

Noise assessments and reports for planning applications

Guidance note for developers and consultants



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Environmental Protection team
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Translations, large print and audio versions of this information are available by calling Basingstoke and Deane Borough Council on 01256 844844 or by emailing customer.service@basingstoke.gov.uk

Noise assessments and reports

Aim

This guidance note is to assist developers, agents and consultants who are involved in developments where planning permission is required and noise impact is a consideration. The flow diagram shown in Appendix 1 summarises the steps that any developer should follow when considering whether a noise assessment is required and how to prepare one.

Noise assessments may be required at the application stage, perhaps after pre-application discussions, or in response to a planning condition, once permission has been granted.

This guidance is to help ensure the assessment and report cover all the essential points and reduce the need for additional monitoring, other site work or correspondence.

The guide does not form part of any planning permission or application and is for information purposes only.

Introduction

Noise can, if not controlled, have significant adverse effects on those in the vicinity. Effects can range from annoyance of an individual to serious and long lasting disturbance affecting large parts of the community.

A noise assessment and report are required if the proposed development:

- will be noise sensitive and affected by existing noise sources. For example, a proposed residential development near a motorway, railway or industrial site
- will create noise which may affect nearby noise sensitive receptors. For example, new industrial use near an existing residential development, or a kitchen extract serving a new restaurant, close to existing flats.

Noise sensitive receptors will usually be residential properties but may also be developments, such as schools or medical establishments.

It is important to also determine whether or not the development is likely to be prejudiced by noise or to prejudice existing sites. If so, measures may be necessary and possible in order to prevent noise problems arising from the development at any time in the future.

The noise assessment report is to demonstrate to the council that the source of noise is fully understood and quantified, that all nearby noise sensitive receptors have been identified, and that the impact on the receptor has been established with reference to agreed acceptability criteria. It may also set out additional mitigation measures where it is necessary to achieve the criteria. For example, the need for a noise barrier, a silencer on a duct or different glazing in a house.

The acceptability criteria is the noise level the council expects to be achieved at or inside a sensitive receptor. Usually the assessment is carried out prior to completion of the development and therefore compliance with the criteria is normally demonstrated by

calculation. Occasionally the council may ask for a post-completion noise assessment to prove that the finished development achieves the criteria. Acceptability criteria vary according to the type of receptor, many of which are set out in British Standards or other guidance (see Appendix 3). Sometimes the council will have its own criteria, usually set out in planning guidance.

The council will expect noise assessment work to be carried out by an individual (usually a noise consultant) or firm (noise consultancy) which has the necessary qualifications and accreditation. Details of the organisations are listed later in this guidance.

The report submitted should set out all the required information in a format which is logical and understandable. It should provide the council with information required about the consultant, equipment used, agreed criteria, surveys undertaken, noise source, receptors and the impact. The suggested structure and content of the report is set out later in this guidance.

The process of completing a successful noise assessment involves:

- (a) discussing with the council the need for and timing of an assessment
- (b) selecting and appointing an acoustic consultant
- (c) the noise consultant discussing and agreeing criteria to be achieved and sources and receptors to be considered
- (d) carrying out noise measurement survey
- (e) assessing the impact of noise sources at receptors
- (f) specifying mitigation measures if necessary to achieve agreed criteria and reassess impact
- (g) preparing a detailed report

(a) Discussion with the council

In most cases applicants will have initially spoken to the council's development control team about their application. Applicants may then be referred to the environmental protection team for a more detailed pre-application discussion about the potential noise impacts of, or on, the proposed development.

If you think your proposal may have a noise impact, or be affected by noise, you should contact the environmental protection team on 01256 844844.

This is an opportunity to outline the proposed development and any noise concerns which you or the council can identify.

For proposals where noise is likely to be a key consideration in whether planning permission may be granted, the council will require a noise assessment to be carried out and a report to be submitted along with the planning application. Where noise is not likely to be a determining issue, the council may impose a planning condition on the permission requiring an assessment to be carried out at that stage.

If the proposal is simple, the council can advise you of the acceptability criteria it wants achieved when the development is complete. The information should be

passed to the noise consultant, although a more detailed discussion with the consultant may be necessary particularly if the project is large scale or complex.

