

Noise:

Summary guidance for Pollution
Prevention and Control (PPC) applicants

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Aims and objectives

This guidance is aimed at environmental managers and those involved in submitting PPC applications to the Scottish Environment Protection Agency (SEPA). It lays down four basic steps involved in producing a competent noise submission.

Noise pollution will be treated in the same way as any other polluting emission. If noise is audible at residential property, schools, hospitals, offices, public recreation areas – known as Noise Sensitive Receptors (NSRs) – then it is regarded as having an impact.

Where noise is having, or has the potential to have, an impact it must be assessed to determine what the impact is and therefore how much work needs to be done to prevent or minimise noise pollution. The assessment needs to demonstrate that Best Available Techniques (BAT¹) are used.

Environmental noise monitoring is a specialist field. Monitoring should be carried out by a qualified acoustician, who can demonstrate competency in environmental (rather than occupational health and safety) survey work.

Where vibration is an issue – contact SEPA for advice.

What is required – four basic steps

Step 1 – desktop survey

- identify items of plant or operations that are likely to be audible at any NSR;
- subjectively describe and rank the noise sources in terms of potential off-site impact. Note what they sound like and when they operate; and
- identify NSRs by name, type, location and distance from source. It is also useful to describe the intervening land and whether any natural or man-made barriers to noise propagation are present.

Where noise emissions are capable of causing pollution (i.e. capable of causing annoyance or loss of amenity at a NSR), then a noise monitoring survey will be required. This will be the case in most circumstances, however, it should be noted that the test is to establish the level of noise pollution and not the number of actual complaints.

¹ Landfill Directive Installations: for “BAT to prevent or minimise noise pollution” read “all reasonable steps taken to prevent noise nuisance”

Step 2 – off-site monitoring

The survey should determine the following noise parameters as defined by BS 4142²:

- ambient sound levels at NSRs – total sound levels ($L_{A,eq,T}$);
- residual background sound levels at NSRs – sound levels exceeded for 90% of the time where emissions from the installation is not having an effect on measured levels ($L_{A,90,T}$); and
- specific sound levels at NSRs – sound level due to installation activities ($L_{A,eq,T}$).

Remember to assess the character of the noise impact off-site as per BS 4142. Where tonal or impulsive characteristics are likely to be an issue, other monitoring parameters may be required to quantify the impact (e.g. frequency analysis, maximum noise levels etc). These additional parameters can normally be carried out at the same time as initial noise monitoring.

Step 3 – on-site monitoring

- quantify emissions from the noisiest items of plant/operations identified in Step 1. For Landfill Directive Sites, BS 5228³ may be of use for Step 3 and Step 4; and
- use this data to predict the impact of these noise sources off site.

The data collected in Steps 2 and 3 should be collated into a report (see BS 4142 or BS 7445⁴ for report requirements). The findings should then be assessed by the Applicant, in conjunction with their Acoustic Consultant, to present a justification that Best Available Techniques are (or will be) used to prevent or minimise polluting noise emissions. **The BAT justification is the critical part of any noise submission.**

Step 4 – BAT justification

Place the noise impact in to context and provide a demonstration that emissions have been prevented or reduced as far as reasonably practicable:

- concentrate on the dominant noise sources;
- detail all existing noise attenuation measures (enclosures, silencers, location of kit, operating time restrictions, maintenance regimes, etc);
- for dominant noise sources, consider all noise reduction techniques and come to a reasoned determination of what is achievable;
- where upgrades are identified – state the predicted impact of the works and commit to firm completion timescales; and
- develop a noise management plan.

² BS 4142: Methods for rating and assessing industrial and commercial sound

³ BS 5228: Code of practice for noise and vibration control on construction and open sites

⁴ BS 7445: Description and measurement of environmental noise

What can you expect from SEPA

- SEPA officers will be available to provide guidance on any aspects of your noise monitoring proposals or BAT justifications.
- Pre-application (preferably pre-noise survey) discussions are welcomed as they invariably lead to an improved understanding of site specific issues on both sides.
- SEPA Officers will aim to provide a detailed assessment of your finalised noise submission as part of the PPC determination process.
- Permit Conditions will be clear, concise and proportionate to the risk.

This is a summary guidance note. Full guidance on noise and PPC can be found on SEPA's website: www.sepa.org.uk

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