Proceedings of the Institute of Acoustics

THE NOISE ACT 1996 - A REVIEW OF BRE INVOLVEMENT IN THE NIGHT NOISE OFFENCE MEASUREMENT PROTOCOL

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1. INTRODUCTION

In October 1994, against a background of ever increasing complaints about neighbour noise, continuing pressure from the Right To Peace And Quiet campaign and the media, particularly the Mail on Sunday, the Department of the Environment (DOE) established a Neighbour Noise Working Party to review the controls over neighbour noise nuisance.

In March 1995 the Neighbour Noise Working Party reported[1] that :

"Neighbour noise is the greatest source of noise nuisance and complaints to local authorities in England and Wales. ...There is however a wide variation in the nature of noise complaint services provided by individual authorities. ...

In England and Wales during 1992/93 there were 111,515 complaints of neighbour (domestic) noise nuisance to local authorities - a rise of over 30% from the previous year. This compares with just over 31,000 complaints in 1980. The statutory nuisance powers in Part III of the Environmental Protection Act 1990, as amended, provide the main legislative remedy for noise sufferers. The powers rely on a judgement of what constitutes a statutory nuisance, which in turn relies heavily on case law. In 1992/93 a statutory nuisance was confirmed in 40,096 (36%) of the complaints but only 3,673 abatement notices were served - leading to 247 prosecutions and 220 convictions.

...The existing and long established law of statutory nuisance is regarded by many as too lengthy and uncertain to provide an effective solution in present day conditions.

... Consideration should be given to the creation of a criminal offence, separate to the statutory nuisance regime, to apply to night time neighbour noise disturbance."

Following the publication of the Working Party Recommendations, the 1993/94 Environmental Health statistics reported a further increase to 131,153 complaints about neighbour noise (the 1994/95 statistics are now available and report 144,943 complaints). Considerable political momentum was generated, perhaps for the first time on the issue of noise from neighbours, and an opportunity for change was created.

A REVIEW OF BRE INVOLVEMENT...

Although BRE was not represented on the Neighbour Noise Working Party, we were invited by the DOE to submit comments on the proposed new night time noise offence. Our opening and concluding comments are reproduced below:

"Having read the consultation paper and followed the debate it is still not clear whether a lack of consistency in the application of current controls or inadequacies in the current controls themselves is the real issue to be addressed. It would be sensible to try and clearly identify the underlying problem before proposing solutions."

"In conclusion, whilst we generally welcome and endorse most aspects of the consultation paper, we are concerned about many legal, technical and practical aspects of the proposal for a new night time noise offence and the haste with which the Department is moving towards such a controversial method of control."

In the meantime, BRE had also been awarded a contract to provide technical advice and support on acoustics to the DOE. We were asked, as part of this contract, to develop a measurement protocol to support a new objective night noise offence, which would stay as close as possible to the original suggestion of the Neighbour Noise Working Party:

"Consideration should be given to the creation of a criminal offence, separate to the statutory nuisance regime, to apply to night time noise disturbance...

The offence would occur when a person failed to stop making a noise when asked to do so by a local authority officer. It would:

-Relate to noise from private dwellings during night time hours with local authority action being triggered by complaints to the local authority from those affected;

-Be based on a decision by an officer of the local authority as to whether a particular noise gave reasonable cause for serious disturbance, evidence of which would include assessment that the noise exceeds 35 dB(A) and exceeds the background level by at least 10 dB(A); and

-Be adoptable by local authorities to allow for variations in noise problems"

2. THE DEVELOPMENT OF THE DRAFT MEASUREMENT PROTOCOL

BRE began working closely with the DOE seeking to turn the above proposal into a viable enforcement option. We were asked to address and balance the sometimes conflicting legal, technical and practical issues we had previously identified. At the outset we went back to fundamentals and explored the pros and cons of using a fixed maximum noise limit with the Department. Despite the apparent simplicity of such an approach, we concluded that the practical application of a fixed limit would result in apparently inconsistent and inequitable solutions depending on local circumstances.

We realised at an early stage that a traditional (BS 4142) measurement of "background noise" would not be viable if the assessment was to be completed in a simple manner and in a reasonable time. We therefore decided that we had to find some way of relating the noise causing complaint to the noise that would otherwise be present and started exploring ways of looking for gaps or lulls in the complaint noise.

