



HEALTH AND SAFETY Noise at work Procedure

Originally Issued	May 2011	Ref	3.23
Latest Issue	25 May 2021 (v3.0)	Status	Current
Approved by	UHSWC	Next review date	25 May 2026

The current version is available on the Health & Safety website at:
[Health and Safety Policy and Procedures - Health and Safety \(ulster.ac.uk\)](https://www.ulster.ac.uk/health-and-safety-policy-and-procedures)

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1. PURPOSE

- 1.1 The purpose of this procedure is to outline how exposure to noise caused from work/learning activities within UU is assessed and suitable controls put in place to protect hearing whilst complying with the Control of Noise at Work Regulations (Northern Ireland) 2006.

2 SCOPE & COMMENCEMENT

- 2.1 This procedure applies to all areas of operation within the University, with effect from 25 May 2021. It applies to both University personnel (including students under supervision) and Contractors where there may be exposure to noise in relation to work which is carried out.

3 BACKGROUND

- 3.1 Hearing ability gradually deteriorates with age. However, exposure to high levels of noise at work or through leisure activities can speed this deterioration up. Noise induced hearing loss is preventable.
- 3.2 Exposure to high levels of noise can cause temporary or permanent hearing damage. When temporary deafness is experienced after leaving a noisy environment this cannot be ignored.
- 3.3 Noise induced hearing loss is usually gradual because of exposure to noise over time, but temporary or permanent damage can also be caused by sudden, extremely loud noises.
- 3.3 Hearing loss is not the only problem associated with noise at work. People may develop tinnitus (ringing, whistling, buzzing, humming in ears), a distressing condition which can, for example, disturb sleep.
- 3.4 The best way to protect staff and students is to eliminate or reduce noise at source e.g., damping machinery, replacing old equipment with less noisy alternatives. Where this is not reasonably practical, measures including reducing time exposed, protective equipment, training and health surveillance must be considered.

4 DEFINITIONS

Noise	For the purpose of H&S noise can be defined as unwanted or excessive sound. As a simple guide, activities will be deemed to be noisy if any of the following apply:
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	<p>Employees have to raise their voices to carry out a normal conversation when about 2 m apart for at least part of the day.</p> <p>Employees use noisy powered tools or machinery for more than half an hour each day</p>
Decibels	<p>“Decibels” (dB) are the most used units of noise measurement.</p> <p>A library may have noise levels of 20-30 dB, normal conversation levels would be between 50-60 dB, whereas a power drill will exceed 85 dB and a road drill or chainsaw can exceed 100 dB. The decibel scale is logarithmic ~ A 3 Db increase results in a doubling of the noise intensity.</p> <p>As demonstrated in Appendix 1</p>
Action Levels	<p>The Regulations require you to take specific action at certain action values.</p> <p>These relate to:</p> <p>the levels of exposure to noise of your employees averaged over a working day or week; and</p> <p>the maximum noise (peak sound pressure) to which employees are exposed in a working day.</p>
Lower exposure action values	<p>daily or weekly exposure of 80 dB;</p> <p>peak sound pressure of 135 dB;</p>
Upper exposure action values	<p>daily or weekly exposure of 85 dB;</p> <p>peak sound pressure of 137 dB.</p>

5 KEY LEGAL REQUIREMENT

5.1 The Control of Noise at Work Regulations (Northern Ireland) 2006 require employers to:-

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

5.2 Employees exposed to noise at work also have duties under these Regulations.

6 RESPONSIBILITIES

Vice- Chancellor

- 6.1 On behalf of the Council the Vice-Chancellor has executive responsibility to ensure, that the requirements of the health and safety legislation and the University health, safety and wellbeing policy are complied with. The Vice-Chancellor will ensure that responsibility for health and safety is properly assigned and accepted at all levels within the University.

Deputy Vice Chancellor (DVC), Pro Vice Chancellors (PVC), Chief People Officer (CPO), Chief Finance and Strategy Officer (CFSO) Deans, Directors, Heads of Schools and Departments and Research Institute Directors

- 6.2 Are responsible for ensuring that all activities with exposure to noise are assessed and controlled as laid out in this procedure.

Managers

- 6.3 **Must ensure that:**
- Noise at work is reduced as far as is reasonably practicable;
 - Noise levels are considered as part of the procurement procedure for new plant and/or equipment;
 - All noise at, or above, lower exposure action values is assessed by a competent person and that agreed control measures are implemented, maintained, and monitored;
 - Staff who continue to be exposed to noise levels above upper exposure action values (excluding protection afforded by Personal Protective Equipment) are included in a program of appropriate health surveillance;
 - Any equipment provided is maintained in good working order so far as is reasonably practicable;
 - Consideration if use of any chemicals used, particularly solvents might combine with noise to increase the risk of hearing damage.
 - They carry out supervision where use of hearing protection is mandatory;
 - Where HSW Team noise report indicates health surveillance (audiometry testing) is required managers must promptly complete an [Occupational Health referral](#) for individuals exposed.