(b) Select a noise consultant

It is important to engage an appropriately qualified consultant as the council may not accept their assessment and report if it is not produced correctly.

Most responsible noise consultants will be members of the Institute of Acoustics, although not all members will be experienced noise consultants. For example, some may be academic noise specialists. However, all members of the Association of Noise Consultants should be experienced practising consultants who can undertake the work required. At Appendix 2 of this guidance you will find contact details for both organisations to help you find members operating in your area and for your type of application.

A reputable noise consultant will use instruments meeting the minimum required specifications and will have up to date certification. When the council receives the consultant's report it will be checked to ensure evidence on the types of instrument used is provided and to ensure it has an up-to-date calibration certificate. The basic requirements are as follows:

- Instrument type

Most consultants will use integrating sound level meters conforming to BS 6698/IEC 61672 Class 1. This is preferred, but as a minimum the instrument should be of Class 2.

- Evidence of instrument response

The instrument shall be calibrated to the manufacturer's standard or by a National Accreditation of Measurement and Sampling (NAMAS) accredited laboratory within the previous two years. A current certificate of calibration should be available and a copy included in the assessment report.

The response of the instrument should be checked before and after each measurement using a field calibrator. Any calibration drift shall be recorded and reported. The portable calibrator should itself have been checked and, if necessary, be recalibrated to the manufacturer's standard or by a NAMAS accredited laboratory within the previous 12 months. A current certificate of calibration should be available and a copy included in the assessment report.

(c) Establishing noise sources, receptors and acceptability criteria

The noise consultant should be familiar with the noise assessment process, but should be advised to discuss the proposal in detail with the environmental protection team. In particular, the following should be established:

- The principal existing or proposed noise sources (if this is not obvious). The council may be able to help identify existing local sources of noise.
- When the sources operate or are likely to be operating (time of day and days of the week). The council may have knowledge about local sources and the times they operate.

- Where and what type of sensitive receptors are likely to be affected by the proposal. The council may be able to help identify the location of existing sensitive receptors.
- The acceptability criteria the council requires to be achieved. The criteria commonly used for different situations is set out in Appendix 3. However it is worth confirming your understanding of these with the environmental protection team.
- The methodology the council expects will be used in the survey and assessment. The methodology applied will depend on the purpose of the survey and the source of noise under consideration. Any standard method may have limited applicability and may not entirely meet the objectives in each case. A method statement should be submitted to the environmental protection team at least two weeks prior to the survey.

(d) Noise measurement survey

A survey will usually be necessary to measure noise levels arising from existing noise sources, where these may affect receptors in your development, and when there is a need to understand the existing background or baseline noise situation. The noise consultant will be aware of the requirements for surveys and will need to ensure that the following practices are observed:

Weather conditions

Noise measurements can be influenced by weather conditions. The survey must be carried out in suitable conditions, for example in the absence of strong winds, rain or snow. Where traffic noise is concerned, road surfaces should be dry. The microphone of the sound level meter should be fitted with a windshield when outdoor measurements are taken and details of weather conditions during the survey should be given in the report. The report should include a location plan showing measurement positions in relation to the development site.

Attendance at survey

It is preferred that surveys are attended by the consultant, so they can be certain of the origins of the noise measured and recorded. On occasions, when long-term unattended measurements are needed, these should be supplemented at certain times with attended measurements for the consultant to be able to account for the variations seen in the record.

Recording survey information

Most noise measuring equipment now records and stores data. However, it is also important to make a written record of other aspects of the survey such as:

- purpose, dates, times and duration
- personnel present
- calibration data
- instruments and techniques used
- standards employed

- key results, noise indices, time and frequency weightings and instrument file numbers
- weather conditions
- ground conditions
- source variability and description, worst and typical situations and interferences
- layout plan showing sources, receptors, measurement positions and distances

(e) Impact assessment

The noise consultant will understand or have agreed with the environmental protection team the appropriate way to carry out a noise impact assessment.

Baseline situation

Before any judgement can be made on the likely impact of a development, it will usually be necessary to have a full understanding of the existing noise in the vicinity of the receptor. This is achieved by carrying out a survey of background or ambient noise levels over periods of time representative of the times and days when the noise source will be operational.

