

Proceedings of the Institute of Acoustics

PLANNING AND NOISE - TWENTY YEARS OF PRACTICAL EXPERIENCE

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1. INTRODUCTION

Noise has formally been a matter of concern in Town and Country Planning for nearly two decades. Since 1988, the law [1] has required that applications for planning permission for certain classes of development must be accompanied by Environmental Statements, and of course in many cases noise may be a major topic of the Environmental Statement.

The British system of conducting planning inquiries in an adversarial manner means that noise experts, whether consultants or local authority officers, frequently spend much of their time in front of an Inspector in planning inquiries, being examined and cross-examined about the noise implications of development proposals.

When it is finally replaced by the forthcoming Planning Policy Guidance Note, the Department of the Environment circular 10/73 [2] will have had a remarkably long life, and will have played a key role in determining the outcome of many hundreds of planning appeals. How has it fared? Has it done its job successfully, and is the state of town and country planning in the 1990s acoustically better than it was in the 1960s? What should the noise experts be telling the planners in the 1990s?

2. THE PLACE OF NOISE IN PLANNING LAW AND PRACTICE

In the United Kingdom, all 'development' requires planning permission. The definition of 'development' is complex, but it includes not only the construction of buildings but also change of use, demolition and certain kinds of alteration. The law is contained in a number of Statutes and Statutory Instruments, and in general it falls to local authorities to give effect to it. How local authorities use their powers is the subject of a further body of documentation, in the form of Planning Circulars and Policy Guidance notes.

All planning applications are made to the local planning authority (e.g. a District Council) or, in the case of minerals planning applications, to the minerals planning authority (usually the County Council). The planning authority is empowered

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to grant permission, although certain types of application must be notified to the Department of the Environment and the Secretary of State for the Environment may 'call in' an application. This means that he directs the local authority not to determine the application, and he appoints an Inspector to hold a public local inquiry in which the issues are examined and reported on with a recommendation by the Inspector. The Secretary of State then makes his decision based on the Inspector's report. In certain circumstances the Secretary of State's decision can be challenged in the High Court. Public inquiries can also be reached if the applicant for planning permission appeals against refusal and chooses the public inquiry method rather than the submission of written representations.

Although planning applications to local planning authorities are formally determined by the elected members (except in rare cases, like the London Docklands Development Corporation which is a planning authority with an appointed board and planning committee), the reports of the officers carry considerable weight. Planning officers consult the local Environmental Health Department which is usually the source of comment and advice on matters concerning the noise impact of a proposed development. In planning inquiries, expert evidence on noise may be given by an Environmental Health Officer, although in contentious cases, local authorities do hire external consultants.

In the case of applications determined by the local planning authority, the discharge of the authority's responsibilities concerning the protection of the acoustical environment is thus strongly influenced by the advice given by the Environmental Health authority to the planning department.

For the classes of development which require Environmental Statements by law, an assessment of the noise impact of the proposals will appear in print at the time when the planning application is made. In other cases, if noise is an obvious matter of concern it may be a topic considered in a supporting statement, but in many more cases it does not become an issue until the local authority refuses the application and the matter becomes the subject of a public inquiry, either because of an appeal or as a result of a 'call-in' by the Secretary of State.

The present position is that there is a presumption in favour of development unless the proposals would cause demonstrable harm to interests of acknowledged importance. Consequently, the role of the noise expert in the consideration of development proposals is frequently one of determining whether or not proposals will have a noise impact which will cause demonstrable harm.

Circular 10/73 attempts to do two things. It was written at the time when the Noise Insulation Regulations for noise from new or altered highways were being made, and the concept of an absolute noise standard was topical. An attempt was made to

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harmonise the approach to noise from sources other than highways with the highway noise position, and some sort of equivalence between noise measures for highway noise, aircraft noise and industrial noise was sought. However, just as the circular gave no advice to highway authorities on the assessment of the impact of noise from the highways on existing noise sensitive development (such advice being found elsewhere, the procedures for gaining powers to construct highways being generally outside the Town and Country Planning System), so its attempts at harmonising the absolute standards approach are confined to the setting of standards for new residential development near to existing industry or existing airfields. A table in Circular 10/73 which sets out 'site standards' and 'good standards' is frequently abused and used to justify noise standards in existing premises affected by noise from new development. By contrast it forms part of the standard which is dealing explicitly and exclusively with the effect of existing noise sources on new development. To quote the report of the inspector appointed by the Secretary of State for the Environment to conduct the public inquiry into the proposed City of London Heliport:

