

Proceedings of the Institute of Acoustics

BS 4142(METHOD OF RATING INDUSTRIAL NOISE) REVISED

by W A Utley

Building Research Establishment, Garston, Watford.

INTRODUCTION

British Standard BS 4142:1967[1] is currently being revised. This paper describes the background to this revision and discusses the main changes which are proposed. In order to aid understanding of the reasons why certain changes were made while others were not the history of the Standard is outlined. This history includes reference to developments within the International Standards Organisation (ISO) which have an impact on the British Standard.

BACKGROUND

The origins of the method for assessing community response to noise which is contained in BS 4142 can be traced back to an American paper by Stevens, Rosenblith and Bolt[2] about the development of the Composite Noise Rating (CNR). The scheme which is described involves the prediction of the level of community response to noise in terms of a number of physical aspects of the noise and other factors. Physical factors include noise level, presence of certain characteristics and the percentage on-time, if intermittent. Other factors include the background noise (no descriptor given), the time of day and whether there has been any previous exposure to the particular type of noise under consideration.

The assessment method appears to have been based on practical experience of dealing with noise complaints and the method is tested against a number of case histories. The source noise is defined in terms of a noise level rank with ranks approximately 5dB apart. This seems to have provided the basis for the correction of 5dB for tonal or impulsive noise in the subsequent BS and ISO documents. Stevens et al considered that the presence of these characteristics required that the source level be raised by one level rank. The correction for intermittent noise is based on an eight decibel reduction for each ten fold reduction in the on-time. The scope of the method is not explicitly stated in the paper. Most of the case histories quoted concern sources of an industrial nature but two examples of aircraft in flight are also included.

The first attempt within the U.K. to produce a method for assessing community response to industrial noise is contained in an Appendix to the Wilson Report[3] prepared by the then Building Research Station(now the Building Research Establishment). The method involves a comparison of the measured source noise with a limiting level derived from a basic level and appropriate allowances. The basic level depended on whether the source was new or established and whether or not the factory was in character

Proceedings of the Institute of Acoustics

BS 4142(METHOD OF RATING INDUSTRIAL NOISE) REVISED

with the area. The allowances cover the presence of certain characteristics, the time of occurrence, the type of district and for intermittent noises the on-time. The basic noise level increment used for these allowances is 5dB. The assessment method predicted only whether complaints were likely and not the intensity of the community response. The Appendix provides 10 case histories which are used to test the assessment method.

Four years after publication of the Wilson Report British Standard BS 4142 was published. There were a number of major differences between the Standard and the earlier BRS proposal. In particular, the Standard proposed that where it was possible to measure the background noise level the source noise should be compared with the background rather than with a calculated level. In situations where it was not possible to measure the background the source noise was to be compared with a "corrected criteria". The procedure for deriving this criteria was similar to that used in the earlier BRS proposal for obtaining the basic level and allowances. There seems to be a fundamental flaw in this approach. While some factors such as the type of district might be expected to be related to the background noise level, it seems unlikely that the background noise will be related to whether or not the source is new or has existed for some time. In fact research subsequently showed that even factors such as the type of district were inadequate for accurately predicting background levels[4]. As many users of the Standard had already begun to suspect, the "corrected criteria" tended to give a higher level than the measured background. In a major revision in 1975 the procedure for determining the "corrected criteria" was moved to an appendix. This revision also changed the definition of background level from "a typical low value or mean minimum" to "that level which is exceeded for 90% of the time".

At the same time that BS4142 was being produced ISO were working on a document which was also concerned with noise assessment. In 1971 ISO Recommendation R 1996 was published. The Recommendation differed in many respects from the British Standard and the U.K., together with the USA, had voted against the document. The scope of the ISO document was much wider and it appeared to apply to any source of environmental noise (with the possible exception of aircraft). The Recommendation introduced the use of L_{eq} for describing noise which varied considerably with time. The rating method involved the comparison of a rating level with either a criterion level or with the measured background level, specified as a mean minimum sound level or the level exceeded for 95% of the time. The choice of basic criterion was left to individual countries. Unlike the British Standard the ISO Recommendation proposed that the two approaches be used for different applications. The criterion level was to be used for zoning purposes or for assessing noise on an area basis while the background level was to be used in "special cases" such as in the

case of complaints about noise at a particular place. The assessment procedure was similar to that in BS4142 but a range of community responses were given which depended on the amount by which the rating level exceeded the criterion level.