Depending on the assessment method used, the baseline will usually be determined by measuring the L_{A90} or the L_{Aeq} . In practice both will usually be measured simultaneously.

The L_{A90} is the 'A' weighted noise level exceeded for 90% of the measurement period. Typically this is called the background noise level if it relates to a period when the noise source is not operational. The 'A' weighting is a correction applied within a sound level meter to adjust the response of the meter to match the response of human hearing at different frequencies. This approach is used to exclude short-term noises, such as a vehicle passing, from the measurement value, leaving only the underlying or background noise.

The L_{Aeq} is as an average noise level over the measurement period, although strictly speaking it relates to the average noise energy. It is a popular and universally used measure which correlates well with human annoyance.

Noise sources and times of operation

A detailed knowledge of the noise source (or in the case of a proposed development, the likely noise source) is also essential. This is because noise levels are of less importance than the amount by which they exceed the baseline noise and the times or days of operation.

Where the noise source already exists, data from the survey should give information about levels, frequency content and variability during and between days. Levels may be measured at the proposed receptor location or calculated later from source data at a different location.

If the proposed development will create a source of noise, the consultant may need to obtain manufacturer's data for proposed equipment, times of operation and working practices. Alternatively noise from the same equipment could be measured elsewhere.

If the noise source is transport, it may be appropriate to consider noise levels in the future to take account of transport growth and corresponding increase in noise levels. Typically the noise level fifteen years ahead is considered.

Determining the impact

Noise impact is determined using a variety of methods, all of which will rely on comparing noise levels at a receptor against absolute noise level criteria or against existing baseline noise levels. Generally one of three approaches is used:

- (i) Where the proposal is for a development which will introduce an industrial type noise source, or where a receptor in a new development may be affected by this type of source, it is usual to assess impact by comparing the noise level, after making corrections for certain attributes of the noise, against background noise levels at the receptor (existing or proposed). The council expects that, at the receptor, noise from the source is a certain amount below existing background levels. Typical cases include new equipment in a business, an air conditioning unit or an extract and fan serving a restaurant. This is known as the BS4142 methodology. The criteria used is set out in Appendix 3.
- (ii) Sometimes the impact does not depend on a comparison between source levels and baseline levels. For example, a proposed housing development near an existing road, where generally the impact is determined by establishing whether the absolute levels due to the source are acceptable. The acceptability criteria used is set out in Appendix 3.
- (iii) Applications for certain developments may require a more specialist approach. For example, the method for assessing a new nightclub combines both elements. Existing levels of noise in low frequency bands are measured and compared against levels in those same frequencies with music playing. The council may then require that the music does not cause any increase above existing levels.

(f) Noise mitigation measures

Development proposals which are inherently noisy may include mitigation measures in the original scheme. However, the need for further mitigation may be necessary when the impact assessment indicates that the acceptability criteria is exceeded. Either way noise mitigation, or reduction measures, should be considered in the assessment in demonstrating how the acceptability criteria will be achieved.

The most effective measures will be those which reduce levels at source, rather than in transmission or at the receptor. However, in situations such as where the proposal is for new housing near existing sources of noise, it will not be possible to reduce source noise levels. Where the proposal will introduce a new noise source

it is good practice to reduce levels at source as far as possible, before considering other mitigation measures, for example:

Reduction of noise at source

Using equipment or systems with lower sound power levels is highly effective and can avoid the need for other more costly and intrusive mitigation options. Noise impact can be lessened by reducing total running times or by shifting operations to less sensitive times of the day. Such practices may be the best, or only, method of control which would permit the development to proceed.

The use of acoustic silencers and enclosures around the source may also be effective at reducing the need for other mitigation methods.

Reduction of noise in transmission

The simplest way to reduce noise once emitted is by increasing the distance to receptors. This is not always possible but if it can be achieved reductions of 3-6dB per doubling of distance can be expected. For example, siting of plant and equipment within an industrial site as far a way from sensitive receptors as possible. Alternatively a new housing development may be designed so that properties are set back from a noise source, compared to other less sensitive parts of the development, such as landscaping. In many cases, a properly calculated buffer zone between source and receptor will represent the most cost effective noise control measure.

