NOISE LEVELS IN HIGH DENSITY URBAN DEVELOPMENTS

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1. INTRODUCTION

The current Government Planning Policy Guidance Note PPG24, 'Planning and Noise' [1] advises against granting planning permission for residential development in areas which have been deemed to be excessively noisy according to a defined system of noise exposure categories. For example, PPG24 advises that for residential properties likely to fall within Noise Exposure Category C:

> *'Planning permission should not normally be granted. Where it is considered that permission should be given, for example because there are no alternative quieter sites available, conditions should be imposed to ensure a commensurate level of protection against noise'.*

The advice given in PPG24 is of course, even more prescriptive for outdoor noise levels higher than those within Noise Exposure Category C.

Notwithstanding the advice given in PPG24, there appears to be a growing number of modern high-density urban developments where planning permission has been granted, despite being sited in areas subject to existing high levels of road traffic noise and general street noise. In addition, there is little or no evidence that prospective and new occupiers have been, in any way, put off by the supposedly high levels of external noise. The most important factor here appears to be that high levels of external road traffic and general street noise, which might be considered unacceptable in long established residential areas, do not seem to be of major concern to people who wish to live in modern high density urban developments, where the perceived benefits are presumably more significant than the noise.

The fundamental problem which needs to be overcome is that, in many urban areas throughout the UK, the best available sites for new residential development are adjacent or nearby to major roads and important transport interchanges. This can be a particular problem where previous commercial and industrial sites (so called brown-field sites) become available for possible residential development. There is a fundamental conflict between the advice given in PPG24 and the increasing demand for high density residential development in areas of existing high population density.

This paper discusses this topic and refers to a survey of existing residential developments subject to high noise levels carried out by Peter Brett Associates and Ian H Flindell and Associates during summer 2003.

2. SITE ASSESSMENT

The study started by identifying recent high density residential developments suspected as having been constructed in existing high noise areas in a number of cities throughout the southern half of the UK. Initial site visits were made to confirm existing high noise levels based on short sample noise measurements. Because of known noise level variability, short sample noise measurements cannot normally be used to establish the precise geographic boundaries between different noise exposure category boundaries. However, depending on how close the measured data lies to the defined upper and lower limits of each noise exposure category, short sample noise measurements can be sufficient to establish the generic noise exposure category within which the measurement site lies.

Additional criteria that were adopted for this study were that the developments should at least appear to be 'desirable'. They should be located in areas well endowed with transportation links and other facilities and there should not be any other reasons to suspect undesirability such as proximity to excessively run-down areas. The intention was not to select developments at random for study, but instead to select developments where specific problems with the advice given in the current version of PPG24 might be observable. In other words, the study was not intended as an investigation of the general applicability of the advice given in the current version of PPG24, but rather, it was intended to discover if there were any specific examples of high density residential development where the advice given in the current version of PPG24 had apparently been ignored without any obvious adverse consequences. It would then be a matter for others to determine to what extent observed discrepancies in the general advice given in the current version of PPG24 could or should need to be taken into account in the next (current) revision of the guidance.

Our next step was to investigate the planning history for each of our identified developments to discover, if possible, how the advice given in the current version of PPG24 had apparently either been ignored or at least not taken into account. The problem here is that at this stage of the research, we had identified a number of high density residential developments which did not appear to comply with current planning policy guidance and it was therefore important to discover how this situation had arisen.

We found that, as a broad generalisation, there was little or no written evidence that the relevant planning authorities had taken external noise levels into account when determining the original planning applications for these developments. A number of the relevant local authority planning officers whom we consulted pointed out that the existing high noise levels were an unavoidable consequence of having a high-density development in an existing built-up area or urban brown-field site. In their opinion, there might therefore have been little or no point in raising PPG24 issues in the first place.