REVISION OF ISO R1996

In 1977 an ISO Working Group started work on the revision of ISO Recommendation 1996. It took a number of meetings and much discussion before the format of the new draft standard was formalised. However some important decisions were taken at an early stage and these included the use of the equivalent continuous A-weighted sound pressure level L_{Aeq} for describing environmental noise from all types of source. Another important decision was to exclude procedures for assessing community response to noise from the standard. It was concluded that it was inappropriate to include noise assessment in an ISO document because the relationship between noise exposure and community response was unlikely to be identical in all countries.

The new standard appeared in three parts with the title "Description and measurement of environmental noise". Part 1 was published in 1982 and dealt mainly with the measurement of L_{Aeq} but also included definitions of noise levels, time intervals and categories of noise. The U.K. voted in favour of Part 1 as did most other member bodies of ISO with the exception of the USA. Parts 2 and 3 were published in 1987. Part 2 was entitled "Acquisition of data pertinent to land use" and was generally of less interest to the U.K. since it dealt largely with the zonal concept in land use planning. Nevertheless Part 2 is of some importance since it deals with adjustments for tonal or impulsive characteristics. In fact no clear indication is given of the size of these adjustments although in a Note it is suggested that the tone adjustment might vary between 5 to 6dB and 2 to 3dB depending on the prominence of the tone. A further Note suggests that the impulse characteristic of the noise can be determined by using the time weighting I. The U.K. voted against Part 2 on technical grounds because of the material in these Notes which was considered to be unproven and in the case of I time weighting demonstrably incorrect.

Part 3 deals with noise limits, not in terms of the limit value itself but in terms of the information which must be included in the limit specification e.g. noise descriptor, locations where limit should be met and criteria for assessment of compliance. Use of Part 3 should ensure that in future all noise limits are written unambiguously, something which has not always been true in the past. Despite the fact that the U.K.'s technical comments were accepted we retained our negative vote after a Note was added at a very late stage about the possible use of the C frequency weighting for large amplitude noise. It was considered that the introduction of a new noise descriptor without the approval of the technical working group was inappropriate particularly as it was

BS 4142(METHOD OF RATING INDUSTRIAL NOISE) REVISED

known that there were disagreements within the USA, the country responsible for requesting the change.

It is worth pointing out here the importance of registering a negative vote where it is proposed to produce a National Standard which covers the same topic as an International Standard (IS) and where the IS is seen to have technical deficiencies. Only if a negative vote is recorded will it be possible to correct the technical errors when preparing the National version of the Standard.

REVISION OF BS 4142

It is clear that the standard fulfils an important role in providing a framework for the assessment of industrial noise. Despite the problems of standardisation in this area members of EPC/1/3 were in general agreement that the standard could not simply be withdrawn when the BS equivalent of ISO 1996 was produced because the International Standard did not cover noise assessment.

It is the intention of BSI to publish ISO 1996 Part 1 as a British Standard using the system of dual numbering. Parts 2 and 3 may also be published but in a modified form to meet the U.K.'s technical criticisms. In view of the intention to produce a BS equivalent of ISO 1996 it would be necessary for BS 4142 to be revised in a form to fit more easily with the requirements of ISO 1996 Part 1. In particular it would be necessary to change to the use of L_{Aeq} for describing the noise from the source under investigation.

A panel of five members of BSI sub-committee EPC/1/3 was set up to consider the possible options for revising the British Standard. The three options proposed varied from a "quick" revision with a broadly unchanged scope and using rating level ($L_{Aeq} + \text{corrections}$) in place of CNL, to a comprehensive revision with a considerably broadened scope to include other environmental noise sources including road traffic and aircraft. The panel were aware that research was currently being undertaken to produce more soundly based procedures for applying corrections to measured noise levels when the noise had tonal or impulsive characteristics but that these procedures might not be available for another 5 years.

It was finally decided to proceed with a "quick" revision to convert the Standard to the use of L_{Aeq} and to tighten up the measurement procedures. Since no major study of community response to industrial noise had been undertaken since the original standard was written and no new data on noise complaints were available it would be difficult to justify major changes to the assessment procedure. Insofar as it was possible it was important that the revised standard should give the same assessment as the existing standard for a given situation.