Where land is scarce, or distance alone provides insufficient noise mitigation, an earth bund or other noise barrier may be useful, especially if combined with other control measures. To be fully effective, the height and location must be carefully calculated and for noise sensitive developments it may first be necessary to take additional measurements to record predominant noise frequencies. In general to be effective most barriers will need to cut off line of sight between the source and the receptor.

Reduction of noise at a receptor

This may be the only option to reduce impact where a noise sensitive proposal is located in a busy urban area and where the applicant has no access to land for the construction of a barrier.

The way a development is designed can be an effective mitigation tool if the building faces away from the main noise source. This works in two ways; firstly, the building itself acts as a noise barrier providing sheltered external areas; secondly, if noise sensitive rooms are located on the sheltered side of the building, the impact will be reduced.

Where no other options are available, improving the sound insulation of a building facade can be effective in reducing internal noise levels. However, often it will be necessary to provide acoustic treated mechanical ventilation to avoid the need to open windows in warm or humid weather.

(g) Format and scope of report

The noise assessment report should set out all of the required information in a format which is logical and understandable. It should include:

- an introduction
- a description of the site and proposal
- the agreed acceptability criteria
- details of noise measure surveys undertaken, data summary and additional calculations
- the instrumentation used
- details of the noise source and the receptors
- an impact assessment
- noise mitigation measures
- a conclusion

Appendices, for raw measurement data, calibration certificates, calculations, additional maps and plans, details and specifications for mitigation measures should also be included.

The checklist at Appendix 4 will help ensure all relevant information has been included.

Construction noise management plans

If a development proposal will involve a significant period of construction, there may be short to medium-term additional noise during this time. This may cause disturbance to neighbouring premises and this should be addressed in the report.

Whilst it is accepted that noise is unavoidable in any development, the developer will be expected to take all reasonable steps to minimise disturbance.

Where there are noise sensitive receptors in the vicinity of the construction, the working hours relating to noisy work are 8am to 6pm weekdays, 8am to 1pm Saturdays and no noisy work on Sundays or bank holidays. These hours will be specified in a planning condition.

Where construction noise is expected to be particularly significant, the council may also add a planning condition requiring the applicant to submit a construction noise management plan. However, an applicant may wish to submit such a plan with the application. This can help support an application by demonstrating an early commitment to minimising noise and alleviating local concerns.

The plan is a set of commitments by the developer to minimise noise created during the demolition and construction phases. Whilst the developer has the primary responsibility, it will also ensure that the requirements are included in contracts, agreements and orders with contractors, sub-contractors and suppliers.

The noise consultant should be able to complete the construction noise management plan, the key elements of which include:

- Nomination of a responsible person for implementing the scheme.
- The permitted hours and days of work. It may also deal with emergency situations and where other enforcement agencies require work to take place outside of these normal hours.
- The Best Practicable Means (BPM) for carrying out work on site. This will include the use of the quietest machinery, methods of work, modern serviced and silenced equipment, where possible maximising distance to sensitive receptors.
- Avoiding anti-social behaviour such as shouting and playing radios loudly will not be permitted.

Vibration

Certain developments, notably those in close proximity to railway lines and heavy industry, will require additional assessments to take account of vibration. The consultant will advise whether this may be appropriate for a proposal. If necessary, vibration will need to be assessed and reported in the same way as noise.

Post development noise assessment

The council will require the applicant, through an additional condition, to undertake a post-completion noise assessment. This provides validation that mitigation measures achieve the noise requirements. However an applicant may wish to submit proposals for post-completion monitoring with the application. This can help support an application by demonstrating a commitment to remedy any unforeseen problems at an early stage.

Environmental Impact Assessment

An Environmental Impact Assessment (EIA) is required for applications for developments which are large, complex, potentially intrusive and are likely to have significant environmental effects. An EIA ensures that the likely environmental effects (including noise) of a new development are understood and taken into account before the development goes ahead.

The requirement for EIAs is set out in Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations) 1999, as amended. In the regulations two schedules set out the types of development for which an EIA is required:

- Schedule 1 proposals, which must always have an EIA, include developments such as power stations, industrial developments, airports, long distance railway lines, major roads, waste disposal incinerators.
- Schedule 2 projects of a certain scale, or in sensitive areas, include developments such as agricultural, industrial and other production and processing industries; extractive, mineral, chemical, food and energy industries and infrastructure. Proposals of this type, which meet the threshold criteria, must also be accompanied by an EIA.

