

10 YEARS SINCE HSE'S NOISE AT WORK REGULATIONS - TAKING A LOOK AT WHAT NOISE MEANS FOR INDUSTRY

The Control of Noise at Work Regulations 2005 (the Noise Regulations) came into force for all industry sectors in Great Britain on 6 April 2006 (except for the music and entertainment sectors where they came into force on 6 April 2008).

The aim of the Noise Regulations is to ensure that workers' hearing is protected from excessive noise at their place of work, which could cause them to lose their hearing and/or to suffer from tinnitus (permanent ringing in the ears). Ten years on from the HSE Noise Regulations were brought into force, we take a look at the problems associated with noise at work, and what employers must do to protect their staff.

Background to the Noise Regulations

Both the 1989 and the 2005 sets of noise regulations are based on European Union Directives requiring similar basic laws throughout the Union on protecting workers from the health risks caused by noise. They do not apply to members of the public exposed to noise from their non-work activities, or when they make an informed choice to go to noisy places or from nuisance noise.

The 2005 Noise Regulations replace the 1989 Noise Regulations and introduce new requirements for action to be taken by employers. For example, the 2005 Regulations require employers to take action to protect workers at levels of noise 5 decibels lower than in the 1989 Regulations and now require health surveillance (hearing checks) for workers regularly exposed above 85 decibels.

Many thousands of people are exposed to loud noise at work that may be a risk to their hearing. But compliance with the Noise Regulations will allow workers' hearing to be protected. The level at which employers must provide hearing protection and hearing protection zones is now 85 decibels (daily or weekly average exposure) and the level at which employers must assess the risk to workers' health and provide them with information and training is now 80 decibels. There is also an exposure limit value of 87 decibels, taking account of any reduction in exposure provided by hearing protection, above which workers must not be exposed.

How is Noise Measured?

Noise is measured in decibels (dB). An 'A-weighting' sometimes written as 'dB(A)', is used to measure average noise levels, and a 'C-weighting' or 'dB(C)', to measure peak, impact or explosive noises. You might just notice a 3 dB change in noise level, because of the way our ears work. Yet every 3 dB doubles the noise, so what might seem like small differences in the numbers can be quite significant.

The Health Effects of Noise at Work

Noise at work can cause hearing loss that can be temporary or permanent. People often experience temporary deafness after leaving a noisy place. Although hearing recovers within a few hours, this should not be ignored. It is a sign that if you continue to be exposed to the noise your hearing could be permanently damaged. Permanent hearing damage can be caused immediately by sudden, extremely loud, explosive noises, eg from guns or cartridge-operated machines.

But hearing loss is usually gradual because of prolonged exposure to noise. It may only be when damage caused by noise over the years combines with hearing loss due to ageing that people realise how deaf they have become. This may mean their family complains about the television being too loud, they cannot keep up with conversations in a group, or they have trouble using the telephone. Eventually everything becomes muffled and people find it difficult to catch sounds like 't', 'd' and 's', so they confuse similar words.

Hearing loss is not the only problem. People may develop tinnitus (ringing, whistling, buzzing or humming in the ears), a distressing condition which can lead to disturbed sleep.

Remember: Young people can be damaged as easily as the old.

Do You Have a Noise Problem at Work?

This will depend on how loud the noise is and how long people are exposed to it. As a simple guide you will probably need to do something about the noise if any of the following apply:

- Is the noise intrusive - like a busy street, a vacuum cleaner or a crowded restaurant - for most of the working day?
- Do your employees have to raise their voices to carry out a normal conversation when about 2 m apart for at least part of the day?
- Do your employees use noisy powered tools or machinery for more than half an hour each day?
- Do you work in a noisy industry, eg. construction, demolition or

road repair; woodworking; plastics processing; engineering; textile manufacture; general fabrication; forging, pressing or stamping; paper or board making; canning or bottling; foundries?

- Are there noises due to impacts (such as hammering, drop forging, pneumatic impact tools etc.), explosive sources such as cartridge operated tools or detonators, or guns?

Noise can also be a safety hazard at work, interfering with communication and making warnings harder to hear. Some examples of typical noise levels are shown in the graphic.