2.1 Trials of the first draft measurement protocols

Our initial investigations were helped by receiving a large number of DAT recordings of night noise problems from Birmingham City Council. The measurement protocol was developed as a laboratory exercise and then taken out into the real world with the help of a number of local authorities who agreed to participate in trials of our ideas. We were very keen to ensure that any proposed measurement protocol would be grounded in reality, technically sound, legally enforceable and, perhaps above all, practical and suitable for use in the often difficult circumstances likely to be encountered by enforcement officers during the night. The assistance and constructive criticism received from officers of the following local authorities during the trials is gratefully acknowledged:

Barking & Dagenham, Bristol, Bromley, Cardiff, Doncaster, Greenwich, Kensington & Chelsea, Leicester, Norwich, Portsmouth, Tameside, Tamworth, Westminster, Woodspring, and York.

One aspect of the trials that concerned us at BRE was that whilst the Department was testing the measurement protocol it was not possible, in the absence of relevant legal powers, to test the wider aspects of the new offence proposal. The trials therefore tested the measurement protocol in isolation of the actual offence, the resources needed to implement it and in isolation of any impact on the wider nuisance regime. In response we developed two questionnaires with the Department for use in the trials. One questionnaire was designed to elicit views and criticism of the measurement protocols and the other to seek views on the envisaged workability of the proposed offence.

The first trials were undertaken during the long hot summer of 1995. The first draft measurement protocol was issued to participating local authorities with a requirement to measure the noise causing complaint as a $L_{Aeq,10min}$ and to confirm that the level dropped by at least 10 dB(A) during short lulls or troughs in the noise. It was acknowledged that the noise level in such troughs might not fall completely to the background level in the room but that it would be indicative of an underlying level.

Three different methods of assessing the "underceedance", the amount by which the noise level dropped during troughs or lulls in the annoying noise, were provided. The first, and our preferred option, used short (0.1s - 0.125s) L_{Aeq} over the same 10 minute period and looked for five measurements that were at least 10 dB(A) below the $L_{Aeq,10min}$ of the noise causing complaint.

The second method used a sound level meter connected to a level recorder set to F time weighting. The five lowest points on a 10 minute paper trace recording were used to assess the "underceedance". The third option used an analogue sound level meter, set to F response, and involved noting the five lowest readings from the display. All three options also provided for the use of a typical minimum level in circumstances where there was a long enough trough during the 10 minute period and suggested an alternative approach, possibly aided by measurements in other nearby locations, for circumstances where there was a continuously high level of noise with no troughs.

In order that we could gain first hand experience BRE officers accompanied local authority officers on investigations of night noise complaints during the summer. As a result of that experience, further work at BRE and feedback from the local authorities, a number of significant changes were made to the draft measurement protocol. At the same time we were aware that we would need to tighten up the measurement protocol, to make it more objective, and to remove ambiguity and discretion from the procedures wherever possible.

As a consequence, the three alternative methods of assessing whether the noise causing complaint was capable of falling by 10 dB(A) were all dropped. The method based on short L_{Aeq} was removed because equipment with this capability was not generally available amongst local authorities, although in the BRE laboratory we continued to find this method to have considerable potential. The method using a level recorder failed for primarily practical reasons and the third analogue based method was disliked by a generation of enforcement officers trained and experienced in the use of digital equipment.

2.2 Trials of the second draft measurement protocol

The second draft measurement protocol was issued to participating local authorities during the autumn/winter of 1995. One of our intentions was to ensure that a single meter could be simply used to take all the necessary measurements. As a result of experience in the first trials the measurement period for the noise causing complaint was reduced from 10 minutes to 5 minutes ($L_{Aeq,5min}$). In addition, a method of assessing "underceedance" based on the same basic concept as before but that allowed the use of statistical L_N parameters was introduced. In this second draft, the underlying noise level was defined as the minimum value of a set of at least five $L_{A99,1min}$ measurements made in the complainants dwelling and taken in a period of no more than 15 minutes encompassing the period during which the noise causing complaint was made. An alternative of using $L_{A99,8.5min}$ was added soon afterwards to allow the use of a wider range of measuring equipment in the trials.

