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# Horizontal Guidance for Noise Part 1 - Regulation and Permitting

Integrated Pollution Prevention and Control (IPPC)



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#### Note:

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## Executive summary

This guidance has been produced by the Environment Agency for England and Wales in collaboration with the Scottish Environment Protection Agency (SEPA) and the Northern Ireland Environment and Heritage Service (EHS). Together these are referred to as “the Agency” or “the Regulator” throughout this document. Publication of this document follows consultation with industry, government departments, local government and non-governmental organisations and full public consultation.

### What is IPPC?

Integrated Pollution Prevention and Control (IPPC) is a regulatory system that employs an integrated approach to control the environmental impacts of certain industrial activities. It involves determining the appropriate controls for industry to protect the environment through a single permitting process. To gain a Permit, operators will have to show that they have systematically developed proposals to apply the Best Available Techniques (BAT) and meet certain other requirements, taking account of relevant local factors.

The Agency intends to implement IPPC to:

- protect the environment as a whole
- promote the use of “clean technology” to minimise waste at source
- encourage innovation, by leaving significant responsibility for developing satisfactory solutions to environmental issues with industrial operators
- provide a “one-stop shop” for administering applications for permits to operate

Once a Permit has been issued, other parts of IPPC come into play. These include compliance monitoring, periodic Permit reviews, variation of Permit conditions and transfers of permits between operators. IPPC also provides for the restoration of industrial sites when the permitted activities cease to operate.

### The aim of this guidance

This document forms part of the guidance on the arrangements for dealing with permitting of emissions of noise and vibration under the Pollution Prevention & Control (England & Wales) Regulations 2000. See [Reference 1](#) and [Appendix 7](#) for equivalent legislation in Scotland and Northern Ireland.

This guidance is in two parts:

- **Part 1**, this document, outlines the main considerations relating to the **Regulation and Permitting** of noise<sup>1</sup>. It is aimed primarily at the information needs of Regulators;
- **Part 2: Noise Assessment and Control**, describes the principles of noise measurement and prediction and the control of noise by design, by operational and management techniques and abatement technologies. It forms a background to this document and will assist in determining BAT for a given installation. It is aimed equally at regulators and at operators.

This document (Part 1) describes (i) the interactions between IPPC and other legislation relating to noise for England, Wales and Scotland, and (ii) the process of determination and drafting of Permit conditions<sup>2,3</sup>. **It should be read in conjunction with the appropriate sector-specific guidance note.**

The approach relies heavily on the existing methodologies that have been developed over many years by local authorities and others, applying them within the BAT framework of IPPC (see [Section 1.2](#)).

Regulation of noise under IPPC will bring together several legislative regimes with different scope but similar purpose and, in the case of A1 installations, will require a co-ordinated approach between the Agency and both the Planning functions and the Environmental Health or Environmental Protection Teams of local authorities. At an early stage, lead planning and environmental health/protection officers should be identified to ensure an effective liaison and consultation process.

In England and Wales the Environment Agency is responsible for those IPPC installations designated as “A1”. In Scotland SEPA is responsible for the regulatory control of all Part A IPPC installations. This is also the case in Northern Ireland. The legislation implementing IPPC has been put into place in England & Wales and in Scotland. In Northern Ireland, the legislation is at an advanced stage and any queries should be directed to EHS.

<sup>1</sup> Throughout this document the term noise also includes vibration except where clearly differentiated by the context.

<sup>2</sup> This guidance does not cover occupational noise exposure.

<sup>3</sup> For those facilities covered by the Waste Management Licensing regime, reference should be made to the document *Internal Guidance for the Regulation of Noise at Waste Management Facilities under the Waste Management Licensing Regulations* ([Reference 16](#)).

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## 1 The regulatory framework for control of noise and vibration

### 1.1 Integrated Pollution Prevention and Control

#### What is IPPC?

Integrated Pollution Prevention and Control (IPPC)<sup>4</sup> is a regulatory system that requires an integrated approach to control the environmental impacts of certain industrial activities. It involves determining the appropriate controls for industry to protect the environment through a single permitting process. To gain a Permit, operators will have to show that they have systematically developed proposals to apply the Best Available Techniques (BAT) and meet certain other requirements, taking account of relevant local factors.

In England and Wales the Environment Agency is responsible for those IPPC installations designated as "A1". In Scotland SEPA is responsible for the regulatory control of all Part A IPPC installations. This is also the case in Northern Ireland. The legislation implementing IPPC has been put into place in England & Wales and in Scotland. In Northern Ireland, the legislation is at an advanced stage and any queries should be directed to EHS.

#### The requirements of IPPC for noise and vibration

Noise and vibration are included within the definition of "emissions" as set out in the Pollution Prevention & Control (PPC) Regulations. Conditions will need to be included within the Permit for the control of noise, as appropriate to the specific situation.

IPPC requires the use of BAT in setting emission limit values or equivalent parameters, and in determining conditions relating to process parameters or technical measures.

### 1.2 IPPC requirements for noise

#### The relationship of this General Note to Sector Guidance Notes

Sector Guidance Notes lay down the indicative standards at a sector, or national, level for determining noise issues under IPPC. Noise issues, however, tend to be very site-specific. In accordance with the regulations, departures from any national standards can be justified at the installation level on the grounds of the technical characteristics of the installation concerned, its geographical location and the local environmental conditions. Further information on this is given in [Section 2.4](#) and in [Reference 8](#).

The Sector Guidance cross-refers to this Note, H3, *Horizontal Guidance for Noise (Parts 1 and 2)*, which covers general issues relating to the regulation, assessment and control of noise relevant to all sectors.

The basic physics associated with this subject area are set out in Part 2 of this Note, **Noise Assessment and Control** ([Reference 17](#)). The material in Part 2 is given as supporting information for the guidance in this document. It is not intended to be a substitute for a more detailed study of the subject as taught, for example, in courses accredited by the Institute of Acoustics.

Taken together, these Guidance Notes will ensure that all aspects necessary for the PPC Regulations, and other regulations that need to be given effect by the IPPC Permit, are addressed adequately in the application.

In determining BAT across an installation, noise will have to be considered and balanced within the wider context of other releases to different media (air, land and water), and taking issues such as usage of energy and raw materials into account. Noise cannot therefore be considered in isolation from other impacts on the environment. Further explanation of this relationship is given in [Section 2.4](#). In many cases, there will be no conflict between the needs of the different media but, where it does arise, **IPPC Guidance Note H1** ([Reference 5](#)) contains methodologies for assessing such cross-media impacts.

#### How far should BAT go?

[Section 2.4](#) deals with the determination of BAT and [Section 2.5](#) with the setting of conditions. The PPC Regulations require installations to be operated in such a way that "all the appropriate preventative measures are taken against pollution, in particular through the application of BAT". The definition of pollution includes "emissions which may be harmful to human health or the quality of the environment, cause offence to any human senses or impair or interfere with amenities and other legitimate uses of the environment". BAT is therefore likely to be similar, in practice, to the

<sup>4</sup> IPPC operates under the Pollution Prevention and Control (England and Wales) Regulations 2000 and the Pollution Prevention and Control (Scotland) Regulations 2000 ([Reference 1](#)). These regulations have been made under the Pollution Prevention and Control (PPC) Act 1999 and implement the EC Directive 96/61 on IPPC ([References 2 and 3](#)). Further information on the overall system of IPPC, together with Government policy and more detailed advice on interpreting the regulations, can be found in the Department for Environment, Food and Rural Affairs (DEFRA) document *IPPC: A Practical Guide Edition 2* and the Scottish Executive/SEPA document *The Pollution Prevention and Control (Scotland) Regulations 2000 a practical guide* ([Reference 4](#)).

requirements of the Statutory Nuisance legislation, which requires the use of “best practicable means” to prevent or minimise noise nuisance.

In the case of noise, “offence to any human senses” may be judged by the likelihood of complaints. However, a lack of complaints should not necessarily imply the absence of a noise problem. In some cases it may be possible, and desirable, to reduce noise emissions still further at reasonable cost and this may therefore be BAT for noise emissions.

Consequently, one of the aims of BAT should be to ensure that there is no reasonable cause for annoyance to persons beyond the installation boundary.

The need to “prevent” noise emissions is, in certain situations, less relevant for noise than for some other pollutants. Noise does not accumulate on the installation or in the environment permanently like some pollutants. In other words, when the installation ceases operations, the original noise climate may be restored. The aim should be, wherever feasible, to ensure that proposed additions to existing plant or activities do not add to the overall ambient level. In some cases, however, this may be unreasonable or beyond BAT.

BAT will be installation-specific and, in determining what constitutes BAT, a number of factors will need to be taken into consideration (given in Schedule 2 of the Pollution Prevention and Control (England and Wales) Regulations 2000). The cost of applying a particular technique will need to be balanced against the increased benefit to the environment. Where an environment is particularly noise sensitive, the balance of costs and benefits will probably tip towards the need for additional cost, that is the environmental advantages would justify the increased cost. In this case, the Operator may have to go beyond the standard that would constitute BAT in a less sensitive environment.

A particular concern has been that the balancing of media impacts in an integrated assessment could lead, in some circumstances, to a reduced level of regulatory control for noise compared with the current regimes (for example, switching fans on and off to save energy can cause annoyance). It is anticipated that this will be unlikely to occur in most circumstances.

In summary, the aim of BAT should be to achieve the following:

- underpinning of good practice, a basic level of which the Operator should employ for controlling noise, including adequate maintenance of any parts of plant or equipment whose deterioration may cause increases in noise. For example, this would include bearings, air handling plant, and the building fabric as well as specific noise attenuation measures associated with plant, equipment or machinery;
- noise levels should not be loud enough to give reasonable cause for annoyance to persons in the vicinity, which is a more appropriate environmental standard than that of Statutory Nuisance and is normally the aim of most planning or other conditions applied by local authorities;
- prevention of creeping ambient (often referred to as creeping background), which is the gradual increase in ambient sound levels as industry expands and areas develop.

These indicative requirements apply to both new and existing activities, but it will be more difficult to justify departures from them in the case of new activities. Indeed, because the requirements for noise are likely to be strongly influenced by local environmental conditions, new installations will be expected to meet BAT from the outset and to demonstrate that noise reduction or prevention has been built in to process design.

For most existing plant, especially where there are no existing noise limits, the focus will be on good practice (BAT) and the need to ensure that there is no reasonable cause for annoyance. In assessing any noise impact, existing levels will normally be monitored, then corrections and calculations applied rather than relying on predictions.

For new plant, in addition to the requirements for existing plant, clear targets may be needed to ensure that noise emissions do not contribute to a creeping background (ambient) sound level. In the case of new plant, sound levels should be predicted and modelled. Monitoring for subsequent compliance may be required and this may result in the need for additional noise reduction measures.

The techniques for this are described in Part 2 of this note: *Noise Assessment and Control* (Reference17).

Noise from trade, industrial and business premises is regulated under several different legislative regimes. At the time of submitting an application for an IPPC Permit, an installation may already have a framework of specific noise or vibration-related conditions in place. Alternatively, it may not have been subject to any *specific* noise or vibration-related regulatory intervention at all. There are potentially areas of overlap between IPPC and the existing legislative framework, which will need to be recognised and considered at the permitting stage.

The main provisions are:

- Waste Framework Directive

### **New and existing installations**

### **Existing legislative framework**

- Town & Country Planning Act 1990
- EPA'90 Part III — Statutory Nuisance
- Control of Pollution Act 1974 (COPA)
- Noise & Statutory Nuisance Act 1993

Details of these interactions and how to deal with them are covered in [Appendix 5](#).

