



The Control of Noise at Work Code of Practice

Reviews and Revisions

Date	Reason	Reviewer	Next review date	Approved by
12/02/2018	To ensure currency of University practice	John Hall	12/02/2020	E Pritchard
22/11/2018	Update University logo	John Hall	12/02/2020	E Pritchard
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Introduction

This guidance applies to all Northumbria University employees and any person who may be affected by the work activity conducted by the University.

It sets down the measures to be taken by the University to ensure that all persons, staff, students, visitors, contractors and others are protected from noise induced hearing loss while at work, and comply fully with **The Control of Noise at Work Regulations 2005**.

What Harm can Noise Cause?

Hearing damage

Exposure to noise at work can cause hearing damage that is permanent and disabling.

Hearing loss can occur over time, due to repeated exposure to noise, or be caused by sudden extreme loud noises. This condition stops people understanding speech, keeping up with conversations or using the phone. Other conditions such as tinnitus (ringing, whistling, buzzing in the ears) may disrupt sleep.

Safety issues

Noise at work can interfere with *communications* and make warnings harder to hear. It can also reduce people's awareness of their surroundings. These issues can lead to safety risks – putting people at risk of injury or death.

Noise may interfere with *working efficiency* by being an annoyance and causing stress. It may directly cause accidents by hindering communication and most importantly can cause permanent *damage to hearing*.

The risk of damage depends on the dose of sound energy received over a period of time. A temporary loss of hearing lasting from a few seconds to a few days may result from exposure to intense noise for a short time.

Regular exposure to high noise levels over a long period is much more serious and may result in the destruction of certain inner ear structures and a loss of hearing, which is incurable.

Initial symptoms include:

- An inability to hear high-pitched or soft sounds
- Trouble understanding conversation in a crowded room
- Ringing or whistling in the ears (tinnitus)

Hearing loss may also happen as part of the normal ageing process, or may be caused by disease.



Definitions

- **Decibel (dB)** - The unit of measurement for loudness of a sound. The higher the dB reading, the louder the sound. Every 3dB increase equates to a doubling in sound intensity.
- **Exposure** – The amount of noise to which a person is exposed at work over a specified time period.
- **Action Level** - Is a noise exposure level at which employers are required to take certain steps to reduce the harmful effects of noise on hearing. There are two main action levels for continuous Noise: 80 dB(A) and 85 dB(A).
- **Maximum Exposure Values** – The levels of noise exposure that must not be exceeded.
- **Control Measure** – Any measure to reduce the risk in the workplace, e.g. acoustic enclosures, sound absorbing screens, restricted access zones, mechanical devices, access procedures, personal protective equipment, training.
- **Acoustic Shock** – A sudden, unexpected noise event which is perceived as loud, transmitted through a telephone or headset that may cause an adverse reaction.
- **Hearing Protection Zones** – Any working environment which potentially exposes persons (daily or weekly) to sound levels of 85 dB(A) or greater.
- **Competent Person** - A competent person is someone who has sufficient technical and practical knowledge of the noise measuring equipment to be able to carry out a noise survey in a controlled, methodical fashion and correctly interpret those results.

Duties Imposed on the Employer/Employees/Others

The Control of Noise at Work Regulations 2005 requires the risk of damage to peoples hearing, to be prevented or controlled. Generally, any equipment or process, which is used by staff or students at work, is covered by the regulations.

The University as an employer shall:

- Ensure that employees and workers (staff at work and students attending lecture and practical sessions) are not exposed to persistent or instantaneous noise of a kind that would be detrimental to hearing.
- Keep up with good practice and relevant higher education sector and industry standards for noise control.
- Encourage continuous improvements.



