

GUIDANCE ON REDUCING NOISE PRODUCTION AND NOISE EXPOSURE

Introduction

The Control of Noise at Work Regulations 2005 applies to almost all work activities where noise is present in substantial enough levels to cause a hazard. They require employers to prevent or reduce risks to health and safety from exposure to noise at work. The Regulations require exposure to hazardous noise to be reduced “so far as reasonably practicable” - this must be achieved primarily by reducing the production of noise, and then by reducing exposure to it. Under the University Code of Practice on Control of Noise, Faculty Operating Officers and Directors of Directorates must:

- Ensure that noise is taken into account in risk assessments and reviews for relevant activities. Formal assessment of the risk to health is required where noise levels exceed the lower exposure action value.
- Reduce noise exposure levels so far as is reasonably practicable, by reducing the production of noise or by reducing people’s exposure to it, or a mixture of the two.
- Consider alternative processes, equipment and/or working methods which will make the work quieter or mean people are exposed for shorter times.
- Consider noise levels when purchasing new equipment, and where possible specify and purchase quieter equipment for continuous improvement.
- Consider noise levels when installing or relocating equipment or activities, and where possible make adjustments to minimise noise production.
- Have maintenance arrangements that ensure equipment continues to operate properly and does not become noisier over time.

Risk assessment

The guidance to the Regulations states that, as a simple guide, action to reduce exposure may need to be considered if people have to raise their voices to carry out a normal conversation when about two metres apart; if they use noisy powered tools or machinery for more than half an hour a day; or the work produces very loud impact or explosive sounds. Unwanted noise in general work and study areas may be distracting and in itself may not be a health hazard within the meaning of the Regulations but noise can create stress, and can be a safety hazard at work, interfering with communication, acting as a distraction and making warnings harder to hear.

The aim of the risk assessment is to help decide what needs to be done:

- Identify where there may be a risk from noise and who is likely to be affected
- Include a reliable estimate of workers (staff and student) exposures, which can be compared with the noise exposure action values and limit values in the Regulations.

- Identify what needs to be done, e.g. whether noise control measures or hearing protection are needed, and if so where and what type.
- Identify any employees who need to be provided with health surveillance (hearing checks) and whether any are at particular risk.

Noise control measures

Noise control measures fall into two parts: reducing noise production and reducing noise exposure. The following measures refer to noisy equipment and processes, but are also of general relevance to any noisy areas or activities.

- **Buy-in ready made items rather than make them by noisy processes**
- **Use quieter equipment**
 - Can whatever is causing the noise be replaced with something quieter?
 - Can silencers be fitted?
 - Can quieter equipment be purchased?
 - Is the equipment installed properly, according to the manufacturer's instructions?
- **Use a different, quieter process or method of working**
 - Can the work be done in a different, quieter way?
 - Is the equipment being used properly, according to the manufacturer's instructions?
 - Could the equipment be run faster or slower and produce less noise?
 - Can metal on metal impacts be eliminated or reduced?
- **Minimise the number of items of equipment in use**
 - Can some equipment be removed to another area?
 - Can items of equipment be used at different times rather than together?
- **Keep equipment working quietly**
 - Is equipment checked, maintained, serviced and cleaned regularly?
 - Are panels secured to prevent vibrations?
 - Can padding 'damping' be used on poorly-fitting panels to stop vibrations?
 - Can rubber mountings or flexible couplings be used to reduce vibration?
- **Reduce the travel of noise**
 - Can noise enclosures be erected around the equipment?
 - Can barriers and screens be used to block the noise?
- **Design the work environment and layout to minimise reflected noise**
 - Can absorptive materials be used on walls and floors?
- **Minimise the number of people in a noisy area**
 - Can noisy equipment be kept well away from quieter areas?
 - Does everyone have to be in the noisy area? Can times when noise has to be made be adjusted to when fewer people are exposed?
- **Minimise the amount of time people have to spend in noisy areas**
 - Halving the time reduces noise exposure by 3 dB
 - Can work be rostered?
 - Can breaks be taken in quieter areas?
- **Use hearing protection if all other measures have not reduced noise levels below the upper exposure action values – see separate Guidance.**