Preparation of the noise elements of an EIA are more involved than in the relatively simple noise assessment processes. It requires a more systematic and formal approach to the assessment. Your noise consultant will need to prepare a number of documents which may be part of a larger process covering other environmental effects of the proposal. For example, preparation of the noise chapter in an environmental statement and possibly a non-technical summary.

The need for an EIA should be discussed in initial talks with the council's development control team.

Submission of the report

Once completed and compared against the checklist in Appendix 4, the consultant's report should be sent to:

Basingstoke and Deane Borough Council
Civic Offices
London Road
Basingstoke
Hampshire
RG21 4AH

Due to the detailed technical information required in many noise survey reports, up to ten working days should be allowed for a report to be considered and a written response sent to the planning case officer.

When commenting on noise reports and proposed schemes of works, the environmental protection team will not accept responsibility for the effectiveness of the design and installation of control measures in the prevention of nuisance. This is the responsibility of developers and their professional advisors. Developers should, therefore, fully appreciate the importance of competent professional advice. In all cases the council retains its rights under the Environmental Protection Act 1990 in respect of statutory nuisance.

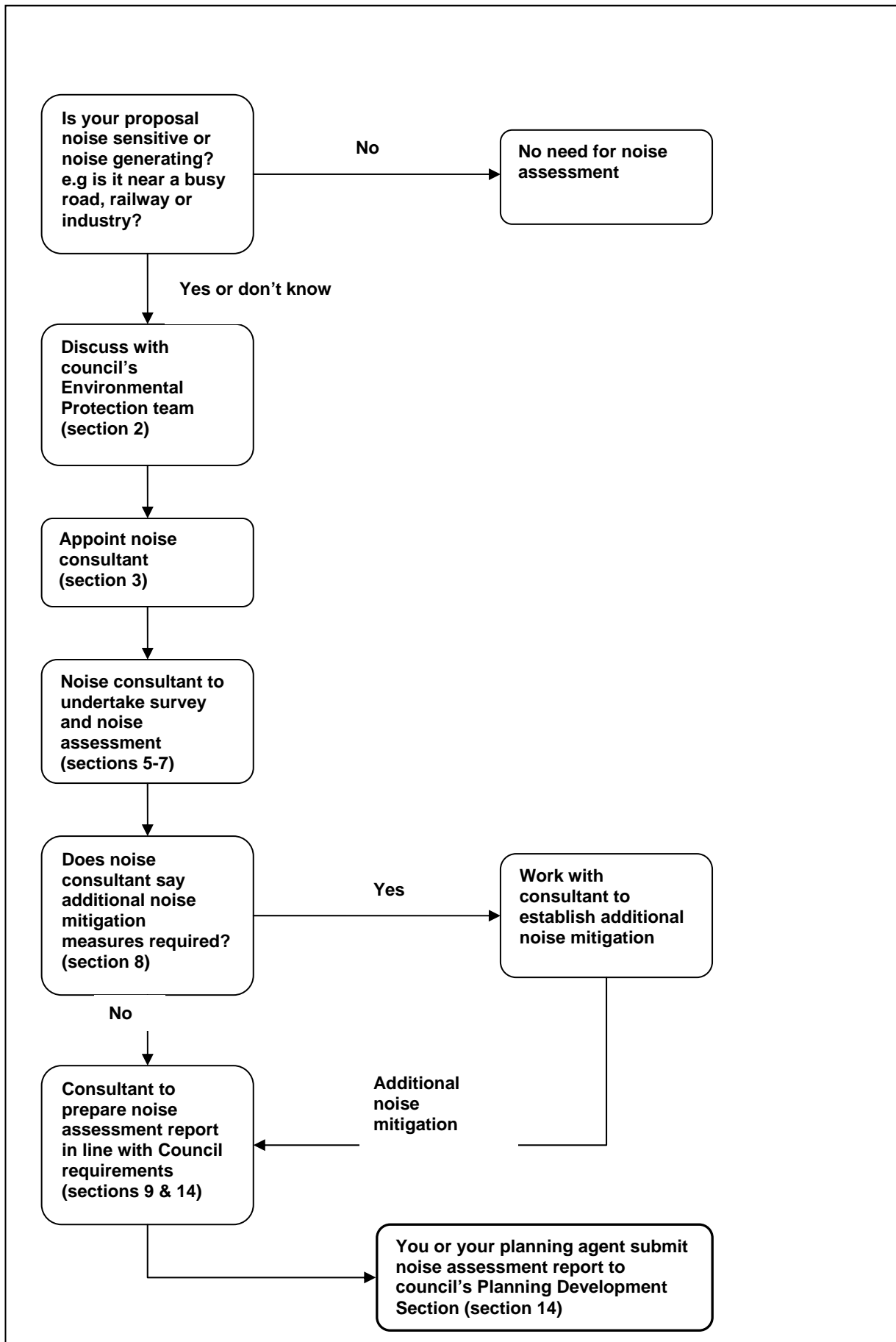
If you require further information you should contact the environmental protection team on 01256 844844.