Pro Vice-Chancellors and Service Directors shall ensure measures are in place to:

- Consider noise levels in risk assessments and reviews for relevant activities.
- Reduce noise exposure levels so far as is reasonably practicable, by reducing or eliminating noise at source or reducing people's exposure to it.
- Reduce noise through the use of alternative processes, equipment and/or working methods.
- Consider noise levels when purchasing new equipment/specifying quieter equipment. HSE's "Buy Quiet" guidance can be found [here](#).
- Maintain equipment in good condition.
- Respond appropriately to concerns about noise levels in any location.
- Provide signage for hearing protection zones, where necessary, where exposure to workers (staff and students) is equal to or exceeds the upper exposure action value.
- Inform workers (staff and students) where the personal noise exposure is above the upper exposure action value and provide relevant information.
- Provide suitable hearing protection to workers (staff and students) in designated zones, and supervise its correct use.
- Where hearing protection is provided (on request or mandatory), ensure suitable training and instruction on correct fitting, maintenance and storage.

The Central Health and Safety Team shall:

- Carry out or arrange a noise survey of all relevant areas every two years, or more frequently if problems are reported; keep records of all noise surveys undertaken.
- Ensure that survey findings are made available together with advice on any remedial actions.

Occupational Health shall:

- Arrange for appropriate health surveillance (hearing checks) for relevant employees, if they are likely to be regularly exposed above the upper exposure action values, or are at risk for any reason e.g. they already suffer from hearing loss or are particularly sensitive to damage.

Staff shall:

- Use hearing protection provided for mandatory use in designated hearing protection zones.
- Attend health surveillance (hearing checks) when requested by Occupational Health.

Students are required to:

- Use hearing protection provided for mandatory use in designated hearing protection zones.



Understanding Noise Levels and Exposure

Action Levels

The Control of Noise at Work Regulations require the University (and employers) to take specific action at certain levels of noise exposure. These relate to exposure averaged over a working day or week and the maximum noise (peak sound pressure) which staff may be exposed to.

At Lower action level: Daily or weekly exposure above **80 dB(A)**, or peak sound pressure **135 dB(C)** - Employers must:

- Provide information and training
- Make hearing protection available

At Upper action level: Daily / weekly exposure of **85dB(A)** and above, or peak sound pressure **137dB (C)** - Employers must:

- Take action to reduce the daily exposure below **85dB**, using hearing protection as a last resort.
- Designate the noisy area as a hearing protection zone.
- Exposed staff provided with annual health surveillance.

Exposure Limit Values

The Regulations also set maximum levels of noise exposure of **87 dB** and the peak sound pressure is **140 dB (C)** that must not be exceeded. These exposure limit values take into account any reduction in exposure provided by hearing protection.

Identifying if there is a noise problem in the workplace

This will depend on how loud the noise is, and how long people are exposed to it. Action should be taken if any of the following apply:

- a) Is there machinery, a process, vehicles or other intrusive noise present most of the day?
- b) Do staff in the area need to raise their voices to be heard when standing 2 metres apart?
- c) Do staff/students use power tools or machinery for more than 30 minutes each day?
- d) Are there noisy, hammering, pneumatic or impact tools in use?
- e) Are there areas where noise levels could interfere with warning or danger signals?

If the answer to any of the above questions is 'yes' then a risk assessment should be undertaken and noise readings obtained from those areas (during typical work activities).


If noise levels exceed either exposure action values, hearing protection shall be worn (as a short-term solution) until permanent noise reduction measures are in place.



Daily and Weekly Noise Calculators/Ready Reckoner

The HSE have devised a simplified method of calculating the daily and weekly exposure by using the noise exposure calculator, and the ready reckoner.

Enter the LAE (in dB) and select the daily exposure duration (in hours) in the white areas for up to eight jobs or tasks carried out by a person during their working day



You can enter data in the white cells only

Exposure Calculator		Daily noise exposure calculator		
	Noise Level (L _{Aeq} dB)	Exposure duration (hours)	Exposure points (job/task)	Exposure points per hour
Job / task 1	87	0.25	5	20
Job / task 2	84	4	40	10
Job / task 3	95	0.4	50	125
Job / task 4				
Job / task 5				
Job / task 6				
Job / task 7				
Job / task 8				
Total duration		4.65		
Daily noise exposure (L _{EP,d})		85 dB	95 points	

Note: Exposure points can be used to prioritise noise control. The highest exposure points are given by the jobs, tasks, etc. which make the greatest contributions to daily noise exposure. Therefore, tackling these noise exposures will have the greatest effect on daily noise exposure.