Proceedings of the Institute of Acoustics

BS 4142(METHOD OF RATING INDUSTRIAL NOISE) REVISED

At its first meeting the sub-committee had before it a layout document which highlighted the major decisions which would need to be taken in regard to the revised standard. One such decision was whether the revised standard should deal with both new and existing sources. The current standard refers to "pre-existing background noise" which would seem to have little meaning for a source that has been operating for some years. Nevertheless the current standard has been used regularly to assess complaints about noise from sources that have been in operation for some time. The sub-committee decided to include both new and existing sources.

Another decision which is as yet still not fully resolved is the extent to which measurement periods are specified. On the one hand there is the wish to avoid vagueness and ambiguity by including definite requirements, while on the other there is the desire to leave the expert some scope for selecting an appropriate period for a particular situation and merely requiring that the period "shall be long enough" to obtain the required quantity. A third option, to include sufficient material to enable the non-expert to make his own decision soon leads to the standard becoming a text book and is not recommended.

DRAFT FOR PUBLIC COMMENT

A draft revision was circulated for public comment in 1988. The draft attracted a considerable volume of comment which, when collated, covered more than 170 pages. The volume of comments showed that there was a high degree of interest in the standard which some twenty years after it was first written was still being used by large numbers of practitioners in the field of environmental noise assessment. In view of the large number of comments it was decided to set up a panel to study the comments and, if possible, to produce a new version for discussion by sub-committee EPC/1/3.

The panel first considered a number of general comments. Potentially the most important of these was a criticism of the use of L_{Aeq} since the change to this noise descriptor was one of the major reasons for undertaking the revision. There were in fact three separate reasons put forward for objecting to the use of L_{Aeq} , first that it would be difficult to measure, second that there was no proof that the use of L_{Aeq} , particularly when compared to L_{A90} , would give a correct assessment, and finally that in many existing situations there was a difference of more than 10 dB between L_{Aeq} and L_{A90} without there being any complaints.

The use of L_{Aeq} requires some care when carrying out measurements with an integrating-averaging meter since short extraneous noise peaks can have a large effect on the measured value. However the difficulties are not so great as to constitute a valid reason for rejecting the use of the index and in many situations (ie when the

Proceedings of the Institute of Acoustics

BS 4142(METHOD OF RATING INDUSTRIAL NOISE) REVISED

noise is steady) the use of a sound level meter as in the existing standard would be adequate. The use of L_{Aeq} has the advantage that all types of noise can be measured on a common basis. It is sometimes forgotten that the existing standard fails to specify how certain types of noise should be measured, for example noise which fluctuates by more than 10dB but without having periods at a clearly identified higher level.

During the drafting of the revision, care had been taken to ensure that the assessments with new and existing standards were the same. If this equality were achieved objections to L_{Aeq} on the grounds of lack of proof of suitability for assessment would not stand. The main problem with ensuring equality of assessment was with intermittent noise, particularly at night. The problem was overcome by the panel by specifying a reference time period at night of 5 minutes. In fact an examination of the case histories used to test the original BRS proposal showed that in the great majority of cases the noise was steady. For only 3 out of 40 case histories was the duration correction used and therefore, the correction was not fully tested by the original sample of case histories.

Those who consider L_{Aeq} unsuitable because of the existence of ambient noise environments where the $L_{Aeq}-L_{A90}$ difference exceeds 10dB, but without giving rise to complaints, tend to ignore the fact that the sources contributing to the ambient noise environment such as road traffic lie outside the scope of the standard.

Because it was fundamental to the revision and because a majority of respondents had made no objection, the panel agreed that the specific noise should continue to be measured in terms of L_{Aeq} .

A number of respondents had suggested that the revision should be based on new research or on further data from case histories, though without including any data with their comments. When the BSI sub-committee started work on the revision, new data was requested from members of the committee but none was forthcoming.

The panel readily accepted the comments which pointed out that the revised standard should be written unambiguously. However they were aware that, sometimes, one man's ambiguity was another's essential flexibility.

The panel then went on to consider the comments about particular sections of the draft. There were a number of comments about the inclusion in or the exclusion from the scope of the standard of certain noise sources. The draft for public comment had broadened the scope to include noise from commercial premises. The panel considered that this might involve too great a change in view of some of the queries about types of source that could be classed as

Proceedings of the Institute of Acoustics

BS 4142(METHOD OF RATING INDUSTRIAL NOISE) REVISED

commercial. The panel have suggested a restriction to "sources of an industrial nature" in commercial premises. The reference to "fixed installations" in the original standard appeared to be interpreted by some people as restricting the standard to fixed sources. As a result there were quite a number of requests for the scope to be widened to include mobile sources within industrial premises. However the panel considered that the inclusion within the scope of "noise from industrial premises" was adequate since it did not exclude mobile or any other type of source. It was considered that "fixed installations" referred to sources such as electricity sub-stations which did not come within the classes of "factories or industrial premises". The panel felt that there was some duplication within the initial sections of the draft and have therefore removed the "Introduction" and the "Principle" and included relevant material within a rewritten "Foreword".