BRE received feedback on the second trials through investigation reports, further questionnaires and informal meetings with local authorities. A period of reflection and consultation with DOE then followed where we attempted to develop the measurement protocol through the sometimes conflicting technical, practical, legal and political issues and priorities involved in the development of a new offence of this type. We also had to bear in mind that the measurement protocol had to work within the legal framework of the Noise Bill and so we worked closely with

the Department as the Bill progressed through Parliament to try and avoid any technical problems arising. The Bill received Royal Assent on 18 July 1996 when it became the Noise Act 1996.

2.3 Consultation on the draft circular and measurement protocol

In September 1996 the Department of the Environment issued a draft Circular[2] on the Noise Act 1996 together with draft Directions and Approval under sections 5 and 6 of the Act, the latter containing the draft technical specification for the night noise offence based on the work at BRE. During the consultation period a series of joint CIEH/DOE/BRE roadshows aimed at local authority personnel were held around the country to explain and expand on all aspects of the Neighbour Noise Working Party recommendations, including the proposed CIEH Noise Management Guide as well as the new night noise offence.

It seemed to me, as a speaker at these roadshows, that many local authority officers were treating them as an occasion to make their feelings known about the new initiatives and proposals, particularly their concern over the night noise offence and its radical new approach to dealing with some types of neighbour noise. But by now the Noise Act was already on the statute book and the time for raising fundamental objections had long since passed with the consultation exercise that followed the Neighbour Noise Working Party Recommendations. Hopefully, professionals working in this field will reflect on the reasons behind the lack of alternative suggestions for a new approach and the muted initial response to the opportunities afforded by the Neighbour Noise Working Party Review in more detail.

3. THE DEVELOPMENT OF THE NIGHT NOISE OFFENCE

This part of my paper traces the development of the night noise offence, includes a summary of the consultation draft proposals issued in September 1996 and raises the issues being considered at the time of writing (early January 1997).

The main administrative provisions for the new night noise offence are contained in the Noise Act 1996. However the permitted level will be set out in Directions by the Secretary of State and the measurement protocol will be set out in an Approval by the Secretary of State. This approach does not involve parliamentary approval and will allow technical aspects to be revised more easily. It is envisaged that the Directions and Approval will be annexed to a circular to local authorities for ease of reference.

3.1 Noise Act 1996 (July 1996)

• Applies to complaints during night hours (2300 - 0700) from an individual present in a dwelling about excessive noise from another dwelling (includes garden, yard, outhouse)

• An officer of the local authority must take reasonable steps to investigate the complaint, may take measurements and may serve a "warning notice".

• Any person responsible for noise which is found by measurement in the complainant's dwelling to exceed the permitted level during the period specified in the "warning notice" is guilty of an offence (subject to a defence of reasonable excuse).

• Officer may serve a "fixed penalty notice" (£100) or instigate summary proceedings (maximum fine of £1000).

3.2 Draft specification of permitted level of noise (issued for consultation in September 1996)

• 35 dB in any case where the underlying level of noise does not exceed 25 dB

• 10 dB over the underlying level of noise in all other cases

3.3 Draft night noise offence measurement protocol (issued for consultation in September 1996)

3.3.1 Noise emitted from offending dwelling:

• Measure $L_{Aeq,5min}$ of noise emitted from the offending dwelling within a 15 minute period, taking care to exclude any significant noise other than that causing complaint.

• Approved device: Type 1 or 2 (BS EN 60804:1994) integrating sound level meter, measuring equipment or system.

3.3.2 Underlying level of noise:

• Determine L_A, time weighting "F", which is not exceeded for 0.6s in a time period of no shorter than 1 minute and no longer than 5 mins, within the same 15 minute period during which the noise from the offending dwelling is also measured.

• Approved device: Type 1 or 2 (BS EN 60651:1994) sound level meter, measuring equipment or system and capable of determining the underlying level of noise.

3.3.3 Testing of approved devices:

• Verified to BS 7580:1992 within the preceding 12 months.

• Sensitivity checked using a calibrator (BS 7189:1989) after measurement, before device is removed from dwelling.

