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| **CAL-HS-PD-1000** |
| **Management of Noise at Work** |
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| **Procedure** |
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###### Contents

[1.0 PURPOSE 1](#_Toc181035598)

[2.0 BACKGROUND 1](#_Toc181035599)

[3.0 DEFINITIONS AND AN EXPLANATION OF TERMS USED 2](#_Toc181035600)

[4.0 FULL DETAILS 2](#_Toc181035601)

[4.1 “Exposure Limit Values” (ELV) - daily/weekly personal noise exposure 2](#_Toc181035602)

[4.2 Risk Assessment 2](#_Toc181035603)

[4.3 Reducing Risk from Noise Exposure 3](#_Toc181035604)

[4.4 Simple Guide – excessive noise 4](#_Toc181035605)

[5.0 HEALTH SURVEILLANCE 4](#_Toc181035606)

[5.1 Initial assessment 4](#_Toc181035607)

[6.0 MANAGEMENT OF NOISE AT WORK OPERATING STANDARDS 5](#_Toc181035608)

[6.1 Incident Reporting 5](#_Toc181035609)

[6.2 Tool and machine manufacturers’ responsibilities 6](#_Toc181035610)

[7.0 RESPONSIBILITY 6](#_Toc181035611)

[7.1 Supervisors & Managers 6](#_Toc181035612)

[7.2 Employees 7](#_Toc181035613)

[8.0 PROVISION OF HEARING PROTECTION – PPE 7](#_Toc181035614)

[8.1 Issuing PPE 8](#_Toc181035615)

[9.0 REFERENCE/ FURTHER READING 8](#_Toc181035616)

[Appendix-A Managing the risk process flow chart 9](#_Toc181035617)

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# PURPOSE

1. Excessive noise levels at work can cause hearing loss which can be either temporary or permanent. Such damage typically occurs over many years and the deterioration may not be noticed by the member of staff until it is too late. People may also develop tinnitus (ringing, whistling, buzzing or humming in the ears), a distressing condition which can lead to disturbed sleep.
2. These Operating Standards set out the arrangements for safely managing exposure to noise within .

# BACKGROUND

1. is committed to safely managing exposure to noise likely to cause harm, in order to prevent, or to reduce exposure to as low a level as is reasonably practicable.
2. The Control of Noise at Work Regulations 2005, require to eliminate or reduce risks to health and safety from noise at work. Depending on the level of risk should:

* Take action to reduce the noise exposure; and also
* Provide their employees with personal hearing protection

1. Other duties under the Regulations include the need to:

* Make sure the legal limits on noise exposure are not exceeded
* Maintain and ensure the use of equipment provided to control noise risks
* Provide information, instruction and training; and
* Carry out health surveillance (monitor employees’ hearing ability)

1. Regular and frequent exposure to noise can cause hearing damage and even hearing loss that is permanent and disabling. Noise also interferes with communication and may therefore compromise safety at work. This is most likely whilst operating machinery as a regular part of a person’s job.
2. Occasional exposure is unlikely to cause hearing loss.
3. It can be generated whilst operating hand-held power tools, and hand-guided equipment, such as powered concrete pokers, lawnmowers, or by operating machinery, such as pedestal grinders or cut off saws as a few examples.

# DEFINITIONS AND AN EXPLANATION OF TERMS USED

1. Noise is measured in decibels (dB). An `A-weighting` sometimes written as `dB(A)`.is used to measure the noise at the human ear (noise typically received – individual receiving noise), and a `C-weighting` or dB(C) to measure back ground noises (whole site).
2. You might just notice a 3dB change in noise level because of the way our ears work.
3. Every 3 dB doubles the noise, so what might seem like a small difference in the numbers can be quite significant.

# FULL DETAILS

## “Exposure Limit Values” (ELV) - daily/weekly personal noise exposure

* Lower exposure action values are, 80 dB or peak sound pressure of 135 dB
* Upper exposure action values are, 85 dB or peak sound pressure of 137 dB

1. The following are noise levels of noise exposure which must not be exceeded. They also take account of any reduction provided by hearing protection.

* Daily/Weekly exposure limit values are 85 dB or peak sound pressure of 140 dB

1. **“Peak Sound Pressure”** means the maximum sound pressure an employee is exposed to.
2. **“Weekly Personal Noise Exposure”** means the level of weekly personal noise exposure. Where exposure may change on a daily basis the employer may use the personal noise exposure in place of the daily personal noise exposure for the purpose of complying with the regulations employees will not normally be exposed to levels of noise that are above these limits.
3. Wherever exposure at or above this level occurs, certain actions (including health surveillance) are required to control the risk. will take all reasonable steps to reduce noise exposure to as low a level as is reasonably practicable ie to consider whether further reduction is possible even if exposure falls below the lower exposure value.

## Risk Assessment

1. Noise risk assessments will be required if employees work with, for example, hand held tools (eg drills, breakers, sanders, chain saws, hedge trimmers or any equipment that has a warning about noise in its information); hand guided tools (such as pedestrian lawn mowers, buffers, grinder, timber being guided through a band saw, dental laboratory and orthotic grinders and buffers) for more than half an hour each day.

