St Mary's University Twickenham London

Policy on Controlling Noise at Work

HSPG 17

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Policy on Controlling Noise at Work

1. Statement of Policy

St Mary's University will put in place measures to protect employees from the risks of Noise Induced Hearing loss (NIHL) and tinnitus, which can be caused by exposure to excessive noise. These measures will include:

a) Assessing the risks from noise exposure.
b) Taking measures to reduce noise exposure where a risk assessment shows that this is necessary.
c) Ensuring the level of noise generated is taken into account when a new piece of equipment is purchased or hired.
d) Providing hearing protection where necessary if risks cannot be adequately reduced by other means.
e) Providing training and information for employees on the risks from noise and the measures in place to reduce these.
f) Providing health surveillance where the risk assessment shows that this is appropriate.

This will enable the University to satisfy its obligations under the Control of Noise at Work Regulations (2005) and the Management of Health and Safety at Work Regulations (1999). The Noise at Work Regulations 1989 introduced the requirements of the first EEC noise Directive. A second noise Directive has been implemented through the Control of Noise at Work Regulations 2005. These Regulations took effect on 6 April 2006.

Noise and vibration are essentially both fluctuations in the pressure of air (or other media) which affect the human body. Vibrations which are detected by the human ear are classified as "sound". The term "noise" is used to describe unwanted sound.

At the lower end of the range, vibrations can be felt in other parts of the body. Some of these vibrations are experienced both by hearing and feeling so there is an overlap in these definitions.

The normal range of hearing is from approximately 16 Hertz (Hz) (a very low bass sound) to 20,000 Hertz (20 kHz) (a very high pitched sound). Vibration can be detected by the human body from 1-80Hz.

Noise and vibration are hazards to employees when they occur at high levels, or continue for a long time.

This policy does not cover the environmental aspects of noise and noise pollution; or the adverse effects on wellbeing which can arise from 'nuisance' noise which is below the levels likely to cause deafness. The vibration regulations affect any activity involving extensive use of power tools or heavy vehicles and equipment.

"Prolonged exposure to noise at work can cause hearing loss, which is often

permanent. Hearing loss caused by work is preventable, but once your hearing has gone, it won't come back"

HSE website

2. Procedures and Guidance

a) Exposure Limit Values and Action Values

The unit of measurement used to assess noise at work is called the "daily personal noise exposure" and its technical notation is LEP.d, where L=loudness, E=exposure, P=personal and d=dose.

This is the continuous level of noise, over an eight hour period, which would produce the same amount of acoustic energy as the fluctuating noise levels actually experienced. It is a convenient way to think of noise, and to compare noise environments, because it provides a single number index.

The scale of noise levels and exposures can be demonstrated as follows:-

quiet office	40-60 dBA
normal conversation	50-60 dBA
listening to radio or television at home	50-60 dBA
a bulldozer with its engine idling	85 dBA
noisy restaurant	80-90 dBA
process plant	80-95 dBA
lathes	90 dBA
nightclub, as experienced by staff	95-115 dBA
call centre	up to 100 dBA in the headphones
motorcycle courier	up to 100 dBA
pneumatic drill	100 dBA
alarms (as experienced by engineers)	100 dBA
sandblasting	110 dBA
riveting	130 dBA
gunshot (near the ear)	140dBA
aircraft taking off 25 metres away	140dBA

Lower Exposure Action Value – **80dB(A) (personal exposure averaged over a day)**
135 dB(C) Peak Sound pressure

Upper Exposure Action Value – **85dB(A) (personal exposure averaged over a day)**
137 dB(C) Peak Sound pressure

Wherever exposure at or above these levels occurs, certain actions are required.

Where exposure is very varied, average exposure may be calculated over a week rather than a day.

Exposure Limit Value – 87dB(A) (exposure averaged over a day or a week)
140 dB(C) Peak Sound Pressure

This is the maximum sound exposure permitted for any individual and takes hearing protection into account i.e. it is the actual sound exposure of the individual 'at the ears' following any attenuation from hearing protection.

b) Manufacturers' Duties

The Supply of Machinery (Safety) Regulations 1992 (as amended 1994) requires manufacturers of equipment which is likely to give rise to noise exposure implications to provide acoustical information for the end-user.

c) Risk Assessment

Employers who undertake work liable to expose any employees to noise at or above a lower exposure action value must make a suitable and sufficient assessment of the risk that noise poses to the health and safety of those employees. The risk assessment must also identify the measures needed in order to meet the requirements of the regulations (that is to eliminate or mitigate the exposure).