3.3.4 General requirements:

• Room used for dwelling purposes

• Windows and doors closed

• Microphone at least 0.5m from any room surface and furniture

• Both measurements in same 15 minute period in same room

• Both measurements can be made with the same measuring device at the same time

4. POSSIBLE CHANGES TO THE DRAFT NIGHT NOISE OFFENCE MEASUREMENT PROTOCOL

The previous section summarised the draft proposals for the new night noise offence as issued for consultation by the DOE in September 1996. Following further work at BRE and consideration of the comments received during the roadshow and consultation process (particularly from NPL and the IOA Measurement and Instrumentation Group) we submitted a report to the Department of the Environment during December 1996 making a number of fundamental points and recommending several changes to the Approval and some additional material for inclusion in the revised circular. At the time of writing these comments were still under consideration and we understand that the Department is currently expanding and clarifying the text to seek to address our comments.

Some of our comments and recommendations are reproduced below:

"It is vital that the circular makes it clear that the permitted level of noise is not a criteria for nuisance (or indeed planning issues). Further, that nuisance may exist at noise levels below the permitted level and may be a more serious offence than a night noise offence. If these points are not made clear then the night noise offence will seriously undermine existing good practise.

The draft circular implies that visits must always be made upon receipt of a complaint (eg para 15). If it is the intention to allow local authorities discretion in how they interpret "must ... secure that an officer of the authority takes reasonable steps to investigate the complaint" then it must be made clear in the circular. Otherwise, local authorities and their officers could be put in an untenable position by some complainants.

There is no longer a requirement to "stop" making a noise as recommended by the Neighbour Noise Working Party and this could lead to practical problems (eg noise turned down to just below the permitted level). It might be useful to point out that, despite this important change in the drafting of the offence, seizure can achieve a "stop" in noise emission and also to indicate that noise turned down just below the permitted level will often (nearly always) still constitute a statutory nuisance and thus be amenable to other action. Further, because the offence is no longer to "stop" making a noise and has become far more objective, "exceeds the permitted level", it has become a technical offence leaving the technical aspects open to potential challenge in court."

BRE had not originally envisaged that the "underlying level of noise" would need to be accurately determined as a noise level. Our draft measurement protocols looked for gaps or lulls in the noise where the level dropped by 10 dB or more for longer than about 1/2 second, hence indirectly giving an indication of the noise that would otherwise be present. The legal drafting of the "permitted level of noise" resulted in the need to measure very accurately at low noise levels, around 25 dB, for a very short time period, 0.6s, necessitating a number of changes to the Approval and additions to the circular in order to avoid possible technical problems.

4.1 Possible changes to the draft Approval

Appropriate words are required to keep all the references to British Standards etc. throughout the measurement protocol up to date. Particularly pertinent is an imminent revision to BS 7580 due in late 1996 or early 1997. We suggest that if a named standard has been revised or updated by the issuing standards body, the new version may be used as a source of guidance provided it continues to address the relevant requirements.

References to the use of type 2 measuring devices and class 2 calibrators should be removed.

The verification requirement for approved devices should be extended to include the appropriate calibrator that will be used for offence measurements and, in response to consultation comments, the verification period should be increased to biannual.

The sensitivity check on the approved device should be extended to before and after measurement and we should consider providing guidance on how to interpret this check. A new requirement for the calibration and certification of the calibrator should be considered.

In order to further reduce operator discretion the measurement of the noise from the offending dwelling should be a continuous $L_{Aeq,5min}$ except for pauses to exclude from the measurement any significant noise other than that causing complaint. Should the measurement be paused then the measurement time will need to be extended accordingly.

To quote environmental noise level measurements to 0.1 dB confers expectation of an unrealistic accuracy on the measurement[3]. Therefore measurements should be stated as integer values. The following procedures should be used in obtaining these integer values. The procedures are designed to avoid enhancing the likelihood of confirming an offence, either directly as a result of the rounding procedures themselves or because of tolerances in the accuracy of measurement resulting from using the approved measuring devices in the specified manner:

Noise from the offending dwelling: The equivalent continuous A-weighted sound pressure level shall be truncated to the integer value (eg 35.9 and 35.0 become 35) in order to obtain the noise emitted from the offending dwelling.

Underlying level of noise: The A-weighted sound pressure level shall be rounded up to the next highest integer value (eg. 25.1 and 26.0 become 26) in order to obtain the underlying level of noise.