The "Definitions" and "Measuring equipment" sections remain substantially the same except for the addition of a definition of measurement time interval. The section on calibration has been expanded to explain more clearly the requirement for the measuring equipment itself to be checked by an accredited laboratory (now defined as a laboratory accredited by NAMAS) every two years. The period of two years has been retained although there were a number of requests for a change to one year in the public comments.

The section on the measurement of the specific noise level has been changed to the determination of the level in order to include the possibility of calculating the level for new sources. An attempt has been made to try to overcome some of the confusion that seemed to have arisen in understanding the use of the time intervals. Definite values have been proposed for the reference time interval for day and night periods. The clauses dealing with weather conditions have been modified to take account of adverse comments about the requirement to use optimum transmission conditions. The modified clauses simply require that the possible influence of the weather is taken into account.

The section on the measurement of background noise level has been considerably shortened after some strict editing. In the sections on the rating level and assessment the original version of the clause on specific characteristics has been restored and the concept of a 5dB marginal difference between specific noise and background has been reinstated. The latter change was requested by a considerable number of those who submitted comments on the draft.

POSTSCRIPT

If sub-committee EPC/1/3 is in agreement with the draft revision prepared by the panel to take account of public comments the revised standard should be published later in 1989 or early in 1990. The draft revision meets the requirements laid down by the sub-committee at the start of its work. These were to use the

equivalent continuous A-weighted sound pressure level for describing the noise from the source under investigation, to ensure, as far as possible, that the noise assessment for a given situation was the same as would have been achieved with the existing standard and to tighten up the specifications for equipment, calibration and measurement procedures. In meeting these requirements the revised standard would need to be compatible with the ISO standard 1996 Part 1. All three parts of the International Standard will appear in a BSI format in the near future. Whether or not they are exactly the same as the ISO versions will depend on consideration of the ISO Standard within CEN.

There will be a need to consider a further revision of the standard in 3-5 years time when current research aimed at devising improved procedures for taking into account the increased response to noises with impulsive or tonal characteristics is completed. During the current revision it became clear that more data about the community response to noise from industrial and commercial noise sources would be useful when BS 4142 is next revised. Some of the proposals which had to be rejected for this revision because of the lack of corroborating data included the extension of the scope to include sources associated with recreation and entertainment and a restriction to exclude the assessment of low frequency noise from the scope of the standard. It is also important for the changes incorporated in the revision to be fully tested in practice, including the rating of noise which fluctuates over a range of more than 10dB without reaching a distinct higher level and the use of fixed and specified reference time intervals for rating intermittent noise.

ACKNOWLEDGEMENT

This paper has been produced as part of the research programme of the Building Research Establishment of the Department of the Environment and is published by permission of the Director.

REFERENCES

- [1] British Standards Institution 1967 BS4142 Method for rating industrial noise affecting mixed residential and industrial areas
- [2] K N Stevens, W A Rosenblith and R H Bolt. 1955. Noise Control 1, 63-73, A community's reaction to noise: Can it be forecast?
- [3] Noise. Final Report of the committee on the problem of noise, Cmnd 2056. HMSO 1963.
- [4] K Attenborough, S Clark and W A Utley, 1976. Journal of Sound and Vibration, 48(3), 359-375. Background noise levels in the United Kingdom.

Proceedings of the Institute of Acoustics

PLANNING INQUIRIES

GEORGE S ELLIFF

PREAMBLE

1. Thank you for inviting me to your 10th Anniversary Seminar. From a look at the list of speakers and topics in your programme, I appear to be the odd man out in talking about inquiries rather than about noise. I have no doubt that many of you will have appeared as witnesses at public inquiries, but I am told that this is not so for all of you.

2. In the same way that at inquiries I have welcomed the expert witness who has guided me through the mysteries of his specialism starting with very basic factors, I hope it will be of general interest if I say a few words about public inquiries in general, about the work handled by the Planning Inspectorate, about Planning Inspectors, and about the organisation of inquiries.