'The specific criteria in the circular are set out in Appendix 2; they relate to circumstances in which it is proposed to introduce new development to areas around existing noise sources. Although paragraph 21 in the circular states that the same principles will be material in considering proposals for the establishment of new airports, their application must be treated with care. While it is possible to incorporate high levels of sound insulation in new buildings, existing structures will not have been designed to alleviate the effects of a new airport and noise insulation could be rudimentary. It could be difficult to provide additional sound insulation in existing buildings; account should be taken of the probability that the occupants of such buildings will have become accustomed to their existing noise levels.'

Circular 10/73 is silent about railways, although a number of local authorities have adopted railway noise standards for use in the same manner as the site standard for highway noise.

While Circular 10/73 deals in absolute standards when addressing the topic of noise from existing sources affecting new development, it takes a different approach when dealing with the reverse situation - the effect of noise from proposed new development on existing properties. As far as highways and airfields are concerned, it offers little advice, but in the case of proposed new industrial development, the circular offers substantial guidance. This guidance makes extensive use of British Standard 4142 Method of Rating Industrial Noise Affecting Mixed Residential and Industrial Areas, albeit the 1967 version.

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Basically the advice given is that noise from the proposed development should be rated using BS 4142; if the conclusion is that 'complaints may be expected' it will hardly ever be right to give permission; increases in ambient noise levels affecting residential and noise-sensitive development should be avoided, but if this is not possible the aim should always be to hold down noise levels and 'scarcely ever' to exceed a set of absolute limits. The absolute limits are set very high, and were intended to apply in cases where the pre-existing background noise level is already very high and increases of 5 to 10 dB(A) (as might be permissible without reaching the 'complaints likely' threshold) would take the overall noise level up to intolerable levels.

Noise from mineral workings is dealt with only in passing in Circular 10/73, in the much quoted paragraph:

'There will however be times when it is appropriate--or even desirable in order to meet other planning objectives--to allow some form of industrial or similar development near houses etc. Minerals have sometimes to be worked although there are houses nearby. And some service installations are sometimes welcomed in a local shopping centre serving a residential area. The need is then to take every precaution to ensure that noise emitted by the development in question does not on the whole make the area a less pleasant place to live.'

In fact, noise from mineral workings is the subject of a different government circular, MPG 2 [3]. Unfortunately it is of little help, since it refers the reader to Circular 10/73 which has nothing to say about noise from mineral workings besides the paragraph quoted above. MPG2 also refers to BS 5228 [4] which gives advice on the prediction of noise levels from plant associated with (among other things) mineral extraction and guidance on how to reduce noise disturbance, but little or no guidance on setting noise limits. The Department of the Environment commissioned a study of noise from mineral workings [5], which concluded that control of noise by the setting of absolute standards was best, through the use of boundary noise limits. A new Minerals Planning Guidance note is expected, which will give effect to the recommendations of the report.

3. THE PLANNERS' RECORD TO DATE

In the second decade following the publication of Circular 10/73 PLANNING AND NOISE, do we have more enlightened planning policies regarding noise? Is residential development kept separate from sources of noise? Is industry kept separate from residential development? Are new commercial and industrial developments subject to adequate control of emitted noise?

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Unfortunately the answer is frequently 'no'. Land enclosed by by-passes is viewed as an ideal place to build houses, and if the 'site standard' of Circular 10/73 can be met by a combination of noise barriers and sound insulation then the planners are content. Green fields next to long established factories are viewed as suitable plots on which to build houses, notwithstanding the fact that meeting the 'site standard' or even the 'good standard' does not stop people who like to open their windows from complaining about noise and successfully causing nuisance action to be taken against the factory. Major housing developments are built around airports in areas exposed to noise levels well above the Circular's recommended criterion for major new developments, on the basis that if enough noise insulation is provided the situation is satisfactory.

On the positive side, noise is frequently considered in the assessment of planning applications when in the past it might have been overlooked, although the record is patchy. Some local authorities are over zealous in seeking to apply conditions such as 'no increase in the L_{A90} ', others permit food superstores with bedroom windows looking out over service yards.

