintballing centres and skate parks.

4.2 Considerations

4.2.1 It is possible that a greater amount of noise may be acceptable from this type of development than from other, more permanent developments. As such, clear details of the use of the development, such as frequency and hours of use, in addition to the expected noise levels at the nearest noise sensitive receptor should be submitted with the planning application.

4.2.2 This type of activity is often likely to take place in suburban and rural areas where the background noise levels are particularly low; as a result, their impact upon neighbouring noise sensitive receptors can be considerable. This being the case, care should be taken at an early stage to choose the correct site.

4.3 Codes of Practice

4.3.1 Some recreational activities have dedicated Codes of Practice aimed at mitigating noise. Any acoustic report must consider any relevant Code of Practice.

4.3.2 Current codes of practice are listed in Annex 1.

4.4 Multi Use Games Areas (MUGAs)

4.4.1 Multi Use Games Areas (MUGAs) are typically located close to noise sensitive receptors and as such have the potential to cause significant noise impacts.

4.4.2 As such, a full acoustic report will be required and any mitigation that may be identified as being necessary must be clearly stated along with a timeframe for implementation and maintenance.

5.0 New Noise Sensitive Developments

5.1 Scope

5.1.1 Any new or altered residential dwellings, schools, hospitals, offices, places of worship or other land uses where noise can have a detrimental impact.

5.2 Determining Suitability

5.2.1 When assessing whether a chosen site will be suitable for its proposed use the applicant should have regard to the Good Acoustic Design principles described in section 1.2.2 above. As such, it is strongly recommended that a full acoustic report be carried out at an early stage to help determine the suitability of the site, the number and type of accommodation to be built, as well as the final layout and design of the site.

5.2.2 In addition, the siting of any new noise sensitive developments should consider the noise maps produced for the Environmental Noise Directive. Indicative noise levels, Priority Areas and Quiet Areas can be viewed on the website of the Welsh Government.[14] Should a proposed development be in or close to any Priority or Quiet Areas or would be included within any noise contour identified by the mapping then a full acoustic report will be necessary.

5.3 Criteria for requiring noise assessment

5.3.1 As discussed in section 1.3 above, proposed noise sensitive developments that are to be sited close to existing sources of noise are very likely to require a full acoustic report.

5.3.2 It is important to note that not all developments close to all roads will require a full acoustic report. Developments that will likely be exposed to a noise level of equal or greater than 50dB L_{AEQ} during the day and 40dB L_{AEQ} during the night at the site boundary will require a full acoustic report.[15]

5.4 Assessment Methodology

5.4.1 In assessing noise affecting noise sensitive developments it is possible that different noise sources may need to be assessed, occasionally at the same time. Each noise source may have their own methodology which will be considered below and in Annex 1.

5.4.2 Assessments involving road traffic noise will need to observe the methodologies of the Calculation of Road Traffic Noise document (CRTN).

5.4.3 Assessments involving rail noise will need to observe the methodologies of the Calculation of Rail Noise document (CRN).

5.4.4 In the absence of any specific methodology relating to the noise source affecting the proposed site it would be expected that the requirements of the World Health Organisations Night Noise Guidelines, Technical Advice Note 11: Noise and the requirements of BS8233: 2014 be applied.

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[14] http://lle.gov.wales/map

[15] These values are chosen as they are highest external noise levels considered acceptable before mitigation measures are considered necessary according to BS8233:2014.

5.4.5 Where a full acoustic report is required night time noise monitoring will be expected unless strong evidence is provided that demonstrates that calculation of the expected night noise levels are robust and accurate.

5.4.6 The use of appropriate modelling software may be appropriate if it can be demonstrated that the model has been sufficiently calibrated and appropriately constructed.

5.4.7 Any predictions and/or calculations carried out to assess the noise level at the façade of any buildings must consider the noise levels at each storey of the building.

5.5 Design criteria for noise sensitive development

5.5.1 Where a full acoustic report has shown that habitable rooms and/or external areas will be likely to give rise to unacceptable levels of noise it will be expected that mitigation measures will be required.

5.5.2 It will be expected that developments achieve the "good" noise criteria as described by BS8233:2014 unless there are exceptional circumstances why this standard cannot be achieved. Such cases will be determined on a case by case basis.