4.2 Possible additions to the draft circular on the Noise Act 1996
We have suggested that the circular needs to contain more information about the measurement protocol for the night noise offence. Our recommended wording follows:

"The permitted level is established by reference to the underlying level of noise. There will be cases where the level of noise complained about is clearly substantially above the level of noise that would otherwise be present and where there will be obvious gaps or lulls in the noise. In such cases it should be possible to assess, by judgement or measurement, that the underlying level of noise (as an A-weighted sound pressure level using time weighting "F") is at least 10 dB below the $L_{Aeq,5min}$ of the noise from the offending dwelling.

The measurement technique makes it possible, in most cases, to assess the underlying level of noise even if the noise from the offending dwelling, such as amplified music, appears to be continuous. This can be done, using currently available instrumentation, by the use of a statistical parameter (such as $L_{A99.8.5min}$, $L_{A99.5.2min}$ or $L_{A99,1min}$) as a proxy for the underlying level of noise. However, if $L_{AN,T}$ measurements are used to determine the underlying level of noise, the equipment used must meet certain additional criteria:
(a) The rate at which the approved device samples the sound pressure level shall be at least 10, and preferably at least 16, times a second.
(b) The class interval used in the statistical calculation performed by the approved device shall be no greater than 0.5 dB.

It is understood that, at the present time, only the instrument manufacturer or their agent can usually supply data regarding the sampling rate and method of operation of the statistical calculations performed by such instruments.

The measurement procedure may require measurements of relatively low levels of noise. In such situations the investigating officer will be more likely to confirm an offence if the level of self-noise of the approved device (which includes the microphone) is low. Self-noise will always have the effect of elevating the underlying level of noise to a greater extent than the offending noise, thus as self-noise increases it becomes less likely that an offence will be confirmed.

To obtain suitable measurements, for the purposes of the Noise Act 1996, in situations where underlying levels of noise are around 25 dB(A), it would be preferable for the self-noise of the approved device (which includes the microphone) to be below 20 dB(A). It should be appreciated that self-noise can exceed this level without significantly affecting the accuracy of measurement of higher sound pressure levels.

The measurement procedure requires the sensitivity of the approved device to be checked, both before and after use, using an acoustic calibrator or pistonphone. It is advised that the acoustic calibrator or pistonphone shall itself have been calibrated and certified in accordance with the requirements given in clause 5.2 of BS 7580: Part 1: 199x 'Specification for the verification of sound level meters'.

During the sensitivity check before use, the approved device should be adjusted so that the level indicated is the same as the 'calibration level'. If the sensitivity check after use shows that the level indicated by the approved device has changed by 0.5 dB or more, then the measurements made in the intervening period should be discarded. The 'calibration level' is the certified level of the calibrator including any required correction for the microphone type and any required environmental correction as specified by the manufacturer(s) of the approved device and calibrator.

It should be noted that the measurement and assessment of noise is a skilled operation and should only be undertaken by people who are competent in the procedures."

5. THE FUTURE DEVELOPMENT OF THE NIGHT NOISE OFFENCE

The availability of new neighbour noise control powers will raise public expectations and demands on local authorities. It seems likely, certainly in the short term, that this will lead to further increases in the number of domestic noise complaints to local authorities. The new offence will inevitably only be suitable for a small proportion of these complaints. Whether this will mean local authorities developing a different approach to neighbour noise control remains to be seen.

Given the adoption of the new offence by a reasonable number of local authorities it would not be unrealistic to suggest that equipment may be developed capable of determining the underlying level of noise, and the wider offence requirements, directly. Such equipment would have low self-noise, a fast sample rate and could include the concept of moving analysis time windows with the direct measurement of the level not exceeded for 0.6s, together with a graphical display and/or print out of relevant values and an appropriate level/time history.

The development of this new offence has shown the importance of standardisation work to policy development. For example, there is a clear need for industry agreement and standardisation on the way in which instruments determine statistical L_N parameters. It would also be useful to develop a simple field procedure for the determination of the self-noise of measuring devices, including any microphone. Procedures for the certification of calibrators and for interpreting the sensitivity check of measuring devices would also benefit from standardisation. There may be value in the IOA establishing a certificate of competence in indoor noise measurement which could include training on the night noise offence measurement protocol as well as other indoor issues such as domestic sound insulation measurement.