However, the Agency must consider the extent of conditions relating to noise control that are required by the PPC Regulations in respect of a particular installation, notwithstanding the existence of noise control provisions under other regimes. Where this results in a necessary duplication of control this should be addressed as an enforcement issue rather than a decision not to impose conditions in the PPC Permit.

In summary:

- the intention is that IPPC and other legislative provisions acting on a given installation will, as far as the legislation allows, be complementary in achieving the required level of control
- the existing legislative framework needs to be taken into account when drafting Permit conditions. Where noise and/or vibration-related conditions are already in place, some of these will probably remain in force whatever the IPPC status of an installation
- any conditions previously imposed by way of notices or through designation of a noise abatement zone or other Local Plan/Unitary Development Plan will need to be considered in consultation with the local authority. There may be good reason for including some in the IPPC Permit
- the Agency will need to maintain for its records an outline of the regulatory history relating to noise for each installation (including the planning history) for future reference
- the implications for enforcement (that is, the split between regulators) need to be discussed by the Agency and the local authority, then documented

Further detail on some less frequently encountered legislative provisions is given in [Appendix 1](#).

### 1.3 Interaction between the Agency and local authorities

#### **High-level arrangements**

Local authorities and the Agency share joint responsibility for the various aspects of the working of the IPPC regulatory regime. A protocol has been drawn up between the Agency and the Local Government Association (LGA) on behalf of local authorities in England and Wales. This sets out high-level principles to ensure that operations work as effectively as possible to secure the highest level of environmental improvement under the legislation.

In Scotland, where SEPA is responsible for the regulatory control of all IPPC installations, specific arrangements to secure liaison will be put in place by local authorities and the Agency.

In Northern Ireland, legislation implementing IPPC has not yet been put in place. This section therefore refers to the position in England, Wales and Scotland. Arrangements in Northern Ireland may be covered in subsequent revisions.

The protocol, recognising particular areas of expertise among the respective regulators, sets out a broad framework describing the interaction between the Agency and local authorities on IPPC issues relating primarily to noise and releases to controlled waters/sewers, and also to exchanges of information and other procedural matters.

While the protocol sets out the high-level arrangements, the detail will be given in accompanying guidance. This document describes the arrangements for noise and vibration.

It is expected that some form of local working arrangements will be drawn up in due course between individual local authorities, groups of authorities or local pollution groups and Agency area offices. These will be based on the framework set out in the protocol to enact the requirements in a way that recognises local commitments, constraints and workloads.

#### **Consultation with Local Authorities**

The protocol suggests that, as well as the formal consultation required by the PPC Regulations, the Agency should encourage as much informal exchange of information as resources Permit, commensurate with the degree of risk associated with particular installations. The exchange is likely to be two-way in most cases, as local authorities will need information and advice about releases to water from A2 installations. Such exchanges will need to continue, as appropriate, beyond the permitting stage with regard to compliance and enforcement.

From time to time, issues may arise where the nature of the interaction is more complex. It is suggested that resolution be attempted initially by discussion between the relevant case officers and a request for further information relating to the particular issue. Should this prove unsuccessful, or if there are aspects that need to be considered in the context of wider consistency, the matter should be referred through normal line-management channels.

[Section 2.3](#)(Consultation with statutory consultees) describes the information required from the local authority with regard to noise in the consultation response and the likely interaction between the regulators.



## 2 Application, determination and permitting

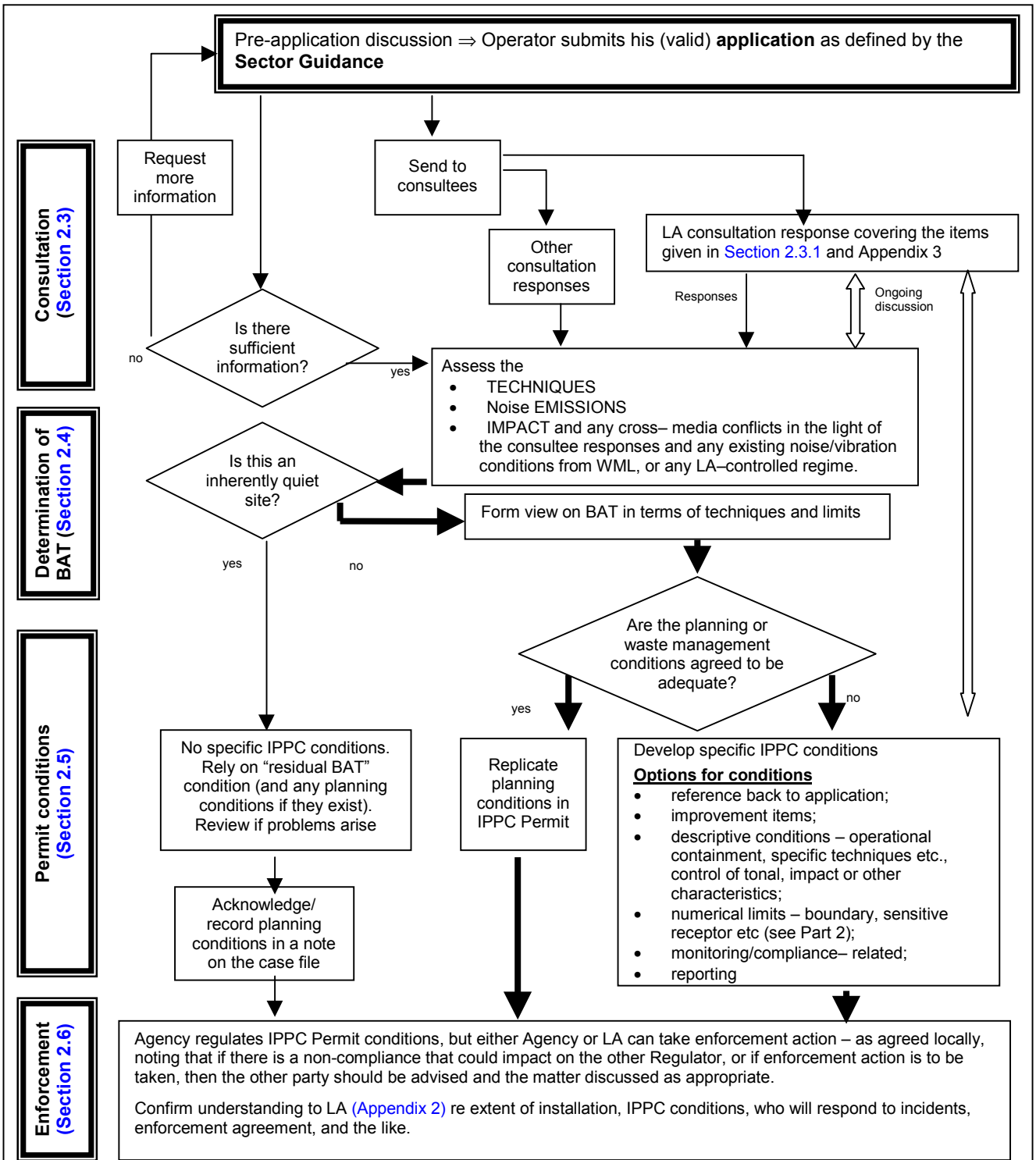
### 2.1 Overview

#### Stages of the permitting process

The permitting process can be broken down into a number of stages, which are shown in [Figure 2.1](#):

- pre-application discussions and receipt of (valid) application ([see Section 2.2](#))
- consultation with statutory consultees and the public ([see Section 2.3](#))
- determination of the application (that is, of BAT) ([see Section 2.4](#))
- setting Permit conditions ([see Section 2.5](#))
- ongoing regulation and ensuring compliance ([see Section 2.6](#))

Figure 2.1 The regulatory process for noise.



## 2.2 Application for an IPPC Permit

### Application requirements — general

The application requirements for noise and vibration are laid down in the regulations and are set out in Section 2.9 of the *Sector Guidance Notes* or the *General Sector Guidance* (the requirements are expanded on the following pages). In outline, the Operator must provide information relating to:

- (i) the techniques employed to control noise
- (ii) the emissions of noise from the installation
- (iii) an assessment of the impact of those emissions on the environmental receptors

### Level of detail required

The level of detail supplied in the application should be commensurate with the level of risk. In other words, the higher the risk of causing annoyance or other environmental impact, the more detail is required and the higher the expectation of a proactive approach to noise control.

Discussions with local authority officers at the outset of the application procedure are likely to be very valuable. The likely risk posed by the installation can be ascertained and this will act as a guide to the level of detail required from the Operator.

Where the activities are inherently quiet and there is no history of noise nuisance, information requirements will be minimal. Where the activities are noisy, but have no history of noise nuisance by virtue of remote location or other reason that *could* change in the future, it is expected that due regard is given to the possibly transient nature of the situation in the supply of information and in ensuring that improvement is factored into longer-term plans. Significant modifications to plant should still be expected to meet standards required of new plant and in any event the general BAT requirement will still apply to existing plant.

### Vibration

There will probably be relatively few applications for operations where environmental issues arising as a result of vibration are evident (that is vibration that arises from the activity being perceptible at the sensitive receptor). It is anticipated that the local authority would make the Agency aware of any previous issues relating to vibration early in the application process.

### What is included in an installation?

The extent of the installation will have been assessed separately. It is quite likely that there will be aspects of the site that are not included within the IPPC installation. The split between installation and non-installation noise will need to be determined. There are two splits to consider:

1. On a large site, the installation may not take in all activities under the control of the Operator. The noise sources outside the installation "boundary" will remain under the provisions of Planning/Statutory Nuisance. This split of sources will need to be agreed with the local authority at an early stage.
2. Within the boundary of the installation, there may be activities or types of sources that are covered by other legislative provisions which have not been repealed or amended by the PPC Regulations and which might legitimately be non-installation noise. This might include construction work, intruder alarms and guard dogs. Discussion with the local authority should identify a common-sense approach for a given installation.

As a guide, the following activities or sources (in addition to that arising from the process itself) are likely to fall within the installation, provided that they are technically connected:

- transport of materials between parts of the process — including non-vehicular means of transfer such as pumping, blowing or conveyors. Vehicular transport off-site is not covered;
- warehousing and associated transportation
- flares
- cooling towers
- extraction/ventilation fans
- raw material or other stockyards, and associated transport and stock-management activities
- waste recycling or waste storage areas
- overhead cranes
- emergency equipment — generators, flares, dump stacks
- boiler blow-down and maintenance activities
- commissioning and construction or modification work that is not covered by COPA or planning provisions — for example, where we require modifications to a bund, storage area, drainage and the like
- loudspeaker address systems, provided that they are associated with managing the activity;
- high-level alarms or other audible warning devices (external)
- vehicle reversing alarms

***What might be excluded from an installation?***

Some sources or aspects of noise generation on the installation are covered by other legislation:

- intruder alarms on buildings
- guard dogs;
- transport on access roads beyond the installation boundary

At the pre-application stage, it is important to be clear about which noise or vibration sources are likely to fall outside the installation and remain under local authority control. This can be explored in more detail during the determination phase. In some cases, it may be appropriate for the Agency to have information on sources adjacent to the installation if this might assist in differentiating between sources.

Advice on defining the extent of an installation can be found in the Department for Environment, Food and Rural Affairs (DEFRA) document *IPPC: A Practical Guide Edition 2* and the Scottish Executive/SEPA document *The Pollution Prevention and Control (Scotland) Regulations 2000 a practical guide (Reference 4)*.