5.5.3 It will be expected that developments are designed to achieve "good" internal noise levels in habitable rooms with the windows partially open. For developments sited next to transportation sources of noise the design target may be achieved with sealed façades as long as alternative means of ventilation is specified that complies with Part F of the Building Regulations and is submitted and detailed within the application.

5.5.4 In addition to the above, there are some specific points for consideration:

- Within a development the separation of noise generating and noise sensitive uses may be necessary, for example avoiding siting a children's playground next to accommodation for the elderly;
- The careful orientation of buildings may reduce noise impact, for example avoiding siting windows to habitable rooms that are parallel to noise sources;
- Single aspect buildings may be useful to mitigate the impacts of a noise source;
- Screening of noise by non-noise sensitive structures, such as garages, walls, acoustic fences or bunds may provide mitigation to habitable rooms; and
- The internal layout of dwellings may help reduce the impact of noise through the use of non-noise sensitive rooms as buffers between noise sources and noise sensitive rooms;

- The stacking of noise making rooms above or below noise sensitive rooms should be avoided in wherever possible and should be justified where this cannot be achieved.

5.6 New noise sensitive developments near existing industrial/ commercial noise sources

5.6.1 For new noise sensitive developments next to existing industrial and/or commercial noise sources it will be expected that the Agent of Change principle[16] will be adopted.

5.6.2 This being the case, a full acoustic report will be expected to be produced that examines the impact of the industrial and/or commercial noise source(s) in the area. The acoustic report will also be required to recommend mitigation measures that will be likely to render the noise impact acceptable.

5.6.3 Failure to supply a full acoustic report with the application may result in delays and/or risk refusal for insufficient information.

6.0 Transport Schemes

6.1 Scope

6.1.1 This section covers noise from additional vehicle movements likely to be generated by new developments such as new commercial or industrial sites, entertainment premises, housing developments and so on. This section also covers stand-alone transportation schemes such as new traffic calming measures and/or new road links.

6.2 Guidelines and criteria

6.2.1 The Department for Transport's Design Manual for Roads and Bridges (DMRB) sets out a method for evaluating both the immediate and long term impact of changes in the 18 hour traffic flow on noise sensitive receptors. It also sets out the noise criteria to consider.

6.2.2 For schemes that are likely to see an increase in traffic volumes it will be expected that a full acoustic report is carried out and submitted with the application.

[16] Paragraph 6.7.5 of Planning Policy Wales Version 10 states that:
"The agent of change principle says that a business or person responsible for introducing a change is responsible for managing that change. In practice, for example, this means a developer would have to ensure that solutions to address air quality or noise from nearby pre existing infrastructure, businesses or venues can be found and implemented as part of ensuring development is acceptable."

6.2.3 It will be expected that a full acoustic report examining this area will consider the following:

- Any properties that experience an increase of 1dB $L_{A10, 18\ hour}$ upon completion or in the future as a result of the development and other consented developments in the vicinity;
- Any properties that experience an increase of 1dB $L_{night, outside}$ upon completion or in the future as a result of the development and other consented developments in the vicinity;
- Any mitigation measures appropriate to reduce the impact of the increase in traffic noise.

6.2.4 Failure to supply a full acoustic report with the application may result in delays and/or risk refusal for insufficient information.

7.0 Construction and Open Sites

7.1 Scope

7.1.1 This section covers noise and vibration from Construction and Open Sites.

7.2 Guidelines and criteria

7.2.1 The noise and vibration from construction sites have the potential to cause significant impact upon neighbouring noise sensitive receptors.

7.2.2 British Standard BS5228-1:2009+A1:2014 and BS5228-2:2009+A1:2014 provides a methodology for assessing noise and vibration from construction and open sites where industry specific guidance is not available.

7.2.3 For construction sites that are likely to be more than “small scale” it will be expected that a full acoustic report will be produced that considers the likely noise and vibration impact of the site upon neighbouring noise sensitive receptors.