Staff

6.4 Staff exposed to noise at work must:

- Co-operate with management to enable them to ensure the health and safety of themselves and others;
- Use any hearing protection (e.g., ear plugs/hearing defenders) and follow any safe working procedures;
- If exposed to the upper exposure action value, wear the hearing protection provided and in accordance with training;
- Look after hearing protection in accordance with training and instructions provided;
- Additionally, anyone at risk for any reason, e.g. they already suffer from hearing loss, use hearing aids or are particularly sensitive to hearing damage must inform their manager without delay;
- Report any problems, particularly those in relation to hearing protection or noise control devices, immediately.

HSW Team

- 6.5 The HSW team will provide technical support including completing noise measurements and training. HSW must ensure that requests for occupational hygiene monitoring such as noise measurements are dealt with in a timely manner, leading to the provision of the required report.

Occupational Health

- 6.6 The Occupational Health team must ensure that any requests requiring health surveillance in relation to hearing is carried out within the prescribed timescales.

7 DECIDING IF AN ASSESSMENT IS REQUIRED

- 7.1 Not all work activities require a noise assessment; the decision to carry one out will depend on how loud the noise is and how long people are exposed to it. In practical terms a Noise Assessment may be required if any of the following apply:

- Employees must raise their voices to carry out a normal conversation when about 2 m apart for at least part of the day;
- Employees use noisy powered tools or machinery for more than half an hour each day;
- Staff/students are subjected to noises due to impacts, including one off use (such as hammering, pneumatic impact tools, cutting

equipment, etc.), explosive sources such as cartridge operated tools or detonators;

- The activity is in a recognised industry with noise exposure, e.g. construction, demolition; woodworking; engineering; general fabrication; forging, pressing or stamping etc;
- The noise is intrusive for much of the working day.

7.2 It should be noted that the Regulations do not apply:

- When the activities are not work related or as members of the public making an informed choice to go to noisy places/events/activities;
- To low-level noise which is a nuisance but causes no risk of hearing damage.

7.3 Before requesting a noise assessment, the manager must follow the hierarchy of control to eliminate (or reduce as low as is reasonably practicable) the hazard by:

- Completing recommended planned preventative maintenance;
- Using quieter equipment or a different, quieter process;
- Engineering/technical changes to reduce the noise at source;
- Using screens, barriers, enclosures or absorbent materials;
- Laying out of the workplace to create quiet workstations;
- Changing ways of working to reduce noise levels;
- limiting the time spent in noisy areas.

8 NOISE ASSESSMENT

8.1 If a manager deems a work activity to be above the lower exposure action value (See definitions at para 4 above), he/she should email healthandsafety@ulster.ac.uk to request a noise assessment.

8.2 On receipt of the request, a Noise Assessment will be carried out by a competent person. The HSW Team will require other information e.g.

- A list of the employee's daily / weekly duties with approximate time.
- Time exposed to noisy equipment/machinery.
- Details of hearing protection worn if any.
- Whether there is any exposure to ototoxic substances (e.g. some solvents or medicines may combine with high levels of noise to increase risk of noise induced hearing loss)

8.3 The HSW Team will take noise measurements and produce a report in which will specify:

- The Lepd (the daily personal exposure level over eight hours) for the those carrying out that activity, measured in dB(A);

- Classification of the level of the noise, i.e. below the lower exposure action values, in lower exposure action values or in Upper exposure action values;
- Specification of necessary control measures, i.e. training, PPE, health surveillance, and;
- Recommendations on further actions that may be taken.

Actions required on receipt of report

On receipt of the report the manager will take action recommended according to exposure action levels as indicated below:

Under the Lower Exposure action values

- The manager need not take any immediate action, but periodic noise assessment may be required to ensure the noise levels don't increase.

In the Lower Exposure action values

- Ensure hearing protection is provided for workers, and its use is encouraged.
- Ensure those with underlying conditions potentially or affecting hearing, are referred for health surveillance where they will undergo audiometric testing.
- Ensure staff are given appropriate training and instruction covering risks from exposure to noise, controls, correct use and wearing of PPE, health surveillance and responsibilities.

In the Upper Exposure action values

- Ensure the wearing of appropriate hearing protection which is compulsory above the Upper Exposure action value.
- The area must be marked as a 'Hearing Protection Zone' and it will be compulsory for all in that area to wear appropriate hearing protection.
- All those exposed must attend health surveillance at the frequency required by the Occupational Health Team where they will undergo audiometric testing.
- All those who are exposed must have appropriate instruction covering risks from exposure to noise, controls, correct use and wearing of PPE, health surveillance and responsibilities.