A noise risk assessment is required wherever it is likely that exposure will occur at or above the lower exposure action value.

As a guide to this, the following may be considered:

- if noise is intrusive but normal conversation is possible, likely noise level is approx 80dB
- If you have to shout to talk to someone 2m away, likely noise level is approx 85 dB
- If you have to shout to talk to someone 1m away, likely noise level is 90dB

The decibel scale used to measure noise is logarithmic. An increase in 3 dB equates to a doubling of sound; the increase from 80 to 85 dB is almost a four fold increase in sound level.

A tractor, a power mower and a hand drill are each likely to generate at least 90dB(A); a chain saw may be well over 100dB(A)

Personal noise exposure is a function of noise level and length of exposure. An individual working in an area where the noise level was 80dB would have a personal exposure of 80dB if he or she worked there for 8 hours per day. Working in an area where the noise level was 85 dB for 2 hours per day would also give a personal exposure of 80 dB.

Where noise exposure is accompanied by exposure to vibration, or to some chemicals such as solvents the risk of adverse effects may be higher at a given noise level.

Formal, documented risk assessment should be carried out if any individual works in an area exceeding 80 dB on a regular basis (e.g. 4 hours or more, most days) or if noise levels exceed 85dB, even if exposure is infrequent or irregular. Please see and complete the Noise Monitoring and Risk Assessment Form available on the portal.

If risk assessment is deemed not to be necessary this should be recorded, for example as part of a department or section's general risk assessment. Please see SMUC HSPG 17a **Noise** Further Information and Guidance.

Risk Assessment requires :·

- assessment of the level and type of noise; this may come from manufacturer's data for individual pieces of equipment, or from sound level measurement, especially where multiple pieces of equipment operate in an area simultaneously. Additional noise e.g. from background music should also be included;
- identification of who might be affected;
- the likely exposure time of those individuals, taking into account working patterns, noise exposure during breaks etc;
- assessment of indirect risk e.g. the risk of individuals not hearing warning alarms due to the noise level;
- consideration of additional risk factors such as the presence of vibration or solvents.

The risk assessment should include an action plan which documents the measures already in place to reduce the risk from noise exposure and any further measures planned.

The noise risk assessment can be a stand alone document, or can be incorporated into the overall risk assessment document for a department or process where this is more appropriate.

The risk assessment should be reviewed if there is any change in noise exposure; and at least every year otherwise.

c) Hearing Protection

Hearing protection can be used as an additional measure once noise has been reduced as far as is reasonably practicable by other means; or as an interim measure pending noise reduction. It must not be used as the sole method of protection if personal noise exposures exceed the upper action value (85dB)

Hearing protection should be made available on request if noise exceeds the lower action value (80dB)

Any area where noise levels exceed 85 dB (or peak sound level of 137dBC) must be designated as 'Hearing Protection Zones' and marked with appropriate signage. Within these areas, wearing of hearing protection will be compulsory, even though exposure may only be for short periods of time.

Hearing protection provided must be suitable for the levels and type of noise individuals are exposed to. Guidance on choosing suitable hearing protection can be found in "Controlling Noise at work – Guidance on Regulations" (HSE 2005).

Hearing protection should be stored properly, well maintained, and regularly inspected by a competent person.

d) Health Surveillance

Health surveillance of employees exposed to noise at work is required under Regulation 9 of the Control of Noise at Work Regulations 2005. The main purpose of health surveillance is to highlight where employees might be suffering the early signs of hearing damage, giving the employer the opportunity to do something to prevent this situation becoming worse, and also the check that control measures implemented are working efficiently and effectively. Health surveillance involves :-

- regular hearing checks in controlled conditions
- advising employees of hearing check results
- keeping health records, which are available to employees
- a medical examination by a doctor where hearing damage is identified.