Feedback

Comments on all council publications are welcomed so that we can improve them in the future. To give your feedback on this guidance email pollution@basingstoke.gov.uk or write to the environmental protection team at the council.

Note: This guidance is for information and has been produced to help those considering noise issues relating to planning applications. For further detail on specific proposals, speak to a member of the environmental protection team.

Appendix 1 – Simplified flow diagram showing the steps to be taken when considering whether a noise assessment is needed and how to complete one.



Appendix 2 - Contact details for acoustics organisations

Institute of Acoustics

77A St Peter's Street
St. Albans
Hertfordshire
AL1 3BN

Phone 01727 848195
Fax 01727 850553
Email ioa@ioa.org.uk
Website <http://www.ioa.org.uk/find-a-specialist/>

The Association of Noise Consultants

105 St Peter's Street
St Albans
Hertfordshire
AL1 3EJ

Phone 01727 896092
Fax 01727 896026
Website http://www.association-of-noise-consultants.co.uk/index.php?*p=memberlist

Building Research Establishment

Garston
Watford
Hertfordshire
WD2 7JR

Phone 01923 664 000
Fax 01923 664 010

Appendix 3 - Assessment Acceptability Criteria

Criteria for proposed residential accommodation affected by existing transport noise sources

The council will generally expect that the following internal and external noise environments are achieved. The criteria are based on the guidance in WHO Guidelines for Community Noise 1999, BS 8233:1999 Sound insulation and Noise Reduction for Buildings - Code of Practice, and Sound Control for Homes 93.

Externally generated noise due to transport noise sources, affecting new housing, hostels and hotels	
Area	Noise Criteria
Private and communal gardens	Levels should be as low as practicable and not greater than 50dB $L_{Aeq, 1hr}$ 7am-11pm
Bedrooms	Not greater than 30dB $L_{Aeq, 1hr}$ 11pm-7am Not greater than 45dB $L_{Amax, 1hr (fast)}$ 11pm-7am
Living rooms and dining rooms	Not greater than 35dB $L_{Aeq, 1hr}$ 7am-11pm
Kitchens, bathrooms and utility rooms	Not greater than 45dB $L_{Aeq, 1hr}$ 7am-11pm
<p>Note 1: BS 8233: 1999, paragraph 7.6.1.2 states "As well as protection for buildings, barriers or bunds should be considered to protect the gardens. In gardens and balconies etc, it is desirable that the steady noise level does not exceed 50 $L_{Aeq,T}$ dB and 55 $L_{Aeq,T}$ dB should be regarded as the upper limit."</p> <p>Note 2: Internal building services noise generated from, for example, ventilation systems and lifts should meet the same criteria as specified above.</p>	

Criteria for proposed residential accommodation affected by existing industrial type noise sources

For dominant industrial sources, the rating level of the noise emitted from the proposed development, determined by the procedure at BS 4142 1997, should be at least 5dB(A) below the background $L_{A90,1hr}$ noise level. This should be measured at the most sensitive period when the plant will be operated (for example, evenings and weekends), measured or calculated at 3.5m from the ground floor, and 1m from the upper floor of the nearest facade of the nearest affected premises.