### Risk Assessment requires:

1. The assessment of the noise magnitude from each piece of equipment used. This information can come from three sources:-

* Accurate data is available from organisations which have measured noise levels of equipment in real use
* Direct measurement of noise levels – this is a specialist area, and is not usually necessary or appropriate. If it is required in exceptional circumstances, eg where very accurate data is needed in relation to an individual at high risk, or where costly equipment is difficult to replace and data is difficult to obtain, it can be arranged through M2 Safety Consultants.
* Data may be provided by the manufacturer: Manufacturers’ data will come from testing at idle speed and under load.
* Identification of who might be affected;
* Identification of exposure time for those individuals, ie the time for which the operators’ are exposed to noise, not the overall time spent on the job.
* Calculation of daily and weekly exposure for individuals, based on this information, remembering: that if more than one tool is used in a day the effects will be cumulative. To calculate please contact the M2 Safety Consultants.
* consideration of individual factors for example, the presence of some health condition’s may increase risk from noise exposure.

1. 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.
2. 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 (eg where the risk from noise is very low).
3. The risk assessment should be reviewed if there is any change in noise exposure;and at least every year otherwise.
4. The risk assessment for noise should be carried out in conjunction with M2 Safety Consultants to ensure that the assessor has the necessary skills and experience.

## Reducing Risk from Noise Exposure

1. Measures will be put in place to reduce noise exposure to as low a level as is reasonably practicable – even if noise levels are below the Exposure Limit Value (ELV), consideration will be given as to whether further reduction is practical.
2. Wherever noise exposures exceed nominal levels and definitely wherever they may exceed the ELV, assistance should be sought from M2 safety Consultants to assist with risk assessment and reduction of Noise exposure.
3. **Personal noise exposure MUST NOT exceed the Exposure Limit Values (ELVs) of Daily/Weekly exposure limit values of 85 dB or peak sound pressure of 140 dB**
4. Measures to reduce risks from noise exposure may include:-

* replacing tools and equipment with alternatives which produce lower magnitudes of noise (consider replacing old equipment in particular)
* ensuring all equipment is properly maintained eg in accordance with a local maintenance policy/procedure
* reducing time exposed to noise eg regular breaks, job rotation etc
* providing suitable training and information for all those exposed to noise.
* wearing hearing protection as a last resort

## Simple Guide – excessive noise

1. As a simple guide, there will be excessive noise if:

* Employees have to raise their voices to carry out a normal conversation when about 2m apart or closer for at least part of the day,
* There are noises because of impacts (e.g. hammering, impact tools and so on), or where an employee has to use noisy powered tools or machinery for over half an hour per day.

# HEALTH SURVEILLANCE

1. Health surveillance will be carried out by Occupational Health (OH) under the Noise at Work Regulations 2005, and will usually be by questionnaire.
2. Face to face review with the OH Adviser and /or OH physician will be arranged. Health surveillance is a programme of systematic health checks to identify early signs and symptoms of work-related ill health and to allow action to be taken to prevent its’ progression.
3. Suitable health surveillance usually means regular hearing checks (audiometric testing). If an individual reports relevant symptoms or is considered to be at particular risk or every 3 years otherwise.
4. All individual records will be held in confidence.
5. Where appropriate, summary results for groups of employees, will be reported back to a management to indicate the effectiveness of noise control.
6. Exposure to noise carries a risk of health effects, this is most likely with exposure above the ELVs of Lower exposure action values of, 80 dB or peak sound pressure of 135 dB
7. Noise covers a number of different conditions and may be present in an affected individual.

* Hearing damage or loss, temporary or permanent
* Tinnitus, (ringing, whistling, buzzing or banging)

1. Symptom severity worsens with continued exposure; symptoms may be disabling and are generally irreversible.

## Initial assessment

1. This will be carried out for all employees who are identified as being at risk of exposure even if exposure is likely to be below the ELVs of Lower exposure action value of 80 dB or peak sound pressure of 135 dB.
2. For existing employees, assessment will be carried out once initial risk assessment indicates that this is required.
3. For new employees, this will be carried out at the time of general pre-employment health assessment. It is important that the recruiting officer identifies the need for this as part of the job risk assessment carried out at the time of interview.
4. This will be carried out for all those exposed at or above the ELV and for those exposed below the ELV but who have been identified by Occupational Health as being at increased risk of hearing loss or tinnitus.

# MANAGEMENT OF NOISE AT WORK OPERATING STANDARDS

1. All employees who are exposed to noise should be given training to include:

* The health effects of noise
* Sources of noise
* The risk factors (eg the levels of noise, daily exposure duration, regularity of exposure over weeks, months and years)
* How to recognise and report symptoms
* The need for health surveillance, how it can help them remain fit for work, how it will be provided, and what will happen to the results

1. Ways to minimise risk including:

* Changes to working practices to reduce noise exposure
* Correct selection, use and maintenance of equipment.