Employers' Responsibilities - Legal Duties

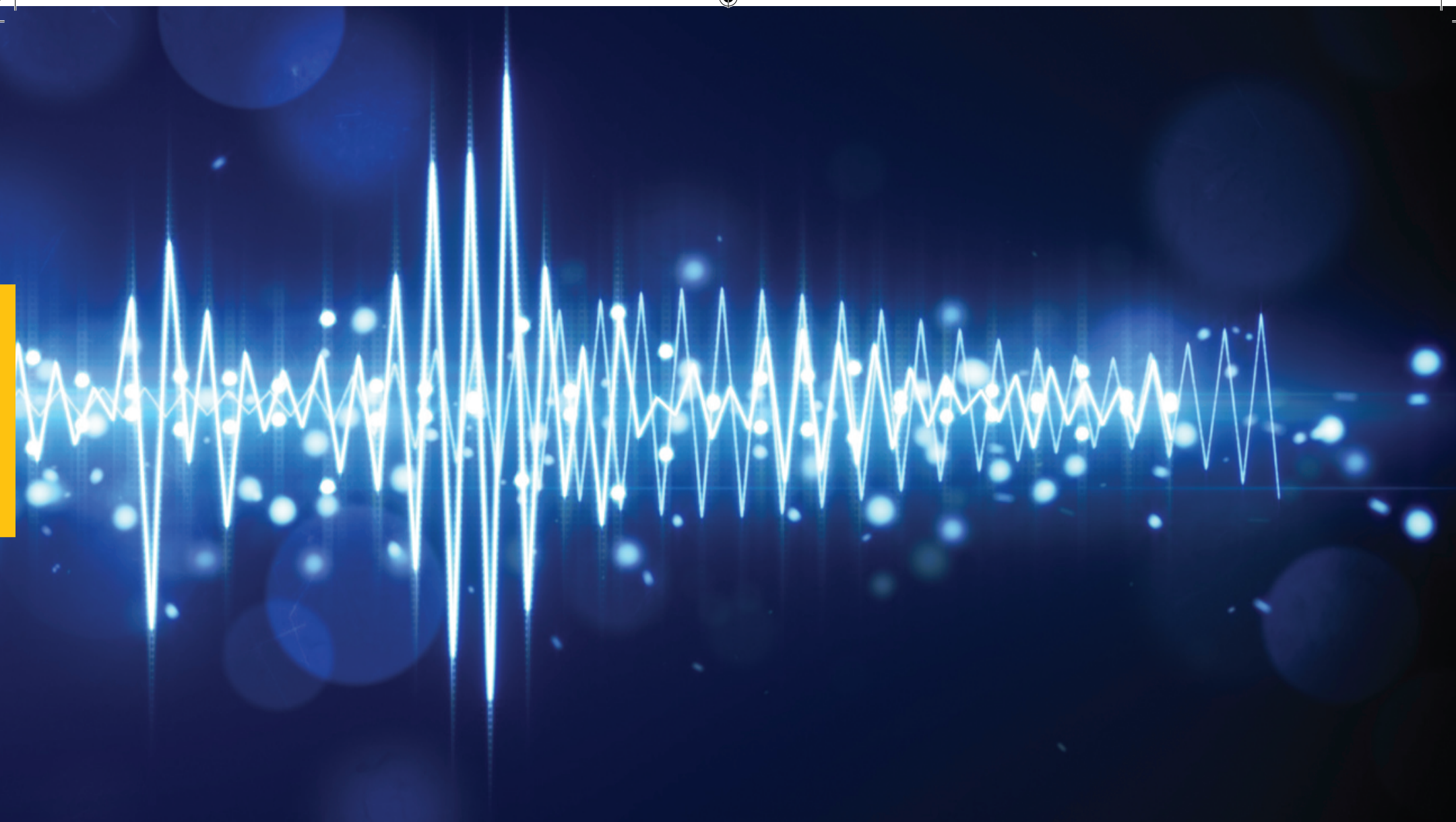
What do the regulations require you to do?

The Control of Noise at Work Regulations 2005 (Noise Regulations 2005) require employers to prevent or reduce risks to health and safety from exposure to noise at work. Employees have duties under the Regulations too. The Regulations require you as an employer to:

- Assess the risks to your employees from noise at work;
- Take action to reduce the noise exposure that produces those risks;
- Provide your employees with hearing protection if you cannot reduce the noise exposure enough by using other methods;
- Make sure the legal limits on noise exposure are not exceeded;
- Provide your employees with information, instruction and training;
- Carry out health surveillance where there is a risk to health.

The Regulations do not apply to:

- members of the public exposed to noise from their non-work activities, or making an informed choice to go to noisy places;
- low-level noise that is a nuisance but causes no risk of hearing damage.



How Do I Control the Risks from Noise?

The purpose of the Noise Regulations 2005 is to make sure that people do not suffer damage to their hearing - so controlling noise risks and noise exposure should be where you concentrate your efforts.

Wherever there is noise at work you should be looking for alternative processes, equipment and/or working methods which would make the work quieter or mean people are exposed for shorter times. You should also be keeping up with what is good practice or the standard for noise control within your industry.

Where there are reasonably practicable things you can do to reduce risks from noise, that are reasonably practicable, they should be done. However, where noise exposures are below the lower exposure action values, risks are low and so you would only be expected to take actions that are relatively inexpensive and simple to carry out.

Where your assessment shows that your employees are likely to be exposed at or above the upper exposure action values, you must put in place a planned programme of noise control.

How can I choose quieter equipment and machinery?