The HSE Noise exposure ready reckoner



Sound pressure level L _{Aeq}	Duration of Exposure								total exposure points	Noise exposure
	15mins	30mins	1hr	2hrs	4hrs	8hrs	10hrs	12hrs		
105	325	625	1250						3200	100
100	100	200	400	800					1600	97
97	50	100	200	400	800				1000	95
95	32	65	125	250	500	1000			800	94
94	25	50	100	200	400	800			630	93
93	20	40	80	160	320	640			500	92
92	16	32	65	125	250	500	625		400	91
91	12	25	50	100	200	400	500	600	320	90
90	10	20	40	80	160	320	400	470	250	89
89	8	16	32	65	130	260	470	380	200	88
88	6	12	25	50	100	200	240	300	160	87
87	5	10	20	40	50	160	190	240	130	86
86	4	8	16	32	65	125	160	190	100	85
85		6	12	25	50	100	125	150	80	84
84		5	10	20	40	80	100	120	65	83
83		4	8	16	32	65	80	95	50	82
82			6	12	25	50	65	75	40	81
81			5	10	20	40	50	60	32	80
80			4	8	16	32	40	48	25	79
79				6	13	25	32	38	20	78
78				5	10	20	25	30	16	77
75					5	10	13	15		



Instructions:

For each task or period of noise exposure in the working day, look up in the table on the left the exposure points corresponding to the sound pressure level and duration (e.g. exposure to 93 dB for 1 hour gives **80** exposure points);

- Add up the points for each task or period to give total exposure points for the day.
- Look up in the table on the right the total exposure points to find the corresponding daily noise exposure (e.g. total exposure points for the day of 280 points gives a daily noise exposure of between 89 to 90 dB).

Training

All staff should be aware of the risks they may be exposed to and the findings of the risk assessment with any noise monitoring shared.

If the lower action value is reached, staff should be informed of:

- The likely noise exposure and the risk to their hearing this creates.
- What control measures are in place.
- Where to obtain hearing protection and how to report defects in this equipment.
- What they should do to minimise risk including wearing PPE and safety working practices.
- The University's health surveillance process.
- How to detect the first signs of hearing damage.

All staff using hearing protection must be trained in its correct use, how to spot defects, and where to obtain hearing protection.

Health Surveillance

Health surveillance (hearing checks) will be provided by the University's Occupational Health Service for all staff who are likely to be regularly exposed above the upper action values (determined by noise monitoring and risk assessment), or are at risk for any reason, e.g. have a pre-existing hearing condition.

The purpose of health surveillance is to provide advance warning of any early signs of hearing damage so that control measures can be implemented and the situation monitored.

Health surveillance shall also be carried out for new starters or those changing jobs before they are exposed to noise, where the job has been identified as one requiring health surveillance. This is to provide a baseline assessment.



Health surveillance can be introduced at any time even if they have already been exposed to high noise levels or if dictated by risk assessment. This would be followed by routine and planned checks (usually annually).

Monitoring & Review

The effectiveness of this guidance will be monitored through a number of indicators:

- Incident and injury statistics / sickness absence data.
- Results of inspections and dip checks.
- RIDDOR incidents reported to the HSE.
- Legal action / claims data.
- Occupational Health data on health surveillance.

Faculties and Services will monitor risk assessments and control measures through their Health & Safety Committees. Any problems highlighted should be brought to the attention of the Central H&S Team.