1. Face to face training may be provided by the M2 Safety Consultants or can be arranged through external training companies.
2. Alternatively training may be computer based or through the use of leaflets.
3. Where new staff are employed, they should be made aware of the risks of noise prior to first exposure, or at least within the first week of employment. This can be done at the same time as asking them to complete the initial health assessment form for return to Occupational Health.
4. In addition, all employees should be given appropriate training in the use of equipment. This should include periodic supervised practice to identify work practices.

## Incident Reporting

1. All staff must ensure that all incidents, including near misses and work related ill health, that occur within their areas of work, are recorded to their Supervisor/ Manager/ Management.

## Tool and machine manufacturers’ responsibilities

1. Tool and machine manufacturers and suppliers are obliged by the Supply of Machinery (Safety) Regulations 2008 to design equipment which will reduce noise risks to as low a level as possible, making use of the latest technology.
2. The equipment should be CE-marked to show that it complies with these requirements, and health and safety information should be provided in an instruction book.
3. This should include:

* warnings about any noise-related risk from using the equipment
* information on safe use and, where necessary, training requirements
* information on how to maintain the equipment
* a statement of the noise emission together with information on the test method used (see ‘Estimating exposure’).

1. For most types of tool, manufacturers use internationally agreed test methods for noise testing. These allow you to compare the noise performance of different brands and models of the same type of tool. Unfortunately, many of these test methods do not represent the way tools perform at work and noise levels in the workplace may be much higher than those in this type of ‘laboratory’ test.

# RESPONSIBILITY

## Supervisors & Managers

1. Supervisors and Managers are responsible for:

* Ensuring risk assessments of the work environment are carried out where noise is indicated as a potential hazard and that action is taken to reduce the noise exposure that produces risks
* Ensuring the legal limits on noise exposure are not exceeded
* Provision of hearing protection if the noise exposure cannot be reduced by using other methods
* Ensuring that staff are consulted through partnership arrangements, on matters relating to their Health and Safety
* Ensuring that all staff are aware of this procedure, understand its content and those of local and associated procedures;
* Ensuring that all noise risk assessments are reviewed annually and before in response to any changes in procedures, equipment, location, type of personnel, legislation or other external requirements
* Ensuring that staff groups and individuals identified as being at risk, are given appropriate information, instruction and training
* Monitoring the effectiveness of risk control measures relating to noise at work through an effective system of local reporting and investigating.
* Ensuring staff are appropriately identified via the noise risk assessment process and sent for health surveillance where there is a known risk to health

## Employees

1. All employees are responsible for

* Taking reasonable care of themselves and others who may be affected by their actions
* Co-operating by following local arrangements for safe work in a noisy environment and working in a manner which controls risk to as low a level as is reasonably practicable;
* Reporting all incidents and unsafe conditions arising out of the work environment that did or could result in loss, injury or damage
* Undertaking training and education designed to meet the requirements of the procedure and
* Attending health surveillance appointments where indicated as a requirement within the risk assessment process.

# PROVISION OF HEARING PROTECTION – PPE

1. The main types of hearing protection are:

* Earmuffs, which completely cover the ear;
* Earplugs, which are inserted in the ear canal; and
* Semi-inserts (also called 'canal caps'), which cover the entrance to the ear canal.

1. Ear plugs and semi-inserts must never be shared. Preferably, a set of ear muffs would be used by one individual only, and would be issued on an individual basis.
2. Where earmuffs are kept for the use of visitors, they must be hygienically cleaned for each new wearer, or alternatively, disposable covers can be used. Appropriate storage must be provided for all hearing protection issued.
3. The results from the noise assessment and the information from hearing protection suppliers must be used to make the best choice of hearing protection. Aim to get below 85 dB at the ear, and ensure it is suitable for the employees' working environment and compatible with other protective equipment used by the employee (e.g. hard hats, dust mask, eye protection).
4. Wherever possible, provide employees with a suitable range of effective hearing protectors so they can choose ones that suit them. Some employees may prefer a particular type, or may not be able to use some types of hearing protection because of the risk of ear infections.

## Issuing PPE

1. Hearing protection must only be issued to employees:

* where extra protection is needed above what can been achieved using noise control;
* as a short-term measure while other methods of controlling noise are being developed.

1. The use of hearing protection must never be considered as an alternative to controlling noise by technical and organisational means.
2. If in any doubt, contact M2 Safety Consultants, who will provide assistance in the risk assessment process and where required, in the selection of the correct hearing protection for the staff.

# REFERENCE/ FURTHER READING

* Controlling Noise at Work, Guidance on the regulations, (HSE L108) Stationery Office ISBN 0717661644
* Noise at Work: Guidance for employers on the Control of Noise at Work Regulations HSE leaflet INDG362 www.hse.gov.uk
* Hearing Protectors - Recommendations for selection, use, care and maintenance. British Standards BS EN 458:2004

Managing the risk process flow chart

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