We would also like to think that the measurement protocol will stimulate debate in this field. We understand that the protocol will be kept under review and that it could be altered in response to any significant advances in our ability to objectively quantify excessive night time noise. In particular, the use of C-weighting and short (125ms) L_{eq} in the measurement procedures appears to be worth further investigation. Perhaps, given time, and given greater experience and

acceptance of the use of objective criteria in the field of neighbour noise control, more radical alternative approaches could be developed.

Whatever your views on the new night noise offence it is clear that national and local policy makers, equipment manufacturers, researchers and professionals dealing regularly with neighbour noise problems need to work closely together with the objective of achieving the correct balance between the rights of people to go about their daily lives and the rights of noise sufferers. There can be little doubt that the night noise offence presents challenges for, and asks questions of, the acoustics and environmental health professions - perhaps all of us.

6. ACKNOWLEDGEMENT

A review of BRE involvement in the development of the night noise offence measurement protocol would not be complete without acknowledgement of the significant contribution made by my retired colleague, John Sargent. The opinions expressed in this paper are those of the author and not necessarily those of the Building Research Establishment or the Department of the Environment.

7. REFERENCES

1. Neighbour Noise Working Party, Review of the effectiveness of neighbour noise controls - conclusions and recommendations, Department of the Environment, Welsh Office and Scottish Office, March 1995.
2. The Noise Act 1996 - Draft Department of the Environment and Welsh Office Circular, September 1996.
3. G. Parry, R.G. Tyler, How good is *your* decibel?, Proc IOA Vol 17 Part 5, 1995.

8. APPENDIX

Easy reference guide to the night noise offence measurement protocol

Summarised below is a revised measurement protocol for the Noise Act 1996 on the assumption that the Department will make changes in line with the BRE suggestions. This Appendix is therefore only indicative of the final format of the measurement protocol. The Directions and Approval of the Secretary of State and the circular to local authorities should be consulted in detail for the precise final wording used. Possible changes from the draft measurement protocol issued in September 1996 are shown in italics.

8.1 Noise Act 1996 (July 1996)

- Applies to complaints during night hours (2300 - 0700) from an individual present in a dwelling about excessive noise from another dwelling (includes garden, yard, outhouse)
- An officer of the local authority must take reasonable steps to investigate the complaint, may take measurements and may serve a "warning notice".
- Any person responsible for noise which is found by measurement in the complainant's dwelling to exceed the permitted level during the period specified in the "warning notice" is guilty of an offence (subject to a defence of reasonable excuse).
- Officer may serve a "fixed penalty notice" (£100) or instigate summary proceedings (maximum fine of £1000).

8.2 Permitted level of noise (September 1996)

- 35 dB in any case where the underlying level of noise does not exceed 25 dB
- 10 dB over the underlying level of noise in all other cases

8.3 Measurement protocol (As suggested, January 1997)

8.3.1 Noise emitted from offending dwelling:

- Measure *continuous* $L_{Aeq,5min}$ of noise emitted from the offending dwelling within a 15 minute period, *except for pauses* to exclude any significant noise other than that causing complaint.
- Approved device: *Type 1* (BS EN 60804:1994) integrating sound level meter, measuring equipment or system.
- *The $L_{Aeq,5min}$ shall be truncated to the next lowest integer value (eg 35.9 and 35.0 become 35) to obtain the noise emitted from the offending dwelling.*

8.3.2 Underlying level of noise:

• Determine L_A, time weighting "F", which is not exceeded for 0.6s in a time period of no shorter than 1 minute and no longer than 5 mins, within the same 15 minute period during which the noise from the offending dwelling is also measured.
• Approved device: *Type 1* (BS EN 60651:1994) sound level meter, measuring equipment or system and capable of determining the underlying level of noise.
• *If $L_{AN,T}$ measurements (such as $L_{A99.8.5min}$, $L_{A99.5.2min}$ or $L_{A99.1min}$) are used to determine the underlying level of noise, the equipment used must meet certain additional criteria:*
(a) The rate at which the approved device samples the sound pressure level shall be at least 10, and preferably at least 16, times a second.
(b) The class interval used in the statistical calculation performed by the approved device shall be no greater than 0.5 dB.