Guidance Documents and Useful Links

INDG362: Noise at work a brief guide to controlling risks. Provides an outline of the requirements of what the University, as an employer, needs to do under the Control of Noise at Work Regulations 2005 to protect your employees from noise. [HSE INDG362\(rev2\)](#)

HSE L108: Controlling Noise at Work

This guidance provides general information about the requirements of the Noise at Work Regulations 2005. It describes what the University may need to do to protect persons in the workplace and is available at the following link: [HSE L108](#)

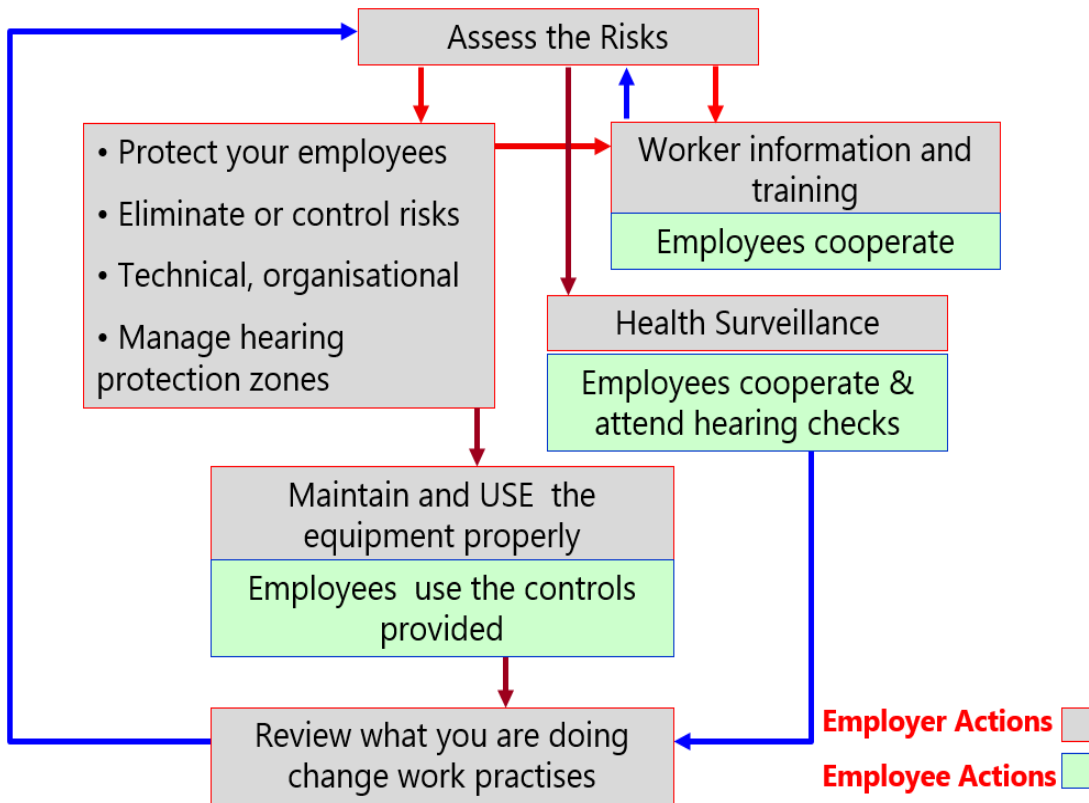
Other useful links:

- [HSE Daily noise exposure calculator](#) [1]
- [HSE Weekly noise exposure calculator](#) [2]
- [HSE Hearing protection calculators](#) [3]
- [HSE Removal of hearing protectors severely reduces protection\[4\] - online tool](#)