We also consulted a number of estate agents with experience of selling individual properties in each of our identified developments. As another broad generalisation, we found that when estate agents merely assumed that we might be prospective purchasers of the properties they did not draw our attention to the existing high noise levels. When we mentioned the subject of high noise levels, it was generally dismissed as not being a topic that many people asked about or appeared to be concerned about. When we were able to disclose the main purpose of our enquiries, i.e. to carry out a study of the extent to which existing high noise levels might have been perceived as a disadvantage by prospective occupiers, virtually all of the estate agents we consulted expressed the opinion that prospective occupiers generally understood that high noise levels outdoors were an unavoidable or inevitable

consequence of residential development in what would otherwise be considered as highly desirable locations. The view was that high noise levels would not therefore be a significant issue for potential purchasers.

For the most recent developments, estate agents had had no opportunity to observe whether the high noise levels outdoors might be perceived as an increasing or as a decreasing problem for occupiers over time, but we noted a suggestion that for some developments - those that appeared to be more than about 5 years old - some prospective occupiers were becoming a little more concerned about noise than when the developments were brand new. A number of agents pointed out that while people who were concerned about noise probably would not have even considered these properties in the first place, this did not seem to have affected the overall level of demand for this type of property.

We also inspected a number of properties internally where we had been able to obtain permission from the site agents or landlords. We found no evidence of any additional acoustic insulation over and above that which naturally follows from fitting double glazing and effective draught stripping to external doors to meet the thermal requirements of Part L of the Building Regulations. There was no evidence that designers had avoided fronting habitable rooms or balconies onto noisy streets and no evidence of any attempts to provide a so-called 'quiet' side. On the contrary, for at least some of the developments, large areas of glazing overlooking the 'noisy' side of the property seemed to have been promoted as particularly desirable features. The evidence suggests that at least for the typical occupiers of this type of high density urban development, the need to be able to see all the traffic (ie 'life') passing by outside outweighs any conflicting requirements for relative peace and quiet.

3. EXAMPLE SITES

When the developments were studied in detail, it was observed that many of the most desirable developments (in the opinions of both estate agents and occupiers) as reported to us (due to location and facilities) were in the noisiest areas. We now describe salient points arising from three examples from the much larger number of developments that were investigated in total. For what we hope should be obvious reasons, we have avoided identifying specific developments and this has also constrained the number of specific examples which we have been able to describe in a public forum.

We identified a prestige development on the South Bank of the Thames in London near to the Houses of Parliament which had been constructed on a very noisy site. There were main roads on two sides which were responsible for much of the site falling into Noise Exposure Category D throughout most of the day-time and early evening period. The first phase of apartments (ranging from £400,000 for a small one bedroom flat through £1,400,000 for a not very big two bedroom flat up to even higher prices for a penthouse) had been completely sold out off plan and there had been no indication of any fall off in demand for any of the subsequent phases, some of which were still under construction at the time of our visit. Many of the apartments had one or more 'feature' balconies overlooking the busy main roads down below. The site agents could not recall any prospective occupiers having even mentioned the issue of noise.

As another example, we identified a ‘prestige’ residential development in South Central Birmingham not far from the Gas Street Basin and otherwise in the heart of the commercial area which was very clearly in NEC D. This particular building was a conversion from a late Victorian or early Edwardian commercial/office use and faced onto a busy roundabout with a bus stop right outside. There was some secondary

glazing, but otherwise no indication of any particular precautions having been taken against external noise break-in, and no indication that noise was of any particular concern to any prospective occupiers.

As a final example, we visited a large former brown-field site but nevertheless prestige housing development in Greenhithe in North Kent. This development included a wide range of different types of houses ranging from low rise apartment blocks through to more conventional terraces of individual properties. Although many of the individual streets within the development were not noisy, there was a row of houses fronting onto a busy main road with traffic lights that clearly placed them into NEC D. All available properties had been sold and the developers told us that they had not observed any relative differences in demand between the 'noisy' houses fronting onto the main road and otherwise exactly similar houses located in much quieter areas within the development. This observation does not preclude the possibility that only people who are not sensitive to noise would be interested in occupying the 'noisy' houses, but even if that is the case, there would seem to be enough people who fall into the not-sensitive-to-noise category to justify the developer's original investment in constructing the houses in the first place.