One of the difficulties faced by planners is that for a planning condition to be valid it must relate to land within the control of the applicant. This is interpreted as meaning that a noise limit stated in terms of the permissible maximum noise level outside nearby houses is invalid if the applicant does not own the houses, or the land on which the noise is to be measured. To overcome this, boundary noise limits are favoured, notwithstanding the fact that the relationship between noise levels at the boundaries of large premises may be related to noise levels at more distant residential property in a most complex way.

4. PLANNING AND NOISE - THE FUTURE

In the two decades since Circular 10/73 was produced, noise has certainly become a normal and legitimate consideration in the determination of planning applications. Many planning applications have been refused and appeals dismissed because of 'demonstrable harm' to the amenity of residents by way of noise; many planning permissions have been granted including noise conditions. How much successful enforcement action has been taken to rectify breaches of noise conditions in planning permissions is less clear.

What is needed for the future is better guidance on the quantification of the impact of noise. Now that the Town and Country Planning (Assessment of Environmental Effects) Regulations are in place, the concept of 'significant impact' has come to the fore. What is a significant noise impact?

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As in the case of many phenomena affecting human beings, the effect of noise varies from person to person (or appears to when attempts are made to study the effect of noise on people). There is therefore no clear division between significant and insignificant impact, or between demonstrable harm and harmlessness. As you increase the value of the noise index, all that happens is that a larger proportion of the population responds adversely, more people are woken up; more people are annoyed, and so on. Where do you draw the line? What proportion of the population is it acceptable to awaken, or to annoy? 50%? 10%? 1%? There is of course no scientific answer to this question, since the safe answer that it is acceptable to awaken or annoy no people at all cannot be achieved since the statistical distribution of human responses which is assumed to apply tends to zero only asymptotically. The question has to be answered from a political point of view--what proportion of the population can those in power annoy, or permit to be annoyed, and their actions be considered reasonable. Here the acoustician cannot help.

Where the acoustician can help is in providing better information about the effects of noise. If a development is proposed which will give rise to a given quantity of noise, what proportion of the population can we expect to be annoyed, or suffer sleep disturbance, or deterioration in task performance? While this question can be answered with reasonable confidence in the case of certain classes of noise source, there are important classes of noise source for which the information is completely lacking. If the planning committee, planning inspector or Secretary of State can be provided with reliable information on the effects of the development they are considering, in terms that are can be readily grasped by the layman, they will be better able to judge whether or not the development should be permitted.

For small developments, it should be possible to pre-judge the issue of acceptability, and to set down a series of standards against which the development can be assessed. The Batho report [6] commended a Building Research Establishment idea that there should be three action levels: Level A where noise is not an issue, Level B where development would not be unacceptable on noise grounds alone if noise insulation is provided and Level C where noise was sufficient to create a strong presumption against permitting development.

For major developments, however, including large infrastructure projects such as airports, it may not be possible to avoid significant noise or vibration impacts, and in these cases the decision-maker needs to be able to quantify the adverse impacts, in order to weigh them against such benefits as may be perceived.

The overriding requirement is for clear and unequivocal statements, set out in authoritative documents, which can be used directly for the assessment of noise and vibration impacts. It should be possible by the application of straightforward procedures to be able to state whether or not there is likely to be a significant impact, or

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'demonstrable harm'. Any noise expert who has experienced the examination and cross examination of expert evidence at a major public inquiry will know that what matters is the written word, and who wrote it. One sentence in an official or semi-official document is worth ten opinions.

What is needed therefore is a manual of noise and vibration appraisal for planners, bearing a Department of the Environment *imprimatur*. This should be a compendium of assessment methods, standards and guidelines covering all situations which arise in Town and Country planning.

5. REFERENCES

- [1] TOWN AND COUNTRY PLANNING, ENGLAND AND WALES The Town and Country Planning (Assessment of Environmental Effects) Regulations 1988, SI 1988 No. 1199, H.M.S.O. London 1988
- [2] PLANNING AND NOISE, Department of the Environment Circular 10/73, H.M.S.O. London 1973
- [3] MINERALS PLANNING GUIDANCE: APPLICATIONS, PERMISSIONS AND CONDITIONS MPG 2 Department of the Environment 1988
- [4] NOISE CONTROL IN CONSTRUCTION AND OPEN SITES British Standard 5228:1984, BSI, London 1984
- [5] THE CONTROL OF NOISE AT SURFACE MINERAL WORKINGS, Report Prepared by W.S. Atkins Engineering Sciences Ltd, Department of the Environment, HMSO London 1990
- [6] Report of the Noise Review Working Party 1990, HMSO London