Criteria for proposed residential accommodation affected by noise from existing sources of amplified music

Where living accommodation is likely to be affected by amplified or live music, for example from pubs and clubs, special attention should be given to the sound attenuation of low frequency noise. The recommended design criteria for these dwellings are as follows:

Noise rating curve NR25 in bedrooms (11pm-7am)

Noise rating curve NR35 in all habitable rooms (7am-11pm)

(Noise rating curves should be measured as a 15 minute linear L_{eq} at the octave band centre frequencies).

Criteria for proposed non-residential buildings affected by existing noise sources

Externally generated noise affecting other new noise sensitive buildings	
Type of Development	Noise Criteria
Educational Buildings	
Workshops and practical areas	<50dB L _{Aeq, 1hr} 7am-11pm
Libraries and individual study spaces	<45dB L _{Aeq, 1hr} 7am-11pm
Small lecture or seminar rooms and offices	<40dB L _{Aeq, 1hr} 7am-11pm
Classrooms, lecture rooms and language laboratories	<35dB L _{Aeq, 1hr} 7am-11pm
Music and drama spaces	< 30dB L _{Aeq, 1hr} 7am-11pm
Public libraries	< 45dB L _{Aeq, 1hr} 9am-10pm
Law courts and council chambers	<35dB L _{Aeq, 1hr} 9am-11pm
Concert hall, opera house and large theatre	<25dB L _{Aeq, 1hr} 7am-11pm
Small theatres	<30dB L _{Aeq, 1hr} 7am-11pm
Hospitals, clinics and welfare buildings	
Wards (including day recovery rooms)	<30 dB L _{Aeq, 1hr} 11pm-7am
Operating theatres, reception areas	<35 dB L _{Aeq, 1hr} 7am-11pm
Kitchens, laundry, physiotherapy, x-ray utility and store rooms	<45 dB(A) L _{eq, 1hr} 7am-11pm
Office buildings	
Private offices and small conference rooms	< 40dB(A) L _{eq, 1hr} 7am-11pm
Large offices	< 45dB(A) L _{eq, 1hr} 7am-11pm
<p>Note 1: The revised approved document E of the Building Regulations came into force in July 2003. One of the consequences is that new and refurbished schools will have to meet strict standards for noise levels, insulation and room acoustics. These standards are set at Section 1 of the DfES Building Bulletin 93, "Acoustic Design of Schools", February 2003. Building control officers of local authorities will have responsibility to ensure that the standards are complied with. A liaison will take place between environmental health and building control for the purpose of ensuring that classrooms are adequately insulated against transportation noise sources. Noise from schools to surrounding areas is still controlled under planning legislation.</p> <p>Note 2: National Health Service Estates has produced a series of Hospital Building Notes.</p>	

Criteria for proposed existing industrial type noise sources affecting existing residential accommodation

The rating level of the noise emitted from the proposed development, determined by the procedure at BS 4142 1997, should be at least 5dB(A) below the background LA90,1hr noise level, measured or calculated at 3.5m from ground floor facades and 1m from upper floor facades at the nearest affected premises.

In outline, the BS4142 procedure is set out in the following table.

Measurement and calculation of the specific noise, residual noise and background using BS 4142:1997

- Measure 3.5m from ground floor, or at 1m from a first floor façade and any higher façades.
- Measure L_{Aeq} of representative sample of specific noise (offending noise in quiet or with the residual noise subsided to its lowest level).
- Assess the duration or cycle time for the specific noise over a one hour period (day) or five minute period (night).
- Measure L_{Aeq} of a representative sample of the residual noise subsided to the typical low level pertaining when measuring the specific noise.
- Correct specific noise sample for influence of residual noise (re Table 1 BS4142).
- Adjust, corrected specific noise sample to $L_{Aeq, 1hr}$ (day) or $L_{Aeq, 5m}$ (night).
- Measure the background noise level without the specific (offending noise) sufficiently long enough to obtain a representative value, in L_{A90} . Since background noise levels vary throughout a 24 hour period it is necessary that noise levels are assessed for separate periods (for example day and night) chosen to suit the hours of operation of the proposed development. Similar considerations should be applied to developments that will emit significant noise at the weekend as well as during the week.
- To corrected specific L_{Aeq} add correction of 5dB if offending noise has discreet tones, or is impulsive or irregular enough to attract attention - this gives the rating noise level.