[Appendix 2](#) suggests a template letter of agreement/confirmation relating to the regulatory split of sources on a site between the Agency and the local authority.

### 2.2.1 Noise and vibration information to be included in the application

The following section expands on the noise and vibration requirements of Section 2.9 of the *Sector or General Technical Guidance Note* and the application template. It describes, in detail, the information required to determine BAT for noise and vibration.

**Information needed to determine BAT for noise and vibration**

1. **The main sources of noise and vibration** that fall within the IPPC installation, providing the following information for each source:
  - whether continuous or intermittent
  - the type of emission – aural or vibrational – and its characteristics (for example, impulsive, tonal elements or other distinguishing feature such as clatter, hiss, screech)
  - the hours of operation
  - its contribution to overall site noise emission (categorise each as high, medium or low if there is no available supporting data when applying)
  - the location within the installation on a scaled map (where appropriate this can be combined with the requirement in (3) below to identify sensitive receptors)

A common-sense approach needs to be adopted in determining which sources to include. The ones that need to be considered are those that may have an impact on the local environment and lead to annoyance. For example, a small unit could cause an occupational noise issue in an enclosed space, but would be unlikely to cause an environmental noise problem. Conversely, a large unit or a number of smaller units enclosed within a building could, for example, cause annoyance if doors are left open. Remember, too, that noise which is not particularly noticeable during the day may become more noticeable at night.

2. **Infrequent sources of noise and vibration** not included above (such as infrequently operated/seasonal operations, cleaning/maintenance activities, on-site deliveries/collections/transport or out-of-hours activities, emergency generators or pumps and alarm testing). Provide the information as required for main sources in (1), above, for each infrequent source. Section 2.2 (of this note) gives guidance on which sources should be included.
3. **Identify the noise-sensitive sites and receptors** (typically houses, parkland and open spaces regularly used by the public – schools, hospitals and commercial premises *may* be, depending upon the activities undertaken there) and any other points/boundaries where conditions have been applied by local authority officers or as part of a planning consent, and in particular provide details of:
  - (a) The local environment:
    - provide an accurate map or scaled plan showing grid reference, nature of the receiving site, distance and direction from the installation boundary.
  - (b) Conditions/limits imposed that relate to other locations (that is, boundary fence or surrogate for nearest sensitive receptor):
    - any planning conditions imposed by the local authority relating to noise and vibration
    - other conditions imposed by agreements, for example, limits on operating times or specific technologies
    - any requirements of legal notices and the like relating to noise and vibration
    - any complaints received within the past three years and the outcome of any investigations into those complaints.
  - (c) The noise environment:
    - background noise level, if known (day/evening/night)  $L_{A,90,T}$
    - specific noise level (day/evening/night)  $L_{A,eq,T}$  and/or
    - ambient noise level (day/evening/night)  $L_{A,eq,T}$ , as appropriate
    - vibration data, which may be expressed in terms of the peak particle velocity (ppv) in  $\text{mm s}^{-1}$  or the vibration dose value (VDV) in  $\text{m s}^{-1.75}$

The noise-sensitive sites may not always be the nearest to the installation. Parklands and open spaces may be noise sensitive by virtue of their use for leisure or similar activities, or if they are designated Sites of Special Scientific Interest or similar.

For noise, the terms used above are given the meaning as defined in BS 4142: 1997 *Method for rating industrial noise affecting mixed residential and industrial areas* (Reference 10). Refer to this for a full description. BS 4142: 1997 also gives advice on the appropriate reference periods.

**Information needed to determine BAT for noise and vibration (cont.)**

**“Worst case” situations and impulsive or tonal noise should be accounted for separately and not “averaged out” over the measurement period.** The *Horizontal Noise Guidance Part 2* (Reference 17) gives advice on how to determine background noise levels when plant cannot be switched off.

For vibration, the appropriate standard is BS6472:1992 *Evaluation of human exposure to vibration in buildings* 1 to 80 Hz (Reference 11).

4. **Details of any environmental noise measurement surveys**, noise modelling work or any other noise measurements undertaken relevant to the environmental impact of the installation, identifying:
  - the purpose/context of the survey
  - the locations where measurements were taken
  - the source(s) investigated or identified
  - the outcomes
5. Identify any specific local issues and proposals for improvements.
6. Describe the current or proposed position with regard to the techniques below, those described in Part 2 of this note: *Noise Assessment and Control*, or any others that are pertinent to the installation.
7. Demonstrate that the proposals are BAT, by confirming compliance with the indicative requirements, by justifying departures (as described in Section 1.2 and in the A1 *Guide for Applicants*) or alternative measures. The general requirements are outlined below.

**Indicative BAT requirements**

1. The Operator should employ basic good practice measures to control noise. This should include adequate maintenance of any parts of plant or equipment whose deterioration may give rise to increases in noise (for example, maintenance of bearings, air handling plant, and the building fabric as well as specific noise attenuation measures associated with plant, equipment or machinery).
2. The Operator should also employ other noise control techniques to ensure that the noise from the installation does not give rise to reasonable cause for annoyance, in the view of the Regulator. In particular, the Operator should justify where Rating Levels (as defined in BS 4142: 1997) from the installation exceed the numerical value of the Background Noise Level ( $L_{A90,T}$ ) at the noise-sensitive receptors. Reasons why these levels may be exceeded in certain circumstances are given in Section 2.5.6 of this document.
3. In some circumstances “creeping background” (creeping ambient), described in Section 2.5.6, may be an issue. Where this has been identified in pre-application discussions or in previous discussions with the local authority, the Operator should employ appropriate noise control techniques to minimise problems to an acceptable level within the BAT criteria.
4. Noise surveys, measurement, investigation (which can involve assessing sound power levels for individual items of plant) or modelling may be necessary for either new or existing installations, depending upon the potential for noise problems. Operators may have a noise management plan as part of their management system. More information on such techniques is given in Part 2 of this Note: *Noise Assessment and Control*.

The measurements and reporting should be carried out in accordance with BS4142: 1997 *Method for rating industrial noise affecting mixed residential and industrial areas* (Reference 10).

BS: 7445:1991 Parts 1 to 3 *Description and measurement of environmental noise* also offers advice on measuring environmental noise (Reference 12).

## 2.3 Consultation

### 2.3.1 Consultation between the Agency and local authorities

#### **Consultation with statutory consultees**

Section 1.3 describes the agreements made for liaison between the Agency and local authorities with respect to noise.

The following information is specifically needed from the local authority officers to enable a co-ordinated approach to be taken:

- planning conditions (as they relate to the installation) with relevant information relating to the rest of the installation and its planning history
- information on any contravention of planning conditions and planning enforcement action
- conditions relating to Noise Abatement Zones or other local issues
- an overview of any complaint history, investigations made into the complaints and the outcomes
- other local authority views and recommendations, views on Unitary Development and Local Plans, noise mapping requirements, Local Pollution Group guidance and the like.

A standard letter requesting this input is included in [Appendix 3](#).

The close dialogue between the regulators should lead to ready agreement on the appropriate determination of BAT. The consultation response could, however, propose very tight limits for the following reasons:

1. In planning, to meet local development plans or for other planning reasons, such limits may have been applied or are proposed.

For existing installations such conditions should already be met by the Operator. However, this may not always be the case.

For new plant, IPPC should, in most cases, come to the same conclusion to provide adequate protection of the environment. Theoretically, a situation might arise in which the Agency believes that the balance of costs and benefits, or the balance of cross-media impacts, cannot justify such conditions. In these unusual circumstances, the IPPC Permit may contain conditions that are less strict than the planning conditions.

The conditions imposed via the planning regime would remain within the remit of planning teams in the local authorities, and subsequent regulation will fall on them. The conditions and/or actions that the Agency intends to take to meet IPPC requirements will need to be clearly communicated to the local authority from the outset. Line management should be advised of any such situations.

2. The local authority proposes new noise-related requirements upon transfer to IPPC.

Where possible within BAT, the Agency would work with the local authority to use the IPPC Permit to provide the best protection of the local environment. The Agency has the right to refuse to accept some or all of the local authority consultee response, but must provide robust documented justification for taking a different approach. It may be possible to obtain additional justification from the local authority for the line it has taken, or to ask for a demonstration of how similar limits or conditions have been successfully applied elsewhere to a similar operation.

### 2.3.2 Other consultees

In view of their expertise and involvement in local issues, the local authority statutory consultee response would normally be expected to provide the main input to inform the process of determination. There may, however, be other relevant factors to consider, such as the presence of a Site of Special Scientific Interest (SSSI), Special Areas of Conservation (SACs) or Special Protection Areas (SPAs). Responses relating to these will come from various statutory and non-statutory consultees.

As noise is an amenity issue, responses may also be received from members of the public.

The Agency's responsibilities do not extend to controlling occupational noise, although there may be some areas of overlap between health and safety and environmental legislation.



## 2.4 Determination of BAT

### Overview of the determination process

There are a number of steps in the process of determining BAT, the starting point for which is a comparison of the Applicant's submission and consultation responses (including those from members of the public) with the noise-related aspects of sector-specific guidance and this guidance note. They are:

1. **Confirmation that there is sufficient information in the Operator's application**
2. **Assessment of risk – as a pointer to appropriate conditions**
3. **Determination of installation-specific BAT for noise**
4. **Where appropriate, consideration of noise issues alongside other environmental impacts (see Reference 5).** These steps are set out in detail below. [Section 2.5](#) deals with the details of the Permit conditions.

### Evaluation of the Operator's application

#### 1 *Is there sufficient information?*

- The Operator will need to have addressed all the information requirements set out in Section 2.9 of the *General or the Sector Technical Guidance Note* or to have accounted for why these are not relevant to his application (see [Section 2.2](#) of this document).
- The amount of information supplied and the level of detail should be commensurate with the perceived risk (as gained from some knowledge of the previous noise history of the activity). The information supplied must, however, be sufficient to allow the actual level of risk to be determined. Depending on the circumstances, information relating to night-time or weekend operations, occasional noisy activities and types of noise generated (that is, where it is more likely to cause annoyance — impulse noise, tonal noise) is particularly important.
- Where study of the application shows that more detailed information is required, which the Operator cannot reasonably produce within the determination period (for example, monitoring work), this might be obtained via an improvement condition.
- There should be sufficient information to judge the level of noise risk (see [Figure 2.2](#)). For existing installations, it may be possible to make a judgement that the risk is low from the application and the consultees' responses. For new installations or existing problem installations, information on the background levels and the noise levels generated will be needed.
- Vibration should have been addressed, even if this is only a statement that this is not an issue (a definition of vibration is given in Part 2 Noise Assessment and Control (see [Reference 17](#)). As a guide, the requirement relates to vibration through a structure that affects sensitive receptors in the environment. Vibration, which produces noise as in drumming or rattling, should be addressed for the purposes of the application as noise.
- Noise assessment reports may have been submitted as *part of* the application. These may have been commissioned to fulfil other purposes, such as demonstrating compliance with planning consents or for a planning application. The case officer will need to decide how far these go in providing useful information, taking the following considerations into account, as appropriate: (see also [Section 2.6.2](#) — monitoring requirements):
  - are they sufficiently up to date?
  - is the methodology and the British Standard, or other standard used, stated (including measurement points) and have the requirements of the relevant British Standards been complied with?
  - have details of equipment used and calibration been given?
  - have prevailing meteorological conditions and plant operations at the time of measurement been set out?
  - where modelling has been undertaken, has the model been identified and the inputs detailed?
  - have noise predictions been verified by later measurement?