4. CONCLUDING REMARKS

For the majority of developments identified for further investigation in this study, following the advice in the current version of PPG24 would have led to planning permission being refused, or at the very least, that specific conditions regarding additional noise insulation should have been complied with. However, we found no evidence that there has been any particular harm done by non-compliance with PPG24 in any of the developments that we investigated. For many of these developments the fact that they are located in central positions adjacent to transport and other facilities can be seen as a significant plus point that far outweighs any minor inconveniences associated with noise. It is quite apparent that large numbers of people are prepared to pay premium prices to live in this kind of high density urban development and are either genuinely not bothered by the associated noise or merely consider noise to be an unavoidable and, presumably, ignorable consequence of living in such places.

Therefore why does current government planning policy guidance advise local authorities to refuse planning permission for residential development in high noise areas? Do we need to consider the, at present only theoretical, possibility that high outdoor noise levels contribute to adverse health effects over the longer term but only at such a slow rate that residents are generally unaware of these hitherto unsuspected effects. Some researchers believe in the possibility that environmental noise could have insidious long term effects in much the same way that industrial noise is associated with deafness after very long periods of continuous exposure. Or should we assume that at least for non-noise-sensitive people (such as, presumably, the majority of occupiers and prospective occupiers of noisy high density urban developments) people who are not annoyed by noise are not stressed by it and do not therefore suffer from stress-related adverse effects. This leads to the question of whether the real purpose of PPG24 is to protect noise sensitive people from even the possibility of being able to live in noisy areas? Can we afford the luxury of compliance with PPG24 against conflicting demands for urban living?

The recent DTLR and CABE report By Design, Better Places to Live [2] actively promotes the concept of sustainability. This was first raised in Places, Streets and Movement [3], which states that:

> *'A priority for planners should be to enable people to have access to local facilities on foot or by bicycle. Ideally this means a local shop for daily needs within five to eight minutes' walk (400 metres) of home. If possible there should also be a mixture of shops, businesses and other uses within walking distance. The principle of the walkable neighbourhood is the key to creating a sociable, sustainable community.'*

This form of urban planning builds on the traditional market town approach. In modern day terms it means that residents need to be able to easily access facilities and transport links (bus stops and railway stations) in order to have a sociable and sustainable community. It is not possible, or extremely difficult, to efficiently plan a settlement so that all the residents can easily access facilities on foot without having noise generating areas such as roads or a local centre near to their residence.

The advice offered in PPG24 appears to be generally consistent with subjective opinions regarding noise when considered in isolation, but there are many factors that affect where people chose to live. There are many features additional to objective sound levels alone that can have a significant influence in particular cases. There is good evidence that residents are prepared to weigh high noise levels in the balance against other features of any particular property. There are many cases of modern developments which are subject to high noise levels that, when following the PPG24 assessment procedure, it would be assumed that planning permission should not be granted, but nevertheless noise does not appear to present a problem to the residents.

The current guidance in PPG24 that planning permission should not normally be granted in areas exposed to NEC C and D does not appear to be justified in specific cases where the high noise levels are an unavoidable consequence of development in an otherwise highly desirable location.

5. REFERENCES

1 Planning Policy Guidance: Planning and Noise PPG24. Department of the Environment, September 1994

2 By Design, Better Places to Live, A Companion Guide to PPG3. Department for Transport, Local Government and the Regions and the Commission for Architecture and the Built Environment, 2001

3 Places, Streets and Movement, A Companion Guide to Design Bulletin 32 Residential Roads and Footpaths. Department of the Environment, Transport and the Regions: London, September 1998