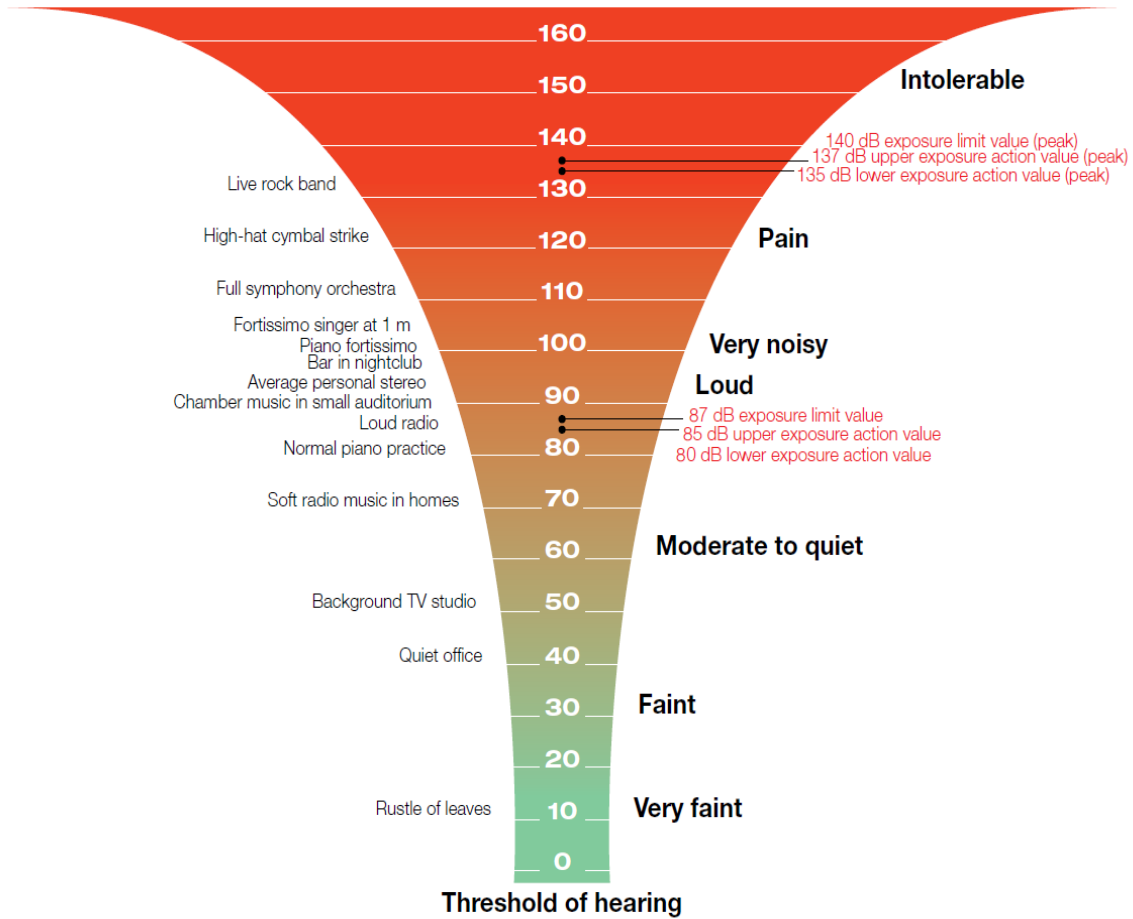
Legal Responsibilities for Noise Levels over 85 dB(A)

Legal responsibilities for noise levels over 85 dB(A)





The Decibel Scale - Comparative Representation



Noise Survey Schedule

Noise Survey Schedule 2020 - 2021						
Faculty / Department	Area	Risk	Last survey date	Frequency (Years)	Next survey date	Monitoring equipment used
Arts Design and Social Sciences	Squires woodwork shop	Medium	19/12/2019	2	Dec-21	Casella
Arts Design and Social Sciences	Squires metalwork shop	Medium	19/12/2019	2	Dec-21	Casella
Arts Design and Social Sciences	garment manufacture	Low	29/10/2017	2	Not required: below 80dB(A)	Casella
Arts Design and Social Sciences	CCE 2 woodwork shop	Medium	19/12/2019	2	Dec-21	Casella
Arts Design and Social Sciences	CCE 2 woodwork shop	Medium	19/12/2019	2	Dec-21	Casella
Arts Design and Social Sciences	CCE 2 metalwork shop	Medium	19/12/2019	2	Dec-21	Casella