



Sound investment

Peter Wilson explains how to minimise your noise assessments while ensuring they are effective

WHY DO you repeat noise assessments? Industry wastes a fortune on assessments that are little more than unnecessary annual or bi-annual “check-box” exercises. The majority of these assessments are inadequate because they don’t meet the minimum regulatory requirements.

Many companies repeat a full noise assessment every year or two because the scheduling is built into their standard health and safety practice. This is despite the fact that regulatory guidance suggests simply “reviewing” your assessment every couple of years to see if an update is necessary.

Unless your plant has changed significantly since the last survey, a full assessment

isn’t necessary. There’s no point using resources on a comprehensive reassessment that simply tells you once again what you already know: that you still have a noise problem.

Measuring v controlling

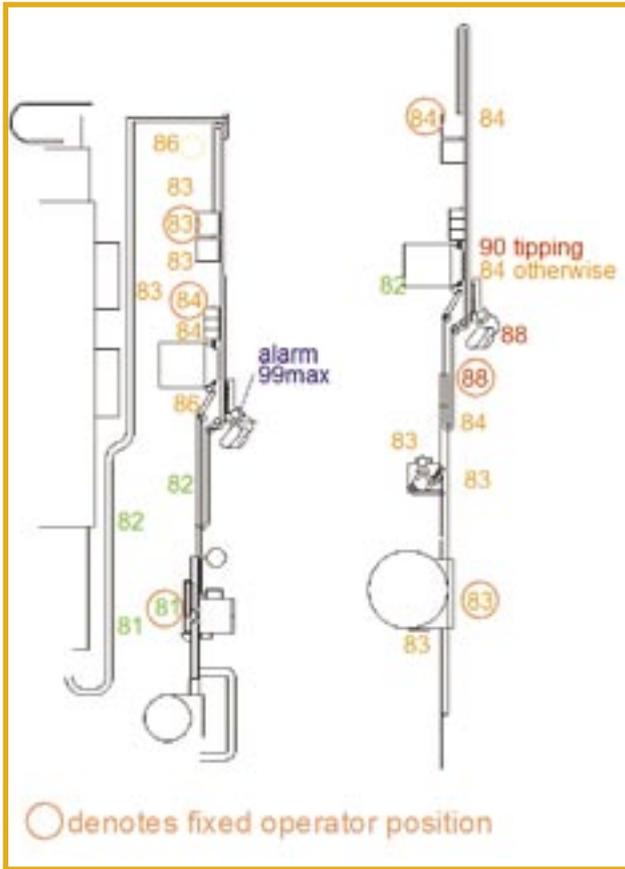
Consider an example from the utilities industry: an inspector’s visit resulted in a formal suggestion that the company should address its noise issues to reduce the risks of hearing damage to the workforce. The company quickly commissioned a noise assessment from a consultancy, which was then forwarded to the inspector. To paraphrase the inspector’s reported response: “You were

informed that you needed to update your noise risk management procedures. However, you have simply generated a report that tells me in great detail that you have a noise problem. We are no further forward.”

As the HSE puts it, the Control of Noise at Work Regulations “are concerned with controlling noise, not measuring it”.

You should consider these factors before commissioning a full assessment.

- Was the last assessment of adequate quality (see below)?
- Has plant changed significantly since the last assessment?
- Can I update just those parts of the assessment where noise levels are likely to have changed (which takes a fraction of the time needed for a full assessment)?
- Would a simple evaluation of the risk management procedures already in practice be sufficient?



A digital map can be quickly and easily updated

- ☒ Would it make sense to carry out a noise control audit instead of yet another risk assessment?

You should carry out a sufficiently detailed noise risk management audit (which can range from the simple update to a full assessment) to generate the detailed action plan you need to revise procedures to reflect current best practice. This approach is not only the most effective way to ensure compliance with the Regulations, but also dramatically reduces the resources and time needed to manage the risks from noise at work.

DNA template

Many companies have wasted time and (a lot of) money on inadequate assessments. HSE figures from 2002 show that 63% of all noise assessments were deemed inadequate; that is, a reassessment would have been needed to bring them up to the

necessary standard. This illustrates the generally poor standard of assessment.

Using a specialist external supplier to provide assessments can be convenient, but does not necessarily guarantee report quality; you should ask for a sample report from the potential assessor. Using a variety of external suppliers also means that your report format will vary over time. This poses a major problem should you need to extract historical information, for hearing damage claims for example.

The report writing associated with in-house assessments can be a time-consuming and tedious process, often taking far longer than the survey itself. If you carry out or update assessments in-house, it's a worthwhile exercise generating or acquiring a high-quality report that you can use as a template for subsequent surveys. This saves time and resources, and imposes a common format on future reports.

It is remarkable how many noise assessment reports exist only in paper form. The huge variation both in format and in quality is also remarkable, and is poor practice. Best practice is to make sure that you have a high-quality digital noise assessment (DNA) benchmark template stored on the company server as the basis for all future assessments.

The template (including CAD drawings for fixed plant) can then be updated as necessary, either in-house or using a contractor. This requires a fraction of the resources needed for conventional assessments, ensures more consistent quality standards and makes it easier to extract the data in future.

Where mobile plant is involved, such as on a construction site, a tool/plant register database should be used in the DNA instead of site CAD drawings. It's often worth combining this data with hand/arm vibration values to make the process even more cost effective.

