

BRITISH ACOUSTICAL SOCIETY

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Institution of Mechanical Engineers, 1, Birdcage Walk, London, SW1.

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"NEIGHBOURHOOD NOISE"

"MONITORING AND REGULATION BY A LOCAL AUTHORITY"

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It is estimated that some 90% of the Greater London area has noise levels in excess of the standards suggested in the Wilson Report. No one can dispute the need to reduce the noise level of the environment in which we live and any means by which this could be achieved should be given the most serious consideration.

My contribution is, therefore, to stimulate the discussion on 'neighbourhood noise' with reference to the problems and means of control of noise abatement zones from a Local Authority point of view. May I say that, in my role as Engineer to a Local Authority, it is not likely that I shall be directly responsible for such controls and, therefore, the following observations are my own personal views on possible ways a Local Authority may exercise its powers in any forthcoming legislation based on the proposals in the Report of the Noise Advisory Council.

The first question is, which department of the Local Authority would be responsible for designating the noise abatement zones? Clearly, I feel that the Public Health Inspectorate is the department which should be responsible for this and for the legal processing of such zones. I say this because in the majority of cases the zones will be concerned with existing buildings and the Public Health Inspectorate is the one department of the Local Authority which has the intimate knowledge of such buildings. However, this cannot be done in isolation and would require inter-departmental consultation with planners and traffic engineers. Introduction of these zones will take a number of years and, as a first stage, the obvious zones are conservation areas and general improvement areas. It could be said, however, that these areas are probably areas in which existing noise nuisances are, at present, at the minimum. Nevertheless, it would give the Local Authority experience in administration and enforcement before tackling the more complicated areas.

I consider that one of the problems facing the Local Authorities will be the determination of the acceptable noise level. This is bound to vary from one area to another and from one part of the country to another. I believe it will be necessary to set a long term target which can be achieved in, say, thirty years and that the reduction in noise levels will be achieved in stages of say, ten years. This would overcome the problem, for example, of a factory owner who only has a short-term lease. In the beginning, I would suggest that the average ambient noise level of the zone would be taken as the first target.

A lot has been said, and in particular by the Confederation of British Industries, that a separate noise inspectorate, under the Department of the Environment, should be set up to operate noise control. I do not agree with this opinion. I consider that the problems, in the main, are local and are best dealt with locally. With the re-organisation of Local Government and the creation of the new larger district councils, I see no problem. It is essential for inspectors to have detailed local knowledge of the areas and I am confident that a regional body would not deal efficiently with the many problems of which residents complain. It would mean a further body for the ratepayer to approach. As I have already mentioned, it will be essential for close liaison with the planners and traffic engineers which, again, would be extremely cumbersome if an outside body was introduced. In the case of complicated problems that might need specialist consultation, there is no reason why the new County Authorities should not employ a specialist within their organisation. For example, London Boroughs can call upon the services of the Greater London Council's Scientific Branch.

Probably, the biggest problem in controlling the noise levels will be the monitoring of noise and the determination of the particular noise. From the enforcement point of view, the simpler the method, the better, provided the result is reliable. If it can be achieved satisfactorily, I would suggest that monitoring the sound level at source would be the better method from a Local Authority's point of view. Manufacturers of machinery could issue certificate of noise emission levels at source and from this it would be possible to calculate the noise level outside the building. After all, noise is not a precise science and I feel that such calculations would be sufficiently accurate to fulfil the basic purpose behind noise abatement zones. In this connection, it would be desirable to give thought to whether it would be practical to schedule different methods of sound insulation of buildings to give differing levels of reduction of noise. As this method relies on sound levels at source as the basis, which is followed by a calculation in order to arrive at a figure at, say, the boundary of the particular property, then I feel it would also be necessary to adopt national standards for such calculations which would apply throughout the country.

This raises a further point on the statement in the Report on 'neighbourhood noise' in which it is considered "the making of building regulations with regard to insulation to the outside would not be appropriate".

In fact, the Department of the Environment has issued a consultative document dealing with proposals for a Building Bill with the intention to modernise and rationalise the building regulations. Amongst the main features of the Bill would be the widening of scope of the present regulations to include, inter alia, more comprehensive control of building services and equipment and to include measures dealing with the health, safety and welfare of persons in or about buildings and the health and safety of the public generally. This includes imposing requirements as to measures affecting the transmission of sound. Thought is also being given to "continuing control". It appears to me that a fresh look should be given to this aspect. I suggest that it should be possible to control the noise from new buildings by means of the Building Regulations. Various tables in the regulations could be included to give various conditions for  
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various degrees of noise reductions. Again, this would mean one less authority or department of the Local Authority for a developer to deal with. I would, therefore, see this aspect as "control by regulations".

I have mentioned liaison with the traffic engineers. It is imperative that steps, where possible, should be taken to reduce the impact of traffic noise on the environment. I believe that many Authorities are now looking into this question and my own Authority is well aware of the problem. Studies are being undertaken to reduce the amount of unnecessary traffic flowing through residential areas and these should go hand-in-hand with the creation of noise abatement zones. After all, the Local Authority should be playing its own role in reducing noise. Many relatively simple measures can be taken to stop rat-runs and lorries using residential roads. The creation of more zones in which overnight lorry parking is banned is also a step in the right direction.

In my particular Borough, we suffer from a noise which exceeds all other noises and that is aircraft noise. This is a very difficult subject and although the British Airports Authority has a sound insulation grants scheme, this has no effect as far as outside noise is concerned. This noise causes more complaint than noise from road transport. Because of this noise, I can foresee difficulty in monitoring noise levels and in fixing environmental noise levels as standards. This, again, brings me to the point of developing source standards.

Therefore, to sum up, my conclusions on monitoring and regulations appertaining to noise abatement zones are as follows:-

1. The administration and operation of noise abatement zones should be under the control of the Local Authority Public Health Inspectors.
2. The control to be a combination of environmental noise levels and source levels. Wherever possible, monitoring sound power levels at source are to be preferred to monitoring environmental noise levels, although it is appreciated that this would not be possible in all cases.
3. Control by regulations in the case of new buildings.