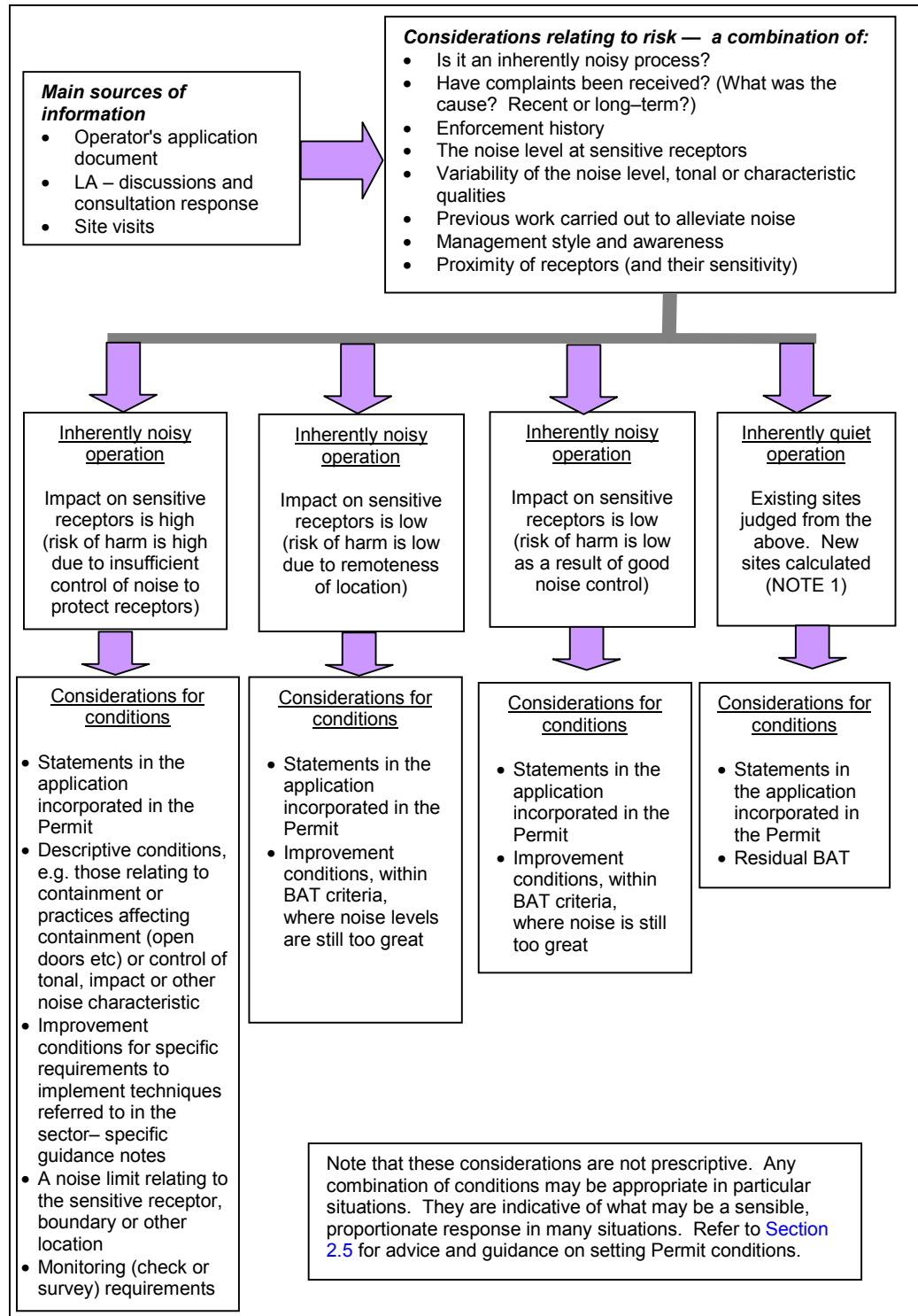
Part 2 to this note: *Noise Assessment and Control* (see [Reference 17](#)) describes an assessment methodology and the most commonly encountered British Standards, ISOs and other guidance relevant to this document. If in doubt, specialist advice should be sought through the Agency noise contacts.

**2 Assessment of risk**

A proportionate approach should be taken to the setting of Permit conditions depending upon the environmental risk posed by the installation. An assessment of the risk will assist in providing context for assessing BAT and in choosing the appropriate conditions in the Permit.

Figure 2.2 is a simple, rule-of-thumb method for categorising installations in terms of their environmental noise risk.

**Figure 2.2 — Simple assessment of risk**



NOTE 1: When assessing whether a new installation is likely to pose a noise risk, it can be assumed that if the rating level of the installation noise is more than 5dB below the background level (both levels assessed or measured in accordance with BS 4142: 1997 (Ref.10)) it would not normally cause a problem. Where both levels are very low (that is, the background below about 30dB and the rating level below about 35dB) specific advice should be sought from the Agency.



### 3 **Determination of BAT for noise and vibration**

Noise is defined in the PPC Regulations in terms of “emissions” and “pollutants”. The requirement to take all preventative measures against pollution, in particular by applying BAT, to prevent and, where that is not practicable, generally to reduce emissions and the impact on the environment, applies equally to noise and vibration as to other pollutants.

In determining BAT for a particular situation, the following aspects need to be considered, together with the guidance on setting conditions in permits in [Section 2.5](#):

1. Are the **Techniques** appropriate, referring to Section 2.9 of the *Sector Guidance* and Part 2 of this note: *Noise Assessment and Control* (see [Reference 17](#)). For a low-risk installation, it is normally enough for the appropriate maintenance regimes to be in place to ensure that the plant remains quiet and meets the minimum criteria of good practice.
2. Do the **Emission** levels meet the benchmarks? That is:
  - are noise-rating levels proposed greater than background and, if so, are the justifications adequate?
  - are noise-rating levels proposed greater than a free-field level of 50dB L<sub>Aeq</sub> by day or façade level of 45 L<sub>Aeq</sub> by night and, if so, are the justifications adequate?
  - is the L<sub>Amax</sub> measured with the fast time weighting less than 60dB at the façade of any room regularly used for sleeping (this may include hospitals and the like by day and night)?
  - are there proposals for noise levels to be below background and, if so, are the justifications adequate?

See “**Setting numerical limits**” in [Section 2.5](#) for reasons why levels above or below background may be appropriate.

3. Is the overall **Impact** acceptable?

#### **BAT for open-air operations**

For an enclosed plant, it may be reasonable to assume that the plant can be designed to achieve a high level of noise control (walls can be upgraded, openings attenuated and the like). However, where engineering solutions are not available, or are limited, it is important for Permit conditions to promote good operational practices. The setting of numerical limits will be subject to the considerations set out in [Section 2.5.6](#), but detailed noise modelling should also be undertaken to explore all available mitigation options.

Landfills are a good example. The design of a landfill, its perimeter bunding and the choice of inherently quiet plant and operating methods, can all reduce noise, but in many cases only by a limited amount. In such cases, the setting of noise limits should be based on the results of detailed noise modelling of available mitigation measures, the results of noise surveys, or a combination of both. Other local conditions and factors also have to be taken into account, otherwise the limit may not be achievable. Landfill operations covered by the PPC Regulations will be subject to the provisions of the Landfill Directive rather than the requirement to achieve BAT under IPPC. Landfill is chosen here as an example of an outdoor site where engineering techniques are not always available to control noise.

The Agency *Internal Guidance for the Regulation of Noise at Waste Management Facilities under Waste Management Licensing Regulations* contains detailed information on this subject ([Reference 15](#)).

### 4 **Cross-media environmental assessment (H1)**

Noise must also be balanced alongside other emissions and environmental impacts in determining BAT for a particular installation. Technical Guidance Note H1, Environmental Assessment and Appraisal of BAT ([Reference 5](#)) provides a tool for assessing the environmental impact of an activity or a whole installation for the purposes of a PPC Permit. However, this should only be necessary where conflicts between noise and other emissions or energy use become apparent.

## 2.5 Options for Permit conditions

### 2.5.1 Overview

Conditions that could be applied to the control of noise and/or vibration can take the form of:

- **descriptive/qualitative** — for example, relating to specific equipment or containment requirements, or timing of certain operations, or other management issues;
- **numerical** — for example, specifying a noise level at the boundary or another specified point.

The simple assessment of potential risk of different types of installation outlined in [Figure 2.2](#) and in [Section 2.4](#) indicates the type of conditions that are likely to be appropriate for each. These are described in more detail below.

Each condition must be able to satisfactorily pass the five key tests of being **reasonable, necessary, precise, relevant and enforceable**, the latter being particularly important on qualitative and numerical conditions. Existing planning conditions — those from a subsumed Waste Management Licence or other conditions that are still relevant and sufficient, and meet these tests — can be replicated in the IPPC Permit, see<sup>5</sup>. Appendix 4 includes sample conditions, taken from PPG24 ([Reference 15](#)), which may be appropriate to the permitting process.

In some cases it may be appropriate to include a Permit condition requiring the Operator to produce and maintain a Noise Management Plan. This may be beneficial to the Operator and the Regulator and could be considered at installations where the resolution of noise problems is particularly complex or where a variety of failures or events could result in off-site harm. See Part 2 to this note: *Noise Assessment and Control* ([Reference 17](#)) for more details. If such a plan is used, it is important to be clear whether it is simply a management tool or whether there is the intention to enforce against its contents.

The following pages describe the approaches that can be taken to permitting for noise under IPPC. In England and Wales the Environment Agency is currently developing an approach using Permit templates which may restrict the choice of condition in a given sector. Account Managers should ensure that they are using the current version of the appropriate sector regulatory package, as developments in the regulatory approach may mean that templates are revised from time to time.

### Options for conditions

### 2.5.2 Statements in the application incorporated in the Permit

It may be appropriate to refer in the IPPC Permit to specific parts of the application where the Operator sets out his techniques for managing noise. They would thus form an integral part of the Permit, against which compliance may be determined.

### 2.5.3 Residual BAT

Where noise-related conditions have not been specifically written into a Permit, the Operator is still obliged to use BAT to implement and maintain appropriate preventative measures against noise-related annoyance. This is often referred to as “residual BAT”. It may be appropriate to have no specific noise-related conditions in the Permit and rely upon these residual responsibilities. This is relevant where an installation has no history of a noise-related problem and there is no reason to believe that harm or annoyance is likely to be caused. However, where this is due only to remoteness of location, the Operator should still be required to reduce noise emissions as far as the balance of cost and benefits allows and particular account should be taken of potential land-use changes in Local Plans and the like.

<sup>5</sup> Within the Environment Agency, assistance in the wording of noise conditions is available from nominated contacts in each region.

### 2.5.4 Descriptive conditions

#### Options for conditions cont.

These can be used in many circumstances, however, as with numerical conditions, great care has to be exercised in their wording:

#### (i) Restrictions on noise characteristics

Noise may contain tonal elements. These are frequencies that stand out against a background of general noise, which is typically made up of many frequencies overlaid on top of one another. Tonal noise can be particularly annoying. Equipment such as fans, transformers and turbines may produce tonal noise (see Part 2 to this note: *Noise Assessment and Control* (Reference 17)).