7.2.4 It is expected that the acoustic report will detail the following:

- Details of any phasing works;
- Details of any plant or machinery to be used, including their expected noise levels at the nearest noise sensitive receptors;
- Details of the methodology used to determine the significance of noise effects, as described in Annex E of BS5228-1: 2009+A1:2014. The choice of methodology must be agreed with the LPA in advance;
- Details of any days where the expected noise levels at the nearest noise sensitive receptors are considered significant when using a method described in Annex E of BS5228-1: 2009+A1:2014;

- Detail of any mitigation measures employed to reduce the noise impacting upon neighbouring noise sensitive receptors, focussing especially upon those days that are considered significant by a method described in Annex E of BS5228-1: 2009+A1:2014;
- Details of any planned night works, including expected noise level at the neighbouring noise sensitive receptors and any mitigation to be used to reduce the impacts of the noise.

7.2.5 Failure to supply a full acoustic report with the application may result in delays and/or risk refusal for insufficient information.

7.2.6 "Small Scale" construction sites may still require to consider the likely noise and vibration impact of the site upon neighbouring noise sensitive receptors. Guidance can be found on the Shared Regulatory Services website.[17]

[17] https://www.srs.wales/en/Environmental-Health/Noise-and-Air-Pollution/Air-quality-and-pollution/Construction-Site-Advice.aspx

Annex 1 – Summary of key information from relevant national and international standards and guidance documents

The following national and international documents provide further technical advice and guidance, which should be referred to when making your application.

Development category	Type of development	Relevant standards (see reference list below for full details)	Recommended noise thresholds (dB) at the nearest noise sensitive properties
All types of development	This standard is relevant to all categories of noise assessment for any development.	ISO 1996 Parts 1, 2 & 3	N/A.
Construction sites	All construction sites	BS5228-1: 2009+A1:2014 BS6472 2008: Part 1 & 2 BS7385	Apply a methodology described in Annex E of BS5228-1: 2009+A1:2014.
Entertainment premises	Clubs, pubs, bars, places of entertainment & other recreational uses	Relevant Local Authority Licensing Policy. CoP on Control of Noise from Pubs and Clubs: IOA 2003	Any amplified sound (including music and speech) will be inaudible within any nearby noise sensitive receptors with or without one or more windows open
Medical sites	New build or extensions that require planning permission	BS8233:2014 WHO (2009)	Apply the indoor ambient noise levels in Table 6 of BS8233: 2014.
Industrial & commercial sites & plant	Factories, industrial premises, fixed installations, or sources of an industrial nature in commercial premises	BS4142: 2014 BS8233: 2014 WHO (2009) DMRB Defra: 2005	The rating level of the plant should be at least 10dB below existing background levels, when measured in accordance with BS4142: 2014. Where background levels are very low (i.e. less than 30dB L_{A90}) or best available techniques are to be applied to mitigate the noise a more permissive rating level may be applied, on a case by case basis, subject to discussions with and approval by the LPA.

Development category	Type of development	Relevant standards (see reference list below for full details)	Recommended noise thresholds (dB) at the nearest noise sensitive properties
Mineral sites	All mineral extraction sites	Minerals Technical Advice Note (MTAN) Wales 1: Aggregates Technical Advice Note 11: Noise	Daytime (07.00 – 19.00): <10dB above background, up to a maximum of 55 dB $L_{Aeq, 1h (freefeld)}$. Daytime (07.00 – 19.00): < 67 dB $L_{Aeq, 1h (freefeld)}$ up to 8 weeks per year. Night (19.00 – 07.00): 42 dB $L_{Aeq,1h (freefeld)}$.
Residential development & Residential Care Homes	New houses, extensions, flats and house conversions that require planning permission	BS8233:2014 WHO (2009) Approved Document E: 2003	Apply the indoor ambient noise levels in Table 4 of BS8233: 2014. External areas <50dB $L_{Aeq, T}$, with <55dB $L_{Aeq, T}$ possibly acceptable in noisier environments. >55dB $L_{Aeq, T}$ may be acceptable in exceptional circumstances subject to the development having been designed to achieve lowest practical levels. Note: It will be expected that the external areas will achieve <50 dB $L_{Aeq, T}$. Any deviation from this requirement may be applied, on a case by case basis, subject to discussions with and approval by the LPA
Schools	New build or extensions/ refurbishments that require planning permission	BB93 (2015)	Apply Performance Standards found in Section 1 of BB93 (2015).
Outdoor sports & recreation facilities	Multi-use games areas, all weather pitches, stadia, leisure centres, clay target shooting, skateparks & off-road motorcycle sports	BS 8233:1999 WHO (2009)	Apply specific Code of Practice for the activity in question. If no Code of Practice is suitable, apply the indoor ambient noise levels in Table 4 of BS8233: 2014 and <50dB $L_{Aeq, T}$ for External Areas.