Introducing a positive purchasing and hire policy can be the most cost-effective long-term measure you take to reduce noise at work. Choosing quieter equipment and machinery, whether it is bought or hired, from the start can save you the cost of introducing noise-reduction measures once it is installed or in use. You could do the following:

- Consider at an early stage how new or replacement machinery could reduce noise levels in the workplace - set a target to reduce the noise levels if possible.
- Ensure you specify a realistic noise output level for all new machinery, and check that tenderers and suppliers are aware of their legal duties.
- Ask the suppliers about the likely noise levels under the particular conditions in which you will operate the machinery, as well as under standard test conditions. If you ask the same question to all suppliers you can compare information. Noise output data will only ever be a guide as many factors affect the noise levels experienced by employees, but it will help you to buy quieter machines.
- Try to purchase or hire only from suppliers who can demonstrate a low-noise design, with noise control as a standard part of the machine, not as a costly optional extra.

Keep a record of your decision process, to help show that you have met your legal duties to reduce workplace noise.

Remember to ask your supplier about:

- installation arrangements, eg methods of mounting and

What Are the Action Levels and Limit Values?

The Noise Regulations require you to take specific action at certain action values. These relate to:

- the levels of exposure to noise of your employees averaged over a working day or week; and
- the maximum noise (peak sound pressure) to which employees are exposed in a working day.

The values are:

Lower exposure action values:

- daily or weekly exposure of 80 dB
- peak sound pressure of 135 Db

Upper exposure action values

- daily or weekly exposure of 85 dB
- peak sound pressure of 137 dB

The actions you need to take are described in the rest of the employers' web pages. The flow chart in Figure 1 will also help you decide what you need to do.

There are also levels of noise exposure which must not be exceeded. These are called exposure limit values:

- daily or weekly exposure of 87 dB
- peak sound pressure of 140 dB

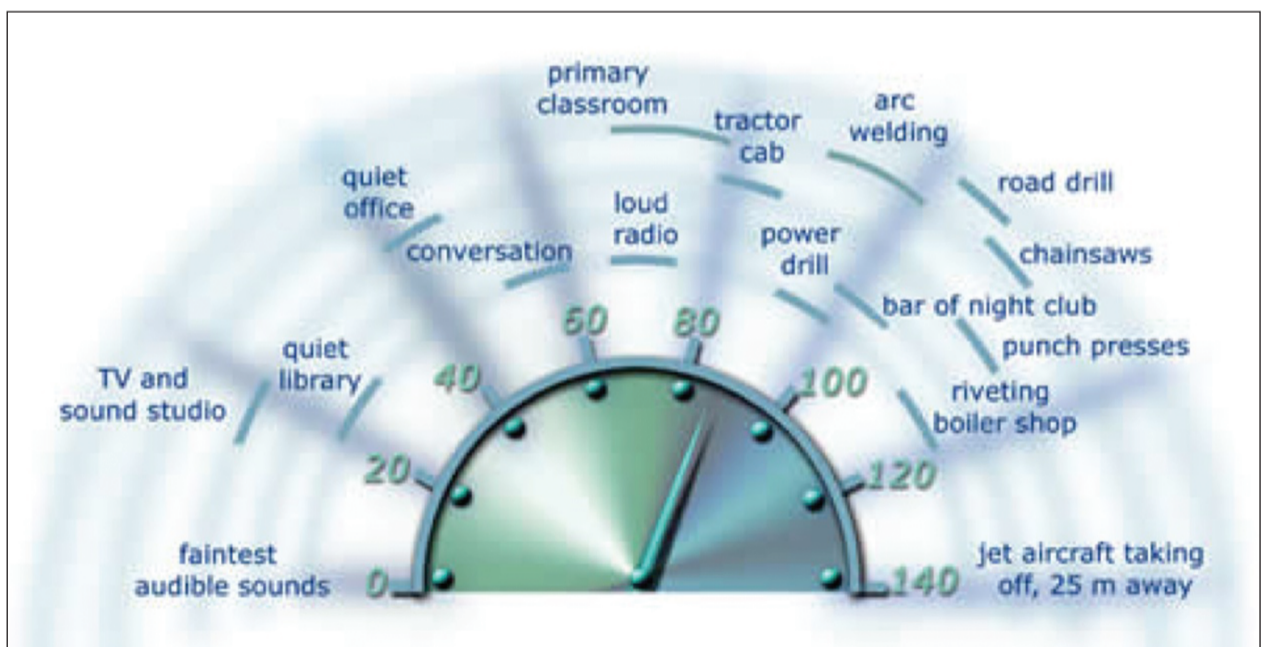


Figure 1: Typical noise levels, as measured in dB

location, to ensure machinery operates as quietly as possible

- anything about how the machine operates which could affect the noise it produces

- maintenance arrangements to ensure the machine continues to operate properly and does not get louder over time

All information taken from the Health and Safety Executive website. For more information please visit www.hse.gov.uk/noise

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