• *The L_A shall be rounded up to the next highest integer value (eg. 25.1 and 26.0 become 26) to obtain the underlying level of noise.*

8.4 Testing of approved devices:

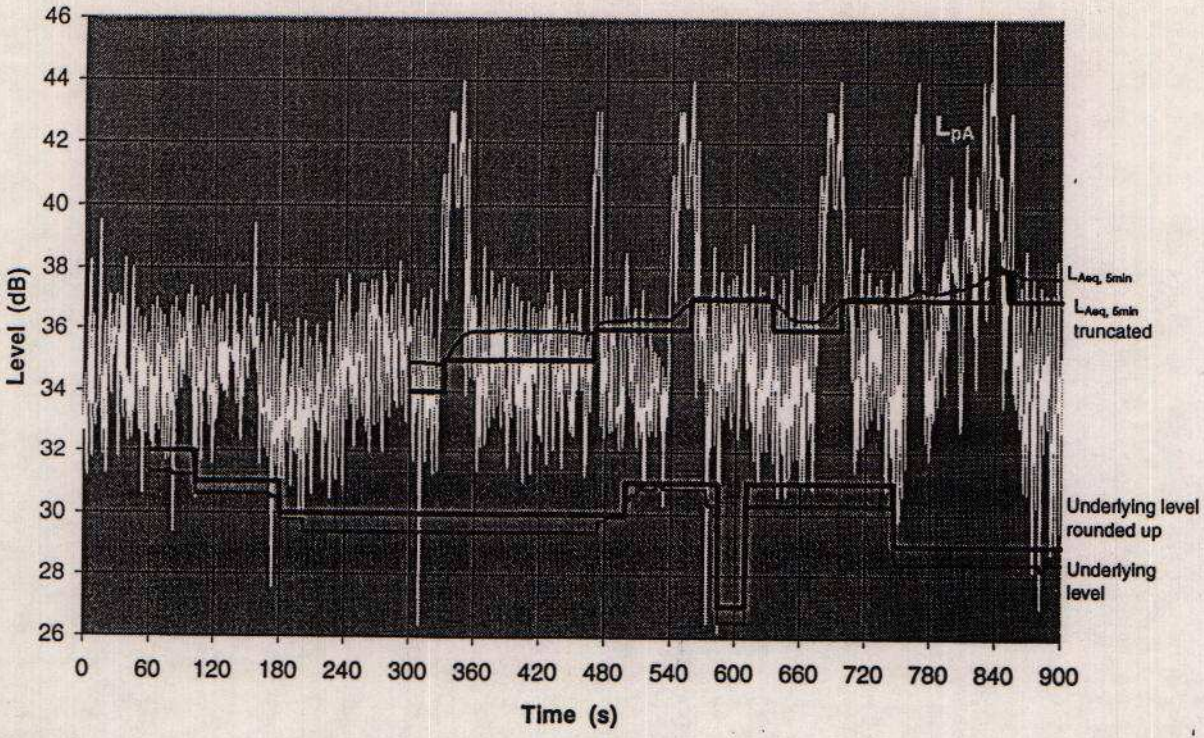
• Approved device *and calibrator* verified to BS 7580: Part 1: 199x within the preceding *24* months.
• Sensitivity checked *before and after use* using a class 1 calibrator (BS 7189: 1989). *If level indicated by the approved device has changed by 0.5 dB or more between sensitivity checks then measurements made should be discarded.*

8.5 General requirements:

• Room used for dwelling purposes
• Windows and doors closed
• Microphone at least 0.5m from any room surface and furniture
• Both measurements in same 15 minute period in same room
• Both measurements can be made with the same measuring device at the same time

8.6 Graph showing suggested night noise offence criteria

The following graph shows an example noise level vs time history of an amplified music complaint, illustrating the suggested night noise offence criteria. In the example the underlying level of noise has been derived directly from the time history rather than using L_{AN} as a proxy (each of the dips being of 0.2s duration). In this case a night noise offence would be confirmed.



Example noise level versus time history of an amplified music complaint showing suggested night noise offence criteria