It may be appropriate to set conditions that prohibit the emission of noise with tonal or other distinctive characteristics, such as clanking or regular "pulsing". This could be applied to new equipment (and may have been imposed as a planning condition), but equally it could be used to ensure that equipment is regularly maintained so that it does not develop such characteristics due to imbalance, for example. The following wording could be used in a Permit:

*The noise emission from source [xyz] shall not contain tonal or other distinctive characteristics as perceived by the authorised officer at location X on plan reference Y attached to this Permit.*

#### (ii) Restrictions on activities/timing, location

The following are examples of conditions that could be used for restricting activities:

*No reversing alarms shall be operated in [specified area] between the hours of [time] and [time], Monday to Friday and not at all at weekends and public holidays.*

Note that use of a condition such as this may result in a conflict with Health and Safety requirements, which should be resolved at the permitting stage.

*Loading, unloading and other activities carried out at [location] must not be undertaken between the hours of [time] and [time], Monday to Friday and not at all at weekends and public holidays.*

#### (iii) Conditions relating to the source or its containment

Typical conditions could include:

- *specified necessary and enforceable standards; for example, silencing equipment on specified powered plant and equipment, maintained in accordance with manufacturer's instructions, or specified noise bunds;*
- *the emergency exit doors at [location] shall be fitted with a device to prevent them being opened except in an emergency;*
- *all external doors shall be fitted with self-closing mechanisms and alarmed to ensure they cannot be left open.*

#### (iv) Other conditions:

A range of other conditions may be set to deal with other circumstances, such as:

- *in cases of periodic testing of safety equipment, emergency or unforeseen circumstances (such as plant failure), the specified noise levels may be exceeded, provided all practicable steps are immediately taken to reduce the noise levels as far as reasonably possible and to restore them to specified levels within the shortest possible time;*
- *emergency generators shall only be tested between the hours of 0800 and 1800 Monday to Friday and not on any public holiday.*

### 2.5.5 Improvement conditions

The improvement section of the Permit can be used to require changes in techniques or other appropriate actions, and to apply appropriate upgrading timescales, as long as the requirements can be justified within the BAT criteria. This would apply in particular to indicative BAT techniques laid down in the *Sector Guidance*.

The improvement programme can also be used to require the Operator to undertake specified monitoring work where this cannot reasonably be undertaken during the determination period. This could be because the monitoring is especially complex or because it needs to coincide with specific (occasional) plant operations.

### 2.5.6 Use of numerical limits

#### **Points to note with regard to the use of numerical limits**

Numerical limits should be applied only when there is particular need and a demonstrable benefit. The limits applied should be appropriate to the situation. Determining compliance in any meaningful way can be very time consuming and expensive, and may not provide any real benefit. In particular, the following should be noted:

- Where an absolute limit is set below the background noise level, it may be impossible to measure it or to infer it accurately from measurement. Checking compliance may be difficult, but can often be undertaken by measuring near the source, then calculating to the point specified in the condition. When framing the condition, it is essential that it passes the five key tests (see Section 2.5.1);
- Often there are multiple noise impacts on a receptor from a variety of sources. This can occur in, for example, industrial estates surrounded by residential development. In such cases noise, low frequencies in particular, may be reflected, leading to difficulties in identifying the source of complaint. Limits or conditions will need to reflect the multiple sources and there may need to be more reliance on source conditions and operational restrictions where compliance can be determined by means other than measurement;
- The measurement of vibration is a specialist subject. Seek advice from the local Agency noise contact as appropriate.

**Wherever possible the emphasis should be upon good design, control at source and use of best practice to prevent or minimise emissions.**

The following paragraphs set out some of the primary issues that must be taken into account when setting numerical limits, in particular for the correct application of the concepts of BS 4142: 1997 *Method of rating noise affecting mixed residential and industrial areas* (Reference 10). The use of BS4142: 1997 is discussed in Part 2 to this note: *Noise Assessment and Control* (Reference 17).

#### **Defining noise levels**

Since many numerical conditions are based around an interpretation of the likelihood of complaints as determined by BS4142: 1997, the measurement of background noise levels (as defined below) is vital. These are usually quantified prior to development as part of the application for planning permission, allowing an absolute noise limit to be set — as a “rating level”. This may be preferable to setting a relative level in case background noise rises in future. The use of “rating level” also addresses tonality and other noise character by applying a 5dB penalty. In the case of existing plant, background may be assessed immediately before or after the normal working day or during periods of shutdown. The term “background noise” should be used with care; it is given a particular meaning in BS4142: 1997.

By convention, the following definitions should be used:

**Ambient noise:** The totally encompassing sound in a given situation at a given time, usually composed of sound from many sources, both distant and near ( $L_{Aeq, T}$ ).

**Background noise level:** The A-weighted sound pressure level of the residual noise at the assessment position that is exceeded for 90 per cent of a given time interval, T, measured using time weighting, F, and quoted to the nearest whole number of decibels ( $L_{A90, T}$ ).

**Rating level:** The specific noise level, plus any adjustment for the characteristic features of the noise ( $L_{Ar, Tr}$ ).

**Reference time interval:** The specified interval over which an equivalent continuous A-weighted sound pressure level is determined, and is 1 hour during the day and 5 minutes at night. (According to BS 4142: 1997 night is the period when the general adult population are asleep or preparing for sleep which, in practice, can be regarded as between 23:00 and 07:00 hours).

**Residual noise:** The ambient noise remaining at a given position in a given situation when specified sources are suppressed to a degree such that it does not contribute to the ambient noise ( $L_{Aeq, T}$ ).

**Specific noise level:** The equivalent continuous A-weighted sound pressure level at the assessment position produced by the specific noise source (the noise source under investigation) over a given reference time interval ( $L_{Aeq, T}$ ).

### Setting the numerical levels

Where numerical levels are set, the measurement positions must be clearly referenced within the condition (see below), as must the need to adhere to relevant British Standards to enable accurate monitoring against the condition to be undertaken. At this stage it is assumed that all levels will be external levels. However, if levels within buildings are set, seek specialist advice from the Agency's local noise contact.

As stated previously, BS4142: 1997 is a useful tool in setting numerical limits. Remember, however, that it is only a guide. It offers clear guidance as to when complaints are likely to be received, but it does not, for example, define Statutory Nuisance. However, BS4142: 1997 states in the foreword, "Although, in general, there will be a relationship between the incidence of complaints and the level of general community annoyance, quantitative assessment of the latter is beyond the scope of this standard, as is the assessment of nuisance".

The British Standard suggests that the likelihood of receiving complaints can be assessed by subtracting the Background Noise Level from the Rating Level. It then advises:

- a difference of around 10dB or more indicates that complaints are likely and the greater the difference the greater the likelihood of complaints;
- a difference of around 5dB is of marginal significance;
- if the Rating Level is more than 10dB below the Background Level then this is a positive indication that complaints are unlikely.

It is impossible to define numerical levels that would be applicable to all circumstances; however, the following two sections should provide a basis from which to develop numerical levels for use in Permit conditions. *Quite often, higher or lower levels than those discussed below will be appropriate, but in each case the levels chosen will have to be carefully considered and justified.*

The advice and experience of the local authority will often be a great help in considering levels and approach.

Some local authorities will have specific planning noise criteria in their local planning policies and these may influence the setting of numerical levels.

#### (i) **The noise should not be so loud that it gives reasonable cause for annoyance to persons in the vicinity.**

The concept of "reasonable cause for annoyance to persons in the vicinity" is dependant upon many factors, including the type of noise, the times of day or night, the nature of the area, the existing noise climate and the contribution made by the noise source under consideration. A comprehensive discussion on environmental noise levels can be found in the WHO Guidelines (see Appendix 6). These offer levels that may give rise to "serious or moderate annoyance". They also suggest that existing quiet outdoor areas should be preserved and for these areas the ratio of intruding noise to background should be kept low. In general terms, the guidelines suggest that an outdoor  $L_{Aeq}$  greater than 50dB is likely to give moderate cause for annoyance in the daytime or evening. An external night-time level of  $L_{Aeq}$  of 45 dB or less is required to prevent sleep disturbance.

Hence it is suggested that the starting point for numerical levels should be a free-field rating level ( $L_{Ar,Tr}$ ) of 50dB by day and a façade rating level of 45dB by night. Day and night should be clearly defined, but day is suggested as being 07:00 to 23:00 and night 23:00 to 07:00, in line with *Planning Policy Guidance Note PPG 24 (Reference 15)*.

Additionally, the  $L_{Amax}$  measured with the fast time weighting should not normally exceed 60dB at the façade of any bedrooms to prevent sleep disturbance. This standard should also apply to hospitals and similar premises, and may apply by day and night.

However, evidence suggests that the setting of absolute levels can lead to difficulties. Consequently the setting of levels linked to the background, with an overriding safeguard of absolute levels to ensure a baseline of good practice, is considered to be most appropriate.

To be sure that there is no reasonable cause for annoyance, the Rating Level ( $L_{Ar,Tr}$ ) of the noise from the installation should be the same as the Background Noise Level ( $L_{A90,T}$ ). As the difference between the two increases, then it is clear that there is an increasing likelihood of complaints.

The aim should be to set Rating Levels ( $L_{Ar,Tr}$ ) from an installation at the numerical value of the Background Noise Level ( $L_{A90,T}$ ), *but there are several reasons why departures from this approach could be justified:*

- a) Setting a less stringent standard:

- open-air activities that cannot be undertaken indoors – such as landfills or mineral workings
  - temporary or short-term problems such as construction or decommissioning
  - a well-established installation with no significant history of noise problems
- b) More stringent standard:
- tonal or other acoustic characteristics
  - a tranquil area that requires preservation
  - creeping background (ambient) – see below
  - a large area affected

For new installations, or existing ones where noise is a problem, the Operator should have justified in the application free-field rating levels that exceed background or 50dB by day or façade rating levels of 45 by night. The Agency should be confident of the reasons for setting levels below background.

Where background noise levels are low (below about 30dB) and the requirement to restrict the rating level to that of the background would be technically very difficult or the costs would be out of proportion to the benefit, a judgement may be required as to how far the Operator should go in reducing noise. The factors listed above under (a) should be considered in deciding upon an appropriate and reasonable regulatory approach, together with the complaint and enforcement history (both planning and environmental health) and whether it is a new or existing plant. However, noise with any acoustic features as outlined in BS 4142: 1997 (paragraph 8.2) should be avoided, especially at night.

**(ii) The prevention of creeping background (or creeping ambient) levels**

There is sometimes concern over the need to prevent creeping background (more correctly termed "creeping ambient"). This is the gradual increase in ambient sound levels as industry expands and areas develop, so the issue of creeping background is most likely to arise when there is a general redevelopment of an area. However, the introduction of a significant new noise source or number of sources at an installation, without appropriate controls, could also contribute to an increase in noise levels outside the boundary.

**Where to set the limits — boundary fence vs. sensitive receptors**

Traditionally, noise levels have been set at the installation boundary or at the sensitive receptor, depending on the circumstances. However, noise limits could also be set close to the noise source if this will facilitate compliance monitoring and the Regulator is satisfied that this approach will ensure satisfactory levels at the sensitive receptors.

The following are some of the conditions that may influence the choice of setting either a boundary or receptor sound-level condition.

Possible problems setting conditions at the sensitive receptor	Possible problems setting conditions at the boundary fence
Operator has no control over changes that may affect the monitoring point, for example, the construction of new buildings. An off-site monitoring point may become unusable or unrepresentative.	The boundary fence may be in an acoustic shadow, for example, if the principal source is extract fans on a roof and the boundary fence is less than the height of the eaves away from the wall.
It may be difficult to identify which source (or even which installation) is causing elevated noise levels.	It may be difficult to achieve a free-field monitoring location (that is, away from building reflections).
Levels at receptors may be significantly affected by external influences, such as noises from nearby premises or road traffic and, in the case of residences, DIY, children playing in school holidays and the like.	Not actually measuring at the point where the problem will be and the need for calculation.
Security for unattended measurements may be a problem.	In the case of a large installation, a boundary monitoring location may not be representative of the sound levels at the receptor.