THE REASON FOR PUBLIC INQUIRIES

3. Why do we have a system of appeals and public inquiries in Britain? Appeals arise because a person or a company is dissatisfied with an administrative decision by a governmental body or with a proposal by such a body. These decisions or proposals can take a variety of forms and be governed by many different Acts of Parliament, which also set out rights of appeal against these governmental decisions. There are many such proposals, these could be major highway schemes sponsored by the Department of Transport or by the local Highway Authority, Compulsory Purchase Orders proposed by Local Authorities, Drought Orders, etc. It would take a long time to go through the vast number of all these procedures, and it would take much more time than is available today. Therefore I propose to deal in detail with the main category of appeals, the one which results in the large majority of inquiries. This category comprises appeals made under the provisions of Section 36 of the Town and Country Planning Act 1971 against the refusal of planning permission by a Local Planning Authority. As potential witnesses on acoustic matters you will be interested also in inquiries dealing with highway proposals, and I will refer to these later.

HANDLING OF PLANNING APPEALS

4. In the year from April 1987 to March 1988, 22,482 appeals against refusal of planning permission by Local Planning Authorities were made to the Secretary of State for the Environment. This figure has been increasing at over 10% per annum in recent years.

Proceedings of the Institute of Acoustics

5. After an appeal is received by the Department of the Environment, it is examined by administrative staff to see whether it conforms with various rules and if it is valid. The Local Planning Authority are asked to provide background information to the case. The proposal is also examined to see whether the decision on the appeal should be taken by the Secretary of State for the Environment, or whether the proposal falls within a category which can be transferred to one of his Planning Inspectors for decision. Over the years the proportion of appeals determined by Planning Inspectors has steadily increased, and Planning Inspectors now determine about 97% of all appeals.

6. There are three methods of handling appeals. These are by written representations, by an informal hearing, or by an inquiry.

7. In the first method, by written representations, the Appellant and the Local Planning Authority submit their views in writing to the Department of the Environment, and they have the opportunity to comment on the submission by the other party. There is a visit to the site by the Planning Inspector so that he can assess the impact of the proposal, and he issues the decision letter.

8. In the second method, by informal hearing, the views of the parties are submitted to the Department of the Environment. A meeting is arranged between the Planning Inspector and the two parties to discuss the proposal on an informal basis, usually without any legal representatives or expert witnesses present.

9. These two methods cater for most of the appeals. The third method, that of the inquiry, is used for some 10% of all appeals.

PRELIMINARY ARRANGEMENTS FOR INQUIRIES

10. It is the appeals which are determined by the inquiry method which are likely to be of most concern to you. As I mentioned earlier, I am going to look in detail first at the appeals which are made under Section 36 of the Town and Country Planning Act 1971.

11. After the initial examination of the appeal by the administrative staff of the Planning Inspectorate, the parties are consulted about the date of the inquiry, and the Local Planning Authority arrange suitable accommodation for the inquiry. This is often in a town hall, using either the council chamber or a committee room, depending upon the anticipated number of participants and members of the public.

12. For large inquiries, a pre-inquiry meeting may be held 2 to 6 months in advance of the opening date. This meeting is attended by the Planning Inspector, by representatives of the Appellant, the Local Planning Authority and by interested parties. The purpose of this meeting is to discuss the procedure to be adopted at the inquiry, to agree a timetable, and to discuss the form and presentation of evidence. At the pre-inquiry meeting, no evidence is taken, nor are the merits of the proposal discussed. It is not necessary, nor is it usual for expert witnesses to attend this meeting.

Proceedings of the Institute of Acoustics

REPRESENTATION OF PARTIES AT INQUIRIES

13. In the case of large scale proposals, the result of the inquiry can have large financial implications for the Appellant, who may be either a private individual or a company, and there can be serious implications for the Local Planning Authority on the overall planning of an area. Therefore it is likely that the Appellant will want to engage a skilled person to present his case, with expert witnesses to give detailed evidence. The presentation of the case may be by a planning consultant, or by a solicitor, barrister, or Queen's Counsel, depending on the complexity of the case and the financial resources of the Appellant. The number of expert witnesses will also vary, depending on the nature of the case. Usually there are witnesses to give evidence on planning aspects, with support from a variety of other experts.

14. The Local Planning Authority will usually draw its witnesses from experts on its own staff, but with support from private experts on specialist matters.

