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| **Controlling the risks where hazardous noise and sound has been identified** |

Examples of hierarchy of control measures and specific requirements

(Extract from the [Code of Practice Managing noise and preventing hearing loss at work](https://www.safework.sa.gov.au/resources/codes-of-practice).)

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| The following information is provided for the supervisor or person in control of the activity/area to assist in the selection of appropriate control measures to manage the risk of exposure. (Please record the specific details of the control measure whendocumenting your risk assessment so that the workers can identify the requirements.)  |
| **Elimination** | * Remove the hazardous noise and sound (e.g. the plant/equipment) or stop the activity.
 |
| **If elimination is not possible** |
| **Substitution**  | Replace a hazard or hazardous work practice with something that gives rise to a lesser risk.For example:* Substitute plant/equipment or processes that are quieter, replace ototoxic substances with other less harmful products
 |
| **Isolation** | Isolate or separate the hazard or hazardous work practice from any person exposed to it.For example:* Isolate the source of noise and sound from people by using distance, barriers, enclosure and sound-absorbing surfaces
* Building enclosures or soundproof covers around noise and sound sources
* Using barriers or screens to block the direct path of sound
* Locate noise and sound sources further away from workers
* Use remote controls to operate noisy plant/equipment from a distance.
 |
| **Engineering** | Engineering controls are physical control measures.For example:* Modify the plant/equipment and process to reduce the noise and sound.
* Eliminate impacts between hard objects or surfaces through cushioning or separation
* Minimising the drop height of objects or the angle that they fall onto hard surfaces
* Using absorbent lining on surfaces to cushion the fall or impact of objects
* Fitting exhaust mufflers on internal combustion engines
* Fitting silencers to compressed air exhausts and blowing nozzles
* Ensuring gears mesh together better
* Fixing damping materials (such as rubber) or stiffening to panels to reduce vibration
* Fitting sound-absorbing materials to hard reflective surfaces
* Changing fan speeds or the speeds of particular components
* Changing the material the equipment or its parts are made of (for example change metal components to plastic components)
* Selecting tyre types that are suitable for the ground surface or terrain;
* Installing vibration-minimising seats on mobile plant.
* Maintenance
* Check for badly worn bearings and gears, poor lubrication, blunt blades, loose parts, unbalanced rotating parts and steam or air leaks.
* Check vibration mountings, impact absorbers, gaskets, seals, silencers, barriers and other equipment.
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| HSW Handbook | **Noise and Sound Safety Management** | Effective Date: | **12 March 2019** | Version 2.1 |
| Authorised by | Chief Operating Officer and Vice-President (University Operations) | Review Date: | **12 March 2022** | Page **2** of **2**  |
| Warning | This process is uncontrolled when printed. The current version of this document is available on the HSW Website. |

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| **Controlling the risks where hazardous noise has been identified** |
| **Administrative** | * Change the way in which the task is completedFor example:
* bending metal in a vice or a press is quieter than hammering it into shape;
* welding is generally quieter than riveting
* gluing is quieter than hammering in nails
* clipping is quieter than stapling; and
* lowering materials in a controlled manner is quieter than dropping them on hard surfaces.
* Organise schedules so that noisy work is done when only a few workers are present
* Notifying workers and others in advance of noisy work so they can limit their exposure
* Keeping workers out of noisy areas if their work does not require them to be there
* Using job rotation to limit the time workers spend in noisy areas by moving them to quite work or providing quiet areas for rest breaks, before their daily noise exposure levels exceed the exposure standard.
* Provide the appropriate level of information, instruction and training to protect all workers from the risks to their health and safety in accordance with the [Code of Practice “Managing noise and preventing hearing loss at work”](https://www.safework.sa.gov.au/resources/codes-of-practice).

(Also see the requirements for the provision of information, instruction and training in the proper use and wearing of PPE and the storage and maintenance of PPE.) Note – where admin controls are relied on, the Supervisor/Person in control of the area/activity is to conduct regular checks to ensure that the control measures are being complied with. |
| **PPE** | * Personal hearing protectors, such as ear-muffs or earplugs, high quality headsets with acoustic shock protection devices(Noting, that they should be used in the following circumstances:
* When the risks arising from exposure to noise and sound cannot be eliminated or minimised by other more effective control measures
* As an interim measure until other control measures are implemented; and
* Where extra protection is needed above what has been achieved using other noise and sound control measures.

PPE for use of firearmsDue to the risk of immediate hearing loss in work situations that involve exposure to peak noise and sound levels that exceed 140 dB(c) and notwithstanding any higher level controls used, the Supervisor/Person in control of the activity/area should select hearing protectors as detailed in Appendix B of AS/NZS 1269.3:2005, which advises:* Hearing protectors having a classification of five shall be used for exposure to impulse noise and sound from impacts, small-calibre weapons or tools; and
* Well fitted earplugs having a classification of at least three, in combination with ear-muffs of any classification, shall be worn for exposure to impulse noise and sound from large-calibre weapons and blasting.

Where PPE is used, the Supervisor/Person in control of the area/activity is to ensure:* the equipment is selected to minimise risks by ensuring that the equipment is:
* Suitable for the nature of the work and any hazard associated with the work
* Suitable size and fit and reasonably comfortable for the worker who is to use or wear it; and
* Maintained repaired and replaced so that it continues to minimise risk to the worker, and ensuring that the equipment is clean, hygienic and in good working order.
* the worker is provided with the appropriate level of information and instruction in the proper use and wearing of PPE and the storage and maintenance of PPE in accordance with the [Provision of information, instruction and training](https://www.adelaide.edu.au/hr/hsw/handbook/training/) chapter of the HSW Handbook.
* That personal hearing protectors are selected and maintained in accordance with [AS/NZS 1269.3:2005 “Occupational noise management – hearing protector program”](https://subscriptions-techstreet-com.proxy.library.adelaide.edu.au/) and [Code of Practice for Managing noise and preventing hearing loss at work](https://www.safework.sa.gov.au/resources/codes-of-practice).
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