Criteria for other proposed noise sources affecting existing residential accommodation

For example music from proposed nightclubs and pubs.

Amplified music and speech – insulation of building envelope

In the case of amplified music and speech break-out from premises, the council's policy is to control the disturbance by ensuring that insulation of the premises and volume and bass setting inside are adequate. This will require an adequate mechanical ventilation system to supply sufficient fresh air for patrons in the warmest weather, ensuring that sound proofed doors and windows remain closed. The fitting of a limiter device to control the bass and overall noise levels at source may also be required.

Amplified music transmitted from a source not attached to a sensitive premises - criteria

The noise control should be designed so that the background noise level ($L_{90, 15min}$ Linear for the one third octave band levels of 50 to 160Hz and the overall linear noise level), as measured at one metre outside the nearest affected façade of the nearest affected premises with the amplified music and/or vocals switched off, shall not be increased when they are played at the typically highest level and a measurement is repeated in L_{90} Linear at the same position over any five minute period, with the music, vocals and current background noise measured together.

Break-out of amplified music from a source attached to a sensitive premises – criteria

The noise control should be designed so that the background noise level ($L_{90, 15\text{min}}$ Linear for the one third octave band levels of 50 to 160Hz and the overall linear noise level), as measured in the centre of a habitable room attached to the source, with the amplified music and/or vocals switched off, shall not be increased when they are played at the typically highest level and a measurement is repeated in L_{90} Linear at the same position over any five minute period, with the music, vocals and current background noise measured together.

Noise Assessment Report Checklist

Please place a tick against one box for every item in each category, to indicate whether the relevant information has been included in the report, excluded, or does not apply.

CATEGORY	ITEM	YES	NO	NOT APPLICABLE	
Introduction	Maps and plans				
	Description of development				
	Guidance/standards/criteria quoted				
	Development is noise sensitive				
	Development is potentially noisy				
Scope	Existing noise environment				
	Noise sources and receptors identified				
	Impact of noise sources				
	Working hours and methods				
	Distance (noise/receptor)				
	Boundary noise limits				
	Building design/construction				
	Building orientation and site layout				
	Noise barriers				
	Equipment specification				
	Noise management plan				
	Measurements	Baseline noise (general)			
		Baseline noise (worst case)			
Barrier height					
Barrier location					
Relative heights (source/receptor)					
Frequency analysis					
Construction phase noise					
Vibration					
Post development monitoring (validation)					
Instrument details and calibration certificates					

Other considerations (please specify)

Useful References

Where formal guidance and protocols have been produced, either from central government or other authoritative sources, it is the policy of Basingstoke and Deane Borough Council that acoustic investigations are carried out with regard to the relevant British Standards, legislation and other guidelines.

Some of the more commonly used standards and guidance which may be applicable are as follows:

- BS 8233:1999 Sound Insulation and Noise Reduction for Buildings - Code of Practice
- BS4142:1997 - Method for Rating of Industrial Noise Affecting Mixed Residential and Industrial Areas
- WHO Guidelines for Community Noise, 1999
- IEC 61672-1:2002 Electroacoustics - Sound level meters - Part 1:Specifications
- BS 7445:1991 (ISO 1996) – Description and Measurement of Environmental Noise
- ISO 9613 - Acoustics - Attenuation of Sound Propagation Outdoors
- PPG 24 - Planning Policy Guidance 'Planning and Noise'
- BS 5228:1997 - Noise And Vibration Control on Construction and Open Sites
- BS7385:1993 – Evaluation and Measurement for Vibration In Buildings. Guide for Measurement of Vibrations and Evaluation of their Effects on Buildings.
- Building Regulations 2000 Approved Document E – Resistance to the Passage of Sound
- Building Bulletin 93 - Acoustic Design of Schools
- BS 5925: 1991 Code of practice for ventilation principles and designing for natural ventilation.
- BS 5720: 1979 Code of Practice for mechanical ventilation and air-conditioning in buildings.
- BS 5250: 1989 Code of practice for the control of condensation in buildings.
- BRE Digest 398 Continuous mechanical ventilation in dwellings: design, installation and operation.
- BRE Information Paper 13.94 (Passive Stack Ventilation)