The choice will depend on the local circumstances, but the five key tests in [Section 2.5.1](#) should be complied with.



**Setting conditions at the nearest sensitive receptor**

(i) **Sensitive receptors**

The choice of measurement location is often not straightforward where noise permitting is concerned. Generally the main interest is in the noise level experienced by the affected people. This usually implies measurement outside the window of the building they occupy. However, this is not always practical and measurement must sometimes be taken elsewhere. BS4142: 1997 *Method for rating industrial noise affecting mixed residential and industrial areas* states:

“Choose measurement positions that are outside buildings that will give results that are representative of the levels at the buildings where people are likely to be affected.”

When investigating a complaint of excessive noise, measurements should be taken at the complainant's property, and access is not usually a problem. Measurements may be taken inside and outside the building. Permit levels might be set outside the windows to noise-sensitive rooms, on the basis that the attenuation through an open window will be approximately equal for any noise-sensitive building (this is the basis of applicable noise standards for environmental noise). But it will not always be possible to carry out noise monitoring at the receptor because access may not be available.

The points at which measurements are made should be carefully recorded to allow meaningful repeat measurements to be made.

**Setting conditions at the site boundary**

(ii) **Installation boundary**

The installation boundary is a readily available location for setting a Permit level that can be checked. If receptors are close to the boundary the situation is straightforward but, if not, it implies calculating noise levels at the receptor. Calculation will not be as accurate as measurement and it is always preferable to enforce noise limits by measurement at sensitive receptors. (Part 2 to this note, *Noise Assessment and Control* ([Reference 17](#)) shows how such a calculation could be performed.)

A planning condition or agreement may already have been set limiting noise emissions beyond the installation boundary to safeguard future noise-sensitive development nearby. Where new noise-sensitive development is possible, enforcing noise levels at the installation boundary may be appropriate.

There can be problems with measuring at installation boundaries due to local screening effects, for example, by a boundary wall. In these cases, the monitoring location should be chosen to best mimic the screening effect at the nearest receptors, so that any interpolation by calculation is as simple as possible to minimise the error in the calculation process. Judgement will be required to determine the best compromise location. This should always be as representative of the levels at noise-sensitive buildings as possible.

In both subjective and numerical conditions, the observation or measurement point must be specified in the condition, together with the times of day, days of the week and so on. Where measurements are required, the relevant methodology should normally be specified.

### **Monitoring**

Monitoring is likely to be required on commissioning of new plant or additions to existing plant (this may form part of a demonstration of compliance with planning conditions).

It is unlikely that detailed regular monitoring would be required unless there was a particular noise problem or any change in the process. This is because unlike releases to air, noise and/or vibration does not add to an environmental load in the same way. Remember, however, that it is possible to have an underlying level of dissatisfaction without a large number of complaints being made.

Monitoring may be required to demonstrate improvement, if complaints are received, or to demonstrate compliance with specific limits.

The Operator should normally arrange to undertake the work according to the relevant British Standards or other guidance. The appropriate standard would either be specified in the Permit condition, or the Operator would demonstrate that he has selected the most appropriate standard for the purpose. Refer to Part 2 to this note, *Noise Assessment and Control* ([Reference 17](#)).

Information about demonstrating compliance is given in [Section 2.6](#). Specialist advice may be obtained from the National Compliance Assessment Service (NCAS) and from the Agency noise contacts.

## 2.6 Ongoing regulation, compliance and enforcement

### 2.6.1 Defining responsibilities

For the sake of clarity, particularly where case officers subsequently change, it is important for the Agency and local authorities to reach a clear understanding with respect to:

- any split of sources between regulators and regulatory regimes on an installation
- the arrangements for ongoing monitoring and compliance assessment

A checklist for this purpose is suggested in [Appendix 2](#).

While enforcement scenarios can be discussed in general terms, the appropriate action will be case specific and will need to be agreed at the time by the Regulators. Some examples of enforcement scenarios are given below.

It is particularly important to define initial contact points for members of the public. Complaints may be received by either the local authority or the Agency. Where it is clear from the initial complaint whose responsibility it is (for example, off-site traffic movements (LA), barking guard dogs (LA), intruder alarms (LA), safety relief valves (Agency)), then the action can be followed up by the appropriate Regulator.

### 2.6.2 Monitoring

There are several “categories” of monitoring (this refers to Agency involvement and does not include any work that local authorities might undertake, or that the Operator undertakes for submission to local authorities):

1. Spot measurements by Agency staff (compliance or complaints)
2. Operator spot checks (possibly for compliance or complaints)
3. Operator monitoring (survey) for compliance purposes
4. Operator monitoring for other purposes (planning, prediction and the like)
5. Check monitoring by Agency

Part 2 to this note, *Noise Assessment and Control* gives more detailed information on monitoring techniques and in particular on the importance of:

- equipment calibration
- competence
- recording relevant details (weather, position, operations and so on)

*Noise Assessment and Control* also covers the appropriate monitoring standards. The National Compliance Assessment Service (NCAS) will also be able to assist as a centre of expertise in terms of:

- call-off contracts
- equipment advice
- equipment calibration

It is not currently the intention to record information on noise for the Polluting Emissions Register (PER), although this may change in time. It is also possible that information may be required for submission to local authorities with regard to future obligations for noise mapping or local noise strategies.

### 2.6.3 Enforcement scenarios

It is important to ensure that the implications for regulation are discussed, agreed and documented at the permitting stage. The Agency regulates according to the IPPC Permit conditions. Where there are extant planning conditions which are not, for any reason, covered in the IPPC Permit conditions, the local authority would continue to regulate these.

Drawn from this, a number of possible compliance/enforcement scenarios are suggested.

1. Planning conditions are breached – a noisy operation is carried on during prohibited hours. The local authority advises the Agency that it intends to take action under planning legislation.
2. The Operator fails to meet an IPPC improvement condition relating to noise from air-handling plant. The Agency advises the local authority that it is to issue an enforcement notice.
3. There are no planning conditions in place relating to noise. The Agency has included conditions in the Permit to limit a particularly noisy occasional operation. The Operator fails to adhere to the condition and/or the local authority/Agency receives complaints. The following actions and responsibilities apply:



- primarily Agency action under IPPC, the Agency discuss with local authority before taking action
  - a private individual can bring a Nuisance action under Part III of EPA 90.
4. As for 3, but where the Operator complies with the IPPC condition, though complaints are still received. The following actions and responsibilities apply:
- as above, the local authority cannot bring an action under Planning or IPPC
  - Agency reconsiders conditions in discussion with local authority – conditions might be varied.

## References

For a full list of available Technical Guidance, see Appendix A of the *Guide for Applicants* or visit the Environment Agency Website <http://www.environment-agency.gov.uk>. Many of the references below are available free of charge for viewing or downloading from the Website. The same information can also be accessed via the SEPA Website <http://www.sepa.org.uk>, or the EHS Website <http://www.nics.gov.uk/ehs>. Most titles will also be available in hard copy from The Stationery Office (TSO). Some existing titles are not yet available on the Website, but can be obtained from TSO (<http://www.defra.gov.uk/environment/ppc/ippcguide/index.htm>).

1. *The Pollution Prevention and Control (England and Wales) Regulations 2000*, The Stationery Office, ISBN 0 11 099621 6.  
*The Pollution Prevention and Control (Scotland) Regulations 2000*, The Stationery Office, ISBN 0 11 059467 3.
2. *Council Directive 96/61/EEC* concerning integrated pollution prevention and control (OJ L 257, 10.10.96).
3. *Pollution Prevention and Control Act 1999*, The Stationery Office, ISBN 0 10 542499.
4. *IPPC: A Practical Guide for England and Wales 2<sup>nd</sup> edition* (or equivalents in Scotland and Northern Ireland) (<http://www.defra.gov.uk/environment/ppc/ippcguide/index.htm>). Scottish Executive/SEPA document *The Pollution Prevention and Control (Scotland) Regulations 2000 a practical guide*.
5. IPPC Guidance Note H1 – *Environmental Assessment and Appraisal of BAT*, Environment Agency, 2001.
6. *The Waste Management Licensing Regulations 1994*, The Stationery Office, ISBN 0 11 310126 0.
7. *Environmental Protection Act 1990*, The Stationery Office, ISBN 0 10 544390 5.
8. *IPPC Part A(1) Installations: Guide for Applicants*, (EA Website).
9. IPPC Regulatory Guidance Series, No. 1, *Determining “Substantial Change” Under IPPC*, Environment Agency, (EA Website).
10. BS 4142: 1997 *Method for rating industrial noise affecting mixed residential and industrial areas*, BSI ISBN 0 580 28300 3.
11. BS 6472 : 1992 *Guide to the evaluation of human exposure to vibration in buildings (1hz to 80Hz)*, BSI ISBN 0 580 19963 0.
12. BS 7445: Part 1: 1991 ISO 1996-1: 1982 *Description and measurement of environmental noise Part 1 - Guide to quantities and procedures*, BSI ISBN 0 580 19728 X .  
BS 7445: Part 2: 1991 ISO 1996-2: 1987 *Description and measurement of environmental noise Part 2 - Guide to the acquisition of data pertinent to land use*, BSI ISBN 0 580 19736 0.  
BS 7445: Part 3: 1991 ISO 1996-3: 1987 *Description and measurement of environmental noise Part 3 - Guide to the application of noise limits*, BSI ISBN 0 580 19734 4.
13. *Local Government Association/Environment Agency Protocol* (in preparation).
14. *Guidelines for community noise 2000*, World Health Organisation.
15. *Planning Policy Guidance : Planning and Noise PPG24*, DETR, The Stationery Office.
16. *Internal Guidance for the Regulation of Noise at Waste Management Facilities under Waste Management Licensing Regulations*, Environment Agency (consultation has taken place, final version likely to be available in the near future).
17. IPPC Guidance Note H3, Part 2. *Horizontal Guidance for Noise – “Noise Assessment and Control”*, Environment Agency.

## Abbreviations and definitions

BAT	Best Available Techniques – see <i>IPPC — A Practical Guide</i> or the regulations for clarification ( <a href="#">References 1 and 4</a> )
BPM	Best Practicable Means
BS	British Standard
CAA	Civil Aviation Authority
CoPA	Control of Pollution Act 1974
Creeping background	Term commonly used to describe the gradual increase in ambient sound levels as industry expands and areas develop. The more correct term is “creeping ambient” (BS 4142: 1997)
EPA	Environmental Protection Act 1990
IPPC	Integrated Pollution Prevention and Control
LA	Local Authority
LGA	Local Government Association
NAZ	Noise Abatement Zones
PPC	Pollution Prevention and Control
PPG	Planning Policy Guidance
SEPA	Scottish Environment Protection Agency
Substantial change	A change in operation which, in the opinion of the Regulator, may have significant negative effects on human beings or the environment.
UDP	Unitary Development Plan
WHO	World Health Organisation

**Appendix 1 — Legislative framework for environmental noise**

**Table A1.1: Legislative coverage of common (environmental) noise sources**

The table below is a précis of the legislation applicable in England and Wales. It should be used as a guide only, as in some cases the enforcement regime is quite detailed.