PROCEDURE AT PLANNING INQUIRIES

15. At the appointed time, the Planning Inspector formally opens the inquiry, giving the names of the Appellant, the Local Planning Authority and brief details of the proposal. He identifies himself, and announces whether he will be determining the appeal, or whether he will be making a report on the case and giving a recommendation, so that the Secretary of State for the Environment can determine the appeal.

16. The Planning Inspector then asks each of the parties who will be presenting their case and the names of any witnesses. In addition to the Appellant and the Local Planning Authority there may be other people or groups who may wish to give evidence. Other authorities such as County Councils, adjoining District Councils, or Parish Councils may wish to give their views. Chambers of Commerce or other companies may wish to support (or oppose) the proposal, groups of residents or individuals may wish to support (or more usually oppose) the projected development.

17. When all the names have been recorded, the Planning Inspector will usually say a few words setting out how he proposes to run the inquiry, the order in which the parties will give evidence, and the hours that the inquiry will sit. If the inquiry is likely to run onto a second day or longer, he will outline times of resumption.

18. These formalities are usually completed in a quarter of an hour, and the main business of the inquiry commences. Whilst it is possible for procedures to vary in special cases, I will describe the procedures followed in the majority of planning inquiries.

19. The Appellant is usually the first to present his case. The advocate will present a summary of his client's case, highlighting aspects which are considered worthy of note. He is followed by the first witness for the Appellant, who will make his statement, usually reading from a proof of evidence. The advocate may occasionally interrupt to seek clarification or to ask the witness to enlarge upon some point. When the witness has finished his

Proceedings of the Institute of Acoustics

statement, the Planning Inspector will ask the advocate for the Local Planning Authority if he wishes to ask any questions of the witness. This is the opportunity for the Local Planning Authority to probe the views of the witness as expressed in the evidence, with the aim of finding any weaknesses in the evidence. The advocate may also refer to the evidence which is yet to be given by the Local Planning Authority's witnesses where it varies from the views expressed by the present witness. When these questions are completed, the Planning Inspector may then ask other persons, who have indicated that they wish to speak at the inquiry, if they wish to ask the witness any questions.

20. On completion of the cross-examination, the advocate for the Appellant will usually re-examine the witness. This consists of a further series of questions designed to give the witness a chance to expand on his previous answers, with the aim of minimising any admissions which he might have made during cross-examination, and which could have been damaging to his client's case. Before releasing the witness, the Planning Inspector may also wish to ask him some questions. This procedure is followed for each of the witnesses for the Appellant.

21. It is then usual for the Local Planning Authority to present their case. This follows a similar pattern to that outlined already for the Appellant, although there is usually no opening speech by their advocate. On completion of the evidence of the witnesses, the advocate for the Local Planning Authority may make a closing speech summarising the case for the Local Planning Authority. Often he will request, or the Planning Inspector may direct, that the speech should be given towards the end of the inquiry.

22. The other parties will then be invited to present their cases and the witnesses will be questioned about their views. It is customary that witnesses are only questioned by parties who oppose their views. For example, if a residents' group claim that the proposal would be noisy and disturb the neighbourhood, the Appellant's advocate would be permitted to query the reasons for coming to such a view; but the Local Planning Authority would not be permitted to ask questions in the hope of getting answers which would support their case.

23. After all the witnesses have given their evidence, those bodies which have not made closing speeches are invited to do so; usually these are the various authorities. Finally the Appellant has the privilege of giving the last closing speech. In the closing speeches of the Local Planning Authority and the Appellant, the advocate will usually summarise the case made by his witnesses, he will emphasise any admissions made by his opponent's witnesses and he will seek to minimise any admissions made by his own witnesses.

24. The Planning Inspector then discusses with the parties the arrangements to be made for the inspection of the appeal site, and he formally closes the inquiry.

25. On the site inspection the Planning Inspector is accompanied by representatives of the Appellant and the Local Planning Authority and possibly by representatives of other parties. During the site inspection the Planning Inspector will not discuss the merits of the case, nor may additional information be given to him; but parties may draw his attention to matters

Proceedings of the Institute of Acoustics

which were referred to at the the inquiry. For example, it would be permissible for a person to show the Planning Inspector the window of No. 20 Acacia Terrace which was stated at the inquiry to overlook the appeal site; but it would not be permissible for a witness to say "Mr Inspector, you will see that, in addition to the window of No. 20 Acacia Terrace to which I referred at the inquiry, Nos. 22 and 24 also overlook the appeal site".