Time to act

The key factor to remember is that noise assessments are not an end in themselves. There are too many "write only" assessment reports that no one has ever read lurking in filing cabinets. The only reason to carry out an assessment is to generate a practical working document that includes a costed programme of action for the next one to two years. This can be used for budgeting and to decide risk reduction priorities.

Quoting the HSE: "... the most important thing about the risk assessment is that it identifies, in an action plan, what needs to be done to protect employees from the noise. Employers would be expected to use the information and the action plan produced by the risk assessment to set about managing noise risks."

The action plan must be drawn up by someone who is competent in your particular environment, as the recommendations will govern how money and resources are spent on noise.

The following is an outline of the key features that should — and shouldn't — be included in a noise assessment report.

Measurements

- ☒ Include noise level figures on a CAD drawing, or table/database for mobile plant.
- ☒ Include the minimum noise data for each measurement point: Leq, peak, plus the small number of octave band measurements that are absolutely necessary.
- ☒ Do not use reference numbers on plans linked to tables of noise data — this is inefficient and annoying.
- ☒ Do not download interminable and irrelevant data from your digital sound level meter; for example L10, L90, Lmin, Lmax, SEL, octaves.

Risk assessment

- ☒ Identify employees exposed above the two action values; provide estimated LEP, d values and details of how the dose is acquired (noise sources).
- ☒ Evaluate the effectiveness of current risk management procedures (including PPE use rates for example) and provide a detailed assessment of where the legal requirements aren't being met.

Noise control audit

- ☒ Evaluate the noise control options (costs, benefits and priorities) and evaluate existing noise control measures.

Report and action plan

- ☒ Keep the report as short and as simple as possible. Many reports include inapplicable or unnecessary data. This padding detracts from the usefulness of the report.
- ☒ Extract the action plan from the full report as a very short and practical document for busy managers. It should detail simply the actions necessary to implement best practice in risk management over the next one to two years, including short-term recommended actions (PPE zones and signs, types and availability of PPE, training requirements), medium-term recommended actions (training, noise control, management practices), and long-term recommendations (a "buy quiet"

Dosimetry data — a word of caution

The (sadly) common "single day" short-term dosimeter-based noise assessments are not recommended unless hand-held meter measurements are impractical. The results acquired over the first day of dosimetry are usually substantially different from those of subsequent days. So dosimetry should be used over a long enough period to generate statistically valid data.

Dosimeters are inherently less accurate than hand-held meters and, unless used carefully, can give measurement errors of as much as 2dB(A)–6dB(A). There have been several cases where the incorrect use of dosimeters in noise assessments has led to workplaces being wrongly defined as noise hazard areas at considerable cost to the employer and unnecessary discomfort to employees.

purchasing policy, company procedures/responsibilities, health surveillance).

The full report should include assessments of areas and personnel exposures by action value, a detailed evaluation of risk management practices, a CAD factory plan summary (and tables) of the measurement results, and justifications for the action plan. Detailed technical data should be confined to just the minimum reference information necessary and included as appendices so it does not interfere with the report contents. In the case of mobile plant and hand tools, include tables or a database of the results in place of the factory plan.

Noise control

The noise control content of many noise assessments goes along the lines of: "We recommend that it would be a good idea to use noise control measures to reduce noise levels as much as possible...". This does not meet the requirements of the Regulations, nor does it allow companies to benefit from effective noise control programmes which, in a surprising number of cases, can actually pay for themselves.

A noise control audit to generate an engineering evaluation of the noise control

options is mandatory under the Regulations. PPE cannot be used for long-term risk management, for example, unless you can prove that noise control is impractical.

For many companies, best practice would be to use past noise data to establish the areas for a noise control audit, instead of carrying out a conventional assessment. This costs less than an assessment, and provides the information on the costs and benefits you need to include in the action plan. It also offers the potential to eliminate the need for (costly) PPE by improving the working environment.

If you do need a new or repeat noise assessment, then a noise control audit must either be included or commissioned as an add-on where the competent person does not possess the necessary engineering skills.

The bottom line

The main factors to take into account when evaluating your noise assessment reports and review schedule against current best practice include the following.

- ☒ Review past surveys and check that you have a high-quality digital noise assessment template in place on your server that can be used to standardise reporting.

- ☒ Check that you have an action plan in place with specific recommendations that include noise control.
- ☒ Only commission a repeat full noise assessment if plant noise levels have changed and/or there are specific and measurable changes needed to ensure the action plan reflects best practice.

There are too many "write only" assessment reports that no one has ever read lurking in filing cabinets

- ☒ Where noise levels have changed, decide whether to update your template assessment in-house or using a contractor.
- ☒ Decide whether to invest in a noise control audit instead of an assessment — where an assessment is necessary, a noise control audit must be included. ☒

 Peter Wilson is director of the Industrial Noise and Vibration Centre, www.invc.co.uk

Counting the pennies?

Flexible Training Solutions for any Budget

We can provide you with:

- Taught courses
- e-learning
- Blended learning
- NVQs
- In-house
- Overseas
- Regions: Bristol, Leeds, London, Manchester, Newcastle, Scotland and West Midlands



Funding available

HEALTH SAFETY 09

6th & 7th October 2009
The Reebok Stadium, Bolton
Please visit us at Stand 92