Noise source/type	Enforcing authority	Relevant legislation
Aircraft	(DTLR)and the Civil Aviation Authority (CAA)	Civil Aviation Act 1982, national and international regulations for noise certification
Airports (under review)	CAA  Local authority	Civil Aviation Act 1982 Restrictions imposed by Secretary of State Noise management at local level Planning conditions
Construction sites	Local authority	Control of Pollution Act 1974 Sec 60 — if there is a need to protect persons in the locality from the effects of noise Sec 61 — prior consent for construction sites
Dogs/animals (not wild animals)	Local authority	Environmental Protection Act 1990, Part III. Statutory Nuisance
Domestic and neighbourhood noise	Local authority	Environmental Protection Act 1990, Part III. Statutory Nuisance Noise Act 1996 Night-time noise offence – (adoption by around 30 local authorities)
Entertainment noise	Local authority	Environmental Protection Act 1990, Part III. Statutory Nuisance Public Entertainment Licensing – Local Government (Miscellaneous Provisions) Act 1976
Intruder alarms (buildings)	Local authority	Environmental Protection Act 1990, Part III. Statutory Nuisance Noise and Statutory Nuisance Act 1993 (although alarm provisions not yet enacted )
Loudspeakers in streets	Local authority	Control of Pollution Act 1974
Motor vehicles and motor cycles	Police	Road Traffic Act 1988 and numerous regulations and orders made under the Act Some imposed by Secretary of State, such as Road Vehicle (type Approval) Regulations Some enforced by the Police such as Road Vehicle (Construction and Use) Regulations 1986 Motorcycle Noise Act 1987 and regulations made under the Act.
Occupational	Health and Safety Executive  Local authority	Noise at Work Regulations 1989 HSE – factories Local authority — offices, retail and entertainment
Planning	Local planning authority	Controls imposed via planning consents. PPG24 gives guidance  Town & Country Planning (Environmental Impact Assessment) (England & Wales) Regulations 1999
Public works — highways and the like	Local authority (county and unitary authorities)	Land Compensation Act 1973 Principally noise insulation grants
Rail traffic noise	None	N/A
Road traffic	None	N/A

Continued.....

**APPENDIX 1 - LEGISLATIVE FRAMEWORK  
FOR ENVIRONMENTAL NOISE**

Noise source/type	Enforcing authority	Relevant legislation
Trade or business	<p>Local authority</p> <p>Agency</p> <p>Agency</p> <p>Agency and local authority</p>	<p>Environmental Protection Act 1990, Part III. Statutory Nuisance Control of Pollution Act 1974 Noise Abatement Zones (58 designated, 40 no longer operated) Town &amp; Country Planning (Environmental Impact Assessment) (England &amp; Wales) Regulations 1999</p> <p>Processes and activities covered by the Waste Management Licensing regime — “relevant objectives” of WML Regs 1994. Action can still be taken under Environmental Protection Act 1990, Part III if Permit conditions are being met but a Statutory Nuisance still exists</p> <p>Environmental Protection Act 1990, Part I, Part A (IPC) processes involving the recovery or disposal of waste (to comply with Waste Framework Directive), Environmental Protection Act 1990 (Statutory Nuisance provisions), disabled where action could be taken under pollution-control provisions – but this does not apply to noise, fumes or gases that can be regulated under Part I or Part III</p> <p>Integrated Pollution Prevention &amp; Control (PPC (England &amp; Wales) Regulations 2000). Activities categorised as A1 (Agency-regulated) and A2 (Local authority-regulated). Installations shall be operated in such a way that all preventative measures are taken against pollution, in particular through the application of BAT. Noise falls within the definitions of “emissions” and “pollutants”</p>
Vehicles (stationary), machinery and equipment in the street, such as car alarms	Local authority	Noise and Statutory Nuisance Act 1993 amended EPA 1990 to make noise from vehicles, machinery or equipment in the street a statutory nuisance.

## **Appendix 2 — Letter/checklist for recording the arrangements made with the local authority**

**Note:** Ideally agreements made with the local authority should be confirmed as soon as noise/vibration conditions have been firmed up, and preferably before the Permit has been issued. It is not intended to replace discussion, but rather to ensure that both parties are clear about what has been agreed, particularly if case officers subsequently change. If amendments to specific conditions are found to be needed after the Permit has been issued, these can be addressed by a variation.

**To:** [local authority]

### **Regulation of noise**

#### **Operator name and address**

#### **IPPC Permit number**

Further to your response as a statutory consultee with respect to noise on the above application and our consequent discussions, the following highlights the main areas of interaction between us:

#### ***Extent of the installation***

The following items **are** covered by the IPPC Permit:

- transport of materials between parts of the process — including non-vehicular means of transfer such as pumping, blowing, conveyors. (Vehicular transport off-site is not covered)
- warehousing and associated transportation
- flares
- cooling towers
- extraction/ventilation fans
- raw material or other stockyards, and associated transport and stock-management activities
- waste-recycling or waste-storage areas
- overhead cranes
- emergency equipment — generators, flares, dump stacks
- boiler blow-down and maintenance activities
- commissioning and construction or modification work not covered by CoPA or planning provisions — for example, where we require modifications to a bund, storage area, drainage and the like
- loudspeaker address systems, provided they are associated with management of the activity
- high-level alarms or other audible warning devices (external)
- vehicle reversing alarms.

The following items **are not** covered by the IPPC Permit:

- intruder alarms on buildings
- guard dogs
- transport on access roads outside the installation boundary

#### ***Arrangements for ongoing monitoring and compliance assessment:***

- monitoring – (there may be no need for further clarification where there is either no ongoing monitoring required or only Operator self-monitoring, both of which will be clear from the Permit) -
  - spot measurements by Agency staff (compliance or complaints)
  - Operator spot checks (possibly for compliance or complaints)
  - Operator monitoring (survey) for compliance purposes
  - Operator monitoring for other purposes (planning, prediction and the like)
  - check monitoring by Agency
- local arrangements for complaints.

**Delete sections, amend those that are not relevant, or add further specific items.**

## **Appendix 3 — Request for consultation information from local authorities**

This appendix provides the suggested format for a letter which could be forwarded to the officer responsible for Environmental Protection or Environmental Health (or other officer designated by a local authority) during the consultation process, to request specific information relating to the noise history of an installation.

Dear Sirs,

**IPPC application reference:** ....., **Operator**.....

Section 1.3 of the Environment Agency’s Horizontal Guidance Note H3 Part 1 describes the agreements made for liaison between the Agency and local authorities with respect to noise.

The following information is specifically needed from the local authority to enable a co-ordinated approach to be taken concerning the installation referred to in the application:

- planning conditions (as they relate to the installation) with as much information relating to the rest of the site and the planning history as is relevant
- information on any contravention of planning conditions
- conditions relating to Noise Abatement Zones or other local issues
- actions/conditions arising from “Statutory Nuisance” and other (for example, public nuisance) activity
- an overview of any complaint history
- other local authority views and/or recommendations, views on unitary development and Local Plans, noise–mapping requirements, Local Pollution Group guidance and similar.

In view of their expertise and involvement in local issues, the local authority statutory consultee response would normally be expected to provide the most input to inform the process of determination, although there may be other relevant factors such as the presence of a Site of Special Scientific Interest (SSSI).

A copy of the site plan associated with any planning consents would be very helpful since the installation boundary may not always be the same as the site boundary.

### **Section 1 Planning**

#### **Question 1**

Are there any planning conditions relating to noise applicable to the above site? YES/NO

If yes, please enclose all relevant certificates with conditions and any advisory notes.

If sound–level conditions are specified at a location, please enclose a map to enable accurate location of the monitoring points.

#### **Question 2**

Have any complaints been received alleging non-compliance with any planning conditions relating to noise within the past THREE years? YES/NO

If yes, please provide the following information for each complaint:

**date, street name and postcode, noise source, action taken, outcome, comment.**

(Under comment, please outline any non-noise –

related issue that may have given reason

to increase the sensitivity of the complainant , such as a new planning application, change of process or Operator, major emergency).

#### **Question 3**

Have formal planning–enforcement actions been taken for noise–related conditions within the past THREE years? YES/NO

Is there any outstanding planning–enforcement action currently being undertaken? YES/NO

## APPENDIX 3 - REQUEST FOR CONSULTATION INFORMATION FROM LOCAL AUTHORITIES

If the answer to either part is YES, please provide all relevant information including dates, actions taken, outcomes and present position.

### Question 4

Have you monitored noise-related planning conditions within the past THREE years?

YES/NO

If yes, please give details of the monitoring and the outcomes.

### Question 5

Are there any noise-sensitive developments for which planning consent has been granted or any areas zoned for noise-sensitive developments that are likely to be adversely affected by noise from the installation?

YES/NO

If so, please provide relevant information.

## Section 2 Statutory Nuisance

### Question 6

Have any complaints been received alleging a noise nuisance within the past THREE years?

YES/NO

If yes, please provide the following information for each complaint:

**date, street and postcode, noise source, action taken, outcome, comment.**

(Under comment, please outline any non-noise-related issue that may have given reason to increase the sensitivity of the complainant, such as a new planning application, change of process or Operator, major emergency).

### Question 7

Have you taken any informal or formal action in response to any noise-related complaints within the past THREE years?

YES/NO

Is there any outstanding enforcement action currently being undertaken?

YES/NO

If the answer to either part is YES, please provide all relevant information including dates, actions taken, outcomes and the present position.

## Section 3 Noise Abatement Zones

### Question 8

Are the premises in a Noise Abatement Zone?

YES/NO

If yes, the Agency will seek further information.

## Section 4 Private Action

### Question 9

Is the council aware of any action being taken by anyone against the present or previous Operator in respect of noise problems?

YES/NO

If yes, please provide details.

## Section 5 Permit Conditions

Are there any conditions relating to noise that the council feels should be attached to any Permit issued by the Agency?

YES/NO

If yes, it would be helpful if you could outline the conditions you would like attached to any Permit, together with the reason for the proposed condition in each case.

Finally, please feel free to bring to our attention any matter that you feel may be relevant to noise issues, including the effectiveness of any existing conditions.



## Appendix 4 — Sample conditions from PPG24

Section 2.5 of this document discusses the considerations for drafting Permit conditions. The sample conditions below are based on those in PPG24 and may be appropriate to the permitting process.

- a) *[Specified activities] shall not take place anywhere on the installation except within [specified building(s)].*
- (The condition should describe precisely the activities to be controlled as well as the particular building(s) in which they are permitted to take place.)
- b) *The rating level of noise emitted from the installation shall not exceed [A] dB between [T] and [T] Monday to Friday and [A] dB at any other time, as measured on the [specified boundary/boundaries] of the installation at [location(s) of monitoring point(s)].*
- Specify:    A — noise level expressed as  $L_{Aeq,T}$  over a time period X (for example, 1 hour)  
              T — time of day.
- c) *The rating level of the noise emitted from the installation shall [not exceed] [be lower than] the existing background noise level of A dB by [more than] [at least] B dB between [T] and [T] Monday to Friday and [B] dB at any other time. The noise levels shall be determined at [the nearest noise-sensitive premises] [specified location(s)]. The measurements and assessment shall be made according to BS 4142: 1997.*
- Specify:    A — background noise level expressed as  $L_{A90,T}$  over a time period T  
              B — noise level difference between rating level and background level  
              T — time of day
- d) *No [specified machinery] shall be operated on the premises before [time in the morning] on weekdays and [time in the morning] on Saturdays or after [time in the evening] on weekdays and [time in the evening] on Saturdays, or at any time on Sundays, Bank Holidays or Public Holidays.*
- e) *Before [any] [specified plant and/or machinery] is used on the premises, it shall be [enclosed with sound-insulating material] [and] [mounted in a way that will minimise transmission of structure-borne sound] in accordance with a scheme to be submitted to and agreed in writing with the Agency.*

## Appendix 5 — Coexisting regulatory frameworks for noise

This appendix provides a discussion on the coexisting regulatory frameworks for noise, referred to in [Section 1.2](#).