Development category	Type of development	Relevant standards (see reference list below for full details)	Recommended noise thresholds (dB) at the nearest noise sensitive properties
Transport	Road (new & improved roads)	DMRB CRTN Noise Insulation Regulations 1975 (as amended 1988) WHO (2009)	Apply the requirements of the Regulations & WHOs night noise guideline (NNG) of 40 dB $L_{night,outside}$.
	Rail (new & altered)	Noise Insulation (Railways and Other Guided Transport Systems) Regulations 1996 CRN BS6472 2008: Parts 1 & 2 BS7385 WHO (2009)	
	Ports	BS8233:2014 WHO(2009)	Apply the indoor ambient noise levels in Table 4 of BS8233: 2014 and <50dB $L_{Aeq,\ T}$ for External Areas.
	Airports		
Waste sites	All waste sites, including waste water treatment sites	BS 4142:2014 IPPC H3 (Part 2)	The rating level of the plant should be at least 10dB below existing background levels, when measured in accordance with BS4142: 2014. Where background levels are very low (i.e. less than 30dB L_{A90}) or best available techniques are to be applied to mitigate the noise a more permissive rating level may be applied, on a case by case basis, subject to discussions with and approval by the LPA.
Wind turbines **(NB: due to concerns with ETSU-R-97 please discuss the appropriate thresholds with the LPA as early as possible**	Single turbines	ETSU-R-97 WHO (2009)	35dB $L_{90,\ 10\ mins\ (freefeld)}$
	Wind farms		Daytime (07.00 – 23.00): <5dB above background. Daytime (07.00 – 23.00) in low noise environments (<30 dB $L_{90,\ 10mins\ (freefeld)}$): 35dB $L_{90,\ 10mins\ (freefeld)}$. Night (23.00 – 07.00): 43dB $L_{90,\ 10mins\ (freefeld)}$.

References

1. ISO 1996 Parts 1, 2 & 3- Description, measurement and assessment of environmental noise.
2. BS 5228-1: 2009+A1:2014- Code of practice for noise and vibration control on construction and open sites – Part 1: Noise
3. BS 6472: 2008: Parts 1 & 2 – Guide to evaluation of human exposure to vibration
4. BS 7385 – Guide to damage levels from ground borne vibration
5. BS 8233:2014 – Guidance on Sound Insulation and Noise Reduction for Buildings
6. WHO (2009): World Health Organisation – Night noise guidelines for Europe
7. BS 4142:2014- Methods for Rating and Assessing Industrial and Commercial Sound
8. DMRB: Design Manual for Roads & Bridges, Volume 11, Section 3, Part 7, HD 213/11 – revision 1 (November 2011)
9. Defra: 2005. Guidance on the Control of Odour and Noise from Commercial Kitchen Exhaust Systems.
10. Approved Document E – Resistance to the Passage of Sound (2003)
11. BB93 – Acoustic Design of Schools: Performance Standards (2015)
12. Noise Insulation Regulations 1975 (as amended 1988)
13. Noise Insulation (Railways and Other Guided Transport Systems) Regulations 1996
14. IPPC H3 (Part 2): Horizontal Guidance Note, Integrated Pollution Prevention & Control (IPPC), Part 2 – Noise Assessment & Control
15. ETSU-R-97 (2006): The assessment of rating of noise from wind farms

Codes of Practice include the following:

- CoP Environmental Noise Control at Concerts; Noise Council 1999 (under review)
- CoP on Noise from Model Aircraft, DoE, 1982.
- CoP on Control of Noise from Pubs and Clubs: IOA 2003
- Clay Target Shooting- Guidance on the control of noise, CIEH 2003
- CoP on noise from organised off road motorcycle sport, Noise Council 1984
- CoP on Powerboat Racing and Water-Ski racing, British Water Skiing Federation 1999
- CoP for Control of noise from Oval Motor racing Circuits, NSCA 1996.

Mae’r ddogfen hon hefyd ar gael yn Gymraeg
This document is also available in Welsh