Health surveillance (audiometry) must be carried out for employees who are regularly exposed to noise above the upper exposure action value (85 dB)

Health surveillance will also be offered to those exposed above the lower exposure action value if they are at increased risk e.g. if they report a known sensitivity to noise damage or a family history of early deafness.

Where health surveillance is required it will usually be carried out annually for two years then 3 yearly. Wherever possible, audiometry for new employees (or those newly exposed to noise within the college) should be carried out prior to any noise exposure.

Health surveillance will be carried out by Occupational Health. All individual records will be held in confidence. Where appropriate, summary results for groups of employees will be reported back to a manager to indicate the effectiveness of noise management systems.

e) Training and information

All employees who are exposed to noise above the lower exposure action value should be given training to include:

- The adverse effects of noise
- The results of the local risk assessments
- The measures in place to reduce noise exposure
- The need for hearing protection
- The correct use of hearing protection
- The need for health surveillance
- The responsibilities on employees

Measures must be in place to ensure that new employees receive appropriate training prior to exposure to noise.

3. Responsibilities

a) Head of School/Department

- Nominate a person(s)(usually the Health &Safety Coordinator) to support the implementation of the noise regulations within the department or section, and ensure they have the necessary skills and competence.
- Support the nominated person(s) in implementing measures to comply with the Noise at Work regulations.
- Ensure all managers and employees within the department discharge their responsibilities in accordance with this policy.

b) Managers and Supervisors

- Understand the scope and content of the Noise at Work regulations where this is relevant to work in their area.
- Ensure noise factors are taken into account when hiring or purchasing new equipment.
- Ensure that necessary noise risk assessments have been undertaken for any equipment used by those in their charge.
- Implement and enforce noise control measures, in conjunction with the Departmental/School Health & Safety Coordinator.
- Ensure employees are suitably trained in all aspects of operating equipment, including noise control.

c) Departmental/School Health & Safety Coordinator (or other nominated person)

- Understand the scope and content of the Noise at Work regulations.
- Identify whether formal noise risk assessment is required within the school/ department.
- Ensure noise factors are taken into consideration when hiring or purchasing new equipment.
- Work with the Health & Safety Officer to
    - Carry out noise risk assessment if required
    - Implement noise control measures where appropriate
    - Select and supply suitable hearing protection where required
    - Ensure suitable signage is in place
    - Identify where health surveillance is required, and liaise with the relevant managers/supervisors and Occupational health

- Monitor and enforce use of hearing protection where appropriate
- Provide training and information for those who may be exposed to noise above the lower action level.

d) Employee

- Use all equipment and noise control measures in accordance with instruction.
- Wear hearing protection where required.
- Maintain hearing protection and any other noise control equipment.
- Report any defects or difficulties with hearing protection and any other noise control equipment.
- Cooperate with any programme of health surveillance which is identified as necessary following risk assessment.

e) Health and Safety Officer

When requested by the Departmental/School Health & Safety Coordinator or equivalent: ·

- carry out sound level measurement where appropriate
- advise on noise control measures
- advise whether health surveillance is appropriate
- providing training for nominated persons to ensure they are competent to carry out the activities outlined in 3b above
- audit compliance with this policy and the underpinning regulations

f) Occupational Health

- Provide health surveillance on request
- Give feedback and guidance on risk to individuals following health surveillance
- Feedback group results from health surveillance to the appropriate manager
- Advise the appropriate manager if there are restrictions on an individual's ability to work in a noisy area due to health risks

4. References and further reading

Controlling Noise at work The Control of Noise at Work Regulations, 2005. Guidance on Regulations L108 HSE Books

Worried about your hearing? http://www.hse.gov.uk/noise/worried.htm

Protect your hearing or lose it, HSE Guidance for employees INDG 363, also available online http://www.hse.gov.uk/pubns/indg363.pdf

Management of Health and Safety at Work Regulations (1999)

https://www.hse.gov.uk/pubns/hsc13.pdf

5. Further Information

SMUC HSPG 17a **Noise** Further Information and Guidance

A number of documents exist in relation to the exposure of noise at work and useful sources of information may be found at:-

Health and Safety Executive - http://www.hse.gov.uk/noise

Institute of Acoustics - http://www.ioa.org.uk

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