Noise from industrial and other activities is regulated under several different legislative provisions. When submitting an application for an IPPC Permit, an installation may already have a framework of specific noise or vibration-related conditions in place, or it may not have been subject to any *specific* noise or vibration-related regulatory intervention at all. **There are potentially areas of overlap between IPPC and the existing legislative framework that will need to be recognised and considered at the permitting stage. In Northern Ireland, legislation implementing IPPC has not yet been put in place. This section and the following one therefore refer to the position in England, Wales and Scotland. Arrangements in Northern Ireland may be covered in subsequent revisions.**

This is similar to the existing situation for Waste Management Licensing and its interaction with local authority provisions (see below).

The intention is that IPPC and other legislative provisions acting on a given installation will, as far as the legislation allows, be complementary in achieving the required level of control.

This section describes only those aspects of regulation where interaction is likely to occur frequently. Further details and some less frequently encountered legislative provisions are given in [Appendix 1](#).

### Waste Framework Directive

As a competent authority under the Waste Management Licensing Regulations 1994 (WMLR94), which implemented the requirements of the Waste Framework Directive in the UK, the Agency has regulatory control for noise associated with the recovery or disposal of waste ([Reference 6](#)). The relevant objectives require that waste should be recovered or disposed of without causing nuisance<sup>6</sup> through noise or odours. Noise should normally have been considered in planning permissions granted after 30 April 1994. However, where this requirement has not been met through the planning system, conditions should have been set in the waste management licences.

A number of waste-related activities, covered at present by the waste management licensing regime, will fall to IPPC. Those landfill operations covered by the PPC Regulations will be subjected to the provisions of both the Landfill Directive and IPPC, although meeting the requirements of the Landfill Directive will fulfil requirements under IPPC.

The requirement to recover or dispose of waste in accordance with the relevant objectives also applies to a number of processes that fall within Part I of EPA'90 and are controlled under the Integrated Pollution Control (IPC) regime ([Reference 7](#)). Conditions that are already in place will need to be similarly reassessed upon permitting to ensure that the requirements of IPPC are met.

### Town & Country Planning Act 1990

Installations may have been subject to noise control under planning legislation. As part of the planning permission, a range of conditions could have been applied to control noise from operational activities. Many conditions will still be relevant and necessary. An old planning permission, if it has considered noise, may be partly redundant by virtue of activities or the building layout having changed or noise receptors (often local houses where measurement points have been specified) having lost their original status by further development or road-building.

For more recent and large developments, an Environmental Impact Assessment may have been produced as part of a planning application. However, this will probably not cover all the aspects that need to be considered for BAT, as it will be based around amenity needs.

**For new proposals**, planning conditions are still likely to be necessary to control issues that may not be covered by IPPC. It is important, therefore, that the Agency is involved in consultation on new planning applications for activities that will fall under IPPC. Close liaison between the Agency and both the Planning team and Environmental Health or Protection team is essential.

**In existing planning consents**, however, conditions and agreements relating to noise will normally remain extant whatever the IPPC status of an installation (unless time-limited) and will need to be considered when the IPPC application is determined. Where possible, Permit writers should ensure that the Permit conditions do not conflict with extant planning conditions.

There are means available to remove or change redundant and obsolete planning conditions but these are fairly complex. It is unlikely that the Agency could rely upon such removal as a means of easing potential conflict between IPPC and other noise-related legislation, although it might occasionally be possible.

<sup>6</sup> Note that in the interpretation of the term “nuisance” under WMLR94 it is used in a general sense and is not directly linked to Statutory Nuisance.

There is potentially a choice as to whether reliance should be placed on the extant planning conditions or whether these should be mirrored in the IPPC Permit. While duplication of the conditions leads to the theoretical possibility of double jeopardy, in practice the Agency and the local authority would liaise to ensure that this did not occur in any enforcement situation. Furthermore, it is not the intention to rely on the planning system to deliver the requirements of IPPC. The Agency must consider the extent of conditions relating to noise control that are required by the PPC Regulations in respect of a particular installation, notwithstanding the existence of noise control provisions under other regimes. Where this results in a necessary duplication of control this should be addressed as an enforcement issue rather than a decision not to impose conditions in the PPC Permit. The appropriate action will depend upon the circumstances:

- Where it is agreed by the Agency and the local authority that the planning conditions are no longer adequate because they have become redundant or obsolete with time and/or operational changes, then they should be supported/supplanted by including appropriate conditions in the IPPC Permit;
- In other cases, the planning conditions may still be both appropriate and sufficient, and as long as they meet the criteria of being reasonable, precise, enforceable and BAT, they should normally be mirrored within the IPPC Permit to demonstrate clearly that they also meet the requirements of BAT as well as the planning process. Practically, the inclusion of the conditions in the IPPC Permit will also allow flexibility of enforcement action between the local authority and the Agency;
- In circumstances where noise is a low-risk issue, it may be agreed that the planning conditions are sufficient to cover any likely eventualities<sup>7</sup>. In such cases, enforcement by the Agency can still take place under the residual BAT (see Section 2.5.3) and, if problems arise in the future, the Permit can be varied as required. In such cases, it is important that the Agency records its judgement that the planning conditions adequately reflect the BAT judgement.

Whatever the case, the need for a close working relationship between the Agency and the local authority is essential throughout the application, determination and permitting process with due attention to the implications for demonstrating compliance and enforcement. These latter aspects will need to be discussed, agreed and documented (see Section 2.6) at the permitting or variation stage.

**EPA'90 Part III  
— statutory  
nuisance**

Local authorities have a duty to investigate complaints of noise and the definition of noise includes vibration. They also have a duty to require the abatement of a Statutory Nuisance and the prevention of the occurrence, or recurrence, by using the Statutory Nuisance provisions of EPA'90 Part III (Statutory Nuisance and Clean Air). It is a defence to prove that the Best Practicable Means (BPM) were used to prevent or counteract the effects of the nuisance if it arose from industrial, trade or business premises.

Under the existing IPC regime, a local authority can bring proceedings with respect to noise under Part III of EPA'90. In the case of IPPC, noise and vibration are pollutants for which specific Permit conditions may be applied. Therefore as a result of amendments to Part III of EPA'90 by the PPC Act and Regulations, a Statutory Nuisance action in respect of noise may not be brought by a local authority (unless the Secretary of State grants consent) where proceedings could be instituted under the PPC Regulations. Again, this emphasises the need for close liaison with the local authority officer. Note that an aggrieved individual may still bring proceedings under Part III EPA'90 in respect of noise arising from a PPC installation, and that proceedings may also be brought for common law nuisances.

Where the installation forms only a part of a larger site, Permit conditions should relate to installation noise only. The Agency should come to an agreement with the officers from the local authority, at the application stage, on which sources on the site fall outside of the installation and will continue to be covered primarily by the Statutory Nuisance provisions. The Agency and local authority should agree a strategy on permitting and enforcement at an early stage in these situations and document the outcome. For further information on this, see Sections 2.2, 2.3 and Appendix 2.

**Control of  
Pollution  
Act 1974  
(COPA)**

**Noise Abatement Zones**

Sections 63 to 67 of CoPA allow local authorities to designate Noise Abatement Zones. The local authority maintains a register of acceptable noise levels permitted within the Noise Abatement Zone and monitoring is undertaken periodically by the Local Authority at specified monitoring points. The designated noise levels may be exceeded only under a consent issued by the local authority. Where a noise level is exceeded without consent, the local authority may serve a noise-reduction notice.

Very few Noise Abatement Zones have been set up and maintained, but some installations will be covered by such provisions, which will remain in force in parallel with IPPC. This will need to be considered in drafting of Permit conditions.

<sup>7</sup> This is similar to the existing situation for waste management licensing.

## Appendix 6 — Alternative approaches to setting numerical standards

Section 2.5 of this document discusses the considerations for drafting Permit conditions. This appendix reviews the current approaches to setting numerical noise limits.

There are several potential approaches to setting numerical standards. It is proposed that, where numerical limits are appropriate, the following might be used depending on prevailing circumstances:

**BS 4142**

- (i) **BS 4142: 1997 Method for rating industrial noise affecting mixed residential and industrial areas** ([Reference 10](#)).

This is intended as a tool for assessing whether industrial noise in a mixed residential and industrial area is likely to give rise to complaint. It is referred to in Planning Policy Guidance PPG24, *Planning and Noise*, in the context of assessing noise and framing conditions for certain developments. BS4142: 1997 has been criticised, but most of the criticisms relate to its use outside its scope as defined in the standard itself. (For situations outside the scope of BS 4142: 1997, BS 7445:1991 offers detailed advice on noise-measurement procedures and reporting.) Considering the acceptability of a given exposure will need to take other site-specific factors into account. It merely indicates the likelihood of receiving, so it cannot always be used as an indicator of the need, or otherwise, for enforcement action.

Despite these and other restrictions, BS 4142: 1997 remains an effective tool. More details are given in Part 2, *Noise Assessment and Control* ([Reference 17](#)).

- (ii) **World Health Organisation – Guidelines for community noise 2000** ([Reference 14](#)).

WHO gives guidance aimed at avoiding/minimising general community disturbance associated with noise exposure and specific environments. Whilst guideline values are offered, there is a large and well-respected body of research underlying the recommendations. The guidelines also include onerous recommendations for governments to manage and reduce environmental noise. It is also a useful source of information; see Part 2, *Noise Assessment and Control*.

- (iii) **DETR Planning Policy Guidance (PPG24)** ([Reference 15](#)).

This offers guidance to local authorities on considerations in determining planning applications for noise-sensitive developments, and introduces the concept of Noise Exposure Categories (NECs). It offers good advice for dealing with residential applications in each of the NECs; however, it offers little advice on dealing with applications for uses that generate noise, but does refer to BS 4142: 1997. The PPG contains specimen planning conditions, which can be found in [Appendix 4](#).

- (iv) **BS 6472: 1992 — Evaluation of human exposure to vibration in buildings (1Hz to 80 Hz) (revision in progress)** ([Reference 11](#)).

This standard offers advice on vibration assessment. However, this is a complicated field and specialist advice should be sought from the Agency regional/area noise contacts. Vibration problems are expected to occur only rarely.

**Additionally, the following guidance is relevant:**

- (i) **In Scotland - Planning Advice Note 56 *Planning and Noise*.**
- (ii) **In Wales - Technical Advice Note (Wales) 11**

## Appendix 7 — Equivalent legislation in Scotland and Northern Ireland

The legislation referred to in the text is that for England and Wales. The following are the equivalents for Scotland and Northern Ireland.

Table A.2.1 —  
Equivalent  
legislation

<i>England and Wales</i>	<i>Scotland</i>	<i>Northern Ireland</i>
PPC Regulations (England and Wales) 2000/1973	PPC (Scotland) Regulations 2000; SI 200/323	
Waste Management Licensing Regulations SI:1994 1056	Waste Management Licensing Regulations SI:1994 1056	Waste Management Licensing Regulations SI:1994 1056
SI1994/2716 Conservation (Natural Habitats etc) Regulations 1994	SI 1994/2716 Conservation (Natural Habitats etc) Regulations 1994	Conservation (Natural Habitats etc) Regulations (Northern Ireland) 1995

## CONTACTS:

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