Noise issues relating to Integrated Pollution and Prevention Control

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1 INTRODUCTION

Noise regulation at industrial installations was a new challenge facing the Agency with implementation of the PPC regime in 2001. To date around 250 permits have been issued. As expected, relatively few have had specific noise conditions attached. From a noise perspective some applications have been very straightforward but others have been more complicated. Interestingly, some of the existing installations have been as challenging as new ones.

2 THE AGENCY APPROACH

From the outset, the Agency decided that the importance of noise at an installation was proportional to the environmental risk. This approach has been well received by industry, who initially thought that each application has to be accompanied by a detailed noise report. This approach has also been well received by other regulators. Clearly, many applications do need a detailed noise report, but not as a matter of routine. This risk-based approach determines not only the amount of information required in the application but also the importance of noise in the permit. The Agency understands the need for good liaison with local authorities who have a valuable role to play and a wealth of experience to draw from. However, a balance has to be struck between liaising with Local Authorities and giving them every opportunity for an input and giving the impression that the Agency using them as unpaid consultants, which is very definitely not the Agency's intention.

Part 1 of IPPC H3 Horizontal Guidance for Noise[1] sets out the Agency's approach to noise and permitting. Generally speaking it has been well received, both through the consultation process and in its practical application. There was a school of thought that felt that numerical noise limits could be used for all situations. However, as most acousticians know noise is very site specific and this absolute level approach is not appropriate. Nevertheless, it was felt important to give some guidance on what might constitute acceptable noise levels. In order to balance these two issues and retain flexibility a "starting" point approach was adopted. It must be emphasized that the levels in H3 are not rigid levels, and intentionally are the opposite, they are a "starting" point from which satisfactory levels can be determined. These may be higher or lower than the 'starting point', according to the risk and local circumstances and do not necessarily need to be incorporated into a permit as conditions.

Best Available Techniques (BAT) must be used to ensure the underpinning of good practice and in some situations the need to prevent creeping ambient (or background) sound levels is a consideration. In all situations there is the need to ensure that no reasonable cause for annoyance due to noise is caused to persons in the vicinity. The concept of "reasonable cause for annoyance", although in various statutes, has no numerical definition either in terms of volume of noise or duration. The assessment of "reasonable cause for annoyance" has to take into account a combination of many

factors. The aim is to determine if the noise would annoy the person on the Clapham Omnibus, i.e. a reasonable person expecting reasonable standards in their home or garden. The allegation that someone is annoyed by noise does not necessarily meet the criterion. One advantage of this criterion is that it enables the Agency to filter out complaints made by particularly sensitive or intolerant people and yet still offer adequate protection to the reasonable general population. It is not a new concept and has been on the statute books since the Local Government Act 1972[2] which allowed local authorities to make bylaws for "good rule and government". Reasonable cause for annoyance is found in many local authority bylaws e.g. ballgames, noise, and skateboards. The same or a very similar phrase has been used in the following legislation:

Control of Pollution Act 1974[3] (noise in streets and construction sites)
Noise and Statutory Nuisance Act 1993[4] (burglar alarms, although not enacted)
Local Government (Misc. Prov.) Act 1982[5] (Public entertainment licences)

There are several factors to take into account when considering "reasonable cause for annoyance", including:

Duration;
Volume;
Time of day, evening, night or weekends;
Acoustic features;
Number of people; and
Type of receptor.

A single factor, or more than one, in combination can significantly influence the assessment.

3 EXPERIENCE OF APPLICATIONS AND REPORTS

The quality of applications and noise reports received in connection with applications has been varied.

Whilst there have been some very good applications, extensive use has had to be made of the Schedule 4 procedure requiring further information. This has resulted in considerable work for the operators and the Agency, and has resulted in delays in determining applications. The Agency response is heavily influenced by the local situation. Additional information is not requested just for the sake of it, and where the noise risk is low due to an inherently quiet operation and no sensitive receptors in the vicinity less detailed information is required. The responses from Local Authorities have been generally very good, but this too has varied. References have been made to the amount of work required to respond to the consultation, however it should be borne in mind that when problem premises come under PPC there should be less work for the local authority in future regulation.

Where required, the noise monitoring reports accompanying applications have ranged from very good to those lacking in terms of quality, clarity and containing basic errors or omissions. Modified noise at work reports are sometimes submitted, and sometimes reports do not always address the most critical impacts such as night-time or weekends. Somewhat surprisingly although many reports are carried out in accordance with BS4142:1997[6] very little of the information required under Section 10 is reported. In particular a subjective view, a description of the noise being measured, the weather and precise monitoring locations are regularly omitted. Reports are also varied in their detail, and all too often unattended measurements are relied upon, which cannot be carried out if the monitoring is to comply with BS4142, or even BS7445[7].

Another common omission in applications has been the lack of identification of noise mitigation measures. The inclusion of this information is useful for two reasons:

i) it may demonstrate that the operator has made great efforts to minimise noise emissions; and
ii) the information may be required during the permitting process.

4 WORKING BETTER TOGETHER PROTOCOL

On the 14th April 2003, the Local Government Association and the Environment Agency will agree and sign a joint "Working Better Together" agreement. This is a joint England and Wales initiative. Under the umbrella of this agreement a number of protocols have been drawn up covering particular aspects of environmental protection where the Agency and Local Authorities will need to work together or alongside each other to deliver specific environmental outcomes and to enhance quality of life of local communities. One of these protocols describes the arrangements for implementation of IPPC.

The purpose of the protocol is to set out high level principles to ensure that operations work in the most effective way possible and a high level of protection of the environment is secured. The document provides :

- A framework to facilitate the setting up of local arrangements to bring together the available resources and expertise of the regulators at a local level;
- In so far as their powers allow, for regulators to deal with non-compliant releases and non-permitted releases and to respond to emergency situations in a timely and co-ordinated manner as appropriate to the situation;
- Means for furthering the understanding of IPPC regulation by providing relevant training and by the timely exchange of relevant information; and
- For dealing with regulatory action against operators in the most effective way.