HIGHWAY INQUIRIES ETC

26. In highway inquiries, the Highway Authority is the body seeking the development. The Highway Authority can be a County Council, a District Council, or central Government. Such an inquiry follows a slightly different procedure to the one I have set out for a Section 36 inquiry. In this case the Highway Authority is the promoting body. The Authority is in the same position as the Appellant in a Section 36 inquiry, and the opposition may come from land owners, commercial undertakings, public utilities, conservation bodies and residents. Therefore at the inquiry the Highway Authority will normally present their case first, and then the objectors to the road proposal will follow. The Highway Authority will make the final closing speech.

27. Highway inquiries are usually the subject of a pre-inquiry meeting. At this meeting the Inspector will discuss the procedure for the inquiry, and agree with the parties the order of appearance.

28. At the start of this talk I mentioned a variety of other matters which could lead to an appeal followed by a public inquiry. As a general guide, it is the party sponsoring the proposal which is first to present its case at a public inquiry. Then the person or authority opposing the scheme follows. This general guide applies whether it is an Appellant wanting to build a few houses, a Highway Authority wanting to construct a motorway, or a Local Authority seeking a Compulsory Purchase Order for some land.

THE DAILY ROUTINE AT INQUIRIES

29. Planning inquiries are strenuous affairs for all the participants. Every day a large amount of evidence is given or examined. It is customary for inquiries to open at 10.00 hours. It is for each Planning Inspector to arrange the inquiry to achieve the most expeditious outcome. When I was holding inquiries, I adjourned for an hour at lunchtime, and aimed to end the daily proceedings at 16.30 hours, although this would be extended if the evidence of a witness could be completed in a short period thereafter.

30. You may think that 16.30 hours is an early time to finish work, and you yearn for such an apparently easy life. However, for the participants at an inquiry this is nowhere near the end of the day's work. As the Planning Inspector leaves the room, the representatives of the various parties often gather into groups, or move into other rooms to plan their work for the succeeding days. It is not uncommon for a party to arrange that the witnesses, the advocate and supporting staff are accommodated at the same hotel, and the deliberations can carry on late into the night.

Proceedings of the Institute of Acoustics

PLANNING INSPECTORS

31. Who are the Planning Inspectors who sit in lonely isolation, often in a lofty position in the Lord Mayor's enormous Victorian style carved chair with an uncomfortable seat? There are lady inspectors who add a touch of glamour to the proceedings, but most of the inspectors are male - and unglamorous! The members of the Planning Inspectorate are drawn from a variety of backgrounds and professions. Many inspectors have a background of planning, others are architects, lawyers, engineers, surveyors or from other professions. Some inspectors have worked in private practice, or in Local Government, or in central Government, or they may have worked in a combination of all three.

32. The majority of inspectors taking Section 36 planning cases are salaried officers of the Department of the Environment. But in the case of those highway inquiries where the Department of Transport is the sponsoring authority, it would not be appropriate for a salaried officer of the Department of the Environment to hold such an inquiry. In these cases, the inspector is drawn from the Lord Chancellor's Panel of Independent Inspectors.

33. In a similar manner and with the aim of achieving impartiality, a Planning Inspector is precluded from taking cases in his home area, or in areas where he has worked, or where he has had professional associations. He is also precluded from taking cases in which he might have even a remote and minute financial interest. For example, he would not take an appeal involving British Telecom if he is the owner of even a small number of shares in that company.

THE NEW INQUIRY PROCEDURE RULES

34. In recent years the Government became concerned about the increasing length, and hence the cost of holding public inquiries. Therefore in July 1988 they introduced the new Inquiry Procedure Rules in Statutory Instrument 1988 No. 944. These rules were designed to speed up the arranging, programming and holding of inquiries. The rules aim to expedite administrative procedures between the appeal being submitted to the Department of the Environment and the holding of the inquiry. It is not necessary for me to go into all these matters in detail, but the rules do have an impact upon witnesses by laying down a timetable for the submission of information by the parties.

35. Under the former rules, the Local Planning Authority had been required to submit in advance of the inquiry a statement of their reasons for objecting to the proposed development; this was known as a Rule 6 or a Rule 7 statement depending upon whether the inquiry was to be determined by the Secretary of State for the Environment or by a Planning Inspector. Other parties to an inquiry were not normally required to submit any information in advance of the inquiry. In fact some parties were so reluctant to divulge information about their evidence that the proofs of evidence were guarded and unavailable until the witness rose to speak at the inquiry.