Note: There are also levels of noise exposure which **must not be exceeded:**

Exposure Limit Values:

- daily or weekly personal noise exposure of 87 dB(A);
- peak sound pressure of 140 dB(C).

These exposure limit values take account of any reduction in exposure provided by hearing protection. Advice will be provided in relation to this where necessary in the noise assessment report from HSW.

- 8.4 When managers are selecting hearing protection such as ear muffs or plugs it must: -
- Have a protection factor sufficient to eliminate risks from noise (not so much protection that the wearer become isolated (overprotection));
 - Be suitable for the work and working environment, e.g. physical activity, comfort and hygiene;
 - Be compatibility with other protective equipment, e.g., hard hats, masks and eye protection.

9 INFORMATION, INSTRUCTION AND TRAINING

- 9.1 Managers must ensure anyone exposed to noise levels at or above “lower exposure action values” are provided with the following information:
- The likely noise exposure and the risk to hearing this noise creates;
 - What is being done to control risks and exposures;
 - Where and how they can obtain hearing protection;
 - How to report defects in hearing protection and noise-control equipment;
 - What they should do to minimise the risk, such as the proper way to use hearing protection and other noise-control equipment, how to look after it and store it, and where to use it;
 - Health surveillance requirements and procedures;
 - Demonstration of how to use hearing protection. i.e., toolbox talks.
 - Records of, information, instruction and training provided to staff must be retained for a minimum of three years.

10 HEALTH SURVEILLANCE

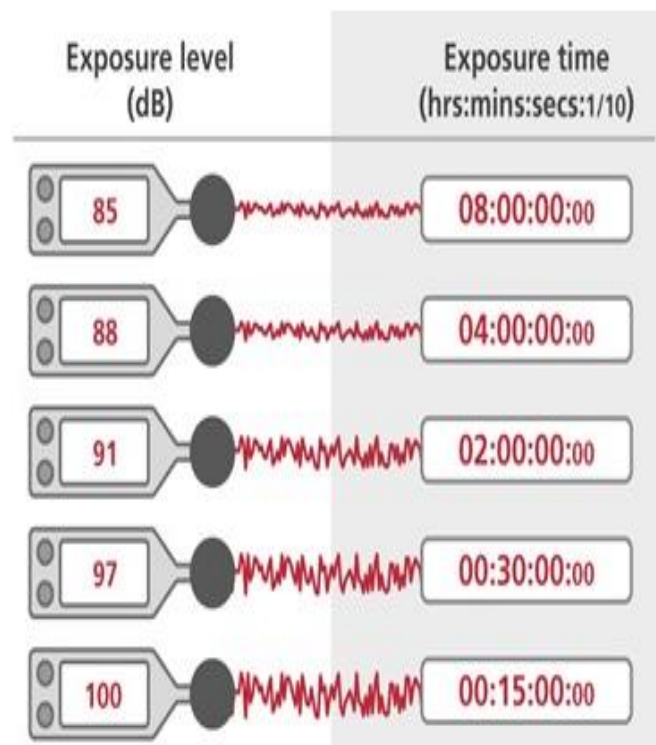
- 10.1 Staff frequently exposed above the upper exposure action values must be provided with health surveillance.

- 10.2 Health surveillance should also be provided if an individual is particularly sensitive to noise. This may be from past medical history, audiometric test results from previous jobs, other independent assessments or a history of exposure to high noise levels. Reported family history of auditory conditions early on in life should also be considered.
- 10.3 The Occupational Health Team will provide health surveillance for staff. Referrals should be made by managers by completing the [Occupational Health referral](#) form.
- 10.4 Where there is known exposure to high levels of noise, surveillance should happen at pre-employment stage. If already employed, then the initial audiogram would be the baseline. Follow up is normally annually for the first two years, then at three year intervals. Testing may be more frequent where abnormality in hearing is detected, or where the risk of hearing damage is high but Occupational Health Team will determine this.
- 10.5 Occupational Health Team will advise the individual and manager of the outcome and frequency of subsequent surveillance on an individual basis and will inform managers as to the means of arranging these appointments.

Fig 1 Common noise exposure levels



Fig 2 - 3dB increase can reduce exposure time by 1/2 (3dB increase doubles noise intensity at the ear)



Resources

HSE Noise at work: [A brief guide to controlling the risks INDG362](#)
HSE Controlling noise at work [L108 Approved Code of practice](#)
HSE Noise at Work FAQs <https://www.hse.gov.uk/noise/faq.htm>
[HSE - Noise: Noise at work in the music and entertainment sectors](#)
Exposure Calculators and Ready Reckoners [HSE - Noise: Exposure Calculator](#)