A National Liaison Group is to be established, the principal roles of which will be to provide a mechanism for resolving issues, monitor the implementation of IPPC and exchange relevant information and review the protocol as necessary. There will also be national level liaison regarding policy and regulatory approaches, as well as joint training as appropriate.

For effective implementation and on-going regulation of IPPC there is a requirement for close co-operation and working between the 2 parties at all levels. It is particularly important for noise in terms of planning issues relating to specific installations and to make this liaison effective, both the Agency and Local Authorities will need to use information from each other to discharge their responsibilities.

5 HABITATS

The Environment Agency must comply with the EU Birds and Habitats Directives (Council Directives 79/409/EEC[8] on the conservation of wild birds and 92/43/EEC[9] on the conservation of natural habitats and of wild flora and fauna) in planning and carrying out all of its regulatory and operational activities. The Agency, as required by its obligations as a competent and relevant authority, will apply the Conservation (Natural Habitats & c.) Regulations 1994[10] (commonly referred to as the Habitats Regulations) when considering all applications for authorisations, permissions, permits, consents and environmental licences (referred to as 'permissions') and all relevant Agency policy and operational activities. Clearly noise may be relevant as part of a PPC application/permission.

At present there is little, if any, relevant or robust information available to inform this decision when a noisy process may be impacting on bird species or wildlife. A precautionary approach would suggest the Agency cannot issue such permits. Previous studies of nightjars in Dorset have shown that the more urban heathland sites support fewer nightjars per hectare of heathland than the more rural heaths (Liley & Clarke, in prep). Fieldwork conducted by the RSPB Dorset Heathland Project in 2002 provided evidence that disturbance did have a negative impact on breeding success, although the mechanism for the increased failure rates is not yet fully understood. The extent of noise impact from permitted activities as compared to other impacts is not known, and further work is required before the effect of disturbance is fully understood, in particular identifying the types of disturbance that are influencing the breeding success.

In recognition of these difficulties the Agency is working with the Royal Society for the Protection of Birds and English Nature on a research project to attempt to assess the impacts of noise on wildlife.

6 THE FUTURE

Special Permitting Groups (SPGs) are in the process of being set up within the Agency to determine applications. These groups are made up a small group of experts, with access to specialists as required. The intention is for these groups to determine applications as industry sectors come into PPC. The use of SPGs will help streamline the permitting process and the use of application and permit templates will add to this. In the case of noise, a risk matrix has been developed which, when completed, would then indicate to the SPG permitting officer that specialist advice should be sought.

As part of the review of PPG24[11] it was recognised that there is comparatively little robust research on the human response to industrial noise. In recognition of this, the Agency is collaborating with DEFRA on a project to review any research that has been carried out in this area. It is anticipated that gaps in the knowledge will be found and the project may pave the way for a more detailed research programme.

At the present time the Agency has a noise modeling capability residing in the Air Quality Modelling and Assessment Unit in Cardiff. The aim is to offer advice to field officers and noise specialists when faced with acoustic reports relying on modeling. The preferred approach, at present, is for noise to be measured wherever possible. However there is no reason why modeling could not be used to back up real monitoring data. In the case of new installations modelling clearly has a greater role, but new applications relying on modelling alone will usually be the subject of detailed conditions and validations during commissioning etc.

Finally a word on monitoring, which is not automatically required either pre or post permitting. Clearly the operator will have the responsibility for monitoring the compliance, or otherwise with any permit noise conditions. However, the frequency of the monitoring will be proportional to the risk and in general terms short term attended monitoring is preferred to unattended long term exercises. One approach is periodic monitoring to ensure that the noise climate around an installation does not increase and over the years gradually decreases with the introduction of newer and, hopefully, quieter plant. If the climate does deteriorate due to noise from the installation this could be an indication that the operator is moving away from BAT.

7 SUMMARY

The quality of applications, monitoring reports and consultation responses has inevitably been variable, and the determination of most permits to date has involved the use of Schedule 4 notices to obtain missing information.

Liaison with Local Authorities is particularly important when Agency is considering the noise aspects of an application, and there have been some good examples of close working and the development of good working relationships at a local level. With the signing of the Working Better Together IPPC protocol in April, it is hoped that this will improve still further.

Noise has not been a major issue at every installation, and by taking a risk based approach to the regulation of noise at installations for which it has responsibility, the Agency aims balance the burden on industry with the need to regulate noise and protect the environment

REFERENCES

1 H3 IPPC Horizontal Guidance for Noise (IPPC H3) Parts 1 & 2, Environment Agency 2002 ISBN 0 11 310123 6 (Part 1) and ISBN 011 310187 2 (Part 2)

2 Local Government Act 1972

3 Control of Pollution Act 1974

4 Noise and Statutory Nuisance Act 1993

5 Local Government (Miscellaneous Provisions) Act 1982

6 BS 4142:1997 Method for rating industrial noise affecting mixed residential and industrial areas, BSI ISBN 0 580 28300 3.

7 BS 7445:1991 Description and measurement of environmental noise:

Part 1. Guide to quantities and procedures, BSI, ISBN 0 580 19728 X;

Part 2. Guide to the acquisition of data pertinent to land use, BSI, ISBN 0 580 19736 0;

Part 3. Guide to the application of noise limits, BSI, ISBN 0 580 19734 4.

8 79/409/EEC

9 92/43/EEC

10 Conservation (Natural Habitats & c.) Regulations 1994

11 Planning Policy Guidance Note PPG24: Planning and Noise, September 1994, DoE.