Proceedings of the Institute of Acoustics

36. The new rules lay down that both the Appellant and the Local Planning Authority shall serve a statement of case upon each other and upon the Secretary of State for the Environment at an early stage in the proposed timetable. The rules also state that the statements of witnesses shall be sent to the Secretary of State for the Environment and to the other party three weeks before the date of the inquiry. Under some circumstances this period can be varied.

37. The rules make provision for the Planning Inspector to require that only a summary of the statement (proof of evidence) is read by a witness at the inquiry. For myself however, I have preferred that witnesses should read their proofs of evidence in full, rather than confining the reading to a summary. Frequently at an inquiry I have heard a witness correct the text during reading, or make an addition to the text. On occasion this has made a significant difference to the meaning of the statement. Also when the witness reads the statement he may give a subtle emphasis, which gives a new perception to the text.

PRESENTATION OF EVIDENCE AT PUBLIC INQUIRIES

38. It is the Planning Inspector who will either make the decision on the appeal, or he will produce a report, concluding with a recommendation to the Secretary of State for the Environment. Therefore a witness must always bear in mind that his aim at a public inquiry should be to convince the Planning Inspector of the validity of his evidence.

39. I wish to draw your attention to some of the mistakes which are made in the presentation of evidence. At a public inquiry much time is spent in looking at proofs of evidence and appendices submitted by witnesses. On occasion these documents can be very thick volumes and it is essential that everyone at the inquiry can find a reference quickly. Many times at inquiries I have groaned inwardly when an advocate has said "Will you please look at Mr Smith's Appendix 4, that is in the green coloured book, about halfway through, just after page 87 in Roman numerals - oh - you will find some faint numbers in the top left-hand corner". When the book of appendices is opened it reveals a collection of documents all separately paginated and, by coincidence, three of the documents have a page 87 in Roman numerals! The result is that valuable inquiry time is lost in searching for references. Later when the Planning Inspector is reviewing the documents at home as he writes his decision letter or report, he may waste more time in searching for a reference.

40. Therefore I would like to make a few suggestions about your presentation of evidence. Remember that at a public inquiry there will be many people - and perhaps even the Planning Inspector - who are a little uncertain of the precise meaning of some of your mysterious terms such as decibels, L90, "A" Scale etc. Whilst I do not suggest that you should give an hour's talk at an inquiry on "Elementary Acoustics", it may be of value to give some basic information in the opening section of your proof. It is likely that you would not have to read this section at the inquiry, but it would be available for reference by any persons unsure of acoustical terms and methods.

Proceedings of the Institute of Acoustics

41. When you produce a proof of evidence, try to get the contents into a logical order. With the aim of accessibility keep the paragraphs short, divide the text into sections, with a brief summary at the head of each section, then summarise your main points in the concluding section. You should ensure that the paragraphs and pages are numbered, then provide an index at the front of the document. It is often useful if there is a wide margin at the side of the text in which references to plans and appendices can be given.

42. Often witnesses go to a lot of trouble to assemble a book of appendices, which may consist of copies of letters, extracts from technical publications or documents, Government circulars, press releases, law reports etc. These are assembled in an A4 sized book with pages interspersed labelled Appendix 1 etc. As I mentioned in paragraph 39, it can be very difficult to find a particular reference in such a book. If you want to be popular with the Planning Inspector, please provide consecutive numbering throughout the volume. An index at the beginning of the volume is invaluable. When in the proof of evidence you refer to an appendix, you should then quote its consecutive page number in the book of appendices.

43. When you give evidence at an inquiry, you should remember that many of the inquiry rooms have poor acoustics, and often there is no amplification system. You should address the Planning Inspector, but also ensure that the public at the rear of the hall can hear you. Speak slowly and clearly. Be confident. You are selling your "product" to the Planning Inspector, you want him to accept your view of the proposed development and its effect.

44. If conflicting evidence on a topic such as noise levels is given by the two parties, it is possible that the Planning Inspector would ask that the two expert witnesses should meet outside the inquiry to try to agree matters, or if that is not possible, to produce a joint statement setting out the points of difference.

CONCLUSION

45. At the end of the inquiry you will see the Planning Inspector stagger out of the inquiry room carrying a heavy load of proofs of evidence, appendices, plans etc. When he gets home, he has to review all that information and reduce it to a few pages in a decision letter or a report. You want to be sure that he has got your message and it will result in a favourable decision for your client. Therefore make your views as clear and concise as